



The **lwarp** package

\LaTeX to HTML

v0.53 — 2018/04/01

© 2016–2018 Brian Dunn
bd@BDTechConcepts.com

Abstract

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

Documents may be produced by `pdf \LaTeX` , `Lua \LaTeX` , or `XY \LaTeX` . A `texlua` script removes the need for system utilities such as `make` and `gawk`, and also supports `xindy` and `latexmk`. Configuration is automatic at the first manual compile.

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

A modular package-loading system uses the **lwarp** version of a package for HTML when available. More than two hundred \LaTeX packages are supported with these high-level source compatibility replacements, and many others work as-is.

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

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

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

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.

1 Supporting 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;
- 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

1	Supporting TeX development	2
	List of Figures	42
	List of Tables	42
2	Updates	43
3	Introduction	55
3.1	Supported packages and features	57
4	Alternatives	61
4.1	Internet class	61
4.2	TeX4ht	61
4.3	Translators	61
4.4	AsciiDoc and AsciiDoctor	62
4.4.1	AsciiDoctor-LaTeX	62
4.5	Pandoc	62
4.6	Word processors	62
4.7	Commercial systems	62
4.8	Comparisons	62
5	Installation	64
5.1	Installing the lwarp package	66
5.2	Installing the lwarpmk utility	68
5.2.1	Using a local copy of lwarpmk	69
5.3	Installing additional utilities	70
6	Tutorial	72
6.1	Starting a new project	72
6.2	Compiling the print version with lwarpmk	76
6.3	Compiling the HTML version with lwarpmk	77
6.4	Generating the SVG images	78
6.5	Using MATHJAX for math	79
6.6	Changing the CSS style	80
6.7	Customizing the HTML output	80
6.8	Using latexmk	81
6.9	Using XeLaTeX or LuaLaTeX	82
6.10	Using a glossary	83
6.11	Cleaning auxiliary files	84
6.12	Cleaning auxiliary and output files	84
6.13	Cleaning the images from the lateximages directory	84
6.14	Creating HTML from an incomplete compile	84
6.15	Processing multiple projects in the same directory	84
6.16	Using the make utility	85

7	Converting an existing document	85
8	Additional details	87
8.1	Font and UTF-8 support	87
8.1.1	Indexes and UTF-8	88
8.2	lwarp package loading and options	89
8.3	Customizing the HTML output	91
8.3.1	Example HTML file naming	95
8.4	Customizing the CSS	96
8.5	Selecting the operating system	97
8.6	Selecting actions for print or HTML output	98
8.7	Commands to be placed into the <code>warpprint</code> environment	99
8.8	Title page	99
8.9	HTML page meta descriptions	100
8.10	HTML page meta title	101
8.11	HTML page meta author	101
8.12	Modifying <code>xindy</code> index processing	101
9	Special cases and limitations	102
9.1	Things to avoid	102
9.2	Formatting	102
9.2.1	Text formatting	102
9.2.2	Horizontal space	102
9.2.3	Text alignment	103
9.2.4	Accents	103
9.2.5	Textcomp	103
9.2.6	Superscripts and other non-math uses of <code>math mode</code>	103
9.2.7	Empty <code>\item</code> followed by a new line of text or a nested list:	103
9.2.8	Filenames and URLs in lists or footnotes	103
9.2.9	relsize package	104
9.3	Boxes and minipages	104
9.3.1	Marginpars	104
9.3.2	Save Boxes	104
9.3.3	Minipages	104
9.3.4	Side-by-side minipages	105
9.3.5	Framed minipages and other environments	105
9.3.6	fancybox package	107
9.3.7	mdframed package	108
9.4	Cross-references	109
9.4.1	Page references	109
9.4.2	cleveref and varioref packages	109
9.4.3	Hyperlinks, hyperref , and url	109
9.4.4	Footnotes and page notes	110
9.5	Front and back matter	111
9.5.1	Custom classes with multiple authors and affiliations	111
9.5.2	Starred chapters and sections	111

9.5.3	abstract package	112
9.5.4	titling and authblk	112
9.5.5	tocloft package	112
9.5.6	appendix package	112
9.5.7	pagenote package	112
9.5.8	endnotes package	113
9.5.9	glossaries package	113
9.5.10	Index and the tocbibind package	114
9.6	Math	115
9.6.1	Rendering tradeoffs	115
9.6.2	SVG option	116
9.6.3	MATHJAX option	116
9.6.4	Customizing MATHJAX	117
9.6.5	MATHJAX limitations	117
9.6.6	Display math	118
9.6.7	chemformula package	118
9.6.8	mhchem package	118
9.6.9	ntheorem package	118
9.6.10	siunitx package	119
9.6.11	units and nicefrac packages	119
9.6.12	newtxmath package	119
9.7	Graphics	119
9.7.1	tikz package	120
9.7.2	grffile package	121
9.7.3	color package	121
9.7.4	xcolor package	121
9.7.5	epstopdf package	121
9.7.6	overpic package	122
9.8	Tabbing	122
9.9	Tabular	122
9.9.1	longtable package	125
9.9.2	supertabular and xtab packages	126
9.9.3	bigdelim package	126
9.10	Floats	126
9.10.1	float , trivfloat , and/or algorithmicx together	126
9.10.2	caption and subcaption packages	126
9.10.3	subfig package	127
9.10.4	floatrow package	127
9.10.5	keyfloat package	128
9.11	Koma-Script	128
9.12	Memoir	128
9.13	Miscellaneous	129
9.13.1	verse and memoir	129
9.13.2	newclude package	129
9.13.3	babel package	130
9.13.4	todonotes and luatodonotes packages	130

9.13.5	fixme	130
9.13.6	xparse	131
10	EPUB conversion	132
11	Word-processor conversion	134
11.1	Activating word-processor conversion	134
11.2	Additional modifications	136
11.3	Recommendations	137
11.4	Limitations	138
12	Modifying lwarp	140
12.1	Modifying a package for lwarp	140
12.1.1	Adding a package to the lwarp.dtx file	141
12.2	Modifying a class for lwarp	141
12.3	Testing lwarp	142
12.4	Modifying lwarpmk	142
13	Troubleshooting	143
13.1	Using the lwarp.sty package	143
13.1.1	Debug tracing output	146
13.2	Compiling the lwarp.dtx file	146
1	lwarp.sty	147
14	Implementation	147
15	Section depths and HTML headings	148
16	Source Code	149
17	Detecting the T_EX Engine — pdf_latex, lua_latex, xel_latex	150
18	MD5 hashing	150
19	pdf_lat_EX T1 and UTF8 encoding	151
20	Unicode input characters	151
21	Miscellaneous tools	152
22	Early package requirements	152
23	Operating-System portability	153
23.1	Common portability code	153
23.2	Unix, Linux, and Mac OS	153
23.3	MS-WINDOWS	153

24	Package options	154
24.1	Conditional compilation	157
25	Package load order	158
25.1	Tests of package load order	158
25.2	Enforcing package loading after lwarp	160
26	Required packages	165
27	Loading packages	170
28	Additional required packages	173
29	File handles	173
30	Include a file	174
31	Copying a file	175
32	Debugging messages	176
33	HTML-conversion output modifications	177
33.1	User-level controls	177
33.2	Heading adjustments	179
34	Remembering original formatting macros	180
35	Accents	183
36	Configuration Files	185
36.1	project_html.tex	185
36.2	lwarpmk.conf	185
36.3	project.lwarpmkconf	186
36.4	lwarp.css	187
36.5	lwarp_sagebrush.css	215
36.6	lwarp_formal.css	220
36.7	sample_project.css	225
36.8	lwarp.xdy	225
36.9	lwarp_one_limage.cmd	226
36.10	lwarp_mathjax.txt	226
36.11	lwarpmk option	229
37	Stacks	243
37.1	Assigning depths	243
37.2	Closing actions	244
37.3	Closing depths	244
37.4	Pushing and popping the stack	245

38	Data arrays	246
39	Sanitizing labels and filenames	247
40	HTML entities	248
41	HTML filename generation	249
42	Homepage link	251
43	\LWRPrintStack diagnostic tool	252
44	Closing stack levels	252
45	PDF pages and styles	253
46	HTML tags, spans, divs, elements	255
46.1	Mapping \LaTeX Sections to HTML Sections	255
46.2	Babel-French	255
46.3	HTML tags	256
46.4	Block tags and comments	259
46.5	Div class and element class	260
46.6	Single-line elements	261
46.7	HTML5 semantic elements	261
46.8	High-level block and inline classes	262
46.9	Closing HTML tags	263
47	Paragraph handling	264
48	Paragraph start/stop handling	268
49	Page headers and footers	270
50	CSS	271
51	Title, HTML meta author, HTML meta description	271
52	Footnotes	273
52.1	Regular page footnotes	273
52.2	Minipage footnotes	273
52.3	Titlepage thanks	274
52.4	Regular page footnote implementation	274
52.5	Minipage footnote implementation	276
52.6	Printing pending footnotes	277
53	Marginpars	278
54	Splitting HTML files	280

55	Sectioning	288
55.1	User-level starred section commands	288
55.2	Book class commands	289
55.3	Sectioning support macros	289
55.4	\section and friends	296
56	Starting a new file	299
57	Starting HTML output	301
58	Ending HTML output	305
59	Title page	306
59.1	Setting the title, etc.	307
59.2	\if@titlepage	308
59.3	Changes for \affiliation	308
59.4	Printing the thanks	309
59.5	Printing the title, etc. in HTML	310
59.6	Printing the title, etc. in print form	311
59.7	\maketitle for HTML output	311
59.8	\published and \subtitle	315
60	Abstract	316
61	Quote and verse	317
61.1	Citations and attributions	317
61.2	Quotes, quotations	318
61.3	Verse	318
62	Verbatim and tabbing	319
63	Theorems	323
64	Lists	324
64.1	List environment	324
64.2	Itemize	328
64.3	Enumerate	329
64.4	Description	329
64.5	Patching the lists	330
65	Tabular	331
65.1	Limitations	331
65.2	Token lookahead	334
65.3	Tabular variables	335
65.4	Handling &, @, !, and bar	338
65.4.1	Localizing & catcodes	340
65.4.2	Handling &	341

65.4.3	Filling an unfinished row	342
65.5	Handling <code>\</code>	343
65.6	Parsing <code>@</code> , <code>></code> , <code><</code> , <code>!</code> , bar columns	344
65.7	Parsing <code>l</code> , <code>c</code> , or <code>r</code> columns	347
65.8	Parsing <code>p</code> , <code>m</code> , or <code>b</code> columns	348
65.9	Parsing <code>D</code> columns	348
65.10	Parsing the column specifications	348
65.11	<code>colortbl</code> and <code>xparse</code> tabular color support	353
65.12	Starting a new row	355
65.13	Printing vertical bar tags	356
65.14	Printing at or bang tags	357
65.15	Data opening tag	358
65.16	Midrules	360
65.17	Cell colors	365
65.18	Multicolumns	368
65.18.1	Parsing multicolumns	368
65.18.2	Multicolumn factored code	371
65.18.3	Multicolumn	373
65.18.4	Longtable captions	374
65.18.5	Counting HTML tabular columns	376
65.19	Multicolumnrow	378
65.20	Utility macros inside a table	379
65.21	Special-case tabular markers	380
65.22	Checking for a new table cell	381
65.23	<code>\mrowcell</code>	384
65.24	<code>\mcolrowcell</code>	384
65.25	New tabular environment	384
66	Cross-references	391
66.1	Setup	391
66.2	Zref setup	393
66.3	Labels	394
66.4	References	396
66.5	Hyper-references	398
67	Floats	402
67.1	Float captions	403
67.1.1	Caption inside a float environment	405
67.1.2	Caption and LOF linking and tracking	405
68	Table of Contents, LOF, LOT	409
68.1	Reading and printing the TOC	409
68.2	High-level TOC commands	413
68.3	Side TOC	413
68.4	Low-level TOC line formatting	414

69	Index and glossary	418
70	Bibliography presentation	420
71	Restoring original formatting	421
72	Math	424
72.1	Limitations	424
72.1.1	Rendering tradeoffs	424
72.1.2	SVG option	425
72.1.3	MATHJAX option	425
72.1.4	Customizing MATHJAX	426
72.1.5	MATHJAX limitations	426
72.1.6	Display math	427
72.2	Inline and display math	427
72.3	MATHJAX support	438
72.4	Equation environment	440
72.5	<code>\displaymathnormal</code> and <code>\displaymathother</code>	443
72.6	AMS Math environments	444
72.6.1	Support macros	444
72.6.2	Environment patches	446
73	Lateximages	455
73.1	Description	455
73.2	Support counters and macros	456
73.3	Font size	456
73.4	Sanitizing math expressions for HTML	457
73.5	Equation numbers	458
73.6	HTML <code><alt></code> tags	460
73.7	<code>lateximage</code>	461
74	<code>center</code>, <code>flushleft</code>, <code>flushright</code>	466
75	Pre-loaded packages	468
76	Siunitx	468
77	Graphics print-mode modifications	469
77.1	General limitations	469
77.2	Print-mode modifications	470
78	Xcolor boxes	471
79	Chemmacros environments	474
80	Cleveref	475
81	Picture	479

82	Boxes and Minipages	479
82.1	Counters and lengths	480
82.2	Footnote handling	480
82.3	Minipage handling	480
82.4	Parbox, mbox, makebox, framebox, fbox, raisebox	484
83	Direct formatting	489
84	Skips, spaces, font sizes	496
85	\phantomsection	504
86	\LaTeX and other logos	504
86.1	HTML logos	505
86.2	Print logos	507
87	\AtBeginDocument, \AtEndDocument	507
88	Koma-script	508
89	Memoir	508
90	Trademarks	509
2	lwarp-a4.sty	510
91	a4	510
3	lwarp-a4wide.sty	510
92	a4wide	510
4	lwarp-a5comb.sty	510
93	a5comb	510
5	lwarp-abstract.sty	510
94	abstract	510
6	lwarp-acro.sty	513
95	acro	513

7	lwarp-acronym.sty	514
96	acronym	514
8	lwarp-adjmulticol.sty	516
97	adjmulticol	516
9	lwarp-addlines.sty	517
98	addlines	517
10	lwarp-afterpage.sty	517
99	afterpage	517
11	lwarp-algorithmicx.sty	517
100	algorithmicx	517
12	lwarp-alltt.sty	518
101	alltt	518
13	lwarp-amsthm.sty	519
102	amsthm	519
14	lwarp-anonchap.sty	523
103	anonchap	523
15	lwarp-anysize.sty	523
104	anysize	523
16	lwarp-appendix.sty	524
105	appendix	524

17	lwarp-arabicfront.sty	524
106	arabicfront	524
18	lwarp-array.sty	525
107	array	525
19	lwarp-atbegshi.sty	525
108	atbegshi	525
20	lwarp-authblk.sty	526
109	authblk	526
21	lwarp-axodraw2.sty	527
110	axodraw2	527
22	lwarp-backref.sty	527
111	backref	527
23	lwarp-balance.sty	527
112	balance	527
24	lwarp-bigdelim.sty	528
113	bigdelim	528
25	lwarp-bigstrut.sty	529
114	bigstrut	529
26	lwarp-blowup.sty	530
115	blowup	530

27	lwarp-bookmark.sty	530
116	bookmark	530
28	lwarp-booktabs.sty	530
117	booktabs	530
29	lwarp-boxedminipage.sty	531
118	boxedminipage	531
30	lwarp-boxedminipage2e.sty	531
119	boxedminipage2e	531
31	lwarp-breakurl.sty	532
120	breakurl	532
32	lwarp-bytefield.sty	532
121	bytefield	532
33	lwarp-cancel.sty	533
122	cancel	533
34	lwarp-caption.sty	534
123	caption	534
35	lwarp-caption2.sty	537
124	caption2	537
36	lwarp-ccaption.sty	537
125	ccaption	537

37	lwarp-changebar.sty	537
126	changebar	537
38	lwarp-changepage.sty	538
127	changepage	538
39	lwarp-chngpage.sty	538
128	chngpage	538
40	lwarp-chappg.sty	539
129	chappg	539
41	lwarp-chapterbib.sty	539
130	chapterbib	539
42	lwarp-chemfig.sty	539
131	chemfig	539
43	lwarp-chemformula.sty	540
132	chemformula	540
44	lwarp-chemgreek.sty	546
133	chemgreek	546
45	lwarp-chemmacros.sty	546
134	chemmacros	546
134.1	Changes to the user's document	547
134.2	Code	547
134.3	Loading modules	547
134.4	New environments	547

134.5	Acid-base	548
134.6	Charges	550
134.7	Nomenclature	550
134.8	Particles	553
134.9	Phases	553
134.10	Mechanisms	554
134.11	Newman	556
134.12	Orbital	557
134.13	Reactions	558
134.14	Redox	558
134.15	Scheme	559
134.16	Spectroscopy	560
134.17	Thermodynamics	564
46	lwarp-chemnum.sty	566
135	chemnum	566
47	lwarp-cite.sty	567
136	cite	567
48	lwarp-color.sty	568
137	color	568
49	lwarp-colortbl.sty	568
138	colortbl	568
50	lwarp-continue.sty	570
139	continue	570
51	lwarp-crop.sty	570
140	crop	570
52	lwarp-cuted.sty	570

141	cuted	570
53	lwarp-cutwin.sty	571
142	cutwin	571
54	lwarp-dblfloatfix.sty	572
143	dblfloatfix	572
55	lwarp-dblfnote.sty	572
144	dblfnote	572
56	lwarp-dcolumn.sty	572
145	dcolumn	572
57	lwarp-diagbox.sty	573
146	diagbox	573
58	lwarp-draftwatermark.sty	574
147	draftwatermark	574
59	lwarp-easy-todo.sty	575
148	easy-todo	575
60	lwarp-ebook.sty	576
149	ebook	576
61	lwarp-ellipsis.sty	576
150	ellipsis	576

62	lwarp-emptypage.sty	576
151	emptypage	576
63	lwarp-endfloat.sty	577
152	endfloat	577
64	lwarp-endheads.sty	577
153	endheads	577
65	lwarp-endnotes.sty	578
154	endnotes	578
66	lwarp-enumerate.sty	579
155	enumerate	579
67	lwarp-enumitem.sty	579
156	enumitem	579
68	lwarp-epigraph.sty	580
157	epigraph	580
69	lwarp-epstopdf.sty	581
158	epstopdf	581
70	lwarp-epstopdf-base.sty	581
159	epstopdf-base	581
71	lwarp-eso-pic.sty	582
160	eso-pic	582

72	lwarp-everypage.sty	582
161	everypage	582
73	lwarp-everyshi.sty	583
162	everyshi	583
74	lwarp-extramarks.sty	583
163	extramarks	583
75	lwarp-fancybox.sty	584
164	fancybox	584
76	lwarp-fancyheadings.sty	589
165	fancyheadings	589
77	lwarp-fancyhdr.sty	590
166	fancyhdr	590
78	lwarp-fancyref.sty	590
167	fancyref	590
79	lwarp-fancyvrb.sty	591
168	fancyvrb	591
80	lwarp-figcaps.sty	598
169	figcaps	598
81	lwarp-figsize.sty	598

170	figsize	598
82	lwarp-fix2col.sty	599
171	fix2col	599
83	lwarp-fixme.sty	599
172	fixme	599
84	lwarp-fixmetodonotes.sty	600
173	fixmetodonotes	600
85	lwarp-flafter.sty	601
174	flafter	601
86	lwarp-float.sty	601
175	float and \newfloat	601
87	lwarp-floatflt.sty	603
176	floatflt	603
88	lwarp-floatpag.sty	604
177	floatpag	604
89	lwarp-floatrow.sty	604
178	floatrow	604
90	lwarp-fltrace.sty	610
179	fltrace	610

91	lwarp-flushend.sty	610
180	flushend	610
92	lwarp-fncychap.sty	610
181	fncychap	610
93	lwarp-fnlineno.sty	611
182	fnlineno	611
94	lwarp-fnpos.sty	611
183	fnpos	611
95	lwarp-fontenc.sty	612
184	fontenc	612
96	lwarp-fontspec.sty	612
185	fontspec	612
97	lwarp-footmisc.sty	612
186	footmisc	612
98	lwarp-footnote.sty	614
187	footnote	614
99	lwarp-footnotehyper.sty	615
188	footnotehyper	615
100	lwarp-footnpag.sty	615
189	footnpag	615

101	lwarp-framed.sty	615
190	framed	615
102	lwarp-ftnright.sty	618
191	ftnright	618
103	lwarp-fullpage.sty	618
192	fullpage	618
104	lwarp-fullwidth.sty	618
193	fullwidth	618
105	lwarp-fwlw.sty	619
194	fwlw	619
106	lwarp-geometry.sty	619
195	geometry	619
107	lwarp-glossaries.sty	620
196	glossaries	620
108	lwarp-graphics.sty	621
197	graphics	621
197.1	Graphics extensions	621
197.2	Length conversions and graphics options	622
197.3	Printing HTML styles	625
197.4	\includegraphics	625
197.5	Boxes	630
109	lwarp-graphicx.sty	633

198	graphicx	633
110	lwarp-grffile.sty	633
199	grffile	633
111	lwarp-grid.sty	633
200	grid	633
112	lwarp-hang.sty	634
201	hang	634
113	lwarp-hanging.sty	635
202	hanging	635
114	lwarp-hypcap.sty	636
203	hypcap	636
115	lwarp-hypdestopt.sty	637
204	hypdestopt	637
116	lwarp-hypernat.sty	637
205	hypernat	637
117	lwarp-hyperref.sty	637
206	hyperref	637
118	lwarp-hyperxmp.sty	643
207	hyperxmp	643

119	lwarp-hyphenat.sty	643
208	hyphenat	643
120	lwarp-idxlayout.sty	644
209	idxlayout	644
121	lwarp-ifoddpage.sty	645
210	ifoddpage	645
122	lwarp-indentfirst.sty	645
211	indentfirst	645
123	lwarp-inputenc.sty	646
212	inputenc	646
124	lwarp-keyfloat.sty	646
213	keyfloat	646
125	lwarp-layout.sty	648
214	layout	648
126	lwarp-letterspace.sty	649
215	letterspace	649
127	lwarp-lettrine.sty	649
216	lettrine	649
128	lwarp-lineno.sty	650

217	lineno	650
129	lwarp-lips.sty	653
218	lips	653
130	lwarp-listings.sty	653
219	listings	653
131	lwarp-longtable.sty	657
220	longtable	657
132	lwarp-lscape.sty	659
221	lscape	659
133	lwarp-ltcaption.sty	659
222	ltcaption	659
134	lwarp-ltxgrid.sty	660
223	ltxgrid	660
135	lwarp-ltxtable.sty	660
224	ltxtable	660
136	lwarp-luacolor.sty	660
225	luacolor	660
137	lwarp-luatodonotes.sty	661
226	luatodonotes	661

138	lwarp-marginfit.sty	663
227	marginfit	663
139	lwarp-marginfix.sty	663
228	marginfix	663
140	lwarp-marginnote.sty	664
229	marginnote	664
141	lwarp-mcaption.sty	664
230	mcaption	664
142	lwarp-mdframed.sty	665
231	mdframed	665
231.1	Limitations	665
231.2	Package loading	666
231.3	Patches	666
231.4	Initial setup	667
231.5	Color and length HTML conversion	667
231.6	Environment encapsulation	667
231.7	Mdframed environment	669
231.8	Titles and subtitles	670
231.9	New environments	672
143	lwarp-memhfixc.sty	675
232	memhfixc	675
144	lwarp-metalogo.sty	675
233	metalogo	675
145	lwarp-mhchem.sty	676
234	mhchem	676

146	lwarp-microtype.sty	678
235	microtype	678
147	lwarp-midfloat.sty	679
236	midfloat	679
148	lwarp-midpage.sty	680
237	midpage	680
149	lwarp-morefloats.sty	680
238	morefloats	680
150	lwarp-moreverb.sty	680
239	moreverb	680
151	lwarp-morewrites.sty	682
240	morewrites	682
152	lwarp-mparhack.sty	682
241	mparhack	682
153	lwarp-multicol.sty	682
242	multicol	682
154	lwarp-multirow.sty	684
243	multirow	684
243.1	Multirow	684
243.2	Combined multicolumn and multirow	686
155	lwarp-multitoc.sty	687

244	multitoc	687
156	lwarp-nameref.sty	687
245	nameref	687
157	lwarp-natbib.sty	687
246	natbib	687
158	lwarp-needspace.sty	688
247	needspace	688
159	lwarp-newclude.sty	689
248	newclude	689
160	lwarp-newunicodechar.sty	689
249	newunicodechar	689
161	lwarp-nextpage.sty	689
250	nextpage	689
162	lwarp-nicefrac.sty	690
251	nicefrac	690
163	lwarp-nonfloat.sty	690
252	nonfloat	690
164	lwarp-nonumonpart.sty	691
253	nonumonpart	691

165	lwarp-nopageno.sty	691
254	nopageno	691
166	lwarp-nowidow.sty	691
255	nowidow	691
167	lwarp-ntheorem.sty	692
256	ntheorem	692
256.1	Limitations	692
256.2	Options	692
256.3	Remembering the theorem style	693
256.4	HTML cross-referencing	696
256.5	\newtheoremstyle	696
256.6	Standard styles	697
256.7	Additional objects	698
256.8	Renewed standard configuration	699
256.9	amsthm option	700
256.10	Ending a theorem	703
256.11	\NoEndMark	703
256.12	List-of	703
256.13	Symbols	704
256.14	Cross-referencing	704
168	lwarp-overpic.sty	704
257	overpic	704
169	lwarp-pagegrid.sty	705
258	pagegrid	705
170	lwarp-pagenote.sty	705
259	pagenote	705
171	lwarp-pagesel.sty	705
260	pagesel	705

172	lwarp-paralist.sty	705
261	paralist	705
173	lwarp-parskip.sty	706
262	parskip	706
174	lwarp-pbox.sty	706
263	pbox	706
175	lwarp-pdfscape.sty	707
264	pdfscape	707
176	lwarp-pdfrender.sty	707
265	pdfrender	707
177	lwarp-pdfsync.sty	707
266	pdfsync	707
178	lwarp-pfnote.sty	708
267	pfnote	708
179	lwarp-phfqit.sty	708
268	phfqit	708
180	lwarp-placeins.sty	709
269	placeins	709
181	lwarp-prelim2e.sty	709

270	prelim2e	709
182	lwarp-prettyref.sty	709
271	prettyref	709
183	lwarp-preview.sty	710
272	preview	710
184	lwarp-quotchap.sty	710
273	quotchap	710
185	lwarp-ragged2e.sty	711
274	ragged2e	711
186	lwarp-realscripts.sty	712
275	realscripts	712
187	lwarp-reysize.sty	713
276	resize	713
188	lwarp-resizegather.sty	714
277	resizegather	714
189	lwarp-romanbar.sty	714
278	romanbar	714
190	lwarp-romanbarpagenumber.sty	715
279	romanbarpagenumber	715

191	lwarp-rotating.sty	715
280	rotating	715
192	lwarp-rotfloat.sty	716
281	rotfloat	716
193	lwarp-savetrees.sty	717
282	savetrees	717
194	lwarp-scalefnt.sty	717
283	scalefnt	717
195	lwarp-schemata.sty	717
284	schemata	717
196	lwarp-scrextend.sty	718
285	scrextend	718
197	lwarp-scrhack.sty	721
286	scrhack	721
198	lwarp-sclayer.sty	721
287	sclayer	721
199	lwarp-sclayer-notecolumn.sty	723
288	sclayer-notecolumn	723
200	lwarp-sclayer-scrpage.sty	723
289	sclayer-scrpage	723

201	lwarp-section.sty	724
290	section	724
202	lwarp-sectionbreak.sty	725
291	sectionbreak	725
203	lwarp-sectsty.sty	726
292	sectsty	726
204	lwarp-setspace.sty	726
293	setspace	726
205	lwarp-shadow.sty	727
294	shadow	727
206	lwarp-showidx.sty	728
295	showidx	728
207	lwarp-showkeys.sty	728
296	showkeys	728
208	lwarp-sidecap.sty	728
297	sidecap	728
209	lwarp-sidenotes.sty	729
298	sidenotes	729
210	lwarp-siunitx.sty	731
299	siunitx	731

211	lwarp-soul.sty	736
300	soul	736
212	lwarp-soulpos.sty	738
301	soulpos	738
213	lwarp-soulutf8.sty	739
302	soulutf8	739
214	lwarp-stabular.sty	739
303	stabular	739
215	lwarp-stfloats.sty	740
304	stfloats	740
216	lwarp-subfig.sty	740
305	subfig	740
217	lwarp-subfigure.sty	745
306	subfigure	745
218	lwarp-supertabular.sty	746
307	supertabular	746
219	lwarp-syntonly.sty	747
308	syntonly	747
220	lwarp-tables.sty	748
309	tables	748

221	lwarp-tabularx.sty	748
310	tabularx	748
222	lwarp-tabulary.sty	749
311	tabulary	749
223	lwarp-textarea.sty	749
312	textarea	749
224	lwarp-textcomp.sty	750
313	textcomp	750
313.1	Limitations	750
313.2	Package loading	750
313.3	Remembering original defintions	750
313.4	HTML symbols	751
313.4.1	pdf \TeX symbols	751
313.4.2	X \TeX and Lua \TeX symbols	751
313.5	HTML dicritics	752
313.6	Inside a lateximage	753
225	lwarp-textfit.sty	753
314	textfit	753
226	lwarp-textpos.sty	754
315	textpos	754
227	lwarp-theorem.sty	755
316	theorem	755
316.1	Remembering the theorem style	755
316.2	CSS patches	757
228	lwarp-threeparttable.sty	759

317	threeparttable	759
229	lwarp-tikz.sty	760
318	tikz	760
230	lwarp-titleps.sty	761
319	titleps	761
231	lwarp-titleref.sty	764
320	titleref	764
232	lwarp-titlesec.sty	765
321	titlesec	765
233	lwarp-titletoc.sty	767
322	titletoc	767
234	lwarp-titling.sty	768
323	titling	768
235	lwarp-tocbasic.sty	773
324	tocbasic	773
236	lwarp-tocbibind.sty	774
325	tocbibind	774
237	lwarp-tocloft.sty	776
326	tocloft	776

238	lwarp-tocstyle.sty	783
327	tocstyle	783
239	lwarp-todo.sty	783
328	todo	783
240	lwarp-todonotes.sty	784
329	tonotes	784
241	lwarp-transparent.sty	786
330	transparent	786
242	lwarp-trivfloat.sty	787
331	trivfloat	787
331.1	Combining \newfloat, \trivfloat, and algorithmicx	788
243	lwarp-turnthepage.sty	788
332	turnthepage	788
244	lwarp-typearea.sty	788
333	typearea	788
245	lwarp-ulem.sty	789
334	ulem	789
246	lwarp-upref.sty	791
335	upref	791
247	lwarp-url.sty	792

lwarp	39
336 url	792
248 lwarp-verse.sty	792
337 verse	792
249 lwarp-vertbars.sty	794
338 vertbars	794
250 lwarp-vmargin.sty	795
339 vmargin	795
251 lwarp-vwcol.sty	795
340 vwcol	795
252 lwarp-wallpaper.sty	798
341 wallpaper	798
253 lwarp-watermark.sty	798
342 watermark	798
254 lwarp-wrapfig.sty	799
343 wrapfig	799
255 lwarp-xcolor.sty	800
344 xcolor	800
344.1 Limitations	800
344.2 Xcolor definitions: location and timing	801
344.3 Package loading	803
344.4 Remembering and restoring original definitions	803
344.5 HTML color style	803
344.6 HTML border	805

lwarp	40
344.7 High-level macros	805
344.8 Row colors	809
256 lwarp-xfrac.sty	810
345 xfrac	810
257 lwarp-xtxtra.sty	813
346 xtxtra	813
258 lwarp-xmpincl.sty	814
347 xmpincl	814
259 lwarp-xtab.sty	814
348 xtab	814
260 lwarp-xurl.sty	816
349 xurl	816
261 lwarp-xy.sty	816
350 xy	816
262 lwarp-zwpage layout.sty	817
351 zwpage layout	817
263 lwarp-patch-komascript.sty	818
352 patch-komascript	818
264 lwarp-patch-memoir.sty	820
353 patch-memoir	820
353.1 Packages	821

353.2 Preliminary setup	822
353.3 Laying out the page	823
353.4 Text and fonts	825
353.5 Titles	826
353.6 Abstracts	826
353.7 Document divisions	826
353.8 Pagination and headers	829
353.9 Paragraphs and lists	831
353.10 Contents lists	831
353.11 Floats and captions	836
353.12 Page notes	841
353.13 Decorative text	843
353.14 Poetry	843
353.15 Boxes, verbatims and files	843
353.16 Cross referencing	844
353.17 Back matter	845
353.18 Miscellaneous	845
353.19 Final patchwork	846

Change History and Index

847

List of Figures

1	tutorial.tex listing	73
---	----------------------	----

List of Tables

1	TeX-HTML generation — lwarp package — Supported features	57
2	Required software programs	65
3	Files created along with the print version	75
4	Package options	89
5	HTML settings	91
6	Section HTML headings for word-processor conversion	138
7	Section depths and HTML headings	148
8	Tabular baseline	349
9	Tabular HTML column conversions	350
10	Cross-referencing data structures	392
11	Float data structures	402
12	AMStm package — CSS styling of theorems and proofs	519
13	Ntheorem package — CSS styling of theorems and proofs	692
14	Theorem package — CSS styling of theorems and proofs	755

2 Updates

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

For a detailed list of the most recent changes, see the end of the Change History on page 865.

v0.53:

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:

documentation

- Improved install instructions regarding `lwarp_baseline_marker.png`.
- Added documentation regarding footnotes in section headings, and footnotes with `\VerbatimFootnotes` from **fancybox**, **fancyvrb**. See section 9.4.4.

SVG math

- Added documentation regarding font selection when using $\text{Xe}\text{L}\text{A}\text{T}\text{E}\text{X}$ or $\text{Lua}\text{L}\text{A}\text{T}\text{E}\text{X}$ with **fontspec** and traditional font packages. See section 8.1.
- Fix: Limit the number of background tasks when generating `lateximages`.
- Added user-adjustable SVG math font scaling. See section 73.3.
- Added warnings if `lwarp_baseline_marker.png` is not present, or if **graphicx** or **graphics** is not loaded.
- Improved `\ensuremath` hashing expansion.
- Fix: `equation*` with `split`.
- `tabbing` now works inside a `lateximage`. Use for math in `tabbing`.

MathJax

- Fix: MathJax script was not executing in some conditions.
- Added `\CustomizeMathJax` to add custom functions. See section 9.6.

footnotes

- Fix: Footnote numbering when using `HTMLDebugComments`.
- Fix: Footnote paragraph tags.
- Fix: `FootnoteDepth` defaults to `\subsubsection`.

misc. fixes

- Fix: `\kill` in a `lateximage`.
- Fix: `\FileDepth`, misc. others, when input encoding is not `utf8`.
- Fix: `\texorpdfstring` in a section name.

packages

- **hyperref** emulation: Fix for `#`, `%`, `&`, `~`, `_` characters in URLs.
- **fancybox**, **fancyvrb**: Initial support for `\VerbatimFootnotes`.

- **nicefrac**: Added with fix for `\ensuremath`.
- **graphicx**: Fix for option defaults. Added v1.1a/b options.
- **endfloat**: Updated for v2.6.
- **url**: Fixes for active characters.

v0.51:

documentation

- Docs: Added **Things to avoid**.
- Docs: Added to **Converting an existing document**.
- Docs: Multiple authors and affiliations with custom classes. See section **9.5.1**.
- Docs: **tikz** with matrices. See section **9.7.1**.

SVG math

- Improved svg math baseline.
- Improved svg math font and color.
- Faster svg math rendering.
- Improved support for display math containing complicated math objects, such as **tikz-cd**. See section **9.6.6**.

MathJax

misc. fixes

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

packages

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

v0.50:

svg math

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

- Fixes: SVG math and/or `\underline` in a sectioning file name.
 - Improved svg display math and tags.
 - Improved svg math and **siunitx** alt tags.
 - Improved **siunitx** units.
 - Fix: `\ensuremath` with MathJax now creates a `lateximage`.
 - Fix: `\centering`, etc. in `svg math`, `lateximage`, `Tikz`.
 - Fix: Made various macros robust, additionally fixing **authblk**.
 - Fix: **ntheorem** if neither `standard` nor `amsthm` selected.
 - Fix: **listings**: Improved column alignment.
 - Fix: Load **fontspec** if necessary.
- misc. fixes**
- Added `xy`, `epstopdf`, `diagbox`, `pbox`, `bytefield`, `axodraw2`, `phfqit`, `schemata`, `dblfloatfix`, `nonfloat`, `morefloats`.
- packages**
- v0.49:**
- tabular**
- Added **xcolor** `\rowcolors`.
 - Fix: `\noalign` inside a `tabular`.
- math**
- Fix: `\eqref` in a caption.
- misc fixes**
- Fix: Incorrect PDF font size changes caused occasional HTML corruption.
 - Fix: **printlen** changes are now grouped for HTML output.
- packages**
- Added **vwcol**, **vertbars**, **hyphenat**, **lineno**, **fncineno**, **figsize**, **hypdestopt**, **pagegrid**, **pdfreder**, **luacolor**, **resizegather**.
- v0.48:**
- documentation**
- Added some documentation regarding converting an existing document. See section 7.
- cleveref**
- Updated compatibility for new **cleveref** v0.21.
- tabular**
- Fix: Ignores optional `tabular` column arguments.
- minor updates**
- Added `\leftline`, `\centerline`, `\rightline`.
 - Lists have improved font control via `\makelabel`.
 - Print-mode `lateximage` now boxed to the natural width of its multiline contents.
 - `abstract` now allows an optional name, as required by some classes.
- math**
- Fix: Improved spacing, `\mbox`, and font sizes with `svg math`, `Tikz`.
 - **siunitx**: Improved `svg math`, fraction compatibility, color output.
- misc. fixes**
- Fix: LOF/LOT links.
 - Fix: Virtual page size grouping caused excessive PDF page breaks.

- Fix: Parsing similar package names in a single `\usepackage`.
- Fix: Adapts to classes without `\part`.
- Fix: `\newline` in `\title` was causing `
` in window title.
- Fix: `\maketitle` with `\cr`, `\crrc`, `\noalign`, for **IEEEtran** class.
- Fix: **xfrac** neutralized `BlockClass` and others.
- Fix: **todonotes** and **luatodonotes**: Improved `\todotoc`.
- Added **colortbl**, **chapterbib**, **acro**, **acronym**, **hypernat**, **hypcap**, **stfloats**, **vmargin**, **fancyheadings**.
- **fancyref**: Now directly supported.

packages

v0.47:

math

- Improved SVG math baseline and sizing.
- Fixes: `svgmath` in captions, subcaptions, `\nameref`.
- Fixes: Line wrap at hyphen in HTML output.

packages

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

v0.46:

 name change
misc. fixes

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

v0.45:

documentation

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

memoir

- Added **memoir**, **memhfixc**. See section 9.12.

cross-references

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

math

- Fix: Now allows `MATHJAX` inside `tabbing`.

bibliography

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

misc. fixes

- Fix: Empty lines between tabular rows.
- Fix: “Improper `\prevdepth`” with `minipages`, `lists`.

- Fix: Incorrect SVG math and lateximages with **subfig**.
- Fix: Lateximages from incorrect pages with Mathjax.
- Fix: Missing sidetoc if using **listings**.
- Fix: Added an **array** emulation package.
- Added **subfigure**, **prettyref**, **hanging**, **midpage**, **flafter**, **fltrace**, **changebar**, **endfloat**, **continue**, **fwlw**, **turnthepage**, **footnpag**, **pagesel**, **textfit**, **titleref**.

packages

v0.44:

koma-script

- Added **koma-script** classes (except **scrlltr2**, **scrjura**).
- Added **scrxextend**, **scllayer**, **scllayer-notecolumn**, **scllayer-scrpage**, **scrhack**, **tocstyle**, **tocbasic**.

HTML title and author

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

encodings

- If using **pdflatex**, automatically loads T1 and UTF8 encodings. (Additional **fontenc** encodings may be loaded after **lwarp**.)

lists

- Added **list** and **trivlist** environments, **hang**.

tabular

- Fix: `\multicolumn` alignment if formatting for a word processor.
- Added **ltxtable**.

math

- Fix: MATHJAX combined with lateximages.
- **algorithmicx**: Improved comment symbol and floating.

packages

- Completed **todonotes** and **luatodonotes**.
- Added **todo**, **easy-todo**, **fixmetodonotes**, **fixme**.
- Added **soulutf8**, **soulpos**, **cancel**.
- Added **section**, **fancyref**, **ifoddpage**.
- Added **preview**, **atbegshi**, **watermark**.
- Improved **tocloft** `\newlistof` and `\newlistentry`.

v0.43:

- Docs: Reorganized HTML customization, added an HTML settings table. See section **8.3**.

footnotes

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

sectioning

- Fix: Expansion in section name.

tabular

- Fix: Ignore spaces in tabular column specification.
- Fix: Tabular rules at bottom or when finishing incomplete rows.

math

- Fix: `\multicolumn` at/bang/before/after specifications, trim, and vertical rules.
- Fix: **supertabular** and **xtab** column misalignment.
- Fix: `equation*`.
- Fix: SVG math in a section name.
- Fix: `\ref` and `\eqref` in SVG math.

packages

- Added **todonotes** and **luatodonotes** (but only disabled).
- Added **breakurl**.
- **hyperref**: Fix: Several macros were made robust, `\Gauge` added.

v0.42:Support T_EX!

- Added T_EX development support page, [Supporting T_EX development](#).
- Improved assistance for word-processor conversions when boolean `FormatWP` is set true. See section 11.

word-processor conversion

- ⚠ name change
- ⚠ name change

- The boolean `FormatWordProcessor` has been renamed `FormatWP`.
- The boolean `HTMLMarkFloats` has been renamed `WPMarkFloats`.
- New booleans control whether to place additional marks around mini-pages, at the table of contents, at the LOF and LOT, and whether to print math as \LaTeX source for copy/paste into the **LibreOffice Writer TeXMaths** extension.
- Improved formatting for numerous objects. See section 11.

tabbing

- Add: tabbing environment.

overpic

- Add: **overpic** package. See section 257.

math

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

symbols

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

load order

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

v0.41:

tabular

- Added tabular vertical rules, subject to some limitations. See the rules section of section 9.9.
- Improved **booktabs**: Width and trim are honored.

- ⚠ new syntax

- Added `\mcolrowcell` for empty cells inside a `\multicolumnrow`. Use `\mcolrowcell` instead of `\mrowcell` for two-dimensional cells created by `\multicolumnrow`. Continue to use `\mrowcell` for empty cells in a `\multirow`. See section 243.2 on section 243.2.

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

v0.40:**graphics, graphicx**`\includegraphics path`

⚠ image file extensions

bigdelim**symbols****fixes**

margins

columns

footnotes

tabular

sectioning

- **graphics** and **graphicx** have been moved from the **lwarp** core, and are only loaded if requested with `\usepackage`.
- Improved **graphics** `\graphicspath` support. Multiple image directories may now be used. Refer to **.pdf files without a file extension** to allow the HTML version to use a `.svg`, `.png`, `.jpg`, or `.gif` version instead. See section 9.7.
- **grffile** is now directly supported instead of emulated.
- Fix for **bigdelim**, and improved documentation. See section 113.
- Improved \LaTeX and **textcomp** symbols.
- Fix for \LaTeX logos and `\InlineClass`, etc. inside a `lateximage`.
- Fix for **xltextra** with X_{\LaTeX} .
- Fixes for **tocbibind** with `\simplechapter`, etc.
- Fixes for `\multicolumnrow` and `\nullfonts` with older versions of **multirow** and **xparse**.
- Added `\underline`.
- Added **adjmulticol**.
- Added **cuted**, **midfloat**.
- Added **pfnote**, **fnpos**, **dblfnote**.
- Added **stabular**, **tabls**.
- Added **sectsty**, **anonchap**, **quotchap**.

v0.39:

title pages

⚠ `\published and`
`\subtitle`

⚠ load order

tabular

multi column/row cell

- Improved the titlepage HTML code, `\thanks` notes, and `\maketitle`. **titling** is no longer required, but is still supported. The `\published` and `\subtitle` fields are no longer provided, but `\AddSubtitlePublished` replicates them using **titling**. See section 59.8. **authblk** is added, and should be loaded before **titling**. See section 59.
- `\multirow` now supports the new optional `vpos` argument.
- Added `\multicolumnrow` for combined `\multicolumn` and `\multirow`. See section 243.2.
- Tabular special cases:
 - Added `\TabularMacro` to mark custom macros inside tabular data cells, avoiding row corruption. See section 9.9.

⚠ macros inside tabular

- ⚠ **tabular defined inside another environment**
- Added `\ResumeTabular` for use when a tabular environment is defined inside another environment. See section 9.9.
- tabular
- Added `supertabular`, `xtab`, `bigstrut`, `bigdelim`.
- margins
- Added `fullwidth`.
- page layout
- Added `addlines`, `anysize`, `a4`, `a4wide`, `a5comb`, `textarea`, `zwpagelayout`, `typearea`, `ebook`.
- v0.38:**
- forced single-pass compile
- Added `lwarpmk print1` and `lwarpmk html1` actions to force a compile of the project a single time. Useful when multiple passes are not needed, or changes were not detected.
- starred sections
- Added `\ForceHTMLPage` and `\ForceHTMLTOC` to force a starred sectional unit onto its own HTML page and with its own TOC entry. See section 9.5.2.
- updated tutorial
- Modified the tutorial to use the new `\ForceHTMLPage` and `\ForceHTMLTOC` macros.
- packages
- Added `appendix`, `tocbibind`, `fncychap`, `fix2col`.
- font size
- Added `resize`, `scalefmt`.
 - Added `realscripts`, `metalogo`, `xltxtra`.
 - Added `grffile`, `romanbar`.
- page numbering
- Added `arabicfront`, `chappg`, `nonumonpart`, `nopageno`, `romanbarpagenumber`.
- front & back matter
- Docs: Improved description of the use of front/back matter. See section 9.5.
 - Fix: `color` requests `xcolor`.
 - Fix: `\part` for `article` class.
- v0.37:**
- `\include` for HTML
- `\include` now maintains independent `.aux` files for HTML versions.
- `latexmk`
- `comment`, used by `lwarp`, now maintains independent cut files for print and HTML versions, helping `latexmk` to better know whether to recompile.
- accents and symbols
- Improved support for \LaTeX accents, `textcomp`, `siunitx` symbols.
- `babel-french`
- Improved `babel-french` handling for load order and `~` tilde.
- v0.36:**
- boxes and frames
- Recorganized the documentation section regarding special cases and limitations. (Section 9)
 - Improved source formatting.
 - `\fbox` and related now use `\fboxsep` and `\fboxrule`.
 - `\makebox` and `\framebox` now use width and position.

- `\fcolorbox` and related now work inside a `lateximage`.
- **babel-french**: Improvements for French variants, load order, footnotes, ellipses.
- **footnotes**: Improved footnote numbering. `lateximage` footnotes now appear as regular footnotes to match the numbering of the print version. Also fixed a regression with `MATHJAX`.
- **siunitx**: Improved `siunitx` units.
- Fix for filenames while using `MATHJAX`.
- Fix for `\rule` when `xcolor` is not loaded.
- Added **transparent**, **upref**.

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

v0.34:

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


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

 instead of:


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

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


```
\InlineClass[style]{class}{text}
```
- spans with minipages**
 - Improved compatibility between spans, minipages, lists, frames, and math. Handles minipages and lists inside an `HTML` span, such as an `\fbox` containing a minipage, although with minimal `HTML` formatting. See section 9.3.3. `\fboxBlock` is added to frame minipages, tables, and lists with full `HTML` formatting but no longer inline, and behaves as `\fbox` for print output. The `fminipage` environment is added for framed minipages, as an environment with full `HTML` formatting, and draws a framed minipage in print output. See section 9.3.5. `\fbox` and minipages now often work in `SVG` math and `lateximages`. `MATHJAX` supports `\fbox`, but not `\fboxBlock` nor `fminipage`.
- lateximage, SVG math, tabular**
 - Improved compatibility between `lateximage` and `minipage`, `\parbox`, `\makebox`, `\fbox`, `\framebox`, `\raisebox`, `\scalebox`, `\reflectbox`, `tabular`, **booktabs**.
 - Improved font control for `lateximagees` and `SVG` math.
- eqnarray**
 - Added the `eqnarray` environments.
- verbatim packages**
 - **fancyvrb** is no longer required (preloaded), but is still supported.
 - Added **verbatim** and **moreverb**.

framing packages
list packages

- Added **fancybox**, **boxedminipage2e** and **shadow**.
- **enumitem** is no longer required, but is still supported.
- Added **enumerate** and **paralist**.
- **titleps** is no longer required, but is still supported.
- Added **crop**.
- Added **rotfloat**, **marginfit**, and several minor packages; see the change log.

babel-french

- Adds fixed-width HTML spaces around punctuation when using **babel-french**. LuaTeX does not yet use the extra punctuation spacing.

v0.33:

- Tabular @ and ! columns now have their own HTML columns.
- & catcode changes are localized, perhaps causing errors about the tab alignment character &, so any definitions of macros or environments which themselves contain tabular and & must be enclosed within `\StartDefiningTabulars` and `\EndDefiningTabulars`. See section 65.4.1. This change is not required for the routine use of tables, but only when a table is defined inside another macro or environment, and while also using the & character inside the definition. This may include the use inside conditional expressions.
- Several math environments were incorrectly placed inline. Also, for **amsmath** with `svg math`, the `fleqn` option has been removed, resulting in improved spacing for aligned equations.
- Bug fixes; see the changelog.

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

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

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

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

v0.30:

 **lwarp-newproject**

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

To modify existing documents, remove from the document source:

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

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

⚠ HTML setup changes.

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

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

Old Package Option	New Package Option
<code>lwarpmklang</code> (new)	<code>IndexLanguage</code> <code>xdyFilename</code>

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

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

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

- The file `lwarp_html.xdy` has been renamed `lwarp.xdy`. To update each document's project:
 1. Make the changes shown above.
 2. Recompile the document in print mode. This updates the project's configuration files, and also generates the new file `lwarp.xdy`.
 3. The old file `lwarp_html.xdy` may be deleted.
- The new **lwarp** package option `optnxdyFilename` may be used to tell **lwarpmk** to use a custom `.xdy` file instead of `lwarp.xdy`. See section 8.12.
- Improvements in index processing:
 - **xindy**'s language is now used for index processing as well as glossary.
 - Print mode without **latexmk** now uses **xindy** instead of **makeindex**.
 - **texindy/xindy** usage depends on **pdflatex** vs **xelatex**, **lualatex**.

- For **pdflatex** and **texindy**, the `-C utf8` option is used. This is supported in modern distributions, but a customized `lwarpmk.lua` may need to be created for use with older distributions.

v0.29:

- Add: `lwarpmklang` option for **lwarp-newproject** and **lwarp**. Sets the language to use while processing the glossary. (As of v0.30, this has been changed to the `IndexLanguage` option.)
- Fix: `\includegraphics` when no optional arguments.

v0.28:

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

3 Introduction

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

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

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

As a package running directly in \LaTeX , **lwarp** has some advantages over other methods of HTML conversion. \TeX itself is still used, allowing a wider range of \TeX trickery to be understood. Lua expressions are still available with Lua \TeX . Entire categories of \LaTeX packages work as-is when used with **lwarp**: definitions, file handling, utilities, internal data structures and calculations, specialized math-mode typesetting for various fields of science and engineering, and anything generating plain-text output. Blocks of PDF output may be automatically converted to SVG images while using the same font and spacing as the original print document, directly supporting `Tikz` and `picture`. Numerous packages are easily adapted for HTML versions, either by loading and patching the originals, or by creating nullified or emulated replacements, and all without resorting to external programming. As a result, several hundred packages have already been adapted (table 1), and an uncounted number more work as-is.

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

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

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

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

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

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

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

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

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

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

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

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

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

3.1 Supported packages and features

Table 1 lists some of the various \LaTeX features which may be used.

Table 1: \LaTeX -HTML generation — **lwarp** package — Supported features

Category	Status and supported features.
Engines:	pdf \LaTeX , Xe \LaTeX , Lua \LaTeX
Classes:	book, report, article, scrbook, screprt, scrartcl, memoir.
Koma-script:	scxextend, sclayer, scrhack. Others as listed below.
Memoir:	memhfixc
Page layout:	geometry, fancyhdr, titleps, sclayer-scrpage, typearea, vmargin, addlines, anysize, a4, a4wide, a5comb, textarea, zwpagelayout, ebook, preview, draftwatermark, watermark, everyshi, atbegshi, continue, fwlw, turnthepage, pagesel, blowup, pagegrid, grid, ltxgrid.
Sectioning:	Adds <code>FileDepth</code> for splitting the HTML output. Files may be numbered sequentially or named according to section name. Common short words and punctuation are removed from the filenames. titlesec, fncychap, sectsty, section, anonchap, quotchap, sectionbreak.
Table of contents, figures, tables:	Supported, with hyperlinks. tocbibind, titletoc, tocloft, tocbasic, and tocstyle, multitoc.
Title page:	<code>\maketitle</code> , <code>titlepage</code> , titling, authblk.
Front & back matter:	abstract, appendix.
Indexing:	texindy is used, with hyperlinks. idxlayout.
Glossary:	glossaries and xindy are used.
Bibliography:	cite, natbib, biblatex, chapterbib, backref, hypernat.

lwarp Supported Functions — continued

Category	Status
Cross-references:	hyperref, cleveref, varioref, fancyref, prettyref, titleref, url, breakurl, xurl, bookmark, hypdestopt.
Languages:	babel. (polyglossia is untested.)
Margin notes:	marginfit, marginfix, sclayer-notecolumn.
Footnotes:	Adds FootnoteDepth to print footnotes at section breaks. footnote, footmisc, marginnote, sidenote, pagenote, endnotes, endheads, footnpag, nccfoots.
Math:	Converted to SVG images with HTML <alt> tags containing the \LaTeX source for the math expression. MATHJAX supported as an alternative. $\mathcal{A}\mathcal{M}\mathcal{S}$ environments are supported. User-defined macros are available during conversion, due to native \LaTeX processing.
Theorems:	Native \LaTeX theorems, theorem, amsthm, ntheorem.
Additional math:	Math fonts via SVG images, resizegather, xy. As-is: delarray, bm, braket, amscd, pb-diagram, tikz-cd, etc.
Display math with $\backslashdisplaymathother$:	Complicated math objects in display math, such as tikz-cd, etc.
Units and fractions:	siunitx, xfrac, nicefrac, units
Science and engineering:	listings, algorithmicx, bytefield, axodraw2, phfqit, mhchem, chemfig, chemformula, chemmacros, chemnum, chemgreek. Tested to work with SVG math: physics, slashed, heppennames, hepnicenames, simpler-wick, linop, blochsphere, bohr, elements, etc. (<i>Math-mode packages generally work as-is with SVG math.</i>)
Liberal arts:	schemata

lwarp Supported Functions — continued

Category	Status
Floats:	Appear where declared. float , rotfloat , newfloat , caption and subcaption , subfig , subfigure , capt-of , placeins , trivfloat , floatrow , subfloat , keyfloat , wrapfig , cutwin , floatflt , flafter , fltrace , endfloat , hypcap , stfloats , fix2col , dblfloatfix , nonfloat , morefloats .
Tabular:	<code>tabular</code> environment, array , tabularx , tabulary , threeparttable , multirow , longtable , supertabular , xtab , ltxtable , booktabs , colortbl , bigdelim , diagbox .
Graphics:	graphics and graphicx . <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. rotating is emulated but all objects are unrotated. picture , tikz , and xy are converted to an SVG image. grffile , epstopdf , overpic , figsize .
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 \TeX environments, enumitem , enumerate , paralist , hang .
Environments:	Standard \TeX environments.
<code>minipage</code> , <code>\parbox</code> :	Some HTML5-imposed limitations. Nested minipages are supported. pbox .
Quotations:	verse , csquotes , epigraph
Verbatim:	verbatim , moreverb , fancyvrb (except for verbatim footnotes), shortvrb .
Frames:	framed , fancybox , mdframed , boxedminipage2e , shadow , vertbars .
Multi-columns:	multicol , adjmulticol , vwcol .

lwarp Supported Functions — continued

Category	Status
Margins:	midpage, hanging, fullwidth.
Line numbering:	lineno, flineno.
Acronyms:	acro, acronym.
Todo notes:	todo, todonotes, easy-todo, fixmetodonotes, fixme, changebar.
Direct formatting:	<code>\emph</code> , <code>\textsuperscript</code> , <code>\textbf</code> , etc are supported. <code>\bfseries</code> , etc. are only supported in a few cases. lettrine, ulem, soul, soulutf8, soulpos, cancel, relsize, scalefmt, textfit, realscripts, hyphenat, pdfrender, luacolor.
Ordinals:	nth, fmtcount, engord.
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>\qquad</code> , <code>\hspace</code> .
Rules:	<code>\rule</code> with width, height, raise, text color.
HTML reserved characters:	<code>\&</code> , <code>\textless</code> , and <code>\textgreater</code> are converted to HTML entities.
Fonts:	Used as-is. Appear in SVG math expressions or embedded image environments.
Symbols:	Native \TeX diacriticals, textcomp, textgreek, textalpha.
Working as-is:	Various utility, calculation, file, and text-only packages, such as calc, fileerr, somedefs, trace, xspace . Also, any math-only packages, including specialized typesetting for various fields of science and engineering.

4 Alternatives

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

4.1 Internet class

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

4.2 TeX4ht

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

Prog `htlatrix` 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 most cases, **lwarp** provides a better HTML conversion, while supporting more packages. `TeX4ht` produces several other forms of output beyond HTML.

4.3 Translators

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

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

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

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

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

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

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

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

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

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

4.4 AsciiDoc and AsciiDoctor

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

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

4.4.1 AsciiDoctor-LaTeX

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

AsciiDoctor-LaTeX:

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

4.5 Pandoc

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

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

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

4.6 Word processors

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

4.7 Commercial systems

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

- Prog Flare
 Prog Madcap

4.8 Comparisons

AsciiDoc, Pandoc, and various other markup languages typically have a syntax which tries to be natural and human-readable, but the use of advanced features tends to require many combinations of special characters, resulting in a complicated mess of syntax. By contrast, \LaTeX spells things out in readable words but takes longer to type, although integrated editors exist which can provide faster entry and a graphic user interface. For those functions which are covered by the typical markup language it is arguable that \LaTeX is comparably easy to learn, while \LaTeX provides many more

advanced features where needed, along with a large number of pre-existing packages which provide solutions to numerous common tasks.

Text-based document-markup systems share some of the advantages of \TeX 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 \TeX back end, yielding high-quality results especially when the \TeX template is adjusted, but they lose the ability to use \TeX macros and other \TeX source-document features.

The effort required to customize the output of each markup system varies. For print output, \TeX 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 \TeX optional macro parameters, but further customization may require patching \TeX code.

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

5 Installation

Table 2 shows the tools which are used for the \LaTeX to HTML conversion. In most cases, these will be available via the standard package-installation tools.

Detailed installation instructions follow.

Table 2: Required software programs

Provided by your \LaTeX distribution:

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

\LaTeX : `pdflatex`, `xelatex`, or `lualatex`.

The lwarp package: This package.

The lwarpmk utility: Provided along with this package. This should be an operating-system executable in the same way that `pdflatex` or `latexmk` is. It is possible to have the `lwarp` package generate a local copy of `lwarpmk` called `lwarpmk.lua`. See table 3.

`luatex`: Used by the `lwarpmk` program to simplify and automate document generation.

`xindy`: The `xindy` program is used by `lwarp` to create indexes. On a MiKTeX 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 \LaTeX code. On a MiKTeX system, `Perl` may need to be installed first.

`pdfcrop`: Used to pull images out of the \LaTeX PDF.

POPPLER PDF utilities:

`pdftotext`: Used to convert PDF to text.

`pdfseparate`: Used to pull images out of the \LaTeX PDF.

`pdftocairo`: Used to convert images to SVG.

These might be provided by your operating-system package manager.

From POPPLER: poppler.freedesktop.org.

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

```
Enter ⇒ brew install poppler
```

For WINDOWS, see:

<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 is required for some of the POPPLER PDF utilities.

strawberryperl.com (recommended), perl.org

Automatically downloaded from the internet as required:

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

5.1 Installing the lwarp package

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

Pre-installed: Try entering into a command line:

```
Enter ⇒ kpsewhich lwarp.sty
```

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

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

```
Enter ⇒ tlmgr install lwarp
```

MiK_TE_X: If using MiK_TE_X:

1. To install **lwarp** the first time, use the **MiK_TE_X Package Manager (Admin)**.
2. To update **lwarp**, use **MiK_TE_X 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 T_EX-related packages.

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

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

T_EX Live:

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

MiK_TE_X:

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

CTAN .dtx and .ins files: Another form of T_EX 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 documentation:


```
Enter ⇒ pdflatex lwarp.dtx
```

 (several times)
6. Create the .sty files:


```
Enter ⇒ pdflatex lwarp.ins
```
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` to the same place as the .sty files.
9. Copy the documentation `lwarp.pdf` to a source directory in the local tree, such as:


```
<texlocal>/doc/local/lwarp
```
10. Renew the cache:


```
Enter ⇒ mktexlsr
```

 — or —


```
Enter ⇒ texhash
```

 Or, for WINDOWS MiK_TE_X, start the program called **MiKTeX Settings (Admin)** and click on the button called Refresh FNDB.
11. See section 5.2.1 to generate your local copy of **lwarpmk**.
12. Once the local version of `lwarpmk.lua` is installed, it may be made available system-wide as per section 5.2.

Project-local CTAN .dtx and .ins files: The .dtx and .ins files may be downloaded to a project directory, then compiled right there, alongside the document source files. The resultant *.sty and `lwarpmk.lua` files may be used as-is, so long as they are in the same directory as the document source. The file `lwarp_baseline_marker.png` 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!

5.2 Installing the lwarpmk utility

(Note: If **lwarpmk** is not already installed, it is easiest to use a local copy instead of installing it system-wide. See section 5.2.1.)

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

1. At a command line, try executing **lwarpmk**. If the **lwarpmk** help message appears, then **lwarpmk** is already set up. If not, it is easiest to generate and use a local copy. See section 5.2.1.
2. For MiKTeX, try updating the **miktex-misc** package. This may install the **lwarpmk** executable for you.

Otherwise, continue with the following:

3. Locate the file `lwarpmk.lua`, which should be in the `scripts` directory of the TDS tree. On a 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 5.2.1.)

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 **pdf_latex** and **makeindex**.

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

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

- (c) Make the link executable:

```
Enter ⇒ chmod 0755 lwarpmk
```

WINDOWS 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 binaries. These will be in a directory such as:
C:\Program Files\MiKTeX 2.9\miktex\bin\x64
In this directory you will find programs such as `pdflatex.exe` and `makeindex.exe`.
 - (b) Create a new file named `lwarpmk.bat` containing:
texlua "C:\Program Files\MiKTeX 2.9\scripts\lwarp\lwarp.texlua" %*
- This will call the copy of `lwarpmk.lua` which is in the `scripts` directory of the distribution.

5.2.1 Using a local copy of lwarpmk

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

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

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

2. When the tutorial is compiled with `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.

5.3 Installing additional utilities

To test for the existence of the additional utilities:

Enter the following in a command line. If each programs' version is displayed, then that utility is already installed. See table 2 on page 65.

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

To install xindy, latexmk, and pdfcrop:

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

```
http://ctan.org/pkg/xindy
http://ctan.org/pkg/latexmk
http://ctan.org/pkg/pdftocrop
```

```
Prog pdftotext
Prog pdfseparate
Prog pdftocairo
```

To install the POPPLER utilities to a Unix/Linux system:

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

To install the POPPLER utilities to a MACOS machine:

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

To install the POPPLER utilities to a WINDOWS machine:

1. See table 2 on table 2.
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.

Prog perl **To install Perl to a WINDOWS machine:**

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

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

6 Tutorial

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

[Need help?](#)

The index to this document contains several hundred custom entries. Also included are automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

6.1 Starting a new project

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

File `tutorial.tex`

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

Copy from the documentation PDF:

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

Copy from the lwarp documentation directory:

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

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

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

File `lwarp_tutorial.txt`

⚠ Note: `.txt` suffix!

⚠ Bad formatting!

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

3. Compile the project:

```
Enter ⇒ pdflatex tutorial.tex
```

(several times)

(**xelatex** or **lualatex** may be used as well.)

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 3](#). 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, \TeX program (**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
\usepackage[T1]{fontenc}
\usepackage[utf8]{inputenc}
\else
\usepackage{fontspec}         % XeLaTeX or LuaLaTeX
\fi

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

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

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

% --- LATEX AND HTML CUSTOMIZATION ---
\title{The Lwarp Tutorial}
\author{Some Author}
\setcounter{tocdepth}{2} % Include subsections in the \TOC.
\setcounter{secnumdepth}{2} % Number down to subsections.
\setcounter{FileDepth}{1} % Split \HTML\ files at sections
\booltrue{CombineHigherDepths} % Combine parts/chapters/sections
\setcounter{SideTOCDepth}{1} % Include subsections in the side\TOC
\HTMLTitle{Webpage Title} % Overrides \title for the web page.
\HTMLAuthor{Some Author} % Sets the HTML meta author tag.

```

```

\HTMLLanguage{en-US}           % Sets the HTML meta language.
\HTMLDescription{A description.}% Sets the HTML meta description.
\HTMLFirstPageTop{Name and \fbox{HOMEPAGE LOGO}}
\HTMLPageTop{\fbox{LOGO}}
\HTMLPageBottom{Contact Information and Copyright}
\CSSFilename{lwarp_sagebrush.css}

\begin{document}

\maketitle                     % Or titlepage/titlingpage environment.

% An article abstract would go here.

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

\chapter{First chapter}

\section{A section}

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

\subsection{A subsection}

See \cref{fig:withtext}.

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

\section{Some math}

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

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

\end{document}

```

Table 3: Files created along with the print version

- tutorial.pdf:** The PDF output from \LaTeX . 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 \LaTeX 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.xdy:** Used by **lwarp** while creating an index. This file should not be modified by the user. A custom file may be used instead, if necessary.
- lwarp_one_limage.txt:** For WINDOWS only. Used to process svg images in the background. Copied to `lwarp_one_limage.cmd` when images are generated.
- lwarp_mathjax.txt:** Inserted into the HTML files when MATHJAX is used to display math. This file should not be modified by the user.
- comment.cut:** A temporary file used by **lwarp** to conditionally process blocks of text. This file may be ignored.

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

- lwarpmk.lua:** A local copy of the **lwarpmk** utility.
- On Unix-related operating systems this file must be made executable:
- ```
chmod u+x lwarpmk.lua
```
- This may be useful to have to archive with a project for future use.

## 6.2 Compiling the print version with lwarpmk

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

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

1. Re-compile the print version:

```
Enter ⇒ lwarpmk print
```

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

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

```
Enter ⇒ lwarpmk print
```

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

4. Force a recompile to occur.

```
Enter ⇒ lwarpmk again
```

```
Enter ⇒ lwarpmk print
```

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

5. Process the index.<sup>67</sup>

```
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.

---

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

<sup>6</sup>A `lwarpmk printglossary` command is also available to process a glossary produced with the glossaries package. See section 9.5.9.

<sup>7</sup>Also see section 9.5.10 for index options.

### 6.3 Compiling the HTML version with lwarpmk

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

1. Compile the HTML version:

```
Enter ⇒ lwarpmk html
```

- (a) **lwarpmk** uses  $\text{\LaTeX}$  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`<sup>8</sup>, `Some-math.html`, and the document's index in `_Index.html`.<sup>9</sup>

2. View the homepage in a web browser.

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

math

Note that math is still displayed as its plain-text  $\text{\LaTeX}$  source until the images of the math expressions have been generated. Math may be displayed as SVG images or by a MATHJAX script, as seen in sections 6.4 and 6.5.

3. Force a recompile:

```
Enter ⇒ lwarpmk again
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk print
```

4. Process the HTML index and recompile:<sup>1011</sup>

```
Enter ⇒ lwarpmk htmlindex
```

```
Enter ⇒ lwarpmk html
```

`_Index.html` is updated for the new  $\text{\LaTeX}$  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
```

<sup>8</sup>`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`.

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

<sup>10</sup>A `lwarpmk htmlglossary` command is also available to process a glossary produced with the `glossaries` package. See section 9.5.9.

<sup>11</sup>Also see section 9.5.10 for index options.

## 6.4 Generating the SVG images

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

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

1. Create the svg images:

```
Enter ⇒ lwarpmk limages
```

```
Enter ⇒ lwarpmk html
```

2. Move to the tutorial's math page and reload.
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 sequence numbers.

 **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 has

```
\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, **lwarp** uses an MD5 hash on its  $\LaTeX$  source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `Tikz` require one image file each. For a document with a large amount of math, see section 6.5 to use `MATHJAX` instead.

## 6.5 Using MATHJAX for math

[math with MATHJAX](#) Math may also be represented using the MATHJAX JAVASCRIPT project.

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

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

2. Recompile

```
Enter ⇒ lwarpmk html
```

3. Reload the math page.

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

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

## 6.6 Changing the CSS style

For a formal css style, add to the preamble:

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

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

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

See section [8.4](#) for more information about modifying the CSS styling of the document.

## 6.7 Customizing the HTML output

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

See section [8.3](#) for more information.

## 6.8 Using latexmk

**latexmk** is a  $\TeX$  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.

[forced single-pass recompile](#) A single recompile may be forced with:

```
Enter ⇒ lwarpmk print1
```

and/or

```
Enter ⇒ lwarpmk html1
```

## 6.9 Using XeLaTeX or LuaLaTeX

X<sub>ε</sub>LaTeX or LuaLaTeX may be used instead of LaTeX.

1. Remove the auxiliary files for the project:

```
Enter ⇒ lwarpmk cleanall
```

2. Use **xelatex** or **lualatex** to recompile the printed version.

```
Enter ⇒ xelatex tutorial.tex
```

-or-

```
Enter ⇒ lualatex tutorial.tex
```

When the recompile occurs, the configuration files for **lwarpmk** are modified to remember which TeX engine was used. X<sub>ε</sub>LaTeX or LuaLaTeX 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.

## 6.10 Using a glossary

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

Opt `IndexLanguage` To assign a language to be used while processing the index and glossary, use the `IndexLanguage` option:

---

```
\usepackage[IndexLanguage=english]{lwrap}
```

---

To process the glossary for the print version:

```
Enter ⇒ lwrapmk printglossary
```

To process the glossary for the HTML version:

```
Enter ⇒ lwrapmk htmlglossary
```

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

## 6.11 Cleaning auxiliary files

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

```
Enter ⇒ lwarpmk clean
```

## 6.12 Cleaning auxiliary and output files

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

```
Enter ⇒ lwarpmk cleanall
```

## 6.13 Cleaning the images from the lateximages directory

To remove the images from the `lateximages` directory, including all `svg` math images:

```
Enter ⇒ lwarpmk cleanlimages
```

## 6.14 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 [project]
```

## 6.15 Processing multiple projects in the same directory

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

To create each project:

```
Enter ⇒ pdflatex project_a
```

```
Enter ⇒ pdflatex project_b
```

Each project is given its own configuration file:

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

To compile each project with `lwarkmk`:

```
Enter ⇒ lwarpmk print project_a
```

```
Enter ⇒ lwarpmk html project_b
```

## 6.16 Using the make utility

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

```
lwarpmk pdftohtml [project]
```

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

## 7 Converting an existing document

To convert an existing document for use with `lwarp`:

1. Arrange the document in the following order:
  - (a) Declare the `\documentclass`.
  - (b) Load text fonts.
  - (c) Load `inputenc`, `fontenc`, and/or `fontspec`.
  - (d) Load `lwarp`.
  - (e) Load remaining packages.
2. Also modify the document:
  - (a) Remove `.pdf` file extensions. Change:

```
\includegraphics{filename.pdf}
```

to:

```
\includegraphics{filename}
```

Other image formats may have a file extension.
  - (b) Avoid the `scale` option. Change:

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

to:

```
\includegraphics[width=<yy>\linewidth]
```
  - (c) Possible changes to tabular environments include `*` columns, `multirow`, `longtable`, `supertabular`, `xtab`, `bigdelim`. See section 9.9.

- 
- (d) Possible option clashes with **memoir**. See section 9.12.
  - (e) Other changes as per **Special cases and limitations**, section 9.
3. Create an SVG version of any PDF image.
  4. Manually compile the print version with **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?](#)

---

The index to this document contains several hundred custom entries. Also included are automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A **Troubleshooting** section is also available.

---

## 8 Additional details

### 8.1 Font and UTF-8 support

**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 usually prevents the use of older bit-mapped fonts.

[pdflatex, T1, UTF8](#) While using **pdflatex**, **fontenc** is automatically loaded 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.

[vector fonts](#)  
[Computer Modern](#) While using **pdflatex**, if no font-related package is specified, the default bit-mapped Computer Modern font is used, so simply add



```
usepackage{lmodern}
```

to the preamble to enable the related vector font instead, or use

```
\usepackage{dejavu}
```

or other font packages, which may provide an increased coverage of Unicode mappings. Avoid bit-mapped fonts.



X<sub>Y</sub>TeX and LuaTeX users must use the **fontspec** package. Do NOT use **fontenc**!

Place **fontspec** or **fontenc** and other font and UTF-8 related commands after the `\documentclass` command and before `\usepackage{lwarp}`. 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}` goes here, followed by any of:

2. Font and UTF-8 related commands:

- For X<sub>Y</sub>TeX or LuaTeX:

– **fontspec** and font choices

Pkg `fontspec`

[ligatures](#)

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

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

|      |                             |                                                                                                                                                                                                                                       |
|------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                             | • For <b>pdflatex</b> :                                                                                                                                                                                                               |
| Pkg  | <code>lmodern</code>        | – <b>lmodern</b> or other font-related packages                                                                                                                                                                                       |
| Pkg  | <code>fontenc</code>        | – <b>fontenc</b>                                                                                                                                                                                                                      |
| Pkg  | <code>inputenc</code>       | – <b>inputenc</b>                                                                                                                                                                                                                     |
| Pkg  | <code>newunicodechar</code> | – <b>newunicodechar</b>                                                                                                                                                                                                               |
| File | <code>glyphtounicode</code> | – <code>\input glyphtounicode.tex</code>                                                                                                                                                                                              |
|      |                             | – <code>\input glyphtounicode-cmr.tex%</code> from the pdfx package                                                                                                                                                                   |
|      |                             | – <code>\pdfgentounicode=1</code>                                                                                                                                                                                                     |
| Pkg  | <code>cmap</code>           | – <b>cmap</b>                                                                                                                                                                                                                         |
| Pkg  | <code>textcomp</code>       | – <b>textcomp</b>                                                                                                                                                                                                                     |
| Pkg  | <code>microtype</code>      | – <b>microtype</b> is automatically used by <b>lwarp</b> to turn off f,q,t,T,Q ligatures for the same browser-related reasons shown above. Also, the monospaced font is used during HTML tag generation to turn off $\TeX$ ligatures. |
|      | <code>ligatures</code>      |                                                                                                                                                                                                                                       |

- `\usepackage{lwarp}` (section 8.2) goes after any of the above, followed by:
- `\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**.
- `\setmonofont{TeX Gyre Cursor}` or similar may be required if using  $X_{\text{Y}}\TeX$  or  $\text{Lua}\TeX$  and **fontspec** along with traditional font packages such as **txfonts**, **newtxtext**, etc. This is required to turn off the monospaced font's ligatures with **fontspec** after loading the traditional font packages. Monospaced output ligatures must be turned off to produce the correct HTML characters.
- ... the rest of the preamble and the main document.

△ **fontspec with traditional font packages**

### 8.1.1 Indexes and UTF-8

**lwarp** uses the **xindy** program to processes indexes.

While using **xelatex** or **lualatex**, **xindy** is used for the index. Everything is handled in UTF-8 encoding, and should work as expected.

While using **pdflatex**, the **texindy** program is used with the `-C utf8` option, which is newly supported in recent distributions of  $\TeX$ . This option correctly sorts index entries into headings while using Latin languages, but will not work well with others.  $X_{\text{Y}}\TeX$  or  $\text{Lua}\TeX$  are recommended for non-Latin languages.

For an older distribution of  $\TeX$ , it may be necessary to generate a local version of `lwarpmk.lua` and modify it to remove the `-C utf8` option from the **texindy** call. See section 12.4.

Table 4: Package options

| Option                        | Description                                                                                                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <code>warpprint</code>        | Generate print output, and also generate configuration files.                                                         |
| <code>warpHTML</code>         | Generate HTML output.                                                                                                 |
| <code>mathsvg</code>          | Show math using SVG images.                                                                                           |
| <code>mathjax</code>          | Show math using MATHJAX.                                                                                              |
| <code>OSWindows</code>        | Force compatibility with MS-WINDOWS.                                                                                  |
| <code>BaseJobname</code>      | The <code>\jobname</code> to use. Set to the <code>\jobname</code> of the printed version even while generating HTML. |
| <code>HomeHTMLFilename</code> | The filename of the home page.                                                                                        |
| <code>HTMLFilename</code>     | A prefix for the filenames of the remaining web pages.                                                                |
| <code>IndexLanguage</code>    | The <code>xindy</code> language option used for index and glossary generation.                                        |
| <code>latexmk</code>          | Boolean for <code>lwarpmk</code> to use <code>latexmk</code> for compiling documents.                                 |
| <code>lwarpmk</code>          | Generate a local copy of <code>lwarpmk.lua</code> .                                                                   |
| <code>xdyFilename</code>      | Set a custom filename for <code>xindy</code> .                                                                        |

## 8.2 lwarp package loading and options

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

|     |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pkg | <code>lwarp</code>     | Load the <code>lwarp</code> package immediately after the font and UTF-8 setup commands.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Opt | <code>warpprint</code> | Usually controlled by <code>lwarpmk</code> , and not set in the document. Select the <code>warpprint</code> option to generate print output (default), or the <code>warpHTML</code> option to generate HTML5 output. The default is print output, so the print version may be compiled with the usual <code>pdflatex</code> , etc. When <code>lwarp</code> is loaded in print mode, it creates <code>&lt;project&gt;_html.tex</code> , which sets the <code>warpHTML</code> option before calling the user's source code <code>&lt;project&gt;.tex</code> . In this way, <code>&lt;project&gt;.tex</code> can <code>\usepackage{lwarp}</code> without any options to create a printed version, while <code>&lt;project&gt;_html.tex</code> will create an HTML version. |
| Opt | <code>warpHTML</code>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Opt | <code>mathsvg</code>   | For math display, select <code>mathsvg</code> (default), or <code>mathjax</code> . For more information about the math options, see section 9.6.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Opt | <code>mathjax</code>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

- 
- Opt `OSWindows` See section 8.5 if using WINDOWS.
- Opt `BaseJobname` Not intended for the user. Used internally by **lwarp** when creating the `*_html.tex` file used to compile the HTML version. See section 24.
- Opt `HomeHTMLFilename` See section 8.3.
- Opt `HTMLFilename` See section 8.3.
- Opt `IndexLanguage` If using an index or glossary, see section 24.
- Opt `latexmk` Has **lwarpmk** use **latexmk** to recompile the document several times if necessary. Otherwise, **lwarpmk** attempts to determine for itself whether to recompile. See section 8.3.
- Opt `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 24.
- Opt `xdyFilename` The default **xindy** filename is `lwarp.xdy`. If you wish to use a custom `.xdy` file for index generation, see section 24.

Table 5: HTML settings

| Option              | Description                                         |
|---------------------|-----------------------------------------------------|
| SideTOCDepth        | Sectioning depth of the sideroc.                    |
| FileDepth           | Sectioning depth of the file splits.                |
| CombineHigherDepths | Combine higher section levels.                      |
| FileSectionNames    | Use section names for file names, else use numbers. |
| FootnoteDepth       | Sectioning depth of footnotes.                      |
| \abstractname       | The name of the abstract.                           |
| \CSSFilename        | The css for the following files.                    |
| \HTMLLanguage       | The html lang tag.                                  |
| \HTMLTitle          | The HTML title meta tag, overriding \title.         |
| \HTMLAuthor         | The HTML author meta tag, overriding \author.       |
| \HTMLDescription    | The HTML description meta tag.                      |
| \HTMLFirstPageTop   | Heading for the home page.                          |
| \HTMLPageTop        | Heading for the other pages.                        |
| \HTMLPageBottom     | Footing for all pages.                              |

### 8.3 Customizing the HTML output

#### Placement!

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` **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 8.3.1 for examples of naming and numbering HTML files.

Opt `HTMLFilename` **HTMLFilename:** A filename prefix for the rest of the HTML web pages. Useful for numbered web pages with a common prefix. May be empty. See section 8.3.1 for examples of naming and numbering HTML files.

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

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

Opt `mathjax` **mathjax:** Selects MATHJAX for math output.

Default: `false`

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

Ctrl `tocdepth` **tocdepth:** Sectioning depth of the table of contents. See section 15 for a list of L<sup>A</sup>T<sub>E</sub>X stack depths.

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

**sideroc**

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

It is recommended to set:

```
SideTOCDepth = FileDepth
```

or

```
SideTOCDepth = FileDepth+1
```

**⚠ inaccessible pages**

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

Ctrl `FileDepth`  
 Default: `-5`

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

- To place the entire file into one HTML page, use:  
`\setcounter{FileDepth}{-5}`
- To split the HTML file at `\section` depth, use:  
`\setcounter{FileDepth}{1}`
- To ensure that the HTML pages/files are accessible:  
 Place a `\tableofcontents` somewhere before the first section break (therefore in the “home page”), and set  
`tocdepth >= FileDepth`



Bool `CombineHigherDepths`  
 Default: `true`

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

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

**Inaccessible pages!**

**Lost in an old page!**

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

Bool `FileSectionNames`  
 Default: `true`

**FileSectionNames:** If `true`, web page filenames are derived from a sanitized version of the section names. If `false`, web pages are numbered. Either way, the `HTMLFilename` option is used as a prefix. See section 8.3.1 for examples of naming and numbering HTML files. The user must ensure that filenames are unique after begin sanitized. For example, `math` in the section name is removed before creating the filename, so the rest of the filename must be sufficiently unique to avoid name collisions.

**Unique filename!**

Ctrl `FootnoteDepth`  
 Default: `3`

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

`\abstractname`  
 Default: `Abstract`

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

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

`\CSSFilename`  
Default: `lwarp.css`

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

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

`\HTMLLanguage`  
Default: `en-US`

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

`\HTMLTitle`  
Default: `\thetitle`

`\HTMLTitle: {\title}` Overrides `\title` for the HTML header's meta title. 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.

`\HTMLAuthor`  
Default: `\theauthor`

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

`\HTMLDescription`  
Default: `<empty>`

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

`\HTMLFirstPageTop`  
Default: `<empty>`

`\HTMLFirstPageTop: {\contents}` A user-definable custom action applied to the top of the home page. Useful for logos, etc. Defaults empty. Ignored in print output.

`\HTMLPageTop`  
Default: `<empty>`

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

`\HTMLPageBottom`  
Default: `<empty>`

`\HTMLPageBottom: {\contents}` A user-definable custom action applied to the bottom of each web page. Useful for authors, copyright notices, contact information, etc. Defaults empty. `\LinkHome` may be used to place a link back to the homepage. Ignored in print output.

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

 `\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:**

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Env <code>warpprint</code>  | <b>warpprint</b> : An environment which is only used while generating print output. Place here anything which does not apply to HTML and which may cause problems with <b>lwarp</b> . If <b>lwarp</b> 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 <b>lwarp</b> using this environment. |
| Env <code>warpHTML</code>   | <b>warpHTML</b> : An environment which is only used while generating HTML output. This is useful for website logos and other items which have no purpose in printed output.                                                                                                                                                                                                                                                                                                                 |
| <code>\warpprintonly</code> | <b>\warpprintonly</b> : <code>{\langle contents \rangle}</code> A macro version of the <code>warpprint</code> environment.                                                                                                                                                                                                                                                                                                                                                                  |
| <code>\warpHTMLonly</code>  | <b>\warpHTMLonly</b> : <code>{\langle contents \rangle}</code> A macro version of the <code>warpHTML</code> environment.                                                                                                                                                                                                                                                                                                                                                                    |

### 8.3.1 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`.<sup>12</sup>

---

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

---

<sup>12</sup>See `\SetHTMLFileNumber` to number in groups by chapter, for example.

**Named HTML sections, no prefix:**

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

---

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

---

**Named HTML sections, with prefix:**

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

---

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

---

**8.4 Customizing the CSS**

`\CSSFilename`  
Default: `lwarp.css`

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

```
...
\newCSS{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  $\text{\LaTeX}$  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`  
File `project.css`  
File `sample_project.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:

---

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

/* Load default lwarp settings: */
@import url("lwarp.css") ;
/* or lwarp_formal.css, lwarp_sagebrush.css */

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

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

---

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

## 8.5 Selecting the operating system

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

Prog Mac OS

Prog Linux

Prog MS-Windows If MS-WINDOWS is not correctly detected, use the **lwarp** option `OSWindows`.

Prog Windows

Opt OSWindows

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

## 8.6 Selecting actions for print or HTML output

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

For most of built-in  $\TeX$  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 `warpHTML` Anything which is to be done only for HTML5 output is surrounded by a `warpHTML` environment:

---

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

---

Env `warpprint` Anything which is to be done only for print output is surrounded by a `warpprint` environment:

---

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

---

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}
```

---

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.

## 8.7 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.

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](#).

## 8.8 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 [59.8](#).

`\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>}`



Avoid newlines in the `\title`; these will interfere with the file break and CSS detection. Use a `\subtitle` command instead (section 59.8). 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`, use `\protect` before formatting commands such as `\textsc`. 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 `titledate`.

`\thanks` `{<text>}`

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

## 8.9 HTML page meta descriptions

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

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

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

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

`\HTMLDescription{}`

## 8.10 HTML page meta title

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

## 8.11 HTML page meta author

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

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

## 8.12 Modifying xindy index processing

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

To customize index processing:

1. Copy `lwarp.xdy` to a new filename such as `projectname.xdy`
2. Make changes to `projectname.xdy`. Keep the line which says

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

This line creates the hyperlinks for the HTML index. During print output `\hyperindexref` becomes a null function.

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

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

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

## 9 Special cases and limitations

Some commonly-used  $\TeX$  expressions should be modified as follows to allow for a smooth conversion to both HTML and print-formatted outputs.

[Need help?](#)

---

The index to this document contains several hundred custom entries. Also included are automated entries for each package, macro, environment, counter, boolean, and other objects; individually and also sorted by category. A [Troubleshooting](#) section is also available.

---

### 9.1 Things to avoid

In the document, avoid the following:

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

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

**Custom macros in section, figure, table names:** Custom macros which appear in the `.toc`, `.lof`, and `.lot` files should be made robust, using `\newrobustcmd` or `\robustify` from `etoolbox`, `xparse`, etc.

### 9.2 Formatting

#### 9.2.1 Text formatting

 `\bfseries`, etc. `\textbf`, etc. are supported, but `\bfseries`, etc. are not yet supported.

 **HTML special chars** `&`, `<`, and `>` have special meanings in HTML. If `\&`, `\textless`, and `\textgreater` are used, the proper result should occur in HTML, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

#### 9.2.2 Horizontal space

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

`\`, `~` and `\,` are converted to HTML entities.

`\kern` `\kern` and `\hskip` are entered into the HTML PDF output as-is, then interpreted by `\pdfotext`, and thus usually appear as a single space.

### 9.2.3 Text alignment

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

### 9.2.4 Accents

Native  $\TeX$  accents such as `\'` will work, but many more kinds of accents are available when using Unicode-aware  $\XeTeX$  and  $\LuaTeX$ .

### 9.2.5 Textcomp

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

 **missing symbols** Many `textcomp` symbols are not supported by many fonts. Try using more complete fonts in the CSS, but expect to see gaps in coverage.

### 9.2.6 Superscripts and other non-math uses of math mode

Use `\textsuperscript{x}` instead of  $\text{\^}{x}$

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

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

### 9.2.8 Filenames and URLs in lists or footnotes

`filename underscore` Escape underscores in the filenames:

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

### 9.2.9 relsize package

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

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

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

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

## 9.3 Boxes and minipages

### 9.3.1 Marginpars

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

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

### 9.3.2 Save Boxes

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

### 9.3.3 Minipages

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

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

- side-by-side** Side-by-side minipages may be separated by `\quad`, `\qquad`, `\enskip`, `\hspace`, `\hfill`, or a `\rule`. When inside a `center` environment, the result is similar in print and HTML. Paragraph tags are suppressed between side-by-side minipages and these spacing commands, but not at the start or end of the paragraph.
- in a span** There is limited support for minipages inside an HTML `<span>`. An HTML `<div>` cannot appear inside a `<span>`. While in a `<span>`, minipages, and `parboxes`, and any enclosed lists have limited HTML tags, resulting in an “inline” format, without markup except for HTML breaks. Use `\newline` or `\par` for an HTML break.
- size** When using `\linewidth`, `\textwidth`, and `\textheight`, widths and heights are scaled proportionally to a 6×9 inch text area.
- no-width minipages** A minipage of width exactly `\linewidth` is automatically given no HTML width.
- full-width minipages** A new macro `\minipagefullwidth` requests that the next minipage be generated without an HTML `width` attribute, allowing it to be the full width of the display rather than the fixed width given.
-  **text alignment** Nested minipages adopt their parent’s text alignment in HTML, whereas in regular L<sup>A</sup>T<sub>E</sub>X PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

### 9.3.4 Side-by-side minipages

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

### 9.3.5 Framed minipages and other environments

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

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

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

**To frame the contents inline with some formatting losses in HTML:** This is the default action of `\fbox` when enclosing a minipage. During HTML output,

**For inline text:**

`\fbox` nullifies the HTML tags for `minipage`, `\parbox`, and lists. The contents are included as inline text inside the `\fbox`'s `<span>` 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  $\text{\TeX}$  code, the result in HTML is problematic since a table is a `<div>` not a `<span>`, 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 below regarding the “Misplaced alignment tab character &” error.

colored boxes and frames:

**To create colored frames and boxes:** See section 344 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 `\EndDefiningTabulars` afterwards. Also see the `lwarp` documentation for the `fancybox` package.

**To frame equations:** See section 164 for the `fancybox` package.

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

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

---

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

---

```
\warpprintonly{\hrule} % only appears in print output
\end{BlockClass}
```

---

### 9.3.6 fancybox package

`Pkg fancybox`  
[framed equation example](#)

**fancybox**'s documentation has an example `FramedEqn` environment which combines `math`, `\Sbox`, a `minipage`, and an `\fbox`. This combination requires that the entire environment be enclosed inside a `lateximage`, which is done by adding `\lateximage` at the very start of `FramedEqn`'s beginning code, and `\endlateximage` at the very end of the ending code. Unfortunately, the `HTML alt` attribute is not used here.

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

[framing alternatives](#)

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

[framed table example](#)

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

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

[framed verbatim](#)

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

```

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

```

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

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

### 9.3.7 mdframed package

**Pkg mdframed 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.

**footnotes** Footnotes are currently placed at the bottom of the HTML page.

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

## 9.4 Cross-references

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

 **underscores**

**`\nameref`** `\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.

**`empty link`**

### 9.4.1 Page references

 **L<sup>A</sup>T<sub>E</sub>X 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 section 66.4.

### 9.4.2 cleveref and varioref packages

**`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 section 80 to redefine the message which is printed for page number references.

### 9.4.3 Hyperlinks, hyperref, and url

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

 **`comment character %`** Do not place a % character between arguments for `\hyperref`, etc., as this is one of

the characters which 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 **url** create hyperlinks during print output.

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

#### 9.4.4 Footnotes and page notes

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

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

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

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

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

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

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

and likewise for equations or display math.

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

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

## 9.5 Front and back matter

### 9.5.1 Custom classes with multiple authors and affiliations

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

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

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

### 9.5.2 Starred chapters and sections

The following describes `\ForceHTMLPage` and `\ForceHTMLTOC`, which may be used for **endnotes**, **glossaries**, **tocbibind**, 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. If the starred section has its own HTML page but no correct TOC entry pointing to that page, the page will be inaccessible unless some other link is created.

`\ForceHTMLTOC` To automatically force the HTML version of the document to have a TOC entry for a starred section, use `\ForceHTMLTOC` just before the `\chapter*` or `\section*`. The

 inaccessible HTML page

TOC will only be assigned for HTML output, not for print output, and it will appear in the main TOC and also the sidetoc per page.

For print output, `\ForceHTMLTOC` and `\ForceHTMLPage` have no effect.

### 9.5.3 abstract package

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

 **missing toc**

### 9.5.4 titling and authblk

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

Pkg `authblk`

package support

 **load order**

`\published` and `\subtitle`

If using the `titling` package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 59.8.

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

Pkg `tocloft`

 **tocloft & other packages**

### 9.5.6 appendix package

Pkg `appendix` During HTML conversion, the option `toc` without the option `page` results in a 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**

### 9.5.7 pagenote package

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

### 9.5.8 endnotes package

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

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

HTML page To additionally have the endnotes on their own HTML page, if FileDepth allows:

```
\ForceHTMLPage
\theendnotes
```

### 9.5.9 glossaries package

Pkg glossaries **xindy** is required for **glossaries**.

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

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.

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
```

Opt IndexLanguage The **lwarp** package takes an option `IndexLanguage=english` to set the language

used by **xindy**. This is passed to **xindy** using its `-L` option, and is used for both index and glossary generation.

Opt lwarpmk printglossary **lwarpmk** has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary` to process the glossaries created by **glossaries** using **xindy**.

Opt lwarpmk htmlglossary

### 9.5.10 Index and the `tocbibind` package

Pkg makeidx  
Pkg tocbibind  
Opt IndexLanguage

The **lwarp** package takes an option `IndexLanguage=english` to set the language used by **xindy**. This is passed to **xindy** using its `-L` option, and is used for both index and glossary generation.

 **tocloft & other packages** 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  $\TeX$  commands to create the titles, allowing other packages to work with it.

[placement and roc options](#) An index may be placed inline with other HTML text, or on its own HTML page:

#### Inline, with a manual TOC entry:

A commonly-used method to introduce an index in a  $\TeX$  document:

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

#### 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
```

#### Inline, with an automatic TOC entry:

Pkg tocbibind 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
```

**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](#)

See section 69 for **lwarp**'s core index and glossary code, and section 325 for **tocbibind**.

## 9.6 Math

### 9.6.1 Rendering tradeoffs

[Math rendering](#) Math may be rendered as SVG graphics or using the MATHJAX JavaScript display engine.

[SVG files](#) Rendering math as images creates a new SVG file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to SVG only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.

[SVG inline](#) The SVG images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.

[PNG files](#) Others  $\LaTeX$ -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.

### 9.6.2 SVG option

**SVG math option** For `svg math`, math is rendered as usual by  $\text{\TeX}$  into the initial PDF file using the current font<sup>13</sup>, then is captured from the PDF and converted to SVG graphics via a number of utility programs. The SVG format is a scalable-vector web format, so math may be typeset by  $\text{\TeX}$  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  $\text{\TeX}$  code which generated the math, allowing copy/paste of the  $\text{\TeX}$  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}{large}
```

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

 **SVG math in  $\text{\TeX}$  boxes** SVG math does not work inside  $\text{\TeX}$  boxes, since a `\newpage` is required before and after each image.

### 9.6.3 MATHJAX option

**MATHJAX math option** The popular MATHJAX alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

Prog MathJax

When MATHJAX is enabled, math is rendered twice:

1. As regular  $\text{\TeX}$  PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of  $\text{\TeX}$ , and
2. As detokenized printed  $\text{\TeX}$  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  $\text{\TeX}$  values, and the MATHJAX cross-referencing system is ignored in favor of the  $\text{\TeX}$  internal system, seamlessly integrating with the rest of the  $\text{\TeX}$  code.

<sup>13</sup>See section 345 regarding fonts and fractions.

### 9.6.4 Customizing MATHJAX

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

Examples:

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

### 9.6.5 MATHJAX limitations

#### MATHJAX limitations

Limitations when using MATHJAX include:

Prog MathJax

#### chapter numbers

- In document classes which have chapters, `\tagged` equations have the chapter number prepended in HTML output, unlike  $\LaTeX$ . `\tag*` equations (correctly) do not. This may be improved with future versions of the MATHJAX support script.

<https://groups.google.com/forum/#!topic/mathjax-users/jUtewUcE2bY>

#### subequations

- MATHJAX itself does not support subequations. This may be improved by parsing the  $\LaTeX$  math expression to manually insert tags, but this has not yet been done.

#### footnotes in math

- Footnotes inside equations are not yet supported while using MATHJAX.

#### lateximage

- Math appearing inside a `lateximage`, and therefore also inside a `Tikz` or `picture` environment, is rendered as SVG math even if MATHJAX is used in the rest of the document.

#### siunitx

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

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

Also see section 9.6.10.

#### △ siunitx inside an equation

#### tabbing

- A tabbing environment is emulated using an HTML `<pre>`. While MATHJAX is enabled inside tabbing, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.

⚠ other macros and packages

- Other math-related macros and packages are not supported by MATHJAX, including `\ensuremath`, **bigdelim**, **units**, and **nicefrac**, along with occasionally-used macros such as `\footnote` and `\relax`.

### 9.6.6 Display math

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, math display environments print their contents in MATHJAX, and render their contents in SVG math as well as use their contents in 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 for MATHJAX, and the HTML `alt` tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as Tikz pictures are more likely to compile successfully.

### 9.6.7 chemformula package

⚠ chemformula with MATHJAX

**chemformula** works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The **chemformula** package adapts to `array`, but does not know about MATHJAX, and MATHJAX does not know about **chemformula**.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain **chemformula** expressions.

### 9.6.8 mhchem package

See section 234.

### 9.6.9 ntheorem package

Pkg ntheorem

⚠ Font control

This conversion is not total. Font control is via CSS, and the custom  $\TeX$  font settings are ignored.

⚠ Equation numbering

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

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

### 9.6.10 siunitx package

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

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

**NOTE:** As of this writing, the **siunitx** extension for **MATHJAX** is not currently hosted at any public CDN, thus **siunitx** is not usable with **MATHJAX** unless a local copy of this extension is created first.

### 9.6.11 units and nicefrac packages

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

### 9.6.12 newtxmath package

Pkg `newtxmath` The proper load order is:

⚠ **loading sequence**

```

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

```

## 9.7 Graphics

Pkg `graphics` For `\includegraphics` with `.pdf` files, the user should provide a `.pdf` image file,  
 Pkg `graphicx` and also a `.svg`, `.png`, or `.jpg` version of the same image. **These should be referred to without a file extension:**

⚠ **.pdf image files**

⚠ **no file extension**

```
\includegraphics{filename} % print:.pdf, HTML:.svg or other
```

For print output, **lwarp** will automatically choose the `.pdf` if available, or some other format otherwise. For HTML, one of the other formats is used instead.

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

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

If a .pdf file is referred to with its file extension, a link to the .pdf file will appear in the HTML output.

```
\includegraphics{filename.pdf} % creates a link in HTML
```

Pkg `epstopdf` For .eps files, use **epstopdf** to provide a PDF version, and also provide a SVG version as well.

**other image files** For .png, .jpg, or .gif image files, 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.

⚠ **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** viewports are not supported by **warp**; the entire image will be shown.

**units** For `\includegraphics`, avoid px and % units for width and height, or enclose them inside `warpHTML` environments. For font-proportional image sizes, use ex or em. For fixed-sized images, use cm, mm, in, pt, or pc. Use the keys `width=.5\linewidth`, or similar for `\textwidth` or `\textheight` to give fixed-sized images proportional to a 6 by 9 inch text area. Do not use the `scale` option, since it is not well supported by HTML browsers.

**options** `\includegraphics` accepts width and height, origin, rotate and scale, plus a new class key.

**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.

**\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  $\TeX$ , so expect some ugly results for scaling and rotating.

### 9.7.1 tikz package

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

⚠ **displaymath and matrices**

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

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

### 9.7.2 grffile package

 **matching PDF and SVG** `Pkg grffile` `grffile` is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

### 9.7.3 color package

`Pkg color` `color` is superseded by `xcolor`, and `lwarp` requires several of the features of `xcolor`.  
 **missing colors** It should be sufficient for the user's document to load `color` then load `xcolor` as well.

### 9.7.4 xcolor package

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

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

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

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

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

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

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

### 9.7.5 epstopdf package

`Pkg epstopdf` `epstopdf` When using `epstopdf` to convert images to PDF, use the `pdftocairo` utility to also provide an SVG version as well. In the document, refer to the image filename without

a suffix. The PDF version will be used in print output, and the SVG version will be used for HTML.

### 9.7.6 overpic package

Pkg overpic The macros `\overpicfontsize` and `\overpicfontskip` are used during HTML generation. These are sent to `\fontsize` to adjust the font size for scaling differences between the print and HTML versions of the document. Renew these macros before using the `overpic` and `Overpic` environments.

△ scaling

## 9.8 Tabbing

The `tabbing` environment works, except that `svg math` and `lateximages` do not yet work inside the environment.

math in tabbing If `math` is used inside `tabbing`, place `tabbing` inside a `lateximage` environment, which will render the entire environment as a single SVG image.

## 9.9 Tabular

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

### Defining environments:

△ misplaced alignment alignment tab character &

- When defining environments or macros which include `tabular` and instances of the `&` character, it may be necessary to make `&` active before the environment or macro is defined, then restore `&` to its default catcode after, using the following commands. These are ignored in print mode.

```
\StartDefiningTabulars
<define macros or environments using tabular and &
here>
\EndDefiningTabulars
```

△ floatrow

This includes before and after defining any macro which used `\ttabbox` from `floatrow`.

△ tabular inside another environment

- When creating a new environment which contains a `tabular` environment, `lwarp`'s emulation of the `tabular` does not automatically resume when the containing environment ends, resulting in corrupted HTML rows. To fix this, use `\ResumeTabular` as follows. This is ignored in print mode.

```

\StartDefiningTabulars % because & is used in a
definition
\newenvironment{outerenvironment}
{
\tabular{cc}
left & right \\
}
{
\TabularMacro\ResumeTabular
left & right \\
\endtabular
}
\EndDefiningTabulars

```

### Cell contents:

#### ⚠ paragraphs

- Multiple paragraphs in one cell of a p, b, m column must have `\newline` between paragraphs.

#### ⚠ `\multirow`

- For **multirow**, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output.

```

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

```

#### vposn

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

- The **multirow** documentation regarding colored cells recommends using a negative number of rows. This will not work with **lwarp**, so `\warpprintonly` and `\warphTMLonly` must be used to make versions for print and HTML.
- See section 243.2 for `\multicolumnrow`.

#### ⚠ `\multicolumn` & `\multirow`

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

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

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

#### ⚠ skipped cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped:

```

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

```

#### ⚠ empty cells

vposn

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

⚠ macro in a table  
custom macros

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

#### Column specifiers:

⚠ \* column specification

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

@ and !

- Only one each of @ and ! is used at each column, and they are used in that order.

\multirow

- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.

⚠ \newcolumntype

- `\newcolumntype` is ignored; unknown column types are set to 1.

#### Rules:

vertical rules

- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.

width and trim

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

full-width rules

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

combined rules

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

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

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

⚠ \warpprintonly  
misplaced \noalign

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

```
This & That \endhead
```

to

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

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

**colortbl:**

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

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

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

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

**9.9.1 longtable package**

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

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

instead of

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

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

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

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

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

or place it inside `\warpingprintonly`.

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

### 9.9.2 supertabular and xtab packages

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

Pkg xtab `\StartDefiningTabulars`  
 $\triangle$  misplaced alignment `\tablefirsthead`  
 alignment tab character & `\EndDefiningTabulars`

See section 9.9.

$\triangle$  lateximage `supertabular` and `xtab` are not supported inside a lateximage.

### 9.9.3 bigdelim package

Pkg bigdelim `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper  
 $\triangle$  use `\mrowcell` number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

---

```
\begin{tabular}{lll}
<empty> & a & b \\
\ldelim{\}{2}{.25in}[left] & c & d \\
\mrowcell & e & f \\
<empty> & g & h \\
\end{tabular}
```

---


$$\text{left} \left\{ \begin{array}{ll} a & b \\ c & d \\ e & f \\ g & h \end{array} \right.$$


---

## 9.10 Floats

### 9.10.1 float, trivfloat, and/or algorithmicx together

Pkg float If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 331.1.

Pkg trivfloat

Pkg algorithmicx

$\triangle$  package conflicts **9.10.2 caption and subcaption packages**

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

Pkg subcaption

```

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

```

⚠ options

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

```

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

```

Similarly for **subtable**, **subfigure**, and **longtable**.

### 9.10.3 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.

horizontal spacing In the document source, use `\hfill` and `\hspace*` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

### 9.10.4 floatrow package

Pkg floatrow

⚠ misplaced alignment tab character &

⚠ subfig package

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

When combined with the **subfig** package, while inside a `subfloatrow` `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

⚠ `\FBwidth`, `\FBheight` The emulation of **floatrow** does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. **lwarp** will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.
- Inside a `warpHTML` environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally afterwards; it will be used as expected in print output, and will use your custom-

selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

### 9.10.5 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`

## 9.11 Koma-Script

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

`\titlehead`, `\subject`, `\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

⚠ **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

## 9.12 Memoir

Cls `memoir` While emulating `memoir`, `lwarp` pre-loads a number of packages (section 353.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading `lwarp`:

⚠ **options clash**

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

`\verbfootnote` is not supported.

`\newfootnoteseries`, etc. are not supported.

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

Poem numbering is not supported.

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

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

## 9.13 Miscellaneous

### 9.13.1 verse and memoir

`Pkg` `verse` 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 `\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` `\TMLvleftskip`

`Len` `\TMLleftmargini`

 **spacing** Horizontal spacing relies on `pdftotext`'s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

### 9.13.2 newclude package

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

 **loading**

---

```

\documentclass{article}
...
\usepackage{newclude}
\usepackage[warpHTML]{lwarp}
...

```

---

### 9.13.3 babel package

Pkg babel

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

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

**punctuation spaces** Also when French is used, **lwarp** creates fixed-width space around punctuation by patching `\FBcolonspace`, `\FBthinspace`, `\FBguillspace`, `\FBmedkern`, `\FBthickkern`, `\FBtextellipsis`, and the tilde. If the user's document also changes these parameters,

**⚠ 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.

### 9.13.4 todonotes and luatodonotes packages

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

Pkg luatodonotes

### 9.13.5 fixme

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

**⚠ external layouts** User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after **fixme** is loaded:

```

\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}

```

**9.13.6 xparse**

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

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

## 10 EPUB conversion

**lwarp** does not produce EPUB documents, but it may be told to modify its HTML output to greatly assist in the conversion. An external program may then be used to finish the conversion to EPUB.

**<meta> author** To assign the author's name for regular **lwarp** HTML files, and also for the EPUB, use `\HTMLAuthor {<name>}`. This assigns the name to the `<meta>` author element. It may be set empty, and it defaults to `\theauthor`.

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

| <i>FormatEPUB</i> |                                                                                                                                                                  |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bool              | FormatEPUB                                                                                                                                                       |
|                   | Default: <code>false</code>                                                                                                                                      |
|                   | FormatEPUB changes HTML output for easy EPUB conversion via an external program. Removes per-file headers, footers, and nav. Adds footnotes per chapter/section. |

To help convert **lwarp** HTML output to EPUB, add

```
\booltrue{FormatEPUB}
```

to the project's source preamble after `\usepackage{lwarp}`. The EPUB version of the document cannot co-exist with the regular HTML version, so

```
Enter ⇒ lwarpmk cleanall
```

```
Enter ⇒ lwarpmk html
```

```
Enter ⇒ lwarpmk limages
```

to recompile with the `FormatEPUB` boolean turned on. Several changes are then made to the HTML output:

- Headers, footers, and navigation are removed at file splits.
- Any accumulated footnotes are printed at the bottom of each section.

The resulting files will be ready to be loaded into an EPUB conversion program, such as the open-source program Calibre (<https://calibre-ebook.com/>).

 **search order**

The EPUB conversion program must know what order the files are included. For **lwarp** projects, set the EPUB conversion software to do a breadth-first search of the files. For Calibre, this option is found in

```
Preferences → Plugins → File type plugins → HTML to Zip
```

Check the box Add linked files in breadth first order.

### ⚠ 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 7. For example, an `article` class document would break at `\section`, which is mapped to HTML heading level `<h4>`, whereas a `book` class document would break at `\chapter`, which is HTML heading level `<h3>`. For Calibre, this option is found in

Preferences → Conversion (Common Options) → Structure Detection → Detect chapters at (XPath expression)

Select the “magic wand” to the right of this entry box, and set the first entry

Match HTML tags with tag name:

to “h4”. (Or “h3” for document classes with `\chapters`.) The Detect chapters at field should then show

`//h:h4` — or — `//h:h3`

This option is also available on the main tool bar at the Convert books button.

Once these settings have been made, the **lwarp**-generated HTML files may be loaded by Calibre, and then converted to an EPUB.

### *MATHJAX support*

---

MATHJAX may be used in EPUB documents. Some e-readers include MATHJAX, but any given reader may or may not have a recent version, and may or may not include extensions such as support for **siunitx**.

**lwarp** adds some modifications to MathML to support equations numbered by chapter. These modifications may not be compatible with the e-reader's version of MATHJAX, so **lwarp** requests that a known version be loaded instead. In some cases chapter numbering of equations still doesn't work.

Until math support in EPUB documents is improved, it is recommended to use SVG images instead of MATHJAX, especially for equations numbered by chapter, or where **siunitx** support is important.

---

## 11 Word-processor conversion

**lwarp** may be told to modify its HTML output to make it easier to import the HTML document into a word processor. At the time of this writing, it seems that **LIBREOFFICE** works best at preserving table layout, but it still has some limitations, such as an inability to automatically assign figure and table frames and captions according to user-selected HTML classes. **lwarp** provides some assistance in locating these frame boundaries, as shown below.

### 11.1 Activating word-processor conversion

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

*FormatWP*

---

Bool FormatWP  
Default: false

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

---

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

```
\booltrue{FormatWP}
```

formatting adjustments

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

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

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

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

## 11.2 Additional modifications

---

### *WPMarkFloats*

---

Adds

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

or

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

Bool `WPMarkFloats`  
 Default: `false`

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

---



---

### *WPMarkMinipages*

---

Adds

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

Bool `WPMarkMinipages`  
 Default: `false`

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

---



---

### *WPMarkTOC*

---

While formatting for word processors, adds

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

Bool `WPMarkTOC`  
 Default: `true`

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

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

---

*WPMarkLOFT*

While formatting for word processors, adds

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

Bool WPMarkLOFT  
Default: false

where each of these lists would have been. This helps identify where to insert the actual lists.

*If set false, the actual lists are printed instead.*

*WPMarkMath*

While formatting for word processors, prints math as  $\LaTeX$  code instead of creating SVG images or MATHJAX. This is useful for cut/paste into the **LibreOffice Writer TeXMaths** extension.

Bool WPMarkMath  
Default: false  
Prog TeXMaths  
[siunitx](#)

When using the **siunitx** package, enter

```
\usepackage{siunitx}
```

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

*WPTitleHeading*

While formatting for word processors, true sets the document title to `<h1>`, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to false to cause the title to be plain text, and the section headings to begin at **Heading 1**.

Bool WPTitleHeading  
Default: false  
[section headings](#)

See table 6 on table 6.

### 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.

Table 6: Section HTML headings for word-processor conversion

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

\* For default depths when not FormatWP, see table 7 on table 7.

6. Manually add frames around each float, adding a caption which is cut/pasted from each float's simulated caption.
7. Manually create cross references.

This process yields a document with an actual LIBREOFFICE Table of Contents, but a simulated List of Figures and List of Tables.

`siunitx` For `siunitx`, remember to adjust the preamble as mentioned above.

**LO view border options** LIBREOFFICE has options in the **View** menu to turn on/off the display of thin borders around table cells and text objects.

## 11.4 Limitations

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

Cross references are not actual LIBREOFFICE linked cross references.

The List of Figures and List of Tables are not linked. The pasted pseudo LOF and LOT match the numbering of the  $\LaTeX$  and HTML versions.

Equation numbering is not automatic, but the equation numbers in SVG math will match the  $\LaTeX$  and HTML output. SVG math is recommended when using the  $\mathcal{AMS}$  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

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.

An environment may be converted to a `lateximage` then displayed with an image of the resulting  $\TeX$  output. See section 81 for an example of the `picture` environment.

To create a custom HTML block or inline CSS class, see section 46.8.

△  **$\TeX$  boxes** Any  $\TeX$  boxes must be undone, as `svg math` or `lateximages` require `\newpage`, which will not work in a  $\TeX$  box.

### 12.1 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  $\TeX$  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

```
\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 256 ([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.

### 12.1.1 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 25.1. This causes `lwarp` to stop with an error if `packagename` is loaded before `lwarp`.

## 12.2 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  $\text{\TeX}$  classes, load any required fonts, then load `lwarp`, then finally load and adjust any other required packages.

### 12.3 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.

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.

### 12.4 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`.

To adjust the command-line arguments for compiling the document, look in `mymake.lua` for “`latexname`”.

To adjust the command-line arguments for processing the index, look for “`xindy`”.

## 13 Troubleshooting

### 13.1 Using the lwarp.sty package

Also see:

Section 8.7: [Commands to be placed into the warpprint environment](#)

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

#### Text is not converting:

- Font-related UTF-8 information must be embedded in the PDF file. See section 8.1 regarding vector fonts.

#### Undefined HTML settings:

- See the warning regarding the placement of the HTML settings at section 8.3.

**Tabular problems:** See section 9.9.

#### Obscure error messages:

**Print first:** Be sure that a print version of the document compiles and that your document's  $\LaTeX$  code is correct, before attempting to generate an HTML version.

**Options clash:** If using `memoir`, see section 9.12.

**“Missing \$ inserted.”:** If using a filename or URL in a footnote or `\item`, escape underscores with `\_.`

**“Label(s) may have changed. Rerun to get cross-references right.”:**

This warning may repeat endlessly if a math expression is used in a caption. Simple math expressions such as  $X=1$  may be replaced with

```
\textit{X}\,=\,1
```

**“Leaders not followed by proper glue”:** This can be caused by a missing `l@<floattype>` or `l@<sectiontype>` definition. See `lwarp`'s definitions for examples.

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

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

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

inside a group first.

⚠ custom macros in section names

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.

⚠ custom macros for environments

“`\begin{equation}` ended by `\end{document}`”: Do not use custom macros such as `\beq` and `\eeq` to replace

```
\begin{equation}
...
\end{equation}
```

⚠ display math

**Complicated objects inside display math:** Some objects, such as `Tikz`, may not compile in **lwarp**'s normal display math emulation. Insert `\displaymathother` before the display math environment, and then `\displaymathnormal` when displaying “normal” math. See section 9.6.6.

⚠ MathJax

**Incorrect MATHJAX:** Some objects do not convert to MATHJAX. Use `\displaymathother` before these objects, then `\displaymathnormal` to return to “normal” display math. See section 9.6.6.

**Missing sections:** See section 8.3 regarding the `FileDepth` and `SideTOCDepth` counters, and the use of `\tableofcontents` in the home page.

**Misnumbered footnotes from section headings:** See section 9.4.4.

**Missing HTML files:**

- See the warning regarding changes to the HTML settings at section 8.3.
- Ensure that the filenames are unique after math and short words are removed. See `FileSectionNames` at section 8.3.

**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”.

labels

⚠ underscores

`\nameref`

⚠ empty link

⚠ cleveref page numbers

Ex:  
`\cpageref{tab:first,tab:second}`  
 in HTML becomes:  
 “pages **for** table 4.1 and **for** table 4.2”  
 See `\cpagerefFor` at section 80 to redefine the message which is printed for page number references.

**Malformed URLs:** Do not use the % character between arguments of `\hyperref`, etc., as this character is among those which is neutralized for inclusion in HTML URLs.

**Em-dashes or En-dashes in listing captions and titles:**

Use  $\XeTeX$  or  $\LuaTeX$ .

**Floats out of sequence:**

**Mixed “Here” and floating:** Floats [H]ere and regular floats may become out of order. `\clearpage` if necessary.

**Caption setup:** With `\captionsetup` set the positions for the captions above or below to match their use in the source code.

**Print document contains HTML tags:**

- Be sure that the document selects `\usepackage[warpprint]{lwarp}` instead of `[warpHTML]`.

**Images are appearing in strange places:**

- Enter `lwarpmk images` to refresh the `lateximage` images.

**SVG images:**

⚠ adding/removing

When a math expression, `picture`, or `Tikz` environment is added or removed, the SVG images must be re-created by entering `lwarpmk images` to maintain the proper image file sequence numbers.

⚠ 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 has

```
\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  $\TeX$  would, but has the disadvantage of requiring an individual file for each math expression. For inline math, **lwarp** uses an MD5 hash on its  $\TeX$  source to combine multiple instances of identical inline expressions into a single image file, but display math and other environments such as `picture` and `Tikz` require one image file each. For a document with a large amount of math, see section 6.5 to use MATHJAX instead.

**Plain-looking document:**

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

**Broken fragments of HTML:**

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

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

- Be sure to `lwarpmk clean`, recompile, then start by reloading the home page. You may have been looking at an older version of the document. If you changed a section name, you may have been looking at the file for the old name.
- See the warning regarding changes to the HTML settings at section 8.3.
- 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.

**13.1.1 Debug tracing output**

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

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

**13.2 Compiling the `lwarp.dtx` file**

`lwarp_tutorial.tex`: Copy or link `lwarp_tutorial.txt` from the TDS doc directory to the source directory, or wherever you wish to compile the documentation. This file is included verbatim in the documentation, but is in the doc directory so that it may be found by **texdoc** and copied by the user.

**Illogical error messages caused by an out-of-sync `lwarp.sty` file:**

1. Delete the `lwarp.sty` file.
2. Enter `pdflatex lwarp.ins` to generate a new `lwarp.sty` file.

3. Enter `pdflatex lwarp.dtx` to recompile the `lwarp.pdf` documentation.

**Un-nested environments:**

Be sure to properly nest:

- `\begin{macrocode}` and `\end{macrocode}`
- `\begin{macro}` and `\end{macro}`
- `\begin{environment}` and `\end{environment}`

File 1 **lwarp.sty**

## 14 Implementation

This package is perhaps best described as a large collection of smaller individual technical challenges, in many cases solved through a number of ~~erude~~ ~~haeks~~ clever tricks. Reference sources are given for many of the solutions, and a quick internet search will provide additional possibilities.

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

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

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

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

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

Table 7: Section depths and HTML headings

| Section                     | $\LaTeX$ depth | HTML headings *                           |
|-----------------------------|----------------|-------------------------------------------|
| title of the entire website |                | <h1>                                      |
| none                        | -5             | new for this package                      |
| book                        | -2             | <b>not yet used</b>                       |
| part                        | -1             | <h2>                                      |
| chapter                     | 0              | <h3>                                      |
| section                     | 1              | <h4>                                      |
| subsection                  | 2              | <h5>                                      |
| subsubsection               | 3              | <h6>                                      |
| paragraph                   | 4              | <span class = "paragraph">                |
| subparagraph                | 5              | <span class = "subparagraph">             |
| listitem                    | 7              | new for this package, used for list items |

\* If `FormatWP` is true, section headings may be adjusted, depending on `WPTitleHeading`. See table 6 on table 6.

## 15 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 7. “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.

## 16 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:**

## 17 Detecting the TeX Engine — pdf<sub>l</sub>atex, lua<sub>l</sub>atex, xe<sub>l</sub>atex

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

Detects Xe<sub>l</sub>TeX and Lua<sub>l</sub>TeX:

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

## 18 MD5 hashing

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

```
16 \newcommand{\LWR@mdfive}[1]{%
17 \PackageError{lwarp}
18 {No MD5 macro was found.}
19 {Lwarp must find the macros pdfmdfivesum or mdfivesum.}
20 }
21
22 \ifPDFTeX
23 \let\LWR@mdfive\pdfmdfivesum
24 \fi
25
26 \ifLuaTeX
27 \RequirePackage{pdftexcmds}
28 \let\LWR@mdfive\pdf@mdfivesum
29 \fi
30
31 \ifXeTeX
32 \@ifundefined{pdfdfivesum}{
33 {\let\LWR@mdfive\pdfmdfivesum}
```

```

34 \@ifundefined{mdfivesum}{}
35 {\let\LWR@mdfive\mdfivesum}
36 \fi

```

## 19 pdfLaTeX T1 and UTF8 encoding

When using pdf $\TeX$ , **lwarp** required T1 and UTF8 encoding.

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

X $\TeX$  and Lua $\TeX$  are both UTF8 by nature.

```

37 \ifPDFTeX
38 \RequirePackage[T1]{fontenc}
39 \@ifpackageloaded{inputenc}{}{
40 \RequirePackage[utf8]{inputenc}
41 }
42 \fi

```

## 20 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.

```

43
44 \RequirePackage{newunicodechar}
45
46 \newunicodechar{*}{\texttimes}
47
48 \ifPDFTeX
49 \newunicodechar{ff}{ff}% the first arguments are ligatures
50 \newunicodechar{fi}{fi}
51 \newunicodechar{fl}{fl}
52 \newunicodechar{ffi}{ffi}
53 \newunicodechar{ffl}{ffl}
54 \newunicodechar{--}{---}
55 \newunicodechar{-}{--}

```

In PDF<sub>T</sub>E<sub>X</sub>, preserve upright quotes in verbatim text:

```
56 \RequirePackage{upquote}
57 \else
58 \fi
```

## 21 Miscellaneous tools

`\LWR@providelength`  $\langle \langle \textit{lengthname} \rangle \rangle$  Provides the length if it isn't defined yet.

Used to provide source compatibility for lengths which will be ignored, but might or might not be already provided by other packages.

```
59 \newcommand*\LWR@providelength[1]{%
60 \ifdeflength{#1}{\newlength{#1}}%
61 }
```

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

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

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

## 22 Early package requirements

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

Pkg `xpatch` Patches macros with optional arguments.

```
63 \RequirePackage{etoolbox}[2011/01/03]% v2.6 for \BeforeBeginEnvironment, etc.
64 \RequirePackage{xppatch}
```

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

```
65 \RequirePackage{ifplatform}% sense op-system platform
```

Pkg `letltxmacro` Used to redefine `\textbf` and friends.

```
66 \RequirePackage{letltxmacro}
```

## 23 Operating-System portability

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

### 23.1 Common portability code

Bool `usingOSWindows` Set if the `OSWindows` option is used.

```
67 \newbool{usingOSWindows}
68 \boolfalse{usingOSWindows}
```

### 23.2 Unix, Linux, and Mac OS

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

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

### 23.3 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.

```
70 \newcommand*{\LWR@setOSWindows}
71 {
72 \booltrue{usingOSWindows}
73 \renewcommand*{\OSPathSymbol}{\@backslashchar}
74 }
```

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

```
75 \ifwindows
76 \LWR@setOSWindows
77 \fi
```

## 24 Package options

Pkg `kvoptions` Allows key/value package options.

```
78 \RequirePackage{kvoptions}
79 \SetupKeyvalOptions{family=LWR,prefix=LWR@}
```

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`.

```
80 \newbool{warpingprint}
81 \newbool{warpingHTML}
82 \newbool{mathjax}
83 \newbool{LWR@origmathjax}
```

[defaults](#) The default is print output, and svg math if the user chose HTML output.

```
84 \booltrue{warpingprint}%
85 \boolfalse{warpingHTML}%
86 \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.

```
87 \DeclareVoidOption{warpprint}{%
88 \PackageInfo{lwarp}{Using option 'warpprint'}
89 \booltrue{warpingprint}%
90 \boolfalse{warpingHTML}%
91 }
```

Env `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.

```
92 \DeclareVoidOption{warpHTML}{%
93 \PackageInfo{lwarp}{Using option 'warpHTML'}%
94 \booltrue{warpingHTML}%
95 \boolfalse{warpingprint}%
96 }
```

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.

```
97 \DeclareVoidOption{mathsvg}{%
98 \PackageInfo{lwarp}{Using option 'mathsvg'}
99 \boolfalse{mathjax}%
100 \boolfalse{LWR@origmathjax}%
101 }
```

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

```
102 \DeclareVoidOption{mathjax}{%
103 \PackageInfo{lwarp}{Using option 'mathjax'}
104 \booltrue{mathjax}%
105 \booltrue{LWR@origmathjax}%
106 }
```

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

This is the `\jobname` of the printed version, even if currently compiling the HTML version. I.e. this is the `\jobname` without `_html` appended. This is used to set `\HomeHTMLFilename` if the user did not provide one.

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

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

```
108 \DeclareStringOption[english]{IndexLanguage}
```

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

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

```
109 \DeclareStringOption[lwarp.xdy]{xdyFilename}
```

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`:

```
110 \newbool{LWR@creatinglwarpmk}
111 \boolfalse{LWR@creatinglwarpmk}
112
113 \DeclareVoidOption{lwarpmk}{
114 \PackageInfo{lwarp}{Using option 'lwarpmk'}
115 \booltrue{LWR@creatinglwarpmk}
116 }
```

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.

```
117 \DeclareVoidOption{OSWindows}{
118 \PackageInfo{lwarp}{Using option 'OSWindows'}
119 \LWR@setOSWindows
120 }
```

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

```
121 \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>`

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

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

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

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

```
124 \ProcessKeyvalOptions*\relax
```

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

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

Defaults unless already over-ridden by the user:

```

126 \ifcsemtypy{LWR@HomeHTMLFilename}{
127 \newcommand*{\HomeHTMLFilename}{\BaseJobname}
128 }{
129 \csedef{HomeHTMLFilename}{\LWR@HomeHTMLFilename}
130 }
131
132 \csedef{HTMLFilename}{\LWR@HTMLFilename}

```

## 24.1 Conditional compilation

`\warpprintonly` `{<contents>}`

Only process the contents if producing printed output.

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

`\warpHTMLonly` `{<contents>}`

Only process the contents if producing HTML output.

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

`Pkg` `comment` Provides conditional code blocks.

```
135 \RequirePackage{comment}
```

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

```

136 \ifbool{warpingHTML}{
137 \def\DefaultCutFileName{\def\CommentCutFile{comment_html.cut}}
138 }{}
139
140 \ifbool{warpingprint}{
141 \def\DefaultCutFileName{\def\CommentCutFile{comment_print.cut}}
142 }{}

```

```
143 \excludecomment{testing}
```

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

```
144 \includecomment{warpall}
```

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

Env `warpHTML`

For HTML output:

```
145 \ifbool{warpingHTML}{%
146 \includecomment{warpHTML}
147 }
148 {\excludecomment{warpHTML}}%
```

```
149 \ifbool{warpingprint}
150 {\includecomment{warpprint}}
151 {\excludecomment{warpprint}}
```

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

```
152 \ifbool{LWR@creatinglwarpmk}
153 {\includecomment{LWR@createlwarpmk}}
154 {\excludecomment{LWR@createlwarpmk}}
```

## 25 Package load order

Several packages should only be loaded before `lwarp`, and most others should only be loaded after.

Packages which should only be loaded before `lwarp` have their own

```
lwarp-<packagename>.sty
```

which use `\LWR@loadbefore` to trigger an error if they are loaded after `lwarp`. Examples include `fontspec`, `inputenc`, `fontenc`, and `newunicodechar`.

Most packages should be loaded after `lwarp`. This is 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.

### 25.1 Tests of package load order

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

```
155 \newcommand*{\LWR@loadafter}[1]{%
156 \@ifpackageloaded{#1}
```

```

157 {
158 \PackageError{lwarp}
159 {Package #1, or one which uses #1, must be loaded after lwarp}
160 {Move \detokenize{\usepackage}{#1} after \detokenize{\usepackage}{lwarp}.
161 Package #1 may also be loaded by something else, which must also be moved
162 after lwarp.}
163 }
164 {}
165 }

```

`\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.

```

166 \@ifclassloaded{memoir}
167 {\newcommand*\LWR@notmemoirloadafter}[1]{}
168 {\LetLtxMacro\LWR@notmemoirloadafter\LWR@loadafter}

```

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

```

169 \newcommand*\LWR@loadbefore}[1]{%
170 \@ifpackageloaded{#1}
171 {}
172 {
173 \PackageError{lwarp}
174 {Package #1 must be loaded before lwarp}
175 {Move \detokenize{\usepackage}{#1} before \detokenize{\usepackage}{lwarp}.}
176 }
177 }

```

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

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

```

178 \newcommand*\LWR@loadnever}[2]{%
179 \PackageError{lwarp}
180 {Package #1 is not supported by lwarp's HTML conversion.
181 Package(s) #2 may be useful instead}
182 {Package #1 might conflict with lwarp in some way,
183 or is superceded by another package.
184 For a possible alternative, see package(s) #2.}
185 }

```

## 25.2 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`:

```
186 \LWR@loadafter{a4}
187 \LWR@loadafter{a4wide}
188 \LWR@loadafter{a5comb}
189 \LWR@notmemoirloadafter{abstract}
190 \LWR@loadafter{acro}
191 \LWR@loadafter{acronym}
192 \LWR@loadafter{adjmulticol}
193 \LWR@loadafter{addlines}
194 \LWR@loadafter{afterpage}
195 \LWR@loadafter{algorithmicx}
196 \LWR@loadafter{alltt}
197 \LWR@loadafter{amsmath}
198 \LWR@loadafter{amsthm}
199 \LWR@loadafter{anonchap}
200 \LWR@loadafter{anysize}
201 \LWR@notmemoirloadafter{appendix}
202 \LWR@loadafter{arabicfront}
203 \LWR@notmemoirloadafter{array}
204 % \LWR@loadafter{atbegshi}% used by morewrites
205 \LWR@loadafter{authblk}
206 \LWR@loadafter{axodraw2}
207 \LWR@loadafter{backref}
208 \LWR@loadafter{balance}
209 \LWR@loadafter{bigdelim}
210 \LWR@loadafter{bigstrut}
211 \LWR@loadafter{blowup}
212 \LWR@loadafter{bookmark}
213 \LWR@notmemoirloadafter{booktabs}
214 \LWR@loadafter{boxedminipage}
215 \LWR@loadafter{boxedminipage2e}
216 \LWR@loadafter{breakurl}
217 \LWR@loadafter{bytefield}
218 \LWR@loadafter{cancel}
219 \LWR@loadafter{caption}
220 \LWR@notmemoirloadafter{ccaption}
221 \LWR@loadafter{changebar}
222 \LWR@notmemoirloadafter{changepage}
223 \LWR@notmemoirloadafter{chnpage}
224 \LWR@loadafter{chappg}
225 \LWR@loadafter{chapterbib}
226 \LWR@loadafter{chemfig}
227 \LWR@loadafter{chemformula}
```

---

228 \LWR@loadafter{chemgreek}  
229 \LWR@loadafter{chemmacros}  
230 \LWR@loadafter{chemnum}  
231 \LWR@loadafter{cite}  
232 \LWR@loadafter{color}  
233 \LWR@loadafter{colortbl}  
234 \LWR@loadafter{continue}  
235 \LWR@notmemoirloadafter{crop}  
236 \LWR@loadafter{cuted}  
237 \LWR@loadafter{cutwin}  
238 \LWR@loadafter{dblfloatfix}  
239 \LWR@loadafter{dblfnote}  
240 \LWR@notmemoirloadafter{dcolumn}  
241 \LWR@loadafter{diagbox}  
242 \LWR@loadafter{draftwatermark}  
243 \LWR@loadafter{easy-todo}  
244 \LWR@loadafter{ebook}  
245 \LWR@loadafter{ellipsis}  
246 \LWR@loadafter{emptypage}  
247 \LWR@loadafter{endfloat}  
248 \LWR@loadafter{endheads}  
249 \LWR@loadafter{endnotes}  
250 \LWR@notmemoirloadafter{enumerate}  
251 \LWR@loadafter{enumitem}  
252 \LWR@notmemoirloadafter{epigraph}  
253 \LWR@loadafter{epstopdf}  
254 \LWR@loadafter{epstopdf-base}  
255 \LWR@loadafter{eso-pic}  
256 \LWR@loadafter{everypage}  
257 \LWR@loadafter{everyshi}  
258 \LWR@loadafter{extramarks}  
259 \LWR@loadafter{fancybox}  
260 \LWR@loadafter{fancyhdr}  
261 \LWR@loadafter{fancyref}  
262 \LWR@loadafter{fancyvrb}  
263 \LWR@loadafter{figcaps}  
264 \LWR@loadafter{figsize}  
265 \LWR@loadafter{fix2col}  
266 \LWR@loadafter{fixme}  
267 \LWR@loadafter{fixmetodonotes}  
268 \LWR@loadafter{flafter}  
269 \LWR@loadafter{float}  
270 \LWR@loadafter{floatflt}  
271 \LWR@loadafter{floatpag}  
272 \LWR@loadafter{floatrow}  
273 \LWR@loadafter{fltrace}  
274 \LWR@loadafter{flushend}  
275 \LWR@loadafter{fncychap}  
276 \LWR@loadafter{fnlineno}  
277 \LWR@loadafter{fnpos}

```
278 % fontenc must be loaded before lwarp
279 % fontspec must be loaded before lwarp
280 \LWR@loadafter{footmisc}
281 \LWR@loadafter{footnote}
282 \LWR@loadafter{footnotehyper}
283 \LWR@loadafter{footnpag}
284 \LWR@loadafter{framed}
285 \LWR@loadafter{ftnright}
286 \LWR@loadafter{fullpage}
287 \LWR@loadafter{fullwidth}
288 \LWR@loadafter{fwlw}
289 \LWR@loadafter{geometry}
290 \LWR@loadafter{glossaries}
291 % \LWR@loadafter{graphics}% pre-loaded by xunicode
292 % \LWR@loadafter{graphicx}% pre-loaded by xunicode
293 \LWR@loadafter{grffile}
294 \LWR@loadafter{grid}
295 \LWR@loadafter{hang}
296 \LWR@loadafter{hanging}
297 \LWR@loadafter{hycap}
298 \LWR@loadafter{hypdestopt}
299 \LWR@loadafter{hypernat}
300 \LWR@loadafter{hyperref}
301 \LWR@loadafter{hyperxmp}
302 \LWR@loadafter{hyphenat}
303 \LWR@loadafter{idxlayout}
304 \LWR@loadafter{ifoddpag}
305 \LWR@loadafter{indentfirst}
306 % inputenc must be loaded before lwarp
307 \LWR@loadafter{keyfloat}
308 \LWR@loadafter{layout}
309 \LWR@loadafter{letterspace}
310 \LWR@loadafter{letrine}
311 \LWR@loadafter{lineno}
312 \LWR@loadafter{lips}
313 \LWR@loadafter{listings}
314 \LWR@loadafter{longtable}
315 \LWR@loadafter{lscape}
316 \LWR@loadafter{ltcaption}
317 \LWR@loadafter{ltxgrid}
318 \LWR@loadafter{ltxtable}
319 \LWR@loadafter{luacolor}
320 \LWR@loadafter{luatodonotes}
321 \LWR@loadafter{marginfit}
322 \LWR@loadafter{marginfix}
323 \LWR@loadafter{marginnote}
324 \LWR@loadafter{mcaption}
325 \LWR@loadafter{mdframed}
326 \LWR@loadafter{memhfixc}
327 \LWR@loadafter{metalogo}
```

```
328 \LWR@loadafter{mhchem}
329 \LWR@loadafter{microtype}
330 \LWR@loadafter{midfloat}
331 \LWR@loadafter{midpage}
332 \LWR@loadafter{morefloats}
333 \LWR@notmemoirloadafter{moreverb}
334 % morewrites must be loaded before lwarp
335 \LWR@notmemoirloadafter{mparhack}
336 %\LWR@loadafter{multicol}% loaded by ltxdoc
337 \LWR@loadafter{multirow}
338 \LWR@loadafter{multitoc}
339 \LWR@loadafter{nameref}
340 \LWR@loadafter{natbib}
341 \LWR@notmemoirloadafter{needspace}
342 % newclude must be loaded before lwarp
343 \LWR@loadafter{newtxmath}
344 % newunicodechar must be loaded before lwarp
345 \LWR@notmemoirloadafter{nextpage}
346 \LWR@loadafter{nicefrac}
347 \LWR@loadafter{nonfloat}
348 \LWR@loadafter{nonumonpart}
349 \LWR@loadafter{nopageno}
350 \LWR@loadafter{nowidow}
351 \LWR@loadafter{ntheorem}
352 \LWR@loadafter{overpic}
353 \LWR@loadafter{pagegrid}
354 \LWR@notmemoirloadafter{pagenote}
355 \LWR@loadafter{pagesel}
356 \LWR@loadafter{paralist}
357 \LWR@notmemoirloadafter{parskip}
358 \LWR@loadafter{pbox}
359 \LWR@loadafter{pdfrender}
360 \LWR@loadafter{pdfscape}
361 \LWR@loadafter{pdfsync}
362 \LWR@loadafter{pfnote}
363 \LWR@loadafter{phfqit}
364 \LWR@loadafter{placeins}
365 \LWR@loadafter{prelim2e}
366 \LWR@loadafter{prettyref}
367 \LWR@loadafter{preview}
368 \LWR@loadafter{quotchap}
369 \LWR@loadafter{ragged2e}
370 \LWR@loadafter{realscripts}
371 \LWR@loadafter{relsize}
372 \LWR@loadafter{resizegather}
373 \LWR@loadafter{romanbar}
374 \LWR@loadafter{romanbarpagenumber}
375 \LWR@loadafter{rotating}
376 \LWR@loadafter{rotfloat}
377 \LWR@loadafter{savetrees}
```

```
378 % \LWR@loadafter{scalegnt}% loaded by babel-french
379 \LWR@loadafter{schemata}
380 \LWR@loadafter{scrextend}
381 \LWR@loadafter{scrhack}
382 \LWR@loadafter{scrlyer}
383 \LWR@loadafter{scrlyer-notecolumn}
384 \LWR@loadafter{scrlyer-scrpage}
385 \LWR@loadafter{section}
386 \LWR@loadafter{sectionbreak}
387 \LWR@loadafter{sectsty}
388 \LWR@notmemoirloadafter{setspace}
389 \LWR@loadafter{shadow}
390 \LWR@notmemoirloadafter{showidx}
391 \LWR@loadafter{showkeys}
392 \LWR@loadafter{sidecap}
393 \LWR@loadafter{sidenotes}
394 \LWR@loadafter{siunitx}
395 \LWR@loadafter{soul}
396 \LWR@loadafter{soulpos}
397 \LWR@loadafter{soulutf8}
398 \LWR@loadafter{stabular}
399 \LWR@loadafter{stfloats}
400 \LWR@loadafter{subfig}
401 \LWR@loadafter{subfigure}
402 \LWR@loadafter{supertabular}
403 \LWR@loadafter{tabls}
404 \LWR@notmemoirloadafter{tabularx}
405 \LWR@loadafter{tabulary}
406 \LWR@loadafter{textarea}
407 % \LWR@loadafter{textcomp}% maybe before lwarp with font packages
408 \LWR@loadafter{textfit}
409 \LWR@loadafter{textpos}
410 \LWR@loadafter{theorem}
411 \LWR@loadafter{threeparttable}
412 \LWR@loadafter{tikz}
413 \LWR@loadafter{titleps}
414 \LWR@loadafter{titlesec}
415 \LWR@loadafter{titletoc}
416 \LWR@notmemoirloadafter{titling}
417 % \LWR@loadafter{tocbasic}% preloaded by koma-script classes
418 \LWR@notmemoirloadafter{tocbibind}
419 \LWR@notmemoirloadafter{tocloft}
420 \LWR@loadafter{tocstyle}
421 \LWR@loadafter{todo}
422 \LWR@loadafter{todonotes}
423 \LWR@loadafter{transparent}
424 \LWR@loadafter{trivfloat}
425 \LWR@loadafter{turnthepage}
```

```

426 % \LWR@loadafter{typearea}% preloaded by koma-script classes
427 \LWR@loadafter{ulem}
428 \LWR@loadafter{upref}
429 \LWR@loadafter{url}
430 \LWR@loadafter{varioref}% no lwarp package provided
431 \LWR@notmemoirloadafter{verse}
432 \LWR@loadafter{vertbars}
433 \LWR@loadafter{vmargin}
434 \LWR@loadafter{vwcol}
435 \LWR@loadafter{wallpaper}
436 \LWR@loadafter{watermark}
437 \LWR@loadafter{wrapfig}
438 \LWR@loadafter{xcolor}
439 \LWR@loadafter{xfrac}
440 \LWR@loadafter{xltextra}
441 \LWR@loadafter{xmpincl}
442 \LWR@loadafter{xtab}
443 \LWR@loadafter{xurl}
444 \LWR@loadafter{xy}
445 \LWR@loadafter{zwpagelayout}

```

## 26 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:** 446 \begin{warpHTML}

Load **fontspec** if necessary:

```

447 \ifxetexorluatex
448 \@ifpackageloaded{fontspec}{}{
449 \usepackage[no-math]{fontspec}
450 }

```

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

```

451 \defaultfontfeatures[\rmfamily]{Ligatures={NoCommon,TeX}}
452 \defaultfontfeatures[\sffamily]{Ligatures={NoCommon,TeX}}
453 \defaultfontfeatures[\ttfamily]{Ligatures=NoCommon}
454 \else

```

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

Pkg microtype

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

```

455 \RequirePackage {microtype}
456
457 \microtypesetup{
458 protrusion=false,
459 expansion=false,
460 tracking=false,
461 kerning=false,
462 spacing=false}
463
464 \DisableLigatures[f,q,t,T,Q]{encoding = *,family = *}

465 \fi

466 \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:**

```

467 \begin{warpHTML}
468 \RequirePackage[paperheight=190in,paperwidth=20in,%
469 left=2in,right=6in,%
470 top=1in,bottom=1in,%
471]{geometry}
472 \@twosidefalse
473 \@mparswitchfalse
474 \end{warpHTML}

```

**for HTML & PRINT:**

```

475 \begin{warpall}

```

Pkg xparse

$\TeX$ 3 command argument parsing

```

476 \RequirePackage{xparse}

```

```
477 \end{warpall}
```

**for HTML output:** 478 \begin{warpHTML}

Pkg expl3

ℒ<sub>EX</sub>3 programming

```
479 \RequirePackage{expl3}
```

Pkg gettitlestring

Used to emulate \nameref.

```
480 \RequirePackage{gettitlestring}
```

Pkg everyhook

**everyhook** is used to patch paragraph handling.

```
481 \RequirePackage{everyhook}
```

```
482 \end{warpHTML}
```

**for HTML & PRINT:** 483 \begin{warpall}

Pkg filecontents

Used to write helper files, done in print mode.

Patched to work with **morewrites**, per <https://tex.stackexchange.com/questions/312830/does-morewrites-not-support-filecontents-and-can-i-write-body-of-environment-us/312910>

```
484 \RequirePackage{filecontents}
```

```
485
```

```
486 \@ifpackagelater{filecontents}{2011/10/09}%
```

```
487 {}
```

```
488 {
```

```
489 \newwrite\fcwrite
```

```
490 \let\LWR@origfilec@ntents\filec@ntents
```

```
491 \def\filec@ntents{\def\chardef##1\write{\let\reservedc\fcwrite}\LWR@origfilec@ntents}
```

```
492 }
```

```
493 \end{warpall}
```

**for HTML output:** 494 \begin{warpHTML}

Pkg xifthen

495 \RequirePackage{xifthen}

Pkg xstring

496 \RequirePackage{xstring}

Pkg verbatim

497 \RequirePackage{verbatim}

Pkg makeidx

498 \RequirePackage{makeidx}

499 \makeindex

Pkg calc

500 \RequirePackage{calc}

Pkg refcount

Provides \setcounterref, \setcounterpageref, etc.

501 \RequirePackage{refcount}

Pkg newfloat

502 \RequirePackage{newfloat}

503 \end{warpHTML}

**for HTML & PRINT:** 504 \begin{warpall}

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

505 \RequirePackage{environ}

506 \end{warpall}

**for HTML output:** 507 \begin{warpHTML}

Pkg zref Used for cross-references.

508 \RequirePackage{zref}

Pkg `amsmath` Preloaded to avoid options clash and to add patches.

Equation numbers are placed to the left for HTML.

`newtxmath` automatically loads `amsmath`, so the option `leqno` is passed beforehand to be picked up both here and by `newtxmath` if it is used.

```
509 % \PassOptionsToPackage{leqno}{amsmath}% disabled to test centered display math
510 \RequirePackage{amsmath}
```

Patches to allow `\eqref` inside a caption:

```
511 \def\maketag@@@#1{\text{#1}}
512 \def\tagform@#1{\maketag@@@{\ignorespaces#1\unskip}}
```

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

```
513 \RequirePackage{printlen}
```

`\LWR@printlength` `{\langle length \rangle}`

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

```
514 \newrobustcmd*\LWR@printlength[1]{%
515 \begingroup%
516 \uselengthunit{PT}%
517 \renewcommand*\unitspace{}%
518 \ifdimless{#1}{10pt}{%
519 \printlength{#1}%
520 }{%
521 \rndprintlength{#1}%
522 }%
523 \endgroup%
524 }
```

```
525 \end{warpHTML}
```

**for PRINT output:** `526 \begin{warpprint}`

Pkg `varwidth` Used for print-mode lateximage:

```
527 \RequirePackage{varwidth}
```

```
528 \end{warpprint}
```

## 27 Loading packages

**for HTML output:** 529 `\begin{warpHTML}`

Remember the original `\RequirePackage`:

```
530 \LetLtxMacro{\LWR@origRequirePackage}{\RequirePackage}
```

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

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

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

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

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

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

```
533 \newcommand*\LWR@findword[3][,]{%
534 \StrBetween[#3,\numexpr#3+1]{#1#2#1}{#1}{#1}%
535 }
```

`\LWR@lookforpackagename` {*index*}

If this is an `lwarp`-supported package name, re-direct it to the `lwarp` version by renaming it `lwarp-` followed by the original name.

Looks `index` deep into the list of package names, `\LWR@requirepackagenames`, and builds `\LWR@parsedrequirepackagenames` which is the modified list of names.

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

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

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

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

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

See if the package name was found:

```
539 \IfStrEq{\LWR@strresulttwo}{}%
540 {%
541 }% no filename
542 {% yes filename
```

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

```
543 \IfFileExists{lwarp-\LWR@strresulttwo.sty}%
544 {% lwarp-* file found
545 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
546 \edef\LWR@parsedrequirepackagenames{lwarp-\LWR@strresulttwo}%
547 }{%
548 \edef\LWR@parsedrequirepackagenames{%
549 \LWR@parsedrequirepackagenames,lwarp-\LWR@strresulttwo%
550 }%
551 }%
552 }%
553 {%

554 \ifdefvoid{\LWR@parsedrequirepackagenames}{%
555 \edef\LWR@parsedrequirepackagenames{\LWR@strresulttwo}%
556 }{%
557 \edef\LWR@parsedrequirepackagenames{%
558 \LWR@parsedrequirepackagenames,\LWR@strresulttwo%
559 }%
560 }%
561 }% no lwarp-* file
562 }% yes filename
563 }
```

`\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  $\LaTeX$  version.

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

Redirect up to nine names:

```
565 \renewcommand*{\LWR@requirepackagenames}{#2}%
566 \renewcommand*{\LWR@parsedrequirepackagenames}{}%
567 \LWR@lookforpackagename{1}%
568 \LWR@lookforpackagename{2}%
569 \LWR@lookforpackagename{3}%
570 \LWR@lookforpackagename{4}%
571 \LWR@lookforpackagename{5}%
```

```

572 \LWR@lookforpackagename{6}%
573 \LWR@lookforpackagename{7}%
574 \LWR@lookforpackagename{8}%
575 \LWR@lookforpackagename{9}%

```

\RequirePackage depending on the options and version:

```

576 \IfValueTF{#1}%
577 {% options given
578 \IfValueTF{#3}% version given?
579 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}[#3]}%
580 {\LWR@origRequirePackage[#1]{\LWR@parsedrequirepackagenames}}%
581 }%
582 {% no options given
583 \IfValueTF{#3}% version given?
584 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}[#3]}%
585 {\LWR@origRequirePackage{\LWR@parsedrequirepackagenames}}%
586 }%
587 }
588 \LetLtxMacro{\usepackage}{\RequirePackage}

```

\LWR@ProvidesPackagePass *{⟨pkgname⟩} [⟨version⟩]*

Uses the original package, including options.

```

589 \NewDocumentCommand{\LWR@ProvidesPackagePass}{m o}{
590 \PackageInfo{lwarp}{Using package ‘#1’ and adding lwarp modifications, including options,}%
591 \IfValueTF{#2}
592 {\ProvidesPackage{lwarp-#1}[#2]}
593 {\ProvidesPackage{lwarp-#1}}
594 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{#1}}
595 \ProcessOptions\relax
596 \IfValueTF{#2}
597 {\LWR@origRequirePackage{#1}[#2]}
598 {\LWR@origRequirePackage{#1}}
599 }

```

\LWR@ProvidesPackageDrop *{⟨pkgname⟩} [⟨version⟩]*

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

```

600 \NewDocumentCommand{\LWR@ProvidesPackageDrop}{m o}{
601 \PackageInfo{lwarp}{Replacing package ‘#1’ with the lwarp version, discarding options,}%
602 \IfValueTF{#2}
603 {\ProvidesPackage{lwarp-#1}[#2]}
604 {\ProvidesPackage{lwarp-#1}}

```

Ignore all options.

```
605 \DeclareOption*{}
```

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

```
606 % \ProcessOptions\relax% original LaTeX code
607 \let\ds@\@empty% from the original \ProcessOptions
608 \edef\@curroptions{}% lwarp modification to \ProcessOptions
609 \@processoptions\relax% from the original \ProcessOptions
610 }
```

```
611 \end{warpHTML}
```

## 28 Additional required packages

**for HTML output:** 612 \begin{warpHTML}

Pkg caption

```
613 \RequirePackage{caption}%
```

```
614 \end{warpHTML}
```

## 29 File handles

Defines file handles for writes.

**for HTML & PRINT:** 615 \begin{warpall}

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

```
616 \newwrite\LWR@quickfile%
```

```
617 \end{warpall}
```

**for HTML output:** 618 \begin{warpHTML}

\LWR@lateximagesfile For lateximages.txt.

```
619 \newwrite\LWR@lateximagesfile
```

```
620 \end{warpHTML}
```

### 30 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:** 621 `\begin{warpHTML}`

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

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

```
622 \def\@include#1 {%
623 \immediate\openout\LWR@quickfile #1_html_inc.tex% lwarp
624 \immediate\write\LWR@quickfile{\string\input{#1.tex}}% lwarp
625 \immediate\closeout\LWR@quickfile% lwarp
626 \LWR@origclearpage% \changed
627 \if@filesw
628 \immediate\write\@mainaux{\string\@input{#1_html_inc.aux}}% changed
629 \fi
630 \@tempswatru
631 \if@partsw
632 \@tempswafalse
633 \edef\reserved@b{#1}%
634 \@for\reserved@a:=\@partlist\do
635 {\ifx\reserved@a\reserved@b\@tempswatru\fi}%
636 \fi
637 \if@tempswa
638 \let\@auxout\@partaux
639 \if@filesw
640 \immediate\openout\@partaux #1_html_inc.aux % changed
641 \immediate\write\@partaux{\relax}%
642 \fi
643 \@input@{#1_html_inc.tex}% changed
644 \LWR@origclearpage% changed
645 \@writeckpt{#1}%
```

```

646 \if@filesw
647 \immediate\closeout\@partaux
648 \fi
649 \else
650 \deadcycles\z@
651 \@nameuse{cp@#1}%
652 \fi
653 \let\@auxout\@mainaux%
654 }

655 \end{warpHTML}

```

## 31 Copying a file

**for HTML output:** 656 \begin{warpHTML}

\LWR@copyfile {<source filename>} {<destination filename>}

Used to copy the .toc file to .sidetoc to re-print the TOC in the sideroc navigation pane.

```

657 \newwrite\LWR@copyoutfile % open the file to write to
658 \newread\LWR@copyinfile % open the file to read from
659
660 \newcommand*{\LWR@copyfile}[2]{%
661 \LWR@traceinfo{LWR@copyfile: copying #1 to #2}
662
663 \immediate\openout\LWR@copyoutfile=#2
664 \openin\LWR@copyinfile=#1
665 \begingroup\endlinechar=-1
666 \makeatletter
667
668 \LWR@traceinfo{LWR@copyfile: about to loop}
669
670 \loop\unless\ifeof\LWR@copyinfile
671 \LWR@traceinfo{LWR@copyfile: one line}
672 \read\LWR@copyinfile to\LWR@fileline % Read one line and store it into \LWR@fileline
673 % \LWR@fileline\par % print the content into the pdf
674 % print the content:
675 \immediate\write\LWR@copyoutfile{\unexpanded\expandafter{\LWR@fileline}}%
676 \repeat
677 \immediate\closeout\LWR@copyoutfile
678 \LWR@traceinfo{LWR@copyfile: done}
679 \endgroup
680 }

```

```
681 \end{warpHTML}
```

## 32 Debugging messages

**for HTML & PRINT:** 682 \begin{warpall}

Bool LWR@tracinglwarp True if tracing is turned on.

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

\tracinglwarp Turns on the debug tracing messages.

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

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

```
685 \newcommand{\LWR@traceinfo}[1]{%
686 \ifbool{LWR@tracinglwarp}%
687 {%
688 \typeout{*** lwarp: #1}%
689 % \PackageInfo{lwarp}{#1 : }%
690 }%
691 {}%
692 }
```

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

Default: false

```
693 \newbool{HTMLDebugComments}
694 \boolfalse{HTMLDebugComments}
```

If \tracinglwarp, show where preamble hooks occur:

```
695 \AfterEndPreamble{
696 \LWR@traceinfo{AfterEndPreamble}
697 }
698
699 \AtBeginDocument{
700 \LWR@traceinfo{AtBeginDocument}
701 }
```

```
702 \end{warpall}
```

## 33 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:** 703 `\begin{warpall}`

### 33.1 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`

```
704 \newbool{FormatEPUB}
705 \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`

```
706 \newbool{FormatWP}
707 \boolfalse{FormatWP}
```

**Bool** `WPMarkFloats` Adds

**Default:** `false`

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

or

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

around floats while formatting for word processors. This helps identify boundaries of floats to be manually converted to word-processor frames and captions.<sup>14</sup>

```
708 \newbool{WPMarkFloats}
709 \boolfalse{WPMarkFloats}
```

**Bool** `WPMarkMinipages` Adds

**Default:** `false`

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

<sup>14</sup>Perhaps some day word processors will have HTML import options for identifying `<figure>` and `<figcaption>` tags for figures and tables.

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

```
710 \newbool{WPMarkMinipages}
711 \boolfalse{WPMarkMinipages}
```

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

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

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

```
712 \newbool{WPMarkTOC}
713 \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.*

```
714 \newbool{WPMarkLOFT}
715 \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.

```
716 \newbool{WPMarkMath}
717 \boolfalse{WPMarkMath}
```

Bool `WPTitleHeading` While formatting for word processors, `true` sets the document title to `<h1>`, which is expected for HTML documents, but also causes the lower-level section headings to start at **Heading 2** when imported into LIBREOFFICE. Set to `false` to cause the title to be plain text, and the section headings to begin at **Heading 1**.

See table 6 on table 6.

```
718 \newbool{WPTitleHeading}
719 \boolfalse{WPTitleHeading}
```

```
720 \end{warpall}
```

## 33.2 Heading adjustments

If formatting the HTML for a word processor, adjust heading levels.

If WPTitleHeading is true, adjust so that part is **Heading 1**.

If WPTitleHeading is false, use <h1> for the title, and set part to **Heading 2**.

for HTML output:

```
721 \begin{warpHTML}

722 \AtBeginDocument{
723 \ifbool{FormatWP}{
724 \@ifundefined{chapter}{
725 \ifbool{WPTitleHeading}{% part and section starting at h2
726 \renewcommand*\LWR@tagtitle}{h1}
727 \renewcommand*\LWR@tagtitleend}{/h1}
728 \renewcommand*\LWR@tagpart}{h2}
729 \renewcommand*\LWR@tagpartend}{/h2}
730 \renewcommand*\LWR@tagsection}{h3}
731 \renewcommand*\LWR@tagsectionend}{/h3}
732 \renewcommand*\LWR@tagsubsection}{h4}
733 \renewcommand*\LWR@tagsubsectionend}{/h4}
734 \renewcommand*\LWR@tagsubsubsection}{h5}
735 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
736 \renewcommand*\LWR@tagparagraph}{h6}
737 \renewcommand*\LWR@tagparagraphend}{/h6}
738 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
739 \renewcommand*\LWR@tagsubparagraphend}{/span}
740 }% WPTitleHeading
741 {% not WPTitleHeading, part and section starting at h1
742 \renewcommand*\LWR@tagtitle}{div class="title"}
743 \renewcommand*\LWR@tagtitleend}{/div}
744 \renewcommand*\LWR@tagpart}{h1}
745 \renewcommand*\LWR@tagpartend}{/h1}
746 \renewcommand*\LWR@tagsection}{h2}
747 \renewcommand*\LWR@tagsectionend}{/h2}
748 \renewcommand*\LWR@tagsubsection}{h3}
749 \renewcommand*\LWR@tagsubsectionend}{/h3}
750 \renewcommand*\LWR@tagsubsubsection}{h4}
751 \renewcommand*\LWR@tagsubsubsectionend}{/h4}
752 \renewcommand*\LWR@tagparagraph}{h5}
753 \renewcommand*\LWR@tagparagraphend}{/h5}
754 \renewcommand*\LWR@tagsubparagraph}{h6}
755 \renewcommand*\LWR@tagsubparagraphend}{/h6}
756 }% not WPTitleHeading
757 }% chapter undefined
```

```

758 {% chapter defined
759 \ifbool{WPTitleHeading}{
760 {% not WPTitleHeading, part and chapter starting at h1
761 \renewcommand*\LWR@tagtitle}{div class="title"}
762 \renewcommand*\LWR@tagtitleend}{/div}
763 \renewcommand*\LWR@tagpart}{h1}
764 \renewcommand*\LWR@tagpartend}{/h1}
765 \renewcommand*\LWR@tagchapter}{h2}
766 \renewcommand*\LWR@tagchapterend}{/h2}
767 \renewcommand*\LWR@tagsection}{h3}
768 \renewcommand*\LWR@tagsectionend}{/h3}
769 \renewcommand*\LWR@tagsubsection}{h4}
770 \renewcommand*\LWR@tagsubsectionend}{/h4}
771 \renewcommand*\LWR@tagsubsubsection}{h5}
772 \renewcommand*\LWR@tagsubsubsectionend}{/h5}
773 \renewcommand*\LWR@tagparagraph}{h6}
774 \renewcommand*\LWR@tagparagraphend}{/h6}
775 \renewcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
776 \renewcommand*\LWR@tagsubparagraphend}{/span}
777 }% not WPTitleHeading
778 }% chapter defined
779 }{}% FormatWP
780 }% AtBeginDocument

781 \end{warpHTML}

```

## 34 Remembering original formatting macros

for HTML output: 782 \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.

```

783 \LetLtxMacro\LWR@origmbox\mbox
784 \LetLtxMacro\LWR@origmakebox\makebox

```

Some packages redefine \#, which is used to generate HTML, so the original must be remembered here.

```

785 \chardef\LWR@origpound='\#

786 \let\LWR@origcomma\,
787 \let\LWR@origtilde~
788 \let\LWR@origenskip\enskip

```

```
789 \let\LWR@origquad\quad
790 \let\LWR@origqquad\qquad
791
792 \let\LWR@origspace\hspace
793 \let\LWR@origfill\hfill
794 \let\LWR@origfil\hfil
795 \let\LWR@origvspace\vspace
796 \let\LWR@orighss\hss
797 \let\LWR@origllap\llap
798 \let\LWR@origrlap\rlap
799 \let\LWR@origfilneg\hfilneg
800
801 \let\LWR@origrule\rule
802 \let\LWR@orighrulefill\hrulefill
803 \let\LWR@origdotfill\dotfill
804
805 \let\LWR@origmedskip\medskip
806 \let\LWR@origbigskip\bigskip
807
808 \let\LWR@origtextellipsis\textellipsis
809
810 \let\LWR@orignormalsize\normalsize
811 \let\LWR@origsmall\small
812 \let\LWR@origfootnotesize\footnotesize
813 \let\LWR@origscriptsize\scriptsize
814 \let\LWR@origtiny\tiny
815 \let\LWR@origlarge\large
816 \let\LWR@origLarge\Large
817 \let\LWR@origLARGE\LARGE
818 \let\LWR@orighuge\huge
819 \let\LWR@origHuge\Huge
820
821 \LetLtxMacro{\LWR@origtextrm}{\textrm}
822 \LetLtxMacro{\LWR@origtextsf}{\textsf}
823 \LetLtxMacro{\LWR@origtexttt}{\texttt}
824 \LetLtxMacro{\LWR@origtextnormal}{\textnormal}
825 \LetLtxMacro{\LWR@origtextbf}{\textbf}
826 \LetLtxMacro{\LWR@origtextmd}{\textmd}
827 \LetLtxMacro{\LWR@origtextit}{\textit}
828 \LetLtxMacro{\LWR@origtextsl}{\textsl}
829 \LetLtxMacro{\LWR@origtextsc}{\textsc}
830 \LetLtxMacro{\LWR@origtextup}{\textup}
831 \LetLtxMacro{\LWR@origemph}{\emph}
832
833 \LetLtxMacro{\LWR@origrmfamily}{\rmfamily}
834 \LetLtxMacro{\LWR@origsfamily}{\sffamily}
835 \LetLtxMacro{\LWR@origttfamily}{\ttfamily}
836 \LetLtxMacro{\LWR@origbfseries}{\bfseries}
837 \LetLtxMacro{\LWR@origmdseries}{\mdseries}
838 \LetLtxMacro{\LWR@origupshape}{\upshape}
```

```
839 \LetLtxMacro{\LWR@origslshape}{\slshape}
840 \LetLtxMacro{\LWR@origscshape}{\scshape}
841 \LetLtxMacro{\LWR@origitshape}{\itshape}
842 \LetLtxMacro{\LWR@origem}{\em}
843 \LetLtxMacro{\LWR@orignormalfont}{\normalfont}
844
845 \let\LWR@origraggedright\raggedright
846 \let\LWR@origonecolumn\onecolumn
847
848 \let\LWR@origsp\sp
849 \let\LWR@origsb\sb
850 \LetLtxMacro\LWR@origtextsuperscript\textsuperscript
851 \LetLtxMacro\LWR@orig@textsuperscript\@textsuperscript
852
853 \AtBeginDocument{
854 \LetLtxMacro\LWR@origtextsubscript\textsubscript
855 \LetLtxMacro\LWR@orig@textsubscript\@textsubscript
856 }
857
858 \LetLtxMacro\LWR@origunderline\underline

859 \let\LWR@origraggedright\raggedright
860 \let\LWR@origraggedleft\raggedleft
861 \let\LWR@origcentering\centering

862 \let\LWR@orignewpage\newpage
863
864 \let\LWR@origpagestyle\pagestyle
865 \let\LWR@origthispagestyle\thispagestyle
866 \LetLtxMacro\LWR@origpagenumbering\pagenumbering
867
868 \LetLtxMacro{\LWR@origminipage}{\minipage}
869 \let\LWR@origendminipage\endminipage
870 \LetLtxMacro{\LWR@origparbox}{\parbox}
871
872 \let\LWR@orignewline\newline
873
874
875 \AtBeginDocument{% in case packages change definition
876 \let\LWR@orig@trivlist\@trivlist
877 \let\LWR@origtrivlist\trivlist
878 \let\LWR@origendtrivlist\endtrivlist
879 \LetLtxMacro\LWR@origitem\item
880 \LetLtxMacro\LWR@origitemize\itemize
881 \LetLtxMacro\LWR@endorigitemize\enditemize
882 \LetLtxMacro\LWR@origenumerate\enumerate
883 \LetLtxMacro\LWR@endorigenumerate\endenumerate
884 \LetLtxMacro\LWR@origdescription\description
885 \LetLtxMacro\LWR@endorigdescription\enddescription
```

```

886 \let\LWR@orig@mklab\@mklab
887 \let\LWR@origmakelabel\makelabel
888 \let\LWR@orig@donoparitem\@donoparitem
889 \LetLtxMacro\LWR@orig@item\@item
890 \let\LWR@orig@nbitem\@nbitem
891 }
892
893 \let\LWR@origpar\par
894
895 \LetLtxMacro{\LWR@origfootnote}{\footnote}
896 \let\LWR@orig@mpfootnotetext\@mpfootnotetext
897
898 \let\LWR@origclearpage\clearpage
899
900
901 \AtBeginDocument{% in case packages change definition
902 \LetLtxMacro\LWR@orighline\hline%
903 \LetLtxMacro\LWR@origcline\cline%
904 }

905 \end{warpHTML}

```

## 35 Accents

Native  $\TeX$  accents such as `\''` will work, but many more kinds of accents are available when using Unicode-aware  $X_{\text{e}}\TeX$  and Lua $\TeX$ .

**for HTML output:** 906 `\begin{warpHTML}`

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

```
907 \AtBeginDocument{
```

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

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

```
908 \LetLtxMacro{\LWR@origt}{\t}
```

For pdf $\TeX$ , additional work is required:

```

909 \ifPDFTeX
910 \LetLtxMacro{\LWR@origequalaccent}{\=}
911 \LetLtxMacro{\LWR@origdotaccent}{\cdot}
912 \LetLtxMacro{\LWR@origu}{\u}
913 \LetLtxMacro{\LWR@origv}{\v}

```

```

914 \LetLtxMacro{\LWR@origc}{\c}
915 \LetLtxMacro{\LWR@origd}{\d}
916 \LetLtxMacro{\LWR@origb}{\b}

```

The HTML redefinitions follow.

For pdf<sub>La</sub>T<sub>E</sub>X, Unicode diacritical marks are used:

```

917 \renewcommand*{\=} [1]{#1\HTMLUnicode{0305}}
918 \renewcommand*{\.} [1]{#1\HTMLUnicode{0307}}
919 \renewcommand*{\u} [1]{#1\HTMLUnicode{0306}}
920 \renewcommand*{\v} [1]{#1\HTMLUnicode{030C}}
921 \renewcommand*{\c} [1]{#1\HTMLUnicode{0327}}
922 \renewcommand*{\d} [1]{#1\HTMLUnicode{0323}}
923 \renewcommand*{\b} [1]{#1\HTMLUnicode{0331}}
924 \fi

```

For all engines, a Unicode diacritical tie is used:

```

925 \def\LWR@t#1#2{#1\HTMLUnicode{0361}#2}
926 \renewcommand*{\t} [1]{\LWR@t#1}

```

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

```

927 \ifPDFTeX
928 \newcommand*{\LWR@restoreorigaccents}{%
929 \LetLtxMacro{\=}{\LWR@origequalaccent}%
930 \LetLtxMacro{\.}{\LWR@origdotaccent}%
931 \LetLtxMacro{\u}{\LWR@origu}%
932 \LetLtxMacro{\v}{\LWR@origv}%
933 \LetLtxMacro{\t}{\LWR@origt}%
934 \LetLtxMacro{\c}{\LWR@origc}%
935 \LetLtxMacro{\d}{\LWR@origd}%
936 \LetLtxMacro{\b}{\LWR@origb}%
937 }%
938 \else% XeLaTeX, LuaLaTeX:
939 \newcommand*{\LWR@restoreorigaccents}{%
940 \LetLtxMacro{\t}{\LWR@origt}%
941 }%
942 \fi%
943 }% AtBeginDocument

944 \end{warpHTML}

```

## 36 Configuration Files

```
945 \begin{warpprint}
946 \typeout{lwarp: generating configuration files}
947 \end{warpprint}
```

### 36.1 project\_html.tex

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

Only write `\jobname_html.tex` if generating the print version.

```
948 \begin{warpprint}
949 \immediate\openout\LWR@quickfile=\jobname_html.tex
950 \immediate\write\LWR@quickfile{%
951 \detokenize{\PassOptionsToPackage}%
952 {warpHTML,BaseJobname=\jobname}{lwarp}%
953 }
954 \immediate\write\LWR@quickfile{%
955 \detokenize{\input}\string{\jobname.tex}\string }%
956 }
957 \immediate\closeout\LWR@quickfile
958 \end{warpprint}
```

### 36.2 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`.

An example `lwarpmk.conf`:

---

```
opsystem = "Unix" -- or "Windows"
latexname = "pdflatex" -- or "lualatex" or "xelatex"
sourcename = "projectname" -- your .tex source
homehtmlfilename = "index" -- or "projectname"
htmlfilename = "" -- or "projectname" if numbered HTML files
```

---

**for PRINT output:**

```
959 \begin{warpprint}
960 \ifcsdef\LWR@quickfile-{}{\newwrite{\LWR@quickfile}}
961 \immediate\openout\LWR@quickfile=lwarpmk.conf
962 \ifbool{usingOSWindows}{
```

```

963 \immediate\write\LWR@quickfile{opsystem = "Windows"}
964 }{
965 \immediate\write\LWR@quickfile{opsystem = "Unix"}
966 }
967 \ifPDFTeX
968 \immediate\write\LWR@quickfile{latexname = "pdflatex"}
969 \fi
970 \ifXeTeX
971 \immediate\write\LWR@quickfile{latexname = "xelatex"}
972 \fi
973 \ifLuaTeX
974 \immediate\write\LWR@quickfile{latexname = "lualatex"}
975 \fi
976 \immediate\write\LWR@quickfile{sourcename = "\jobname"}
977 \immediate\write\LWR@quickfile{%
978 homehtmlfilename = "\HomeHTMLFilename"%
979 }
980 \immediate\write\LWR@quickfile{htmlfilename = "\HTMLFilename"}
981 \immediate\write\LWR@quickfile{latexmk = "\ifbool{LWR@latexmk}{true}{false}"}
982 \immediate\write\LWR@quickfile{language = "\LWR@IndexLanguage"}
983 \immediate\write\LWR@quickfile{xdyfile = "\LWR@xdyFilename"}
984 \immediate\closeout\LWR@quickfile
985 \end{warpprint}

```

### 36.3 project.lwarpmkconf

File `project.lwarpmkconf` A project-specific configuration file for `lwarpmk`.

```

986 \begin{warpprint}
987 \ifcsdef{LWR@quickfile}{\newwrite{LWR@quickfile}}
988 \immediate\openout\LWR@quickfile=\jobname.lwarpmkconf
989 \ifbool{usingOSWindows}{
990 \immediate\write\LWR@quickfile{opsystem = "Windows"}
991 }{
992 \immediate\write\LWR@quickfile{opsystem = "Unix"}
993 }
994 \ifPDFTeX
995 \immediate\write\LWR@quickfile{latexname = "pdflatex"}
996 \fi
997 \ifXeTeX
998 \immediate\write\LWR@quickfile{latexname = "xelatex"}
999 \fi
1000 \ifLuaTeX
1001 \immediate\write\LWR@quickfile{latexname = "lualatex"}
1002 \fi
1003 \immediate\write\LWR@quickfile{sourcename = "\jobname"}
1004 \immediate\write\LWR@quickfile{%

```

```
1005 homehtmlfilename = "\HomeHTMLFilename"%
1006 }
1007 \immediate\write\LWR@quickfile{htmlfilename = "\HTMLFilename"}
1008 \immediate\write\LWR@quickfile{latexmk = "\ifbool{LWR@latexmk}{true}{false}"}
1009 \immediate\write\LWR@quickfile{language = "\LWR@IndexLanguage"}
1010 \immediate\write\LWR@quickfile{xdyfile = "\LWR@xdyFilename"}
1011 \immediate\closeout\LWR@quickfile
1012 \end{warpprint}
```

### 36.4 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.

```
1013 \begin{warpprint}
1014 \begin{filecontents*}{lwarp.css}
1015 /*
1016 CSS stylesheet for the LaTeX lwarp package
1017 Copyright 2016-2018 Brian Dunn -- BD Tech Concepts LLC
1018 */
1019
1020
1021 /* a fix for older browsers: */
1022 header, section, footer, aside, nav, main,
1023 article, figure { display: block; }
1024
1025
1026 A:link {color:#000080 ; text-decoration: none ; }
1027 A:visited {color:#800000 ; }
1028 A:hover {color:#000080 ; text-decoration: underline ;}
1029 A:active {color:#800000 ; }
1030
1031 a.tocpart {display: inline-block ; margin-left: 0em ;
1032 font-weight: bold ;}
1033 a.tocchapter {display: inline-block ; margin-left: 0em ;
1034 font-weight: bold ;}
1035 a.tocsection {display: inline-block ; margin-left: 1em ;
1036 text-indent: -.5em ; font-weight: bold ; }
1037 a.tocsubsection {display: inline-block ; margin-left: 2em ;
1038 text-indent: -.5em ; }
1039 a.tocsubsubsection {display: inline-block ; margin-left: 3em ;
1040 text-indent: -.5em ; }
1041 a.tocparagraph {display: inline-block ; margin-left: 4em ;
1042 text-indent: -.5em ; }
1043 a.tocsubparagraph {display: inline-block ; margin-left: 5em ;
```

```
1044 text-indent: -.5em ; }
1045 a.tocfigure {margin-left: 0em}
1046 a.tocsubfigure {margin-left: 2em}
1047 a.toctable {margin-left: 0em}
1048 a.tocsubtable {margin-left: 2em}
1049 a.toctheorem {margin-left: 0em}
1050 a.toclstlisting {margin-left: 0em}
1051
1052 body {
1053 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1054 "Lucida Bright", Georgia, serif;
1055 background: #FAF7F4 ;
1056 color: black ;
1057 margin:0em ;
1058 padding:0em ;
1059 font-size: 100% ;
1060 line-height: 1.2 ;
1061 }
1062
1063 p {margin: 1.5ex 0em 1.5ex 0em ;}
1064 table p {margin: .5ex 0em .5ex 0em ;}
1065
1066 /* Holds a section number to add space between it and the name */
1067 span.sectionnumber { margin-right: 0em }
1068
1069 /* Inserted in front of index lines */
1070 span.indexitem {margin-left: 0em}
1071 span.indexsubitem {margin-left: 2em}
1072 span.indexsubsubitem {margin-left: 4em}
1073
1074 div.hidden, span.hidden { display: none ; }
1075
1076 kbd {
1077 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1078 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1079 "Courier New", monospace;
1080 font-size: 100% ;
1081 }
1082
1083 pre { padding: 3pt ; }
1084
1085 span.strong { font-weight: bold; }
1086
1087 span.textmd { font-weight: normal; }
1088
1089 span.textsc { font-variant: small-caps; }
1090
1091 span.textsl { font-style: oblique; }
1092
1093 span.textup { font-variant: normal; }
```

```
1094
1095 span.textrm {
1096 font-family: "DejaVu Serif", "Bitstream Vera Serif",
1097 "Lucida Bright", Georgia, serif;
1098 }
1099
1100 span.textsf {
1101 font-family: "DejaVu Sans", "Bitstream Vera Sans",
1102 Geneva, Verdana, sans-serif ;
1103 }
1104
1105 span.textcircled { border: 1px solid black ; border-radius: 1ex ; }
1106
1107 span.underline {
1108 text-decoration: underline ;
1109 text-decoration-skip ;
1110 }
1111
1112 span.overline {
1113 text-decoration: overline ;
1114 text-decoration-skip ;
1115 }
1116
1117 /* for diagbox */
1118 div.diagboxtitleN { border-bottom: 1px solid gray }
1119 div.diagboxtitleS { border-top: 1px solid gray }
1120
1121 div.diagboxE {
1122 padding-left: 2em ;
1123 text-align: right ;
1124 }
1125
1126 div.diagboxW {
1127 padding-right: 2em ;
1128 text-align: left ;
1129 }
1130
1131
1132
1133 /* For realscripts */
1134 .supsubscript {
1135 display: inline-block;
1136 text-align:left ;
1137 }
1138
1139 .supsubscript sup,
1140 .supsubscript sub {
1141 position: relative;
1142 display: block;
1143 font-size: .5em;
```

```
1144 line-height: 1;
1145 }
1146
1147 .supsubscript sup {
1148 top: .5em;
1149 }
1150
1151 .supsubscript sub {
1152 top: .5em;
1153 }
1154
1155 span.attribution {
1156 margin-left: 1em ; font-size: 80% ; font-variant: small-caps;
1157 }
1158
1159 span.citetitle {
1160 margin-left: 1em ; font-size: 80% ; font-style: oblique;
1161 }
1162
1163 span.poemtitle {
1164 font-size: 120% ; font-weight: bold;
1165 }
1166
1167 pre.tabbing {
1168 font-family: "Linux Libertine Mono O", "Lucida Console",
1169 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1170 "Liberation Mono", "FreeMono", "Andale Mono",
1171 "Nimbus Mono L", "Courier New", monospace;
1172 }
1173
1174 blockquote {
1175 margin-left: 0px ;
1176 margin-right: 0px ;
1177 }
1178
1179 /* quotchap is for the quotchap package */
1180 div.quotchap {
1181 font-style: oblique ;
1182 overflow-x: auto ;
1183 margin-left: 2em ;
1184 margin-right: 2em ;
1185 }
1186
1187 blockquote p, div.quotchap p {
1188 line-height: 1.5;
1189 text-align: left ;
1190 font-size: .85em ;
1191 margin-left: 3em ;
1192 margin-right: 3em ;
1193 }
```

```
1194
1195 /* qauthor is for the quotchap package */
1196 div.qauthor {
1197 display: block ;
1198 text-align: right ;
1199 margin-left: auto ;
1200 margin-right: 2em ;
1201 font-size: 80% ;
1202 font-variant: small-caps;
1203 }
1204
1205 div.qauthor p {
1206 text-align: right ;
1207 }
1208
1209 blockquotation {
1210 margin-left: 0px ;
1211 margin-right: 0px ;
1212 }
1213
1214 blockquotation p {
1215 line-height: 1.5;
1216 text-align: left ;
1217 font-size: .85em ;
1218 margin-left: 3em ;
1219 margin-right: 3em ;
1220 }
1221
1222 div.epigraph, div.dictum {
1223 line-height: 1.2;
1224 text-align: left ;
1225 padding: 3ex 1em 0ex 1em ;
1226 /* margin: 3ex auto 3ex auto ; */ /* Epigraph centered */
1227 margin: 3ex 1em 3ex auto ; /* Epigraph to the right */
1228 /* margin: 3ex 1em 3ex 1em ; */ /* Epigraph to the left */
1229 font-size: .85em ;
1230 max-width: 27em ;
1231 }
1232
1233
1234
1235 div.epigraphsource, div.dictumauthor {
1236 text-align:right ;
1237 margin-left:auto ;
1238 /* max-width: 50% ; */
1239 border-top: 1px solid #A0A0A0 ;
1240 padding-bottom: 3ex ;
1241 line-height: 1.2;
1242 }
1243
```

```
1244 div.epigraph p, div.dictum p { padding: .5ex ; margin: 0ex ;}
1245 div.epigraphsource p, div.dictumauthor p { padding: .5ex 0ex 0ex 0ex ; margin: 0ex ;}
1246 div.dictumauthor { font-style:italic }
1247
1248
1249 /* lettrine package: */
1250 span.lettrine { font-size: 3ex ; float: left ; }
1251 span.lettrinetext { font-variant: small-caps ; }
1252
1253 /* ulem and soul packages: */
1254 span.uline {
1255 text-decoration: underline ;
1256 text-decoration-skip ;
1257 }
1258
1259 span.uuline {
1260 text-decoration: underline ;
1261 text-decoration-skip ;
1262 text-decoration-style: double ;
1263 }
1264
1265 span.uwave {
1266 text-decoration: underline ;
1267 text-decoration-skip ;
1268 text-decoration-style: wavy ;
1269 }
1270
1271 span.sout {
1272 text-decoration: line-through ;
1273 }
1274
1275 span.xout {
1276 text-decoration: line-through ;
1277 }
1278
1279 span.dashuline {
1280 text-decoration: underline ;
1281 text-decoration-skip ;
1282 text-decoration-style: dashed ;
1283 }
1284
1285 span.dotuline {
1286 text-decoration: underline ;
1287 text-decoration-skip ;
1288 text-decoration-style: dotted ;
1289 }
1290
1291 span.letterspacing { letter-spacing: .2ex ; }
1292
1293 span.capsspacing {
```

```
1294 font-variant: small-caps ;
1295 letter-spacing: .1ex ;
1296 }
1297
1298 span.highlight { background: #F8E800 ; }
1299
1300
1301
1302
1303 html body {
1304 margin: 0 ;
1305 line-height: 1.2;
1306 }
1307
1308
1309 body div {
1310 margin: 0ex;
1311 }
1312
1313
1314 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
1315 {
1316 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
1317 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
1318 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
1319 "Times New Roman", serif;
1320 font-style: normal ;
1321 font-weight: bold ;
1322 text-align: left ;
1323 }
1324
1325 h1 { /* title of the entire website, used on each page */
1326 text-align: center ;
1327 font-size: 2.5em ;
1328 padding: .4ex 0em 0em 0em ;
1329 }
1330 h2 { font-size: 2.25em }
1331 h3 { font-size: 2em }
1332 h4 { font-size: 1.75em }
1333 h5 { font-size: 1.5em }
1334 h6 { font-size: 1.25em }
1335 span.paragraph {font-size: 1em ; font-variant: normal ;
1336 margin-right: 1em ; }
1337 span.subparagraph {font-size: 1em ; font-variant: normal ;
1338 margin-right: 1em ; }
1339
1340 div.minisec {
1341 font-family: "DejaVu Sans", "Bitstream Vera Sans",
1342 Geneva, Verdana, sans-serif ;
1343 font-style: normal ;
```

```
1344 font-weight: bold ;
1345 text-align: left ;
1346 }
1347
1348 /* Title of the file */
1349 h1 {
1350 margin: 0ex 0em 0ex 0em ;
1351 line-height: 1.3;
1352 text-align: center ;
1353 }
1354
1355 /* Part */
1356 h2 {
1357 margin: 1ex 0em 1ex 0em ;
1358 line-height: 1.3;
1359 text-align: center ;
1360 }
1361
1362 /* Chapter */
1363 h3 {
1364 margin: 3ex 0em 1ex 0em ;
1365 line-height: 1.3;
1366 }
1367
1368 /* Section */
1369 h4 {
1370 margin: 3ex 0em 1ex 0em ;
1371 line-height: 1.3;
1372 }
1373
1374 /* Sub-Section */
1375 h5 {
1376 margin: 3ex 0em 1ex 0em ;
1377 line-height: 1.3;
1378 }
1379
1380 /* Sub-Sub-Section */
1381 h6 {
1382 margin: 3ex 0em 1ex 0em ;
1383 line-height: 1.3;
1384 }
1385
1386
1387 div.titlepage {
1388 text-align: center ;
1389 }
1390
1391 .footnotes {
1392 font-size: .85em ;
1393 margin: 3ex 1em 0ex 1em ;
```

```
1394 padding-bottom: 1ex ;
1395 border-top: 1px solid silver ;
1396 }
1397
1398 .marginpar, .marginparblock {
1399 max-width:50%;
1400 float:right;
1401 text-align:left;
1402 margin: 1ex 0.5em 1ex 1em ;
1403 padding: 1ex 0.5em 1ex 0.5em ;
1404 font-size: 85% ;
1405 border-top: 1px solid silver ;
1406 border-bottom: 1px solid silver ;
1407 overflow-x: auto;
1408 }
1409
1410 .marginpar br { margin-bottom: 2ex ; }
1411
1412 div.marginblock, div.marginparblock {
1413 max-width:50%;
1414 float:right;
1415 text-align:left;
1416 margin: 1ex 0.5em 1ex 1em ;
1417 padding: 1ex 0.5em 1ex 0.5em ;
1418 overflow-x: auto;
1419 }
1420
1421 div.marginblock div.minipage,
1422 div.marginparblock div.minipage {
1423 display: block ;
1424 margin: 0pt auto 0pt auto ;
1425 }
1426
1427 div.marginblock div.minipage p ,
1428 div.marginparblock div.minipage p
1429 { font-size: 85%}
1430
1431 div.marginblock br ,
1432 div.marginparblock br
1433 { margin-bottom: 2ex ; }
1434
1435
1436 section.textbody div.footnotes{
1437 margin: 3ex 0em 0ex 0em ;
1438 border-bottom: 2px solid silver ;
1439 }
1440
1441 .footnoteheader {
1442 border-top: 2px solid silver ;
1443 margin-top: 3ex ;
```

```
1444 padding-top: 1ex ;
1445 font-weight: bold ;
1446 }
1447
1448 .mpfootnotes {
1449 text-align: left ;
1450 font-size: .85em ;
1451 margin-left: 1em ;
1452 border-top: 1px solid silver ;
1453 }
1454
1455 /* Remove footnote top border in the title page. */
1456 div.titlepage div.mpfootnotes {
1457 border-top: none ;
1458 }
1459
1460
1461
1462 ol {
1463 margin: 1ex 1em 1ex 0em;
1464 line-height: 1.2;
1465 }
1466
1467 ul, body dir, body menu {
1468 margin: 3ex 1em 3ex 0em;
1469 line-height: 1.2;
1470 }
1471
1472 li { margin: 0ex 0em 1ex 0em; }
1473
1474 html {
1475 margin: 0;
1476 padding: 0;
1477 }
1478
1479 .programlisting {
1480 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1481 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1482 "Courier New", monospace;
1483 margin: 1ex 0ex 1ex 0ex ;
1484 padding: .5ex 0pt .5ex 0pt ;
1485 overflow-x: auto;
1486 }
1487
1488 section.textbody>pre.programlisting {
1489 border-top: 1px solid silver ;
1490 border-bottom: 1px solid silver ;
1491 }
1492
1493
```

```
1494 div.displaymath {
1495 text-align: center ;
1496 }
1497
1498 div.displaymathnumbered {
1499 text-align: right ;
1500 margin-left: 5% ;
1501 margin-right: 5% ;
1502 min-width: 2.5in ;
1503 }
1504
1505 @media all and (min-width: 400px) {
1506 div.displaymathnumbered {
1507 margin-left: 10% ;
1508 margin-right: 10% ;
1509 }
1510 }
1511
1512 @media all and (min-width: 800px) {
1513 div.displaymathnumbered {
1514 margin-right: 20% ;
1515 }
1516 }
1517
1518 @media all and (min-width: 1200px) {
1519 div.displaymathnumbered {
1520 margin-right: 30% ;
1521 }
1522 }
1523
1524
1525 .inlineprogramlisting {
1526 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
1527 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
1528 "Courier New", monospace;
1529 overflow-x: auto;
1530 }
1531
1532 span.listinglabel {
1533 display: inline-block ;
1534 font-size: 70% ;
1535 width: 4em ;
1536 text-align: right ;
1537 margin-right: 2em ;
1538 }
1539
1540 div.abstract {
1541 margin: 2em 5% 2em 5% ;
1542 padding: 1ex 1em 1ex 1em ;
1543 /* font-weight: bold ; */
```

```
1544 font-size: 90% ;
1545 text-align: left ;
1546 }
1547
1548 div.abstract dl {line-height:1.5;}
1549 div.abstract dt {color:#304070;}
1550
1551 div.abstracttitle{
1552 font-family: "URW Classico", Optima, "Linux Biolinum O",
1553 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
1554 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
1555 font-weight:bold;
1556 font-size:1.25em;
1557 text-align: center ;
1558 }
1559
1560 span.abstracrunintitle{
1561 font-family: "URW Classico", Optima, "Linux Biolinum O",
1562 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
1563 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
1564 font-weight:bold;
1565 }
1566
1567
1568 .verbatim {
1569 overflow-x: auto ;
1570 }
1571
1572 .alltt {
1573 overflow-x: auto ;
1574 }
1575
1576
1577 .bverbatim {
1578 margin: 1ex Opt 1ex Opt ;
1579 padding: .5ex Opt .5ex Opt ;
1580 overflow-x: auto ;
1581 }
1582
1583 .lverbatim {
1584 margin: 1ex Opt 1ex Opt ;
1585 padding: .5ex Opt .5ex Opt ;
1586 overflow-x: auto ;
1587 }
1588
1589 .fancyvrb {
1590 font-size:.85em ;
1591 margin: 3ex Opt 3ex Opt
1592 }
1593
```

```
1594 .fancyvrblabel {
1595 font-weight:bold;
1596 text-align: center ;
1597 }
1598
1599
1600 .verse {
1601 font-family: "Linux Libertine Mono O", "Lucida Console",
1602 "Droid Sans Mono", "DejaVu Mono", "Bitstream Vera Mono",
1603 "Liberation Mono", "FreeMono", "Andale Mono",
1604 "Nimbus Mono L", "Courier New", monospace;
1605 margin-left: 1em ;
1606 }
1607
1608
1609 div.singlespace { line-height: 1.2 ; }
1610 div.onehalfspace { line-height: 1.5 ; }
1611 div.doublespace { line-height: 2 ; }
1612
1613
1614 /* Word processor format output: */
1615 div.wpfigure { border: 1px solid red ; margin: .5ex ; padding: .5ex ; }
1616 div.wptable { border: 1px solid blue ; margin: .5ex ; padding: .5ex ; }
1617 div.wpminipage { border: 1px solid green ; margin: .5ex ; padding: .5ex ;}
1618
1619
1620
1621
1622 /* Minipage environments, vertically aligned to top, center, bottom: */
1623 .minipage, .fminipage, .fcolorminipage {
1624 /* display: inline-block ; */
1625 /* Mini pages which follow each other will be tiled. */
1626 margin: .25em .25em .25em .25em;
1627 padding: .25em .25em .25em .25em;
1628 display: inline-flex;
1629 flex-direction: column ;
1630 overflow: auto;
1631 }
1632
1633 /* Paragraphs in the flexbox did not collapse their margins. */
1634 /* Have not yet researched this. */
1635 .minipage p {margin: .75ex 0em .75ex 0em ;}
1636
1637 .fboxBlock .minipage, .colorbox .minipage, .colorboxBlock .minipage,
1638 .fcolorbox .minipage, .fcolorboxBlock .minipage
1639 {border: none ; background: none;}
1640
1641 .fbox, .fboxBlock { border: 1px solid black ; }
1642
1643 .fbox, .fboxBlock, .fcolorbox, .fcolorboxBlock, .colorbox, .colorboxBlock,
```

```
1644 .fminipage, .fcolorminipage
1645 {display: inline-block}
1646
1647 .shadowbox, .shabox {
1648 border: 1px solid black;
1649 box-shadow: 3px 3px 3px #808080 ;
1650 border-radius: 0px ;
1651 padding: .4ex .3em .4ex .3em ;
1652 margin: 0pt .3ex 0pt .3ex ;
1653 display: inline-block ;
1654 }
1655
1656 .doublebox {
1657 border: 3px double black;
1658 border-radius: 0px ;
1659 padding: .4ex .3em .4ex .3em ;
1660 margin: 0pt .3ex 0pt .3ex ;
1661 display: inline-block ;
1662 }
1663
1664 .ovalbox, .Ovalbox {
1665 border: 1px solid black;
1666 border-radius: 1ex ;
1667 padding: .4ex .3em .4ex .3em ;
1668 margin: 0pt .3ex 0pt .3ex ;
1669 display: inline-block ;
1670 }
1671
1672 .Ovalbox { border-width: 2px ; }
1673
1674 .framebox {
1675 border: 1px solid black;
1676 border-radius: 0px ;
1677 padding: .3ex .2em 0ex .2em ;
1678 margin: 0pt .1ex 0pt .1ex ;
1679 display: inline-block ;
1680 }
1681
1682
1683 .mdframed {
1684 /* padding: 0ex ; */
1685 /* border: 1px solid black; */
1686 /* border-radius: 0px ; */
1687 padding: 0ex ;
1688 margin: 3ex 5% 3ex 5% ;
1689 /* display: inline-block ; */
1690 }
1691
1692 .mdframed p { padding: 0ex .5em 0ex .5em ; }
1693
```

```
1694 .mdframed dl { padding: 0ex .5em 0ex .5em ; }
1695
1696 .mdframedtitle {
1697 padding: .5em ;
1698 display: block ;
1699 font-size: 130% ;
1700 margin-bottom: 1ex ;
1701 }
1702
1703 .mdframedsubtitle {
1704 padding: 0ex .5em 0ex .5em ;
1705 display: block ;
1706 font-size: 115% ;
1707 }
1708
1709 .mdframedsubsubtitle {
1710 padding: 0ex .5em 0ex .5em ;
1711 display: block ;
1712 }
1713
1714 .mdtheorem {
1715 padding: 0ex .5em 0ex .5em ;
1716 margin: 3ex 5% 3ex 5% ;
1717 /* display: inline-block ; */
1718 }
1719
1720
1721 /* framed package */
1722 .framed, pre.boxedverbatim, fcolorbox {
1723 margin: 3ex 0em 3ex 0em ;
1724 border: 1px solid black;
1725 border-radius: 0px ;
1726 padding: .3ex 1em 0ex 1em ;
1727 display: block ;
1728 }
1729
1730 .shaded {
1731 margin: 3ex 0em 3ex 0em ;
1732 padding: .3ex 1em .3ex 1em ;
1733 display: block ;
1734 }
1735
1736 .snugframed {
1737 margin: 3ex 0em 3ex 0em ;
1738 border: 1px solid black;
1739 border-radius: 0px ;
1740 display: block ;
1741 }
1742
1743 .framedleftbar {
```

```
1744 margin: 3ex 0em 3ex 0em ;
1745 border-left: 3pt solid black;
1746 border-radius: 0px ;
1747 padding: .3ex .2em .3ex 1em ;
1748 display: block ;
1749 }
1750
1751 .framedtitle {
1752 margin: 0em ;
1753 padding: 0em ;
1754 font-size: 130%
1755 }
1756
1757 .framedtitle p { padding: .3em }
1758
1759
1760
1761 dl {
1762 margin: 1ex 2em 1ex 0em;
1763 line-height: 1.3;
1764 }
1765
1766 dl dt {
1767 margin-top: 1ex;
1768 margin-left: 1em ;
1769 font-weight: bold;
1770 }
1771
1772 dl dd p { margin-top: 0em; }
1773
1774
1775 nav {
1776 font-family: "URW Classico", Optima, "Linux Biolinum 0",
1777 "DejaVu Sans", "Bitstream Vera Sans",
1778 Geneva, Verdana, sans-serif ;
1779 margin-bottom: 4ex ;
1780 }
1781
1782 nav p {
1783 line-height: 1.2 ;
1784 margin-top: .5ex ;
1785 margin-bottom: .5ex;
1786 font-size: .9em ;
1787 }
1788
1789
1790
1791 img, img.hyperimage, img.borderimage {
1792 max-width: 600px;
1793 border: 1px solid silver;
```

```
1794 box-shadow: 3px 3px 3px #808080 ;
1795 padding: .5% ;
1796 margin: .5% ;
1797 background: none ;
1798 }
1799
1800 img.inlineimage{
1801 padding: 0px ;
1802 box-shadow: none ;
1803 border: none ;
1804 background: none ;
1805 margin: 0px ;
1806 display: inline-block ;
1807 border-radius: 0px ;
1808 }
1809
1810 img.logoimage{
1811 max-width: 300px ;
1812 box-shadow: 3px 3px 3px #808080 ;
1813 border: 1px solid black ;
1814 background:none ;
1815 padding:0 ;
1816 margin:.5ex ;
1817 border-radius: 10px ;
1818 }
1819
1820
1821 .section {
1822 /*
1823 To have each section float relative to each other:
1824 */
1825 /*
1826 display: block ;
1827 float: left ;
1828 position: relative ;
1829 background: white ;
1830 border: 1px solid silver ;
1831 padding: .5em ;
1832 */
1833 margin: 0ex .5em 0ex .5em ;
1834 padding: 0 ;
1835 }
1836
1837
1838 figure {
1839 margin: 3ex auto 3ex auto ;
1840 padding: 1ex 1em 1ex 1em ;
1841 overflow-x: auto ;
1842 }
1843
```

```
1844
1845 /* To automatically center images in figures: */
1846 /*
1847 figure img.inlineimage {
1848 margin: 0ex auto 0ex auto ;
1849 display: block ;
1850 }
1851 */
1852
1853 /* To automatically center minipages in figures: */
1854 /*
1855 figure div.minipage, figure div.minipage div.minipage {
1856 margin: 1ex auto 1ex auto ;
1857 display: block ;
1858 }
1859 */
1860
1861 figure div.minipage p { font-size: 85% ; }
1862
1863 figure.subfigure, figure.subtable {
1864 display: inline-block ; margin: 3ex 1em 3ex 1em ;
1865 }
1866
1867 figcaption .minipage { margin:0 ; padding: 0 }
1868
1869 div.minipage figure { border: none ; box-shadow: none ; }
1870
1871 div.floatrow { text-align: center; }
1872
1873 div.floatrow figure { display: inline-block ; margin: 1ex 2% ; }
1874
1875 div.floatfoot { font-size: .85em ;
1876 border-top: 1px solid silver ; line-height: 1.2 ; }
1877
1878 figcaption , .lstlistingtitle {
1879 font-size: .85em ;
1880 text-align: center ;
1881 font-weight: bold ;
1882 margin-top: 1ex ;
1883 margin-bottom: 1ex ;
1884 }
1885
1886 figure.subfigure figcaption, figure.subtable figcaption {
1887 border-bottom: none ; background: none ;
1888 }
1889
1890 div.nonfloatcaption {
1891 margin: 1ex auto 1ex auto ;
1892 font-size: .85em ;
1893 text-align: center ;
```

```
1894 font-weight: bold ;
1895 }
1896
1897 /* For a \RawCaption inside a minipage inside a figure's floatrow: */
1898 figure div.floatrow div.minipage figcaption {
1899 border: none ;
1900 background: none ;
1901 }
1902
1903
1904 table {
1905 margin: 1ex auto 1ex auto ;
1906 border-collapse: separate ;
1907 border-spacing: 0px ;
1908 line-height: 1.3 ;
1909 }
1910
1911 tr.hline td {border-top: 1px solid #808080 ; margin-top: 0ex ;
1912 margin-bottom: 0ex ; } /* for \hline */
1913
1914 tr.tbrule td {border-top: 1px solid black ; margin-top: 0ex ;
1915 margin-bottom: 0ex ; } /* for \toprule, \bottomrule */
1916
1917 td {padding: .5ex .5em .5ex .5em ;}
1918
1919 table td.tdl { text-align: left ; vertical-align: middle ; }
1920 table td.tdc { text-align: center ; vertical-align: middle ; }
1921 table td.tdat { text-align: center ; vertical-align: middle ; padding: 0px ; margin: 0px ; }
1922 table td.tdbang { text-align: center ; vertical-align: middle ; }
1923 table td.tdr { text-align: right ; vertical-align: middle ; }
1924 table td.tdp { text-align: left ; vertical-align: bottom ; }
1925 table td.tdm { text-align: left ; vertical-align: middle ; }
1926 table td.tdb { text-align: left ; vertical-align: top ; }
1927 table td.tdP { text-align: center ; vertical-align: bottom ; }
1928 table td.tdM { text-align: center ; vertical-align: middle ; }
1929 table td.tdB { text-align: center ; vertical-align: top ; }
1930
1931 table td.tvertbarl { border-left: 1px solid black }
1932 table td.tvertbarr { border-right: 1px solid black }
1933
1934
1935 /* for cmidrules: */
1936 table td.tdrule {
1937 border-top: 1px solid #A0A0A0 ;
1938 }
1939
1940 table td.tdrulel {
1941 border-top-left-radius:.5em ;
1942 border-top: 1px solid #A0A0A0 ;
1943 }
```

```
1944
1945 table td.tdruler {
1946 border-top-right-radius:.5em ;
1947 border-top: 1px solid #A0A0A0 ;
1948 }
1949
1950 table td.tdrulelr {
1951 border-top-left-radius:.5em ;
1952 border-top-right-radius:.5em ;
1953 border-top: 1px solid #A0A0A0 ;
1954 }
1955
1956
1957 /* Margins of paragraphs inside table cells: */
1958 td.tdp p , td.tdprule p , td.tdP p , td.tdPrule p { padding-top: 1ex ;
1959 padding-bottom: 1ex ; margin: 0ex ; }
1960 td.tdm p , td.tdmrule p , td.tdM p , td.tdMrule p { padding-top: 1ex ;
1961 padding-bottom: 1ex ; margin: 0ex ; }
1962 td.tdb p , td.tdbrule p , td.tdB p , td.tdBrule p { padding-top: 1ex ;
1963 padding-bottom: 1ex ; margin: 0ex ; }
1964
1965 td.tdp , td.tdprule , td.tdP , td.tdPrule
1966 { padding: 0ex .5em 0ex .5em ; }
1967 td.tdm , td.tdmrule , td.tdM , td.tdMrule
1968 { padding: 0ex .5em 0ex .5em ; }
1969 td.tdb , td.tdbrule , td.tdB , td.tdBrule
1970 { padding: 0ex .5em 0ex .5em ; }
1971
1972
1973 /* table notes: */
1974 .tnotes {
1975 margin: 0ex 5% 1ex 5% ;
1976 padding: 0.5ex 1em 0.5ex 1em;
1977 font-size:.85em;
1978 text-align: left ;
1979 }
1980
1981 .tnotes dl dt p {margin-bottom:0px;}
1982
1983 .tnoteitemheader {margin-right: 1em;}
1984
1985
1986 /* for colortbl and cell color */
1987 div.cellcolor {
1988 width: 100% ;
1989 padding: .5ex .5em .5ex .5em ;
1990 margin: -.5ex -.5em -.5ex -.5em ;
1991 }
1992
1993
```

```
1994 /* for bigdelim */
1995 .ldelim, .rdelim { font-size: 200% }
1996
1997
1998 /* center, flushleft, flushright environments */
1999 div.center{text-align:center;}
2000 div.center table {margin-left:auto;margin-right:auto;}
2001 div.flushleft{text-align:left;}
2002 div.flushleft table {margin-left:0em ; margin-right:auto;}
2003 div.flushright{text-align:right;}
2004 div.flushright table {margin-left:auto ; margin-right: 0em ;}
2005
2006
2007 /* Fancybox */
2008 div.Btrivlist table tr td {
2009 padding: .2ex 0em ;
2010 }
2011
2012
2013 /* program listing callouts: */
2014 span.callout {
2015 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2016 Geneva, Verdana, sans-serif ;
2017 border-radius: .5em;
2018 background-color:black;
2019 color:white;
2020 padding:0px .25em 0px .25em;
2021 margin: 0 ;
2022 font-weight: bold;
2023 font-size:.72em ;
2024 }
2025
2026 div.programlisting pre.verbatim span.callout{
2027 font-size: .85em ;
2028 }
2029
2030 span.verbatim {
2031 font-family: "DejaVu Mono", "Bitstream Vera Mono", "Lucida Console",
2032 "Nimbus Mono L", "Liberation Mono", "FreeMono", "Andale Mono",
2033 "Courier New", monospace;
2034 }
2035
2036
2037
2038 div.published
2039 {
2040 text-align: center ;
2041 font-variant: normal ;
2042 font-style: italic ;
2043 font-size: 1em ;
```

```
2044 margin: 3ex 0em 3ex 0em ;
2045 }
2046
2047 div.subtitle
2048 {
2049 text-align: center ;
2050 font-variant: normal ;
2051 font-style: italic ;
2052 font-size: 1.25em ;
2053 margin: 3ex 0em 3ex 0em ;
2054 }
2055
2056 div.subtitle p { margin: 1ex ; }
2057
2058 div.author
2059 {
2060 font-variant: normal ;
2061 font-style: normal ;
2062 font-size: 1em ;
2063 margin: 3ex 0em 3ex 0em ;
2064 }
2065
2066 div.oneauthor {
2067 display: inline-block ;
2068 margin: 3ex 1em 0ex 1em ;
2069 }
2070
2071 /*
2072 div.author table {
2073 margin: 3ex auto 0ex auto ;
2074 background: none ;
2075 }
2076
2077 div.author table tbody tr td { padding: .25ex ; }
2078 */
2079
2080 span.affiliation {font-size: .85em ; font-variant: small-caps; }
2081
2082 div.titledate {
2083 text-align: center ;
2084 font-size: .85em ;
2085 font-style: italic;
2086 margin: 6ex 0em 6ex 0em ;
2087 }
2088
2089
2090 nav.topnavigation{
2091 text-align: left ;
2092 padding: 0.5ex 1em 0.5ex 1em ;
2093 /* margin: 2ex 0em 3ex 0em ; */
```

```
2094 margin: 0 ;
2095 border-bottom: 1px solid silver ;
2096 border-top: 1px solid silver ;
2097 clear:right ;
2098 }
2099
2100 nav.botnavigation{
2101 text-align: left ;
2102 padding: 0.5ex 1em 0.5ex 1em ;
2103 /* margin: 3ex 0em 2ex 0em ; */
2104 margin: 0 ;
2105 border-top: 1px solid silver ;
2106 border-bottom: 1px solid silver ;
2107 clear:right ;
2108 }
2109
2110
2111 header{
2112 line-height: 1.2 ;
2113 font-size: 1em ;
2114 /* border-bottom: 2px solid silver ; */
2115 margin: 0px ;
2116 padding: 0ex 1em 0ex 1em ;
2117 text-align:center ;
2118 }
2119
2120 header p {margin:0ex;padding:4ex 0em 2ex 0em ;text-align:center;}
2121
2122
2123 footer{
2124 font-size: .85em ;
2125 line-height: 1.2 ;
2126 margin-top: 1ex ;
2127 border-top: 2px solid silver ;
2128 padding: 2ex 1em 2ex 1em ;
2129 clear:right ;
2130 text-align:left ;
2131 }
2132
2133
2134 a.linkhome { font-weight:bold ; font-size: 1em ;}
2135
2136
2137 div.lateximagesource { padding: 0px ; margin: 0px ; display: none; }
2138
2139 img.lateximage{
2140 padding: 0pt ;
2141 margin: 0pt ;
2142 box-shadow: none ;
2143 border: none ;
```

```
2144 background: none ;
2145 max-width: 100% ;
2146 border-radius: 0ex ;
2147 border: none ;
2148 }
2149
2150
2151
2152 nav.sidetoc {
2153 font-family: "DejaVu Serif", "Bitstream Vera Serif",
2154 "Lucida Bright", Georgia, serif;
2155 float:right ;
2156 width: 20%;
2157 border-left: 1px solid silver;
2158 border-top: 1px solid silver;
2159 border-bottom: 1px solid silver;
2160 /* border-top: 2px solid #808080 ; */
2161 background: #FAF7F4 ;
2162 padding: 2ex 0em 2ex 1em ;
2163 margin: 0ex 0em 2ex 1em ;
2164 font-size:.9em ;
2165 border-radius: 20px 0px 0px 20px ;
2166 }
2167
2168 div.sidetoccontents {
2169 /* border-top: 1px solid silver ; */
2170 overflow-y: auto ;
2171 width: 100% ;
2172 text-align: left ;
2173 }
2174
2175
2176 nav.sidetoc p {line-height:1.2 ; margin: 1ex .5em 1ex .5em ;
2177 text-indent: 0 ; }
2178
2179 nav.sidetoc p a {color:black ; font-size: .7em ;}
2180
2181 div.sidetoctitle {font-size: 1.2em; font-weight:bold; text-align:center;
2182 border-bottom: 1px solid silver ; }
2183
2184 nav.sidetoc a:hover {text-decoration: underline ; }
2185
2186
2187
2188 section.textbody { margin: 0ex 1em 0ex 1em ;}
2189
2190
2191 div.multicolsheading { -webkit-column-span: all;
2192 -moz-column-span: all; column-span: all; }
2193 div.multicols { -webkit-columns: 3 380px ;
```

```
2194 -moz-columns: 3 380px ; columns: 3 380px ; }
2195 div.multicols p {margin-top: 0ex}
2196
2197
2198
2199 /* Used to support algorithmicx: */
2200 span.floatright { float: right ; }
2201
2202
2203
2204
2205 /* Native LaTeX theorems: */
2206
2207 .theoremcontents { font-style: italic; margin-top: 3ex ; margin-bottom: 3ex ; }
2208 .theoremlabel { font-style: normal; font-weight: bold ; margin-right: .5em ; }
2209
2210
2211 /* theorem, amsthm, and ntheorem packages */
2212
2213 span.theoremheader,
2214 span.theoremheaderplain,
2215 span.theoremheaderdefinition,
2216 span.theoremheaderbreak,
2217 span.theoremheadermarginbreak,
2218 span.theoremheaderchangebreak,
2219 span.theoremheaderchange,
2220 span.theoremheadermargin
2221 {
2222 font-style:normal ; font-weight: bold ; margin-right: 1em ;
2223 }
2224
2225 span.amsthmnameplain,
2226 span.amsthmnamedefinition,
2227 span.amsthmnumberplain,
2228 span.amsthmnumberdefinition
2229 {
2230 font-style:normal ; font-weight: bold ;
2231 }
2232
2233
2234 span.amsthmnameremark,
2235 span.amsthmnumberremark
2236 {font-style:italic ; font-weight: normal ; }
2237
2238
2239 span.amsthmnoteplain,
2240 span.amsthmnotedefinition
2241 {font-style:normal ;}
2242
2243
```

```
2244 span.theoremheaderremark,
2245 span.theoremheaderproof,
2246 span.amsthmproofname
2247 {font-style:italic ; font-weight: normal ; margin-right: 1em ; }
2248
2249 span.theoremheadersc
2250 {
2251 font-style:normal ;
2252 font-variant: small-caps ;
2253 font-weight: normal ;
2254 margin-right: 1em ;
2255 }
2256
2257 .theoremdemark {float:right}
2258
2259 div.amsthmbodyplain, div.theorembodyplain, div.theorembodynonumberplain,
2260 div.theorembodybreak, div.theorembodynonumberbreak,
2261 div.theorembodymarginbreak,
2262 div.theorembodychangebreak,
2263 div.theorembodychange,
2264 div.theorembodymargin
2265 {
2266 font-style:italic;
2267 margin-top: 3ex ; margin-bottom: 3ex ;
2268 }
2269
2270 div.theorembodydefinition, div.theorembodyremark, div.theorembodyproof,
2271 div.theorembodyplainupright, nonumberplainuprightsc,
2272 div.amsthmbodydefinition, div.amsthmbodyremark,
2273 div.amsthmproof
2274 {
2275 font-style: normal ;
2276 margin-top: 3ex ; margin-bottom: 3ex ;
2277 }
2278
2279 span.amsthmnoteremark {}
2280
2281
2282
2283 /*
2284 For CSS LaTeX and related logos:
2285 Based on:
2286 http://edward.oconnor.cx/2007/08/tex-poshlet
2287 http://nitens.org/taraborelli/texlogo
2288 */
2289
2290 .latexlogofont {
2291 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
2292 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2293 font-variant: normal ;
```

```
2294 }
2295
2296 .latexlogo {
2297 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
2298 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2299 letter-spacing: .03em ;
2300 font-size: 1.1em;
2301 }
2302
2303 .latexlogo sup {
2304 text-transform: uppercase;
2305 letter-spacing: .03em ;
2306 font-size: 0.85em;
2307 vertical-align: 0.15em;
2308 margin-left: -0.36em;
2309 margin-right: -0.15em;
2310 }
2311
2312 .latexlogo sub {
2313 text-transform: uppercase;
2314 vertical-align: -0.5ex;
2315 margin-left: -0.1667em;
2316 margin-right: -0.125em;
2317 font-size: 1em;
2318 }
2319
2320 .xetexlogo {
2321 font-family: "Linux Libertine O", "Nimbus Roman No 9 L",
2322 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2323 letter-spacing: .03em ;
2324 font-size: 1.1em;
2325 }
2326
2327 /* A smaller gap between Xe and Tex v.s. LaTeX: */
2328 .xetexlogo sub {
2329 text-transform: uppercase;
2330 vertical-align: -0.5ex;
2331 margin-left: -0.0667em;
2332 margin-right: -0.2em;
2333 font-size: 1em;
2334 letter-spacing: .03em ;
2335 }
2336
2337 /* A large gap between Xe and LaTeX v.s. TeX: */
2338 .xelatexlogo sub {
2339 text-transform: uppercase;
2340 vertical-align: -0.5ex;
2341 margin-left: -0.0667em;
2342 margin-right: -.05em;
2343 font-size: 1em;
```

```
2344 letter-spacing: .03em ;
2345 }
2346
2347 .amslogo {
2348 font-family: "TeXGyreChorus","URW Chancery L",
2349 "Apple Chancery","ITC Zapf Chancery","Monotype Corsiva",
2350 "Linux Libertine O", "Nimbus Roman No 9 L", "FreeSerif",
2351 "Hoefler Text", Times, "Times New Roman", serif;
2352 font-style: italic;
2353 }
2354
2355 .lyxlogo {
2356 font-family: "URW Classico", Optima, "Linux Biolinum O",
2357 "DejaVu Sans", "Bitstream Vera Sans", Geneva,
2358 Verdana, sans-serif ;
2359 }
2360
2361
2362 /* Only display top and bottom navigation if a small screen: */
2363 /* Hide the sidetoc if a small screen: */
2364 nav.topnavigation { display:none; }
2365 nav.botnavigation { display:none; }
2366
2367 @media screen and (max-width: 45em) {
2368 /* nav.sidetoc {display:none;} */
2369 nav.sidetoc {
2370 float: none ;
2371 width: 100% ;
2372 margin: 5ex 0px 5ex 0px ;
2373 padding: 0 ;
2374 border-radius: 0 ;
2375 border-bottom: 1px solid black ;
2376 border-top: 1px solid black ;
2377 box-shadow: none ;
2378 }
2379 /* nav.topnavigation { display:block } */
2380 nav.botnavigation { display:block }
2381 .marginpar {
2382 max-width: 100%;
2383 float: none;
2384 display:block ;
2385 margin: 1ex 1em 1ex 1em ;
2386 }
2387 }
2388
2389 @media print {
2390 body {
2391 font-family: "Linux Libertine O",
2392 "DejaVu Serif", "Bitstream Vera Serif",
2393 "Liberation Serif", "Nimbus Roman No 9 L",
```

```

2394 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2395 }
2396 nav.sidetoc { display:none; }
2397 nav.topnavigation { display: none; }
2398 nav.botnavigation { display: none; }
2399 }
2400
2401 @media handheld {
2402 nav.sidetoc { display:none; }
2403 nav.topnavigation { display:block }
2404 nav.botnavigation { display:block }
2405 }
2406
2407 @media projection {
2408 nav.sidetoc { display:none; }
2409 nav.topnavigation { display:block }
2410 nav.botnavigation { display:block }
2411 }
2412 \end{filecontents*}
2413 % \end{Verbatim}% for syntax highlighting
2414 \end{warpprint}

```

### 36.5 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.

```

2415 \begin{warpprint}
2416 \begin{filecontents*}{lwarp_sagebrush.css}
2417 @import url("lwarp.css") ;
2418
2419
2420 A:link {color:#105030 ; text-decoration: none ; }
2421 A:visited {color:#705030 ; text-shadow:1px 1px 2px #a0a0a0;}
2422 A:hover {color:#006000 ; text-decoration: underline ; text-shadow:0px 0px 2px #a0a0a0;}
2423 A:active {color:#00C000 ; text-shadow:1px 1px 2px #a0a0a0;}
2424
2425
2426
2427 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2428 {
2429 font-family: "URW Classico", Optima, "Linux Biolinum 0",
2430 "Linux Libertine 0", "Liberation Serif",
2431 "Nimbus Roman No 9 L", "FreeSerif",
2432 "Hoefler Text", Times, "Times New Roman", serif;

```

```
2433 font-variant: small-caps ;
2434 font-weight: normal ;
2435 color: #304070 ;
2436 text-shadow: 2px 2px 3px #808080;
2437 }
2438
2439 h1 { /* title of the entire website, used on each page */
2440 font-variant: small-caps ;
2441 color: #304070 ;
2442 text-shadow: 2px 2px 3px #808080;
2443 background-color: #F7F7F0 ;
2444 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C4);
2445 }
2446
2447 h1 {
2448 border-bottom: 1px solid #304070;
2449 border-top: 2px solid #304070;
2450 }
2451
2452 h2 {
2453 border-bottom: 1px solid #304070;
2454 border-top: 2px solid #304070;
2455 background-color: #F7F7F0 ;
2456 background-image: linear-gradient(to bottom, #F7F7F0, #DAD0C0);
2457 }
2458
2459
2460
2461 div.abstract {
2462 background: #f5f5eb ;
2463 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
2464
2465 border: 1px solid silver;
2466 border-radius: 1em ;
2467 }
2468
2469 div.abstract dl {line-height:1.5;}
2470 div.abstract dt {color:#304070;}
2471
2472 div.abstracttitle{
2473 font-family: "URW Classico", Optima, "Linux Biolinum 0",
2474 "Linux Libertine 0", "Liberation Serif", "Nimbus Roman No 9 L",
2475 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2476 font-weight:bold;
2477 font-variant: small-caps ;
2478 font-size:1.5em;
2479 border-bottom: 1px solid silver ;
2480 color: #304070 ;
2481 text-align: center ;
2482 text-shadow: 1px 1px 2px #808080;
```

```
2483 }
2484
2485 span.abstractrunintitle{
2486 font-family: "URW Classico", Optima, "Linux Biolinum 0",
2487 "Linux Libertine 0", "Liberation Serif", "Nimbus Roman No 9 L",
2488 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2489 font-weight:bold;
2490 }
2491
2492
2493 div.epigraph, div.dictum {
2494 background: #f5f5eb ;
2495 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
2496
2497 border: 1px solid silver ;
2498 border-radius: 1ex ;
2499 box-shadow: 3px 3px 3px #808080 ;
2500 }
2501
2502
2503 .example {
2504 background-color: #f5f5eb ;
2505 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
2506
2507 }
2508
2509 div.exampletitle{
2510 font-family: "URW Classico", Optima, "Linux Biolinum 0",
2511 "Linux Libertine 0", "Liberation Serif", "Nimbus Roman No 9 L",
2512 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2513 font-weight:bold;
2514 font-variant: small-caps ;
2515 border-bottom: 1px solid silver ;
2516 color: #304070 ;
2517 text-align: center ;
2518 text-shadow: 1px 1px 2px #808080;
2519 }
2520
2521
2522 .sidebar {
2523 background-color: #f5f5eb ;
2524 background-image: linear-gradient(to bottom, #f5f5eb, #C8C8B8);
2525
2526 }
2527
2528 div.sidebartitle{
2529 font-family: "URW Classico", Optima, "Linux Biolinum 0",
2530 "Linux Libertine 0", "Liberation Serif", "Nimbus Roman No 9 L",
2531 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2532 font-weight:bold;
```

```
2533 font-variant: small-caps ;
2534 border-bottom: 1px solid silver ;
2535 color: #304070 ;
2536 text-align: center ;
2537 text-shadow: 1px 1px 2px #808080;
2538 }
2539
2540
2541 .fancyvrblabel {
2542 font-family: "URW Classico", Optima, "Linux Biolinum O",
2543 "Linux Libertine O", "Liberation Serif", "Nimbus Roman No 9 L",
2544 "FreeSerif", "Hoefler Text", Times, "Times New Roman", serif;
2545 font-weight:bold;
2546 font-variant: small-caps ;
2547 font-size: 1.5em ;
2548 color: #304070 ;
2549 text-align: center ;
2550 text-shadow: 1px 1px 2px #808080;
2551 }
2552
2553 div.minipage {
2554 background-color: #eeeeee7 ;
2555 border: 1px solid silver ;
2556 border-radius: 1ex ;
2557 }
2558
2559 table div.minipage { background: none ; border: none ; }
2560
2561 div.framebox div.minipage {border:none ; background:none}
2562
2563 section.textbody > div.minipage {
2564 box-shadow: 3px 3px 3px #808080 ;
2565 }
2566
2567 div.fboxBlock div.minipage { box-shadow: none ; }
2568
2569 .framed .minipage , .framedleftbar .minipage {
2570 border: none ;
2571 background: none ;
2572 padding: 0ex ;
2573 margin: 0ex ;
2574 }
2575
2576 figure.figure .minipage, figcaption .minipage { border: none; }
2577
2578 div.marginblock div.minipage ,
2579 div.marginparblock div.minipage
2580 { border: none; }
2581
2582 figure , div.marginblock {
```

```
2583 background-color: #eeeeee7 ;
2584 border: 1px solid silver ;
2585 border-radius: 1ex ;
2586 box-shadow: 3px 3px 3px #808080 ;
2587 }
2588
2589 figure figure {
2590 border: 1px solid silver ;
2591 margin: 0em ;
2592 box-shadow: none ;
2593 }
2594
2595 /*
2596 figcaption {
2597 border-top: 1px solid silver ;
2598 border-bottom: 1px solid silver ;
2599 background-color: #e8e8e8 ;
2600 }
2601 */
2602
2603
2604 div.table {
2605 box-shadow: 3px 3px 3px #808080 ;
2606 }
2607
2608 /*
2609 .tnotes {
2610 background: #e8e8e8;
2611 border: 1px solid silver;
2612 }
2613 */
2614
2615
2616 nav.topnavigation{
2617 background-color: #b0b8b0 ;
2618 background-image: linear-gradient(to bottom,#e0e0e0,#b0b8b0) ;
2619 }
2620
2621 nav.botnavigation{
2622 background-color: #b0b8b0 ;
2623 background-image: linear-gradient(to top,#e0e0e0,#b0b8b0) ;
2624 }
2625
2626
2627
2628 header{
2629 background-color: #F7F7F0 ;
2630 background-image: linear-gradient(to top, #F7F7F0, #b0b8b0);
2631 }
2632
```

```
2633 footer{
2634 background-color: #F7F7F0 ;
2635 background-image: linear-gradient(to bottom, #F7F7F0, #b0b8b0);
2636 }
2637
2638
2639
2640 nav.sidetoc {
2641 background-color: #F7F7F0 ;
2642 background-image: linear-gradient(to bottom, #F7F7F0, #C0C0C0);
2643 box-shadow: 3px 3px 3px #808080 ;
2644 border-radius: 0px 0px 0px 20px ;
2645 }
2646
2647 div.sidetocitle {color: #304070 ; }
2648
2649 nav.sidetoc a:hover {
2650 color:#006000 ;
2651 text-decoration: none ;
2652 text-shadow:0px 0px 2px #a0a0a0;
2653 }
2654
2655
2656 @media screen and (max-width: 45em) {
2657 nav.sidetoc { border-radius: 0 ; }
2658 }
2659
2660
2661 \end{filecontents*}
2662 % \end{Verbatim}% for syntax highlighting
2663 \end{warpprint}
```

## 36.6 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.

```
2664 \begin{warpprint}
2665 \begin{filecontents*}{lwarp_formal.css}
2666 @import url("lwarp.css") ;
2667
2668
2669
2670 A:link {color:#802020 ; text-decoration:none; }
2671 A:visited {color:#802020 ; text-shadow:none ;}
```

```
2672 A:hover {color:#400000 ; text-shadow:none ;}
2673 A:active {color:#C00000 ; text-shadow:none ;}
2674
2675
2676 body {
2677 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2678 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2679 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2680 "Times New Roman", serif;
2681 background: #fffcf5;
2682 }
2683
2684 span.textrm {
2685 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2686 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2687 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2688 "Times New Roman", serif;
2689 }
2690
2691 span.textsf {
2692 font-family: "DejaVu Sans", "Bitstream Vera Sans",
2693 Geneva, Verdana, sans-serif ;
2694 }
2695
2696
2697
2698 h1, h2, h3, h4, h5, h6, span.paragraph, span.subparagraph
2699 {
2700 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2701 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2702 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2703 "Times New Roman", serif;
2704 color: #800000 ;
2705 text-shadow: none ;
2706 }
2707
2708 h1, h2 {
2709 background-color: #fffcf5 ;
2710 background-image: none ;
2711 border-bottom: 1px solid #808080;
2712 border-top: 2px solid #808080;
2713 }
2714
2715 div.abstracttitle {
2716 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2717 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2718 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2719 "Times New Roman", serif;
2720 color: black ;
2721 text-shadow: none ;
```

```
2722 }
2723
2724 span.abstractrunintitle {
2725 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2726 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2727 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2728 "Times New Roman", serif;
2729 color: black ;
2730 text-shadow: none ;
2731 }
2732
2733 div.abstract { font-size: 100% }
2734
2735 .sidebar {
2736 background: #fffcf5;
2737 background-image: none ;
2738 margin: 2em 5% 2em 5%;
2739 padding: 0.5em 1em;
2740 border: none ;
2741 border-top : 1px solid silver;
2742 border-bottom : 1px solid silver;
2743 font-size: 90% ;
2744 }
2745
2746 div.sidebartitle{
2747 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2748 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2749 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2750 "Times New Roman", serif;
2751 color: #800000 ;
2752 text-shadow: none ;
2753 border: none ;
2754 }
2755
2756 .example {
2757 background: #fffcf5;
2758 background-image: none ;
2759 margin: 2em 5% 2em 5%;
2760 padding: 0.5em 1em;
2761 border: none ;
2762 border-top : 1px solid silver;
2763 border-bottom : 1px solid silver;
2764 }
2765
2766 div.exampletitle{
2767 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2768 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2769 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2770 "Times New Roman", serif;
2771 color: #800000 ;
```

```
2772 text-shadow: none ;
2773 border: none ;
2774 }
2775
2776 div.fancyvrblabel{
2777 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2778 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2779 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2780 "Times New Roman", serif;
2781 color: #800000 ;
2782 text-shadow: none ;
2783 border: none ;
2784 }
2785
2786
2787
2788 .verse {
2789 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2790 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2791 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2792 "Times New Roman", serif;
2793 }
2794
2795
2796 figure {
2797 margin: 3ex 5% 3ex 5% ;
2798 padding: 1ex 1em 1ex 1em ;
2799 background-color: #fffcf5 ;
2800 overflow-x: auto ;
2801 border: none ;
2802 /* border-top: 1px solid silver; */
2803 /* border-bottom: 1px solid silver; */
2804 }
2805
2806
2807 figcaption , .lstlisting {
2808 border: none ;
2809 /* border-top: 1px solid silver ; */
2810 /* border-bottom: 1px solid silver ; */
2811 background-color: #fffcf5 ;
2812 }
2813
2814 .tnotes {
2815 background: #fffcf5 ;
2816 }
2817
2818 .theorem {
2819 background: none ;
2820 }
2821
```

```
2822 .minipage {
2823 background-color: #fffcf5 ;
2824 border: none ;
2825 }
2826
2827 div.floatrow figure { border: none ; }
2828
2829 figure figure { border: none ; }
2830
2831
2832 nav.toc, nav.lof, nav.lot, nav.lol {
2833 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2834 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2835 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2836 "Times New Roman", serif;
2837 }
2838
2839 nav.sidetoc {
2840 font-family: "Linux Libertine O", "Hoefler Text", "Garamond",
2841 "Bembo", "Janson", "TeX Gyre Pagella", "Palatino",
2842 "Liberation Serif", "Nimbus Roman No 9 L", "FreeSerif", Times,
2843 "Times New Roman", serif;
2844 background-image: linear-gradient(to bottom, #fffcf5, #C0C0C0);
2845 border-radius: 0px 0px 0px 20px ;
2846 }
2847
2848 div.sidetoctitle{
2849 color: #800000 ;
2850 }
2851
2852 header{
2853 background-color: #e0e0e0 ;
2854 background-image: linear-gradient(to top, #fffcf5, #b0b0b0);
2855 text-align:center ;
2856 }
2857
2858 footer{
2859 background-color: #e0e0e0 ;
2860 background-image: linear-gradient(to bottom, #fffcf5, #b0b0b0);
2861 padding: 2ex 1em 2ex 1em ;
2862 clear:right ;
2863 text-align:left ;
2864 }
2865
2866 nav.botnavigation {
2867 background: #dedcd5 ;
2868 border-top: 1px solid black ;
2869 }
2870 \end{filecontents*}
2871 % \end{Verbatim}% for syntax highlighting
```

```
2872 \end{warpprint}
```

### 36.7 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.

```
2873 \begin{warpprint}
2874 \begin{filecontents*}{sample_project.css}
2875 /* (--- Start of project.css ---) */
2876 /* (--- A sample project-specific CSS file for lwarp ---) */
2877
2878 /* Load default lwarp settings: */
2879 @import url("lwarp.css") ;
2880 /* or lwarp_formal.css, lwarp_sagebrush.css */
2881
2882 /* Project-specific CSS setting follow here. */
2883 /* . . . */
2884
2885 /* (--- End of project.css ---) */
2886 \end{filecontents*}
2887 % \end{Verbatim}% for syntax highlighting
2888 \end{warpprint}
```

### 36.8 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.

```
2889 \begin{warpprint}
2890 \begin{filecontents*}{lwarp.xdy}
2891 (require "tex/inputenc/latin.xdy")
2892 (merge-rule "\\PS *" "Postscript")
2893 (require "texindy.xdy")
2894 (require "page-ranges.xdy")
2895 (require "book-order.xdy")
2896 (require "page-ranges.xdy")
2897 (markup-locref :open "\hyperindexref{" :close "}")
2898 (define-location-class "arabic-page-numbers"
2899 ("arabic-numbers") :min-range-length 1)
```

```

2900 (define-location-class-order ("roman-page-numbers"
2901 "arabic-page-numbers"
2902 "alpha-page-numbers"
2903 "Roman-page-numbers"
2904 "Alpha-page-numbers"
2905 "see"
2906 "seealso"))
2907 \end{filecontents*}
2908 % \end{Verbatim}% for syntax highlighting
2909 \end{warpprint}

```

### 36.9 lwarp\_one\_limage.cmd

File `lwarp_one_limage.cmd` Used by **lwarp** to help make lateximages when using WINDOWS.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

The arguments are each of the three fields from `lateximages.txt`, and also the base name of the source file.

**MikTeX** does not allow file `lwarp_one_limage.cmd` to be created directly by **lwarpmk**, so `lwarp_one_limage.txt` is created instead, then copied to `lwarp_one_limage.cmd` by **lwarpmk**. This occurs each time **lwarpmk** used to create lateximages.

```

2910 \begin{warpprint}
2911 \begin{filecontents*}{lwarp_one_limage.txt}
2912 @echo off
2913 pdfseparate -f %1 -l %1 %4_html.pdf lateximages\lateximagetemp-%d.pdf
2914 pdfcrop --hires lateximages\lateximagetemp-%1.pdf lateximages\%3.pdf
2915 pdftocairo -svg -noshrink lateximages\%3.pdf lateximages\%3.svg
2916 del lateximages\%3.pdf
2917 del lateximages\lateximagetemp-%1.pdf
2918 exit
2919 \end{filecontents*}
2920 \end{warpprint}

```

### 36.10 lwarp\_mathjax.txt

File `lwarp_mathjax.txt` Used by **lwarp** when using MATHJAX.

This must be present when compiling the project, but does not need to be present when distributing the resulting HTML files.

```
2921 \begin{warpprint}
2922 \begin{filecontents*}{lwarp_mathjax.txt}
2923 <!-- https://groups.google.com/forum/#!topic/
2924 mathjax-users/jUtewUcE2bY -->
2925 <script type="text/x-mathjax-config">
2926 MathJax.Hub.Register.StartupHook("TeX AMSmath Ready",function () {
2927 var seteqsectionDefault = {name: "", num: 0};
2928 var seteqsections = {}, seteqsection = seteqsectionDefault;
2929 var TEX = MathJax.InputJax.TeX, PARSE = TEX.Parse;
2930 var AMS = MathJax.Extension["TeX/AMSMath"];
2931 TEX.Definitions.Add({
2932 macros: {
2933 seteqsection: "mySection",
2934 seteqnumber: "mySetEqNumber"
2935 }
2936 });
2937
2938 PARSE.Augment({
2939 mySection: function (name) {
2940 seteqsection.num = AMS.number;
2941 var n = this.GetArgument(name);
2942 if (n === "") {
2943 seteqsection = seteqsectionDefault;
2944 } else {
2945 if (!seteqsections["_"+n])
2946 seteqsections["_"+n] = {name:n, num:0};
2947 seteqsection = seteqsections["_"+n];
2948 }
2949 AMS.number = seteqsection.num;
2950 },
2951 mySetEqNumber: function (name) {
2952 var n = this.GetArgument(name);
2953 if (!n || !n.match(/^[0-9]+ *$/))
2954 n = ""; else n = parseInt(n)-1;
2955 <!-- $ syntax highlighting -->
2956 if (n === "" || n < 1)
2957 TEX.Error
2958 ("Argument to "+name+" should be a positive integer");
2959 AMS.number = n;
2960 }
2961 });
2962 MathJax.Hub.Config({
2963 TeX: {
2964 equationNumbers: {
2965 formatTag: function (n)
2966 {return "("+(seteqsection.name+"."+n).replace(/\./, "(")+")"},
2967 formatID: function (n) {
2968 n = (seteqsection.name+'.'+n).replace
2969 (/[[:'>&]/g, "").replace(/\./, "(");
2970 return 'mjx-eqn-' + n;
```

```
2971 }
2972 }
2973 }
2974 });
2975 });
2976 </script>
2977
2978 <!-- http://docs.mathjax.org/en/latest/options/ThirdParty.html -->
2979 <script type="text/x-mathjax-config">
2980 MathJax.Ajax.config.path["Contrib"] =
2981 "https://cdn.mathjax.org/mathjax/contrib";
2982 </script>
2983
2984 <!-- https://github.com/burnpanck/MathJax-siunitx -->
2985
2986 <script type="text/x-mathjax-config">
2987 MathJax.Hub.Config({
2988 extensions: ["tex2jax.js","siunitx/siunitx.js"],
2989 jax: ["input/TeX","output/HTML-CSS"],
2990 tex2jax: {
2991 inlineMath: [["$","$"],["\\(","\\)"]] ,
2992 processClass: "tabbing|verse"
2993 },
2994 TeX: {extensions: ["AMSmath.js","AMSsymbols.js", "siunitx.js"]}
2995 });
2996 MathJax.Ajax.config.path['siunitx'] = 'http://rawgit.com/burnpanck/MathJax-siunitx/master/';
2997 </script>
2998
2999 <script type="text/x-mathjax-config">
3000 MathJax.Hub.Config({
3001 TeX: {
3002 equationNumbers: {
3003 autoNumber: "AMS"
3004 }
3005 }
3006 });
3007 </script>
3008
3009 <!-- Alternative CDN provider: -->
3010 <script type="text/javascript" async
3011 src="https://cdnjs.cloudflare.com/ajax/libs/mathjax/2.7.1/MathJax.js?config=TeX-AMS_HTML-full">
3012 </script>
3013
3014 <!-- No longer supported after April 30, 2017: -->
3015 <!--
3016 <script
3017 src="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=TeX-AMS_HTML-full">
3018 </script>
3019 -->
3020
```

```

3021 \end{filecontents*}
3022 % \end{Verbatim}% for syntax highlighting
3023 \end{warpprint}

```

### 36.11 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**.

```

3024 \begin{LWR@createlwarpmk}

3025 \begin{filecontents*}{lwarpmk.lua}
3026 #!/usr/bin/env texlua
3027
3028 -- Copyright 2016-2018 Brian Dunn
3029
3030 -- Print the usage of the lwarpmk command:
3031
3032 printversion = "v0.53"
3033
3034 function printhelp ()
3035 print ("lwarpmk: Use lwarpmk -h or lwarpmk --help for help.");
3036 end
3037
3038 function printusage ()
3039 print ([[
3040
3041 lwarpmk print [project]: Compile the print version if necessary.
3042 lwarpmk print1 [project]: Forced single compile of the print version.
3043 lwarpmk printindex [project]: Process the index for the print version.
3044 lwarpmk printglossary [project]: Process the glossary for the print version.
3045 lwarpmk html [project]: Compile the HTML version if necessary.
3046 lwarpmk html1 [project]: Forced single compile of the HTML version.

```

```
3047 lwarpmk htmlindex [project]: Process the index for the html version.
3048 lwarpmk htmlglossary [project]: Process the glossary for the html version.
3049 lwarpmk again [project]: Touch the source code to trigger recompiles.
3050 lwarpmk limages [project]: Process the "lateximages" created by lwarp.sty.
3051 lwarpmk pdftohtml [project]:
3052 For use with latexmk or a Makefile:
3053 Converts project_html.pdf to project_html.html and individual HTML files.
3054 Finishes the HTML conversion even if there was a compile error.
3055 lwarpmk clean [project]: Remove .aux, .toc, .lof/t, .idx, .ind, .log, *_html_inc.*, .gl*
3056 lwarpmk cleanall [project]: Remove auxiliary files and also project.pdf, *.html
3057 lwarpmk cleanimages: Removes all images from the "lateximages" directory.
3058 lwarpmk -h: Print this help message.
3059 lwarpmk --help: Print this help message.
3060
3061]])
3062 printconf (
3063 end
3064
3065 -- Print the format of the configuration file lwarpmk.conf:
3066
3067 function printconf (
3068 print ([[
3069 An example lwarpmk.conf or <project>.lwarpmkconf project file:
3070 --
3071 opsystem = "Unix" (or "Windows")
3072 latexname = "pdflatex" (or "lualatex", or "xelatex")
3073 sourcename = "projectname" (the source-code filename w/o .tex)
3074 homehtmlfilename = "index" (or perhaps the project name)
3075 htmlfilename = "" (or "projectname" - filename prefix)
3076 latexmk = "false" (or "true" to use latexmk to build PDFs)
3077 language = "english" (use a language supported by xindy)
3078 xdyfile = "lwarp.xdy" (or a custom file based on lwarp.xdy)
3079 --
3080 Filenames must contain only letters, numbers, underscore, or dash.
3081 Values must be in "quotes".
3082
3083]]) ;
3084 end
3085
3086
3087 -- Split one large sourcefile into a number of files,
3088 -- starting with destfile.
3089 -- The file is split at each occurrence of <!--|Start file|newfilename|*
3090
3091 function splitfile (destfile,sourcefile)
3092 print ("lwarpmk: Splitting " .. sourcefile .. " into " .. destfile) ;
3093 local sfile = io.open(sourcefile)
3094 io.output(destfile)
3095 for line in sfile:lines() do
3096 i,j,copen,cstart,newfilename = string.find (line,"(.*)|(.*)|(.*)|") ;
```

```
3097 if ((i~= nil) and (copen == "<!--") and (cstart == "Start file")) then
3098 -- split the file
3099 io.output(newfilename) ;
3100 else
3101 -- not a splitpoint
3102 io.write (line .. "\n") ;
3103 end
3104 end -- do
3105 io.close(sfile)
3106 end -- function
3107
3108 -- Incorrect value, so print an error and exit.
3109
3110 function cvalueerror (line, linenum , cvalue)
3111 print ("lwarpmk: ===")
3112 print ("lwarpmk: " .. linenum .. " : " .. line) ;
3113 print ("lwarpmk: incorrect variable value \" .. cvalue .. "\"" in lwarpmk.conf.\n") ;
3114 print ("lwarpmk: ===")
3115 printconf () ;
3116 os.exit(1) ;
3117 end
3118
3119 -- Load settings from the project's "lwarpmk.conf" file:
3120
3121 function loadconf ()
3122 -- Default configuration filename:
3123 local conffile = "lwarpmk.conf"
3124 -- Optional configuration filename:
3125 if (arg[2] ~= nil) then conffile = arg[2].."lwarpmkconf" end
3126 -- Default language:
3127 language = "english"
3128 -- Default xdyfile:
3129 xdyfile = "lwarp.xdy"
3130 -- Verify the file exists:
3131 if (lfs.attributes(conffile,"mode")==nil) then
3132 -- file not exists
3133 print ("lwarpmk: ===")
3134 print ("lwarpmk: " .. conffile .. " does not exist.")
3135 if (arg[2] ~= nil) then
3136 print ("lwarpmk: " .. arg[2] .. " does not appear to be a project name.\n")
3137 end
3138 print ("lwarpmk: ===")
3139 printhelp () ;
3140 os.exit(1) -- exit the entire lwarpmk script
3141 else -- file exists
3142 -- Read the file:
3143 print ("lwarpmk: Reading " .. conffile .. ".")
3144 local cfile = io.open(conffile)
3145 -- Scan each line:
3146 local linenum = 0
```

```
3147 for line in cfile:lines() do -- scan lines
3148 linenum = linenum + 1
3149 i,j,cvarname,cvalue = string.find (line,"([%w-_]*)%s*=%s*\"([%w%-_.]*)\"");
3150 -- Error if incorrect enclosing characters:
3151 if (i == nil) then
3152 print ("lwarpmk: ===")
3153 print ("lwarpmk: " .. linenum .. " : " .. line);
3154 print ("lwarpmk: Incorrect entry in " .. conffile .. ".\n");
3155 print ("lwarpmk: ===")
3156 printconf ();
3157 os.exit(1) ;
3158 end -- nil
3159 if (cvarname == "opssystem") then
3160 -- Verify choice of opssystem:
3161 if ((cvalue == "Unix") or (cvalue == "Windows")) then
3162 opssystem = cvalue
3163 else
3164 cvalueerror (line, linenum , cvalue)
3165 end
3166 elseif (cvarname == "latexname") then
3167 -- Verify choice of LaTeX compiler:
3168 if (
3169 (cvalue == "pdflatex") or
3170 (cvalue == "xelatex") or
3171 (cvalue == "lualatex")
3172) then
3173 latexname = cvalue
3174 else
3175 cvalueerror (line, linenum , cvalue)
3176 end
3177 elseif (cvarname == "sourcename") then sourcename = cvalue
3178 elseif (cvarname == "homehtmlfilename") then homehtmlfilename = cvalue
3179 elseif (cvarname == "htmlfilename") then htmlfilename = cvalue
3180 elseif (cvarname == "latexmk") then latexmk = cvalue
3181 elseif (cvarname == "language") then language = cvalue
3182 elseif (cvarname == "xdyfile") then xdyfile = cvalue
3183 else
3184 print ("lwarpmk: ===")
3185 print ("lwarpmk: " .. linenum .. " : " .. line);
3186 print ("lwarpmk: Incorrect variable name \" .. cvarname .. "\" in " .. conffile .. ".\n")
3187 print ("lwarpmk: ===")
3188 printconf ();
3189 os.exit(1) ;
3190 end -- cvarname
3191 end -- do scan lines
3192 io.close(cfile)
3193 end -- file exists
3194 -- Error if sourcename is "lwarp".
3195 -- This could happen if a local copy of lwarp has recently been recompiled.
3196 if sourcename=="lwarp" then
```

```
3197 print ("lwarpmk: ===")
3198 print ("lwarpmk: Lwarp has recently been recompiled in this directory,")
3199 print ("lwarpmk: and \"lwarpmk.conf\" is no longer set for your own project.")
3200 print ("lwarpmk: Recompile your own project using pdf/luaxelatex <projectname>.")
3201 print ("lwarpmk: After a recompile, \"lwarpmk.conf\" will be set for your project,")
3202 print ("lwarpmk: and you may again use lwarpmk.")
3203 print ("lwarpmk: ===")
3204 os.exit(1)
3205 end -- sourcename of "lwarp"
3206 -- Select some operating-system commands:
3207 if opsystem=="Unix" then -- For Unix / Linux / Mac OS:
3208 rmname = "rm"
3209 mvname = "mv"
3210 cpname = "cp"
3211 touchnamepre = "touch"
3212 touchnamepost = ""
3213 newtouchname = "touch"
3214 dirslash = "/"
3215 opquote= "\"'"
3216 cmdgroupopenname = " ("
3217 cmdgroupclose = ") "
3218 seqname = " ; "
3219 bname = " &"
3220 elseif opsystem=="Windows" then -- For Windows
3221 rmname = "DEL"
3222 mvname = "MOVE"
3223 cpname = "COPY"
3224 touchnamepre = "COPY /b"
3225 touchnamepost = "+,,"
3226 newtouchname = "echo empty >"
3227 dirslash = "\\\"
3228 opquote= "\""
3229 cmdgroupopenname = ""
3230 cmdgroupclose = ""
3231 seqname = " & "
3232 bname = ""
3233 else print ("lwarpmk: Select Unix or Windows for opsystem")
3234 end --- for Windows
3235
3236 -- set xindycmd according to pdflatex vs xelatex/lualatex:
3237 if (latexname == "pdflatex") then
3238 xindycmd = "texindy -C utf8"
3239 glossarycmd = "xindy -C utf8"
3240 else
3241 xindycmd = "xindy -M texindy -C utf8"
3242 glossarycmd = "xindy -C utf8"
3243 end
3244
3245 end -- loadconf
3246
```

```
3247
3248 function refreshdate ()
3249 os.execute(touchnamepre .. " " .. sourcename .. ".tex " .. touchnamepost)
3250 end
3251
3252
3253 -- Scan the LaTeX log file for the phrase "Rerun to get",
3254 -- indicating that the file should be compiled again.
3255 -- Return true if found.
3256
3257 function reruntoget (filesource)
3258 local fsource = io.open(filesource)
3259 for line in fsource:lines() do
3260 if (string.find(line,"Rerun to get") ~= nil) then
3261 io.close(fsource)
3262 return true
3263 end -- if
3264 end -- do
3265 io.close(fsource)
3266 return false
3267 end
3268
3269
3270 -- Compile one time, return true if should compile again.
3271 -- fsuffix is "" for print, "_html" for HTML output.
3272
3273 function onetime (fsuffix)
3274 print("lwarpmk: Compiling with " .. latexname .. " " .. sourcename..fsuffix)
3275 err = os.execute(latexname .. " " .. sourcename..fsuffix)
3276 if (err ~= 0) then
3277 print ("lwarpmk: ===")
3278 print ("lwarpmk: Compile error.")
3279 print ("lwarpmk: ===")
3280 os.exit(1)
3281 end
3282 return (reruntoget(sourcename .. fsuffix .. ".log")) ;
3283 end
3284
3285
3286 -- Compile up to five times.
3287 -- fsuffix is "" for print, "_html" for HTML output
3288
3289 function manytimes (fsuffix)
3290 if onetime(fsuffix) == true then
3291 if onetime(fsuffix) == true then
3292 if onetime(fsuffix) == true then
3293 if onetime(fsuffix) == true then
3294 if onetime(fsuffix) == true then
3295 end end end end end
3296 end
```

```
3297
3298-- Exit if the given file does not exist.
3299
3300function verifyfileexists (filename)
3301if (lfs.attributes (filename , "modification") == nil) then
3302 print ("lwarpmk: ===")
3303 print ("lwarpmk: " .. filename .. " not found.");
3304 print ("lwarpmk: ===")
3305 os.exit (1) ;
3306end
3307end
3308
3309
3310-- Convert <project>_html.pdf into HTML files:
3311
3312function pdftohtml ()
3313-- Convert to text:
3314print ("lwarpmk: Converting " .. sourcename
3315 .. "_html.pdf to " .. sourcename .. "_html.html")
3316os.execute("pdftotext -enc UTF-8 -nopgbrk -layout "
3317 .. sourcename .. "_html.pdf " .. sourcename .. "_html.html")
3318-- Split the result into individual HTML files:
3319splitfile (homehtmlfilename .. ".html" , sourcename .. "_html.html")
3320end
3321
3322
3323-- Remove auxiliary files:
3324-- All aux files are removed since there may be many bbl*.aux files.
3325function removeaux ()
3326os.execute (rmname .. " *.aux " ..
3327 sourcename .. ".toc " .. sourcename .. "_html.toc " ..
3328 sourcename .. ".lof " .. sourcename .. "_html.lof " ..
3329 sourcename .. ".lot " .. sourcename .. "_html.lot " ..
3330 sourcename .. ".idx " .. sourcename .. "_html.idx " ..
3331 sourcename .. ".ind " .. sourcename .. "_html.ind " ..
3332 sourcename .. ".log " .. sourcename .. "_html.log " ..
3333 sourcename .. ".gl*" .. sourcename .. "_html.gl*" ..
3334 " *_html_inc.* "
3335)
3336end
3337
3338-- Create lateximages based on lateximages.txt:
3339function createlateximages ()
3340print ("lwarpmk: Creating lateximages.")
3341local limagesfile = io.open("lateximages.txt", "r")
3342if (limagesfile == nil) then
3343 print ("lwarpmk: ===")
3344 print ("lwarpmk: \"lateximages.txt\" does not exist.")
3345 print ("lwarpmk: Your project does not use SVG math or other lateximages,")
3346 print ("lwarpmk: or the file has been deleted somehow.")
```

```
3347 print ("lwarpmk: Use \"lwarpmk html\" to recompile your project,")
3348 print ("lwarpmk: and recreate \"lateximages.txt\".")
3349 print ("lwarpmk: If your project does not use SVG math or other lateximages,")
3350 print ("lwarpmk: then \"lateximages.txt\" will never exist, and")
3351 print ("lwarpmk: \"lwarpmk limages\" will not be necessary.")
3352 print ("lwarpmk: ===")
3353 os.exit(1)
3354 end
3355 -- Create the lateximages directory, ignore error if already exists
3356 err = os.execute("mkdir lateximages")
3357 -- For Windows, create lwarp_one_limage.cmd:
3358 if opsystem=="Windows" then
3359 err = os.execute (
3360 cpname .. " lwarp_one_limage.txt lwarp_one_limage.cmd"
3361)
3362 if (err ~= 0) then
3363 print ("lwarpmk: ===")
3364 print ("lwarpmk: File error trying to copy to lwarp_one_limage.cmd")
3365 print ("lwarpmk: ===")
3366 os.exit(1) ;
3367 end
3368 end -- create lwarp_one_limage.cmd
3369 -- Track the number of parallel processes
3370 numimageprocesses = 0
3371 -- Track warning to recompile if find a page 0
3372 pagezerowarning = false
3373 -- Scan lateximages.txt
3374 for line in limagesfile:lines() do
3375 -- lwimgpage is the page number in the PDF which has the image
3376 -- lwimghash is true if this filename is a hash
3377 -- lwimgname is the lateximage filename root to assign for the image
3378 i,j,lwimgpage,lwimghash,lwimgname = string.find (line,"|(.*)|(.*)|(.*|")
3379 -- For each entry:
3380 if (i~=nil) then
3381 -- Skip if the page number is 0:
3382 if (lwimgpage == "0") then
3383 pagezerowarning = true
3384 else
3385 -- Skip is this image is hashed and already exists:
3386 local lwimgfullname = "lateximages" .. dirslash .. lwimgname .. ".svg"
3387 if (
3388 (lwimghash ~= "true") or
3389 (lfs.attributes(lwimgfullname,"mode")==nil) -- file not exists
3390)
3391 then -- not hashed or not exists:
3392 -- Print the name of the file being generated:
3393 print ("lwarpmk: " .. lwimgname)
3394 -- Touch/create the dest so that only once instance tries to build it:
3395 err = os.execute(newtouchname .. " " .. lwimgfullname)
3396 if (err ~= 0) then
```

```
3397 print ("lwarpmk: ===")
3398 print ("lwarpmk: File error trying to touch " .. lwimgfullname)
3399 print ("lwarpmk: ===")
3400 os.exit(1) ;
3401 end
3402 -- Separate out the image into its own single-page pdf:
3403 if opsystem=="Unix" then
3404 -- For Unix / Linux / Mac OS:
3405 err = os.execute(
3406 cmdgroupopenname ..
3407 "pdfseparate -f " .. lwimgpage .. " -l " .. lwimgpage .. " " ..
3408 sourcename .. "_html.pdf" " ..
3409 "lateximages" .. dirslash .. "lateximagetemp-%d" .. ".pdf" ..
3410 seqname ..
3411 -- Crop the image:
3412 "pdfcrop --hires lateximages" .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" " ..
3413 "lateximages" .. dirslash .. lwimgname .. ".pdf" ..
3414 seqname ..
3415 -- Convert the image to svg:
3416 "pdftocairo -svg -noshrink lateximages" .. dirslash .. lwimgname .. ".pdf" " ..
3417 "lateximages" .. dirslash .. lwimgname .. ".svg" ..
3418 seqname ..
3419 -- Remove the temporary files:
3420 rmname .. " lateximages" .. dirslash .. lwimgname .. ".pdf" .. seqname ..
3421 rmname .. " lateximages" .. dirslash .. "lateximagetemp-" .. lwimgpage .. ".pdf" ..
3422 cmdgroupclosename .. " >/dev/null " .. bgnome
3423)
3424 -- Every 32 images, wait for completion at below normal priority,
3425 -- allowing other image tasks to catch up.
3426 numimageprocesses = numimageprocesses + 1
3427 if (numimageprocesses > 32) then
3428 numimageprocesses = 0
3429 print ("lwarpmk: waiting")
3430 err = os.execute ("wait")
3431 end
3432 elseif opsystem=="Windows" then
3433 -- For Windows
3434 -- Every 32 images, wait for completion at below normal priority,
3435 -- allowing other image tasks to catch up.
3436 numimageprocesses = numimageprocesses + 1
3437 if (numimageprocesses > 32) then
3438 numimageprocesses = 0
3439 thiswaitcommand = "/WAIT /BELOWNORMAL"
3440 print ("lwarpmk: waiting")
3441 else
3442 thiswaitcommand = ""
3443 end
3444 -- Execute the image generation command
3445 err = os.execute (
3446 "start /B " .. thiswaitcommand .. " \"\" lwarp_one_limage " ..
```

```
3447 lwimgpage .. " " ..
3448 lwimghash .. " " ..
3449 lwimgname .. " " ..
3450 sourcename .. " <nul >nul"
3451)
3452 end -- Windows
3453 if (err ~= 0) then
3454 print ("lwarpmk: ===")
3455 print ("lwarpmk: File error trying to create one lateximage.")
3456 print ("lwarpmk: ===")
3457 os.exit(1)
3458 end
3459 end -- not hashed or not exists
3460 end -- not page 0
3461 end -- not nil
3462 end -- do
3463 io.close(limagesfile)
3464 print ("lwarpmk limages: done")
3465 if (pagezerowarning == true) then
3466 print ("lwarpmk limages: WARNING: Images will be incorrect.")
3467 print ("lwarpmk limages: Enter \"lwarpmk cleanlimages\", then")
3468 print ("lwarpmk limages: recompile the document one more time, then")
3469 print ("lwarpmk limages: repeat \"lwarpmk images\" again.")
3470 end -- pagezerowarning
3471 end -- function
3472
3473
3474 -- Use latexmk to compile source and index:
3475 -- fsuffix is "" for print, or "_html" for HTML
3476 function compilelatexmk (fsuffix)
3477 -- The recorder option is required to detect changes in <project>.tex
3478 -- while we are loading <project>_html.tex.
3479 err=os.execute ("latexmk -pdf -dvi- -ps- -recorder "
3480 .. "-e "
3481 .. opquote
3482 .. "$makeindex = q/" -- $
3483 .. xindycmd
3484 .. " -M " .. xdyfile
3485 .. " -L " .. language .. " /"
3486 .. opquote
3487 .. "-pdflatex=\" " .. latexname .. " %0 %S\" "
3488 .. sourcename..fsuffix ..".tex") ;
3489 if (err ~= 0) then
3490 print ("lwarpmk: ===")
3491 print ("lwarpmk: Compile error.")
3492 print ("lwarpmk: ===")
3493 os.exit(1)
3494 end
3495 end
3496
```

```
3497
3498
3499 -- lwarpmk --version :
3500
3501 if (arg[1] == "--version") then
3502 print ("lwarpmk: " .. printversion)
3503
3504 else -- not --version
3505
3506 -- print intro:
3507
3508 print ("lwarpmk: " .. printversion .. " Automated make for the LaTeX lwarp package.")
3509
3510 -- lwarpmk print:
3511
3512 if arg[1] == "print" then
3513 loadconf ()
3514 if (latexmk == "true") then
3515 compilelatexmk ("")
3516 print ("lwarpmk: Done.")
3517 else -- not latexmk
3518 verifyfileexists (sourcename .. ".tex") ;
3519 -- See if up to date:
3520 if (
3521 (lfs.attributes (sourcename .. ".pdf" , "modification") == nil) or
3522 (
3523 lfs.attributes (sourcename .. ".tex" , "modification") >
3524 lfs.attributes (sourcename .. ".pdf" , "modification")
3525)
3526) then
3527 -- Recompile if not yet up to date:
3528 manytimes("")
3529 print ("lwarpmk: Done.") ;
3530 else
3531 print ("lwarpmk: " .. sourcename .. ".pdf is up to date.") ;
3532 end
3533 end -- not latexmk
3534
3535 elseif arg[1] == "print1" then
3536 loadconf ()
3537 verifyfileexists (sourcename .. ".tex") ;
3538 onetime("")
3539 print ("lwarpmk: Done.") ;
3540
3541 -- lwarp printindex:
3542 -- Compile the index then touch the source
3543 -- to trigger a recompile of the document:
3544
3545 elseif arg[1] == "printindex" then
3546 loadconf ()
```

```
3547 print ("lwarpmk: Processing the index.")
3548 os.execute(
3549 xindycmd
3550 .. " -M " .. xdyfile
3551 .. " -L " .. language
3552 .. " " .. sourcename .. ".idx")
3553 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
3554 refreshdate ()
3555 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
3556 print ("lwarpmk: Done.")
3557
3558 -- lwarp printglossary:
3559 -- Compile the glossary then touch the source
3560 -- to trigger a recompile of the document:
3561
3562 elseif arg[1] == "printglossary" then
3563 loadconf ()
3564 print ("lwarpmk: Processing the glossary.")
3565
3566 os.execute(glossarycmd .. " -L " .. language .. " -I xindy -M " .. sourcename ..
3567 " -t " .. sourcename .. ".glg -o " .. sourcename .. ".gls "
3568 .. sourcename .. ".glo")
3569 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
3570 refreshdate ()
3571 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
3572 print ("lwarpmk: Done.")
3573
3574 -- lwarpmk html:
3575
3576 elseif arg[1] == "html" then
3577 loadconf ()
3578 if (latexmk == "true") then
3579 compilelatexmk ("_html")
3580 pdftohtml ()
3581 print ("lwarpmk: Done.")
3582 else -- not latexmk
3583 verifyfileexists (sourcename .. ".tex");
3584 -- See if exists and is up to date:
3585 if (
3586 (lfs.attributes (homehtmlfilename .. ".html" , "modification") == nil) or
3587 (
3588 lfs.attributes (sourcename .. ".tex" , "modification") >
3589 lfs.attributes (homehtmlfilename .. ".html" , "modification")
3590)
3591) then
3592 -- Recompile if not yet up to date:
3593 manytimes("_html")
3594 pdftohtml ()
3595 print ("lwarpmk: Done.")
3596 else
```

```
3597 print ("lwarpmk: " .. homehtmlfilename .. ".html is up to date.")
3598 end
3599 end -- not latexmk
3600
3601 elseif arg[1] == "html1" then
3602 loadconf ()
3603 verifyfileexists (sourcename .. ".tex") ;
3604 onetime("_html")
3605 pdftohtml ()
3606 print ("lwarpmk: Done.")
3607
3608 elseif arg[1] == "pdftohtml" then
3609 loadconf ()
3610 pdftohtml ()
3611
3612 -- lwarpmk htmlindex:
3613 -- Compile the index then touch the source
3614 -- to trigger a recompile of the document:
3615
3616 elseif arg[1] == "htmlindex" then
3617 loadconf ()
3618 print ("lwarpmk: Processing the index.")
3619 os.execute(
3620 xindycmd
3621 .. " -M " .. xdyfile
3622 .. " -L " .. language
3623 .. " " .. sourcename .. "_html.idx"
3624)
3625 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
3626 refreshdate ()
3627 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
3628 print ("lwarpmk: Done.")
3629
3630 -- lwarpmk htmlglossary:
3631 -- Compile the glossary then touch the source
3632 -- to trigger a recompile of the document:
3633
3634 elseif arg[1] == "htmlglossary" then
3635 loadconf ()
3636 print ("lwarpmk: Processing the glossary.")
3637
3638 os.execute(glossarycmd .. " -L " .. language .. " -I xindy -M " .. sourcename ..
3639 "_html -t " .. sourcename .. "_html.glg -o " .. sourcename ..
3640 "_html.gls " .. sourcename .. "_html.glo")
3641
3642 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
3643 refreshdate ()
3644 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
3645 print ("lwarpmk: Done.")
3646
```

```
3647 -- lwarpmk limages:
3648 -- Scan the lateximages.txt file to create lateximages.
3649
3650 elseif arg[1] == "limages" then
3651 loadconf ()
3652 print ("lwarpmk: Processing images.")
3653 createlateximages ()
3654 print ("lwarpmk: Done.")
3655
3656 -- lwarpmk again:
3657 -- Touch the source to trigger a recompile.
3658
3659 elseif arg[1] == "again" then
3660 loadconf ()
3661 print ("lwarpmk: Forcing an update of " .. sourcename .. ".tex.")
3662 refreshdate ()
3663 print ("lwarpmk: " .. sourcename .. ".tex is ready to be recompiled.")
3664 print ("lwarpmk: Done.")
3665
3666 -- lwarpmk clean:
3667 -- Remove project.aux, .toc, .lof, .lot, .idx, .ind, .log, *_html_inc.*, .gl*
3668
3669 elseif arg[1] == "clean" then
3670 loadconf ()
3671 removeaux ()
3672 print ("lwarpmk: Done.")
3673
3674 -- lwarpmk cleanall
3675 -- Remove project.aux, .toc, .lof, .lot, .idx, .ind, .log, *_html_inc.*, .gl*
3676 -- and also project.pdf, *.html
3677
3678 elseif arg[1] == "cleanall" then
3679 loadconf ()
3680 removeaux ()
3681 os.execute (rmname .. " " ..
3682 sourcename .. ".pdf " .. sourcename .. "_html.pdf " ..
3683 "*.html"
3684)
3685 print ("lwarpmk: Done.")
3686
3687 -- lwarpmk cleanlimages
3688 -- Remove images from the lateximages directory.
3689
3690 elseif arg[1] == "cleanlimages" then
3691 loadconf ()
3692 os.execute (rmname .. " lateximages/*")
3693 print ("lwarpmk: Done.")
3694
3695 -- lwarpmk with no argument :
3696
```

```

3697 elseif (arg[1] == nil) then
3698 printhelp ()
3699
3700 -- lwarpmk -h or lwarpmk --help :
3701
3702 elseif (arg[1] == "-h") or (arg[1] == "--help") then
3703 printusage ()
3704
3705 else
3706 print ("lwarpmk: Unknown command \""..arg[1].."\".\n")
3707 printhelp ()
3708 end
3709
3710 end -- not --version
3711 \end{filecontents*}
3712 % \end{Verbatim}% for syntax highlighting

3713 \end{LWR@createlwarpmk}

```

## 37 Stacks

**for HTML output:** 3714 \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.

### 37.1 Assigning depths

initial depths for empty stack entries:

```
3715 \newcommand*{\LWR@depthnone}{-5}
```

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

```

3716 \newcommand*\LWR@depthfinished}{-4}
3717 \newcommand*\LWR@depthpart}{-1}
3718 \newcommand*\LWR@depthchapter}{0}
3719 \newcommand*\LWR@depthsection}{1}
3720 \newcommand*\LWR@depthsubsection}{2}
3721 \newcommand*\LWR@depthsubsubsection}{3}
3722 \newcommand*\LWR@depthparagraph}{4}
3723 \newcommand*\LWR@depthsubparagraph}{5}

```

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

```
3724 \newcommand*\LWR@depthlist}{6}
```

used by `\item`:

```
3725 \newcommand*\LWR@depthlistitem}{7}
```

## 37.2 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.

```

3726 \newcommand*\LWR@closeone}{}% top of the stack
3727 \newcommand*\LWR@closetwo}{ }
3728 \newcommand*\LWR@closethree}{ }
3729 \newcommand*\LWR@closefour}{ }
3730 \newcommand*\LWR@closefive}{ }
3731 \newcommand*\LWR@closesix}{ }
3732 \newcommand*\LWR@closeseven}{ }
3733 \newcommand*\LWR@closeeight}{ }
3734 \newcommand*\LWR@closenine}{ }
3735 \newcommand*\LWR@closeten}{ }
3736 \newcommand*\LWR@closeeleven}{ }
3737 \newcommand*\LWR@closetwelve}{ }

```

## 37.3 Closing depths

A stack to record the depth of each level:



Note that nested  $\LaTeX$  structures may push depths which are non-sequential.

---

*Ex:*

---

```

\begin{itemize}
 \item{A}
 \begin{description}
 \item{B}
 \end{description}
\end{itemize}

```

---

```

3738 \newcommand*{\LWR@closedepthone}{\LWR@depthnone}% top of the stack
3739 \newcommand*{\LWR@closedepthtwo}{\LWR@depthnone}
3740 \newcommand*{\LWR@closedepththree}{\LWR@depthnone}
3741 \newcommand*{\LWR@closedepthfour}{\LWR@depthnone}
3742 \newcommand*{\LWR@closedepthfive}{\LWR@depthnone}
3743 \newcommand*{\LWR@closedepthsix}{\LWR@depthnone}
3744 \newcommand*{\LWR@closedepthseven}{\LWR@depthnone}
3745 \newcommand*{\LWR@closedeptheight}{\LWR@depthnone}
3746 \newcommand*{\LWR@closedepthnine}{\LWR@depthnone}
3747 \newcommand*{\LWR@closedephten}{\LWR@depthnone}
3748 \newcommand*{\LWR@closedeptheleven}{\LWR@depthnone}
3749 \newcommand*{\LWR@closedephtwelve}{\LWR@depthnone}

```

## 37.4 Pushing and popping the stack

`\pushclose`  $\langle action \rangle$   $\langle depth \rangle$

Pushes one return action and its  $\LaTeX$  depth onto the stacks.

```

3750 \NewDocumentCommand{\pushclose}{m m}
3751 {
3752 \global\let\LWR@closetwelve\LWR@closeeleven
3753 \global\let\LWR@closeeleven\LWR@closeten
3754 \global\let\LWR@closeten\LWR@closenine
3755 \global\let\LWR@closenine\LWR@closeeight
3756 \global\let\LWR@closeeight\LWR@closeseven
3757 \global\let\LWR@closeseven\LWR@closesix
3758 \global\let\LWR@closesix\LWR@closefive
3759 \global\let\LWR@closefive\LWR@closefour
3760 \global\let\LWR@closefour\LWR@closethree
3761 \global\let\LWR@closethree\LWR@closetwo
3762 \global\let\LWR@closetwo\LWR@closeone
3763 \global\let\LWR@closeone#1
3764 \global\let\LWR@closedephtwelve\LWR@closedeptheleven
3765 \global\let\LWR@closedeptheleven\LWR@closedephten

```

```

3766 \global\let\LWR@closedepthten\LWR@closedepthnine
3767 \global\let\LWR@closedepthnine\LWR@closedeptheight
3768 \global\let\LWR@closedeptheight\LWR@closedepthseven
3769 \global\let\LWR@closedepthseven\LWR@closedepthsix
3770 \global\let\LWR@closedepthsix\LWR@closedepthfive
3771 \global\let\LWR@closedepthfive\LWR@closedepthfour
3772 \global\let\LWR@closedepthfour\LWR@closedepththree
3773 \global\let\LWR@closedepththree\LWR@closedepthtwo
3774 \global\let\LWR@closedepthtwo\LWR@closedepthone
3775 \global\let\LWR@closedepthone#2
3776 }

```

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

```

3777 \newcommand*{\popclose}
3778 {
3779 \global\let\LWR@closeone\LWR@closetwo
3780 \global\let\LWR@closetwo\LWR@closethree
3781 \global\let\LWR@closethree\LWR@closefour
3782 \global\let\LWR@closefour\LWR@closefive
3783 \global\let\LWR@closefive\LWR@closesix
3784 \global\let\LWR@closesix\LWR@closeseven
3785 \global\let\LWR@closeseven\LWR@closeeight
3786 \global\let\LWR@closeeight\LWR@closenine
3787 \global\let\LWR@closenine\LWR@closeten
3788 \global\let\LWR@closeten\LWR@closeeleven
3789 \global\let\LWR@closeeleven\LWR@closetwelve
3790 \global\let\LWR@closedepthone\LWR@closedepthtwo
3791 \global\let\LWR@closedepthtwo\LWR@closedepththree
3792 \global\let\LWR@closedepththree\LWR@closedepthfour
3793 \global\let\LWR@closedepthfour\LWR@closedepthfive
3794 \global\let\LWR@closedepthfive\LWR@closedepthsix
3795 \global\let\LWR@closedepthsix\LWR@closedepthseven
3796 \global\let\LWR@closedepthseven\LWR@closedeptheight
3797 \global\let\LWR@closedeptheight\LWR@closedepthnine
3798 \global\let\LWR@closedepthnine\LWR@closedepthten
3799 \global\let\LWR@closedepthten\LWR@closedeptheleven
3800 \global\let\LWR@closedeptheleven\LWR@closedephtwelve
3801 }

3802 \end{warpHTML}

```

## 38 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:** 3803 `\begin{warpHTML}`

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

```
3804 \NewDocumentCommand{\LWR@setexparray}{m m m}{%
3805 \ifstrempy{#3}%
3806 {\csdef{#1#2}{}}%
3807 {\expandafter\edef\csname #1#2\endcsname{\expandonce#3}}%
3808 }
```

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

```
3809 \newcommand*{\LWR@getexparray}[2]{\csuse{#1#2}}
```

```
3810 \end{warpHTML}
```

## 39 Sanitizing labels and filenames

Special handling for underscores in labels and filenames.

**for HTML output:** 3811 `\begin{warpHTML}`

`\LWR@sanitized` The sanitized version of what was given to `\LWR@sanitize`. Characters are set to their detokenized versions. Required for underscores in labels and filenames.

```
3812 \newcommand*{\LWR@sanitized}{}
```

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

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

```
3813 \newcommand*{\LWR@sanitize}[1]{%
3814 \LWR@traceinfo{\LWR@sanitize: !#1!}%
3815 \edef\LWR@sanitized{#1}%
3816 \LWR@traceinfo{\LWR@sanitize expanded: !\LWR@sanitized!}%
3817 \edef\LWR@sanitized{\detokenize\expandafter{\LWR@sanitized}}%
3818 \LWR@traceinfo{\LWR@sanitize result: !\LWR@sanitized!}%
3819 }
```

```
3820 \end{warpHTML}
```

## 40 HTML entities

**for HTML output:** 3821 \begin{warpHTML}

HTML entites and HTML Unicode entities:

```
3822 \let\LWR@origampersand\&
```

```
\HTMLentity {<entitytag>}
```

```
3823 \newcommand*\HTMLentity[1]{%
3824 % \LWR@traceinfo{HTMLentity \detokenize{#1}}%
3825 \begingroup%
3826 \LWR@FBcancel%
3827 \LWR@origampersand#1;%
3828 \endgroup
3829 % \LWR@traceinfo{HTMLentity done}%
3830 }
```

```
\HTMLunicode {<hex_unicode>}
```

```
3831 \newcommand*\HTMLunicode[1]{\HTMLentity{\LWR@origpound{x#1}}
```

```
\&
```

```
3832 \renewrobustcmd*\&{\HTMLentity{amp}}
```

```
\textless
\textgreater
```

```
3833 \let\LWR@origtextless\textless
3834 \renewcommand*\textless{\HTMLentity{lt}}
3835
3836 \let\LWR@origtextgreater\textgreater
3837 \renewcommand*\textgreater{\HTMLentity{gt}}
```

```
3838 \end{warpHTML}
```

## 41 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:** 3839 `\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.

```
3840 \providecommand*\BaseJobname{\jobname}
```

`\HTMLFilename` The prefix for all generated HTML files other than the home page, defaulting to empty. See section [8.3.1](#).

```
3841 \providecommand*\HTMLFilename{}
```

`\HomeHTMLFilename` The filename of the home page, defaulting to the `\BaseJobname`. See section [8.3.1](#).

```
3842 \providecommand*\HomeHTMLFilename{\BaseJobname}
```

`\SetHTMLFileNumber` `{<number>}`

Sets the file number for the next file to be generated. 0 is the home page. Use just before the next sectioning command, and set it to one less than the desired number of the next section. May be used to generate numbered groups of nodes such as 100+ for one chapter, 200+ for another chapter, etc.

```
3843 \newcommand*\SetHTMLFileNumber[1]{%
3844 \setcounter{LWR@htmlfilenumber}{#1}%
3845 }
```

Bool `FileSectionNames` Selects how to create HTML file names.

Defaults to use section names in the filenames.

```
3846 \newbool{FileSectionNames}
3847 \booltrue{FileSectionNames}
```

```
3848 \end{warpall}
```

**for HTML output:** 3849 `\begin{warpHTML}`

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

```
3850 \newcounter{LWR@htmlfilenumber}
3851 \setcounter{LWR@htmlfilenumber}{0}
```

\LWR@htmlsectionfilename *{(htmlfilenumber or name)}*

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

```
3852 \newcommand*{\LWR@htmlsectionfilename}[1]{%
3853 \LWR@traceinfo{LWR@htmlsectionfilename A !\detokenize{#1}!}%
```

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

```
3854 % \LWR@traceinfo{about to assign temp}%
3855 \edef\LWR@tempone{#1}%
3856 \LWR@traceinfo{about to compare with ??}%
3857 \ifthenelse{\equal{\LWR@tempone}{??}}{%
3858 {\LWR@traceinfo{found ??}}%
3859 {\LWR@traceinfo{not found ??}}%
3860 \LWR@traceinfo{about to compare with zero or empty}%
3861 \ifthenelse{%
3862 \equal{\LWR@tempone}{0}%
3863 \OR \equal{\LWR@tempone}{}%
3864 \OR \equal{\LWR@tempone}{??}}%
3865 }%
3866 {%
3867 \LWR@traceinfo{LWR@htmlsectionfilename B \HomeHTMLFilename.html}%
3868 \HomeHTMLFilename.html%
3869 }%
```

For a  $\LaTeX$  section named “Index” or “index” without a prefix, create a filename with a leading underscore to avoid colliding with the HTML filename index.html:

```
3870 {%
3871 \LWR@traceinfo{LWR@htmlsectionfilename C \LWR@tempone}%
3872 \ifthenelse{%
3873 \equal{\HTMLFilename}{ } \AND
3874 \equal{\LWR@tempone}{Index} \OR
3875 \equal{\LWR@tempone}{index}%
3876 }%
3877 {%
3878 \LWR@traceinfo{Prefixing the index name with an underscore.}%
3879 _#1.html%
3880 }%
```

Otherwise, create a filename with the chosen prefix:

```
3881 {\HTMLFilename#1.html}%
3882 }%
3883 \LWR@traceinfo{\LWR@htmlsectionfilename Z}%
3884 }
```

`\LWR@htmlrefsectionfilename` `{\langle label \rangle}`

Prints the filename for the given label

```
3885 \newcommand*{\LWR@htmlrefsectionfilename}[1]{%
3886 \LWR@traceinfo{\LWR@htmlrefsectionfilename: !\detokenize{#1}!}%
```

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

```
3887 \begingroup%
3888 \LWR@nullfonts%
3889 \LWR@htmlsectionfilename{\LWR@htmlfileref{#1}}%
3890 \endgroup%
3891 \LWR@traceinfo{\LWR@htmlrefsectionfilename: done}%
3892 }
```

```
3893 \end{warpHTML}
```

## 42 Homepage link

**for HTML output:** `3894 \begin{warpHTML}`

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

```
3895 \newcommand*{\LinkHome}{%
3896 \LWR@subhyperrefclass{%
3897 \HomeHTMLFilename.html}%
3898 {Home}{linkhome}%
3899 }
```

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

```
3900 \newcommand*{\LWR@topnavigation}{
3901 \LWR@htmlclassline{nav}{topnavigation}{\LinkHome}
3902 }
```

`\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.

```
3903 \newcommand*{\LWR@botnavigation}{
3904 \LWR@htmlclassline{nav}{botnavigation}{\LinkHome}
3905 }

3906 \end{warpHTML}
```

### 43 `\LWRPrintStack` diagnostic tool



Diagnostics tool: Prints the  $\LaTeX$  nesting depth values for the stack levels. `\LWR@startpars` is used before printing the stack, so that `\LWRPrintStack` may be called from anywhere in the normal text flow.

**for HTML output:** 3907 `\begin{warpHTML}`

`\LWRPrintStack` Prints the closedepth stack.

```
3908 \newcommand*{\LWR@subprintstack}{
3909 \LWR@closedepthone\ \LWR@closedepthtwo\ \LWR@closedepththree\
3910 \LWR@closedepthfour\ \LWR@closedepthfive\ \LWR@closedepthsix\
3911 \LWR@closedepthseven\ \LWR@closedeptheight\ \LWR@closedepthnine\
3912 \LWR@closedephten\ \LWR@closedeptheleven\ \LWR@closedephtwelve\
3913 }
3914
3915 \newcommand*{\LWRPrintStack}{
3916 \LWR@startpars
3917 \LWR@subprintstack
3918 }

3919 \end{warpHTML}
```

**for PRINT output:** 3920 `\begin{warpprint}`

```
3921 \newcommand*{\LWRPrintStack}{}

3922 \end{warpprint}
```

### 44 Closing stack levels

**for HTML output:** 3923 `\begin{warpHTML}`

Close one nested level:

```
3924 \newcommand*{\LWR@closeoneprevious}{%
3925
3926 \LWR@closeone
3927
3928 \popclose
3929 }
```

`\LWR@closeprevious`  $\{<depth>\}$  Close everything up to the given depth:

```
3930 \newcommand*{\LWR@closeprevious}[1]{
3931 \LWR@traceinfo{\LWR@closeprevious to depth #1, depths are \LWR@subprintstack}%
```

Close any pending paragraph:

```
3932 \LWR@stoppars%
```

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

```
3933 \whileboolexpr{test{\ifnumcomp{\LWR@closedepthone}{>}{#1}}}%
3934 {%
3935 \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
3936 \LWR@closeoneprevious%
3937 }%
3938 \ifboolexpr{test{\ifnumcomp{\LWR@closedepthone}{=}{#1}}}%
3939 {%
3940 \LWR@traceinfo{\LWR@closeprevious: closing out depth \LWR@closedepthone}%
3941 \LWR@closeoneprevious%
3942 }{ }%
3943 \LWR@traceinfo{\LWR@closeprevious: done, depths are \LWR@subprintstack}%
3944 }

3945 \end{warpHTML}
```

## 45 PDF pages and styles

**for HTML output:** 3946 `\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.

```
3947 \newcommand{\LWR@forcenewpage}{%
3948 \ifinner\else%
3949 \LWR@stoppars\LWR@orignewpage\LWR@startpars%
3950 \fi%
3951 }
```

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

`\pagestyle`  $\langle style \rangle$

```
3952 \renewcommand*\pagestyle[1]{}
```

`\thispagestyle`  $\langle style \rangle$

```
3953 \renewcommand*\thispagestyle[1]{}
```

`\markboth`  $\langle left \rangle$   $\langle right \rangle$

```
3954 \renewcommand*\markboth[2]{}
```

`\markright`  $\langle right \rangle$

```
3955 \renewcommand*\markright[1]{}
```

`\raggedbottom`

```
3956 \renewcommand*\raggedbottom{}
```

`\flushbottom`

```
3957 \renewcommand*\flushbottom{}
```

`\sloppy`

```
3958 \renewcommand*\sloppy{}
```

`\fussy`

```
3959 \renewcommand*\fussy{}
```

`\pagenumbering` \*  $\langle commands \rangle$

```
3960 \RenewDocumentCommand\pagenumbering{s m}{}
```

```
3961 \end{warpHTML}
```

## 46 HTML tags, spans, divs, elements

for HTML output: 3962 \begin{warpHTML}

### 46.1 Mapping $\TeX$ Sections to HTML Sections

```
3963 \newcommand*\LWR@tagtitle}{h1}
3964 \newcommand*\LWR@tagtitleend}{/h1}
3965 \newcommand*\LWR@tagpart}{h2}
3966 \newcommand*\LWR@tagpartend}{/h2}
3967 \newcommand*\LWR@tagchapter}{h3}
3968 \newcommand*\LWR@tagchapterend}{/h3}
3969 \newcommand*\LWR@tagsection}{h4}
3970 \newcommand*\LWR@tagsectionend}{/h4}
3971 \newcommand*\LWR@tagsubsection}{h5}
3972 \newcommand*\LWR@tagsubsectionend}{/h5}
3973 \newcommand*\LWR@tagsubsubsection}{h6}
3974 \newcommand*\LWR@tagsubsubsectionend}{/h6}
3975 \newcommand*\LWR@tagparagraph}{span class="paragraph"}
3976 \newcommand*\LWR@tagparagraphend}{/span}
3977 \newcommand*\LWR@tagsubparagraph}{span class="subparagraph"}
3978 \newcommand*\LWR@tagsubparagraphend}{/span}
3979
3980 \newcommand*\LWR@tagregularparagraph}{p}
```

### 46.2 Babel-French

Adjust **babel-french** for HTML spaces. So far, this only works for **pdf $\LaTeX$**  and **x $\LaTeX$** .

*(Emulates or patches code by DANIEL FLIPO.)*

```
3981 \providecommand*\LWR@FBcancel}{ }
3982
3983 \AtBeginDocument{%
3984 \@ifundefined{frenchbsetup}%
3985 {}%
3986 {%
3987 \frenchbsetup{FrenchFootnotes=false}%
3988 %
3989 \LetLtxMacro\LWR@FBcancel\NoAutoSpacing%
```

```

3990 \renewrobustcmd*{\FBcolonspace}{%
3991 \begingroup%
3992 \LWR@FBcancel%
3993 \LWR@origampersand{}nbsp;%
3994 \endgroup%
3995 }%
3996 \renewrobustcmd*{\FBthinspace}{%
3997 \begingroup%
3998 \LWR@FBcancel%
3999 \LWR@origampersand\LWR@origpound{}x202f;% \,
4000 \endgroup%
4001 }%
4002 \renewrobustcmd*{\FBguillspace}{%
4003 \begingroup%
4004 \LWR@FBcancel%
4005 \LWR@origampersand{}nbsp;% ~, for \og xyz \fg{}
4006 \endgroup%
4007 }%
4008 \DeclareDocumentCommand{\FBmedkern}{-}{%
4009 \begingroup%
4010 \LWR@FBcancel%
4011 \LWR@origampersand\LWR@origpound{}x202f;% \,
4012 \endgroup%
4013 }%
4014 \DeclareDocumentCommand{\FBthickkern}{-}{%
4015 \begingroup%
4016 \LWR@FBcancel%
4017 \LWR@origampersand{}nbsp;% ~
4018 \endgroup%
4019 }%
4020 \renewrobustcmd*{~}{\HTMLentity{nbsp}}% was overwritten by babel-french
4021 \ifFBunicode%
4022 \else%
4023 \DeclareTextSymbol{\FBtextellipsis}{LY1}{133}%
4024 \DeclareTextCommandDefault{\FBtextellipsis}{\textellipsis\xspace}%
4025 \fi%
4026 }%
4027 }

```

### 46.3 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.

```

4028 \newcommand*{\LWR@htmltagc}[1]{%
4029 \LWR@traceinfo{\LWR@htmltagc !\detokenize{#1}!}%

```

```

4030 \begingroup%
4031 \LWR@FBcancel%
4032 \ifmode\else\protect\LWR@origttfamily\fi%
4033 \protect\LWR@origtextless%
4034 #1%
4035 \protect\LWR@origtextgreater%
4036 \endgroup%
4037 % \LWR@traceinfo{LWR@htmltagc: done}%
4038 }

```

Env LWR@nestspan Disable minipage, \parbox, and HTML <div>s inside a <span>.

⚠ `\begin{LWR@nestspan}` must follow the opening `<span>` tag to allow a paragraph to start if the span is at the beginning of a new paragraph.

⚠ `\end{LWR@nestspan}` must follow the `</span>` or a `<p>` may appear inside the span.

```

4039 \newcommand*{\LWR@nestspanitem}{%
4040 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
4041 \LWR@origitem%
4042 }
4043
4044 \newenvironment*{LWR@nestspan}
4045 {%
4046 \LWR@traceinfo{LWR@nestspan starting}%
4047 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
4048 {%
4049 \LWR@traceinfo{LWR@nestspan: inside a lateximage}%
4050 }%
4051 {% not in a lateximage
4052 \LWR@traceinfo{LWR@nestspan: NOT inside a lateximage}%
4053 \addtocounter{LWR@spandepth}{1}%
4054 \RenewDocumentEnvironment{minipage}{0{t} o 0{t} m}{-}{-}%
4055 \RenewDocumentEnvironment{BlockClass}{o m}{-}{-}%
4056 \renewcommand{\BlockClassSingle}[2]{##2}%
4057 \renewcommand{\LWR@forcenewpage}{}%
4058 \renewcommand{\LWR@liststart}{%
4059 \let\item\LWR@nestspanitem%
4060 }%
4061 \renewcommand{\LWR@listend}{\LWR@htmltagc{br /}\LWR@htmltagc{br /}}%
4062 }% not in a lateximage
4063 \LWR@traceinfo{LWR@nestspan starting: done}%
4064 }% starting env
4065 }% ending env
4066 \LWR@traceinfo{LWR@nestspan ending}%
4067 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
4068 }%
4069 {\addtocounter{LWR@spandepth}{-1}}%
4070 \LWR@traceinfo{LWR@nestspan ending: done}%

```

```

4071 }
4072
4073 \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.

```

4074 \NewDocumentCommand{\LWR@htmlspan}{m +m}{%
4075 \LWR@ensuredoingapar%
4076 \LWR@htmltagc{#1}%
4077 \begin{LWR@nestspan}%
4078 #2%
4079 \LWR@htmltagc{/#1}%
4080 \end{LWR@nestspan}%
4081 }

```

`\LWR@htmlspanclass`  $[ \langle style \rangle ] \{ \langle class \rangle \} \{ \langle text \rangle \}$

```

4082 \NewDocumentCommand{\LWR@htmlspanclass}{o m +m}{%
4083 \LWR@traceinfo{LWR@htmlspanclass |#1|#2|}%
4084 \LWR@ensuredoingapar%
4085 \LWR@subhtmlclass{span}[#1]{#2}%
4086 \begin{LWR@nestspan}%
4087 #3%
4088 \LWR@htmltagc{/span}%
4089 \LWR@traceinfo{LWR@htmlspanclass done}%
4090 \end{LWR@nestspan}%
4091 }

```

`\LWR@htmltag`  $\{ \langle tag \rangle \}$

Print an HTML tag: `<tag>`

```

4092 \newcommand*{\LWR@htmltag}[1]{%
4093 % \LWR@traceinfo{LWR@htmltagb !\detokenize{#1}!}%
4094 \LWR@htmltagc{#1}%
4095 % \LWR@traceinfo{LWR@htmltagb: done}%
4096 }

```

## 46.4 Block tags and comments

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

```

\LWR@htmlopencomment
\LWR@htmlclosecomment
4097 \newcommand*{\LWR@htmlopencomment}{%
4098 {%
4099 % \LWR@traceinfo{\LWR@htmlopencomment}%
4100 \begingroup%
4101 \LWR@FBcancel%
4102 \ifmode\else\protect\LWR@origttfamily\fi%
4103 \LWR@origmbox{\LWR@origtextless{!}{-}{-}}%
4104 \endgroup%
4105 }%
4106 }
4107
4108 \newcommand*{\LWR@htmlclosecomment}{%
4109 {%
4110 % \LWR@traceinfo{\LWR@htmlclosecomment}%
4111 \begingroup%
4112 \LWR@FBcancel%
4113 \ifmode\else\protect\LWR@origttfamily\fi%
4114 \LWR@origmbox{-}{-}\LWR@origtextgreater}%
4115 \endgroup%
4116 }%
4117 }

\LWR@htmlcomment {<comment>}

4118 \newcommand{\LWR@htmlcomment}[1]{%
4119 \LWR@htmlopencomment}%
4120 {%
4121 \LWR@origttfamily% break ligatures
4122 #1%
4123 }%
4124 \LWR@htmlclosecomment{}}

\LWR@htmlblockcomment {<comment>}

4125 \newcommand{\LWR@htmlblockcomment}[1]
4126 {\LWR@stoppars\LWR@htmlcomment{#1}\LWR@startpars}

\LWR@htmlblocktag {<tag>} print a stand-alone HTML tag

```

```

4127 \newcommand*{\LWR@htmlblocktag}[1]{%
4128 \LWR@stoppars%
4129 \LWR@htmltag{#1}%
4130 \LWR@startpars%
4131 }

```

## 46.5 Div class and element class

```
\LWR@subhtmlclass {<element>} [<style>] {<class>}
```

Factored and reused in several places.

The trailing spaces allow more places for a line break.

```

4132 \NewDocumentCommand{\LWR@subhtmlclass}{m O{} m}{%
4133 \LWR@traceinfo{\LWR@subhtmlclass !#1!#2!#3!}%
4134 \ifblank{#2}%
4135 {\LWR@htmltag{#1 class="#3"}}% empty option
4136 {\LWR@htmltag{#1 class="#3" style="#2"}}% non-empty option
4137 \LWR@traceinfo{\LWR@subhtmlclass done}%
4138 }

```

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

```

4139 \NewDocumentCommand{\LWR@htmlclass}{m o m}{%
4140 \LWR@stoppars%
4141 \LWR@subhtmlclass{#1}[#2]{#3}%
4142 \LWR@startpars%
4143 }

```

```
\LWR@htmlclassend {<element>} {<class>}
```

```

4144 \newcommand*{\LWR@htmlclassend}[2]{%
4145 \LWR@stoppars%
4146 \LWR@htmltag{/#1}%
4147 \ifbool{HTMLDebugComments}{%
4148 \LWR@htmlcomment{End of #1 ‘‘#2’’}%
4149 }{}%
4150 \LWR@startpars%
4151 }

```

```
\LWR@htmldivclass [<style>] {<class>}
```

```
4152 \NewDocumentCommand{\LWR@htmldivclass}{o m}{%
```

```
4153 \LWR@htmlclassend{div}[#1]{#2}%
4154 }
```

```
\LWR@htmldivclassend {<class>}
```

```
4155 \newcommand*\LWR@htmldivclassend}[1]{%
4156 \LWR@htmlclassend{div}{#1}%
4157 }
```

## 46.6 Single-line elements

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

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

```
4158 \NewDocumentCommand{\LWR@htmlclassline}{m o m +m}{%
4159 \LWR@stoppars
4160 \LWR@subhtmlclass{#1}[#2]{#3}%
4161 #4%
4162 \LWR@htmltag{/#1}
4163 \LWR@startpars
4164 }
```

## 46.7 HTML5 semantic elements

```
\LWR@htmllement {<element>}
```

```
4165 \newcommand*\LWR@htmllement}[1]{%
4166 \LWR@htmlblocktag{#1}
4167 }
```

```
\LWR@htmllementend {<element>}
```

```
4168 \newcommand*\LWR@htmllementend}[1]{%
4169 \LWR@stoppars
4170 \LWR@htmltag{/#1}
4171 \LWR@startpars
4172 }
4173
4174 \end{warpHTML}
```

## 46.8 High-level block and inline classes

These are high-level commands which allow the creation of arbitrary block or inline sections which may be formatted with css.

Nullified versions are provided for print mode.

For other direct-formatting commands, see section [83](#).

Env `BlockClass` [*style*] {*class*} High-level interface for <div> classes.

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

**for HTML output:** 4175 `\begin{warpHTML}`  
 4176 `\NewDocumentEnvironment{BlockClass}{o m}{}`  
 4177 `{%`  
 4178 `\LWR@origpar%`  
 4179 `\LWR@htmldivclass[#1]{#2}%`  
 4180 `}`  
 4181 `{\LWR@htmldivclassend{#2}}`  
 4182 `\end{warpHTML}`

**for PRINT output:** 4183 `\begin{warpprint}`  
 4184 `\NewDocumentEnvironment{BlockClass}{o m}{}{}`  
 4185 `\end{warpprint}`

`\BlockClassSingle` {*class*} {*text*} A single-line <div>, without a paragraph tag for the line of text.

**for HTML output:** 4186 `\begin{warpHTML}`  
 4187 `\newcommand{\BlockClassSingle}[2]{%`  
 4188 `\LWR@origpar%`  
 4189 `\LWR@htmlclassline{div}{#1}{#2}%`  
 4190 `}`  
 4191 `\end{warpHTML}`

**for PRINT output:** 4192 `\begin{warpprint}`  
 4193 `\newcommand{\BlockClassSingle}[2]{#2}`  
 4194 `\end{warpprint}`

`\InlineClass` [*style*] {*class*} {*text*} High-level interface for inline span classes.

**for HTML output:** 4195 `\begin{warpHTML}`  
 4196 `\NewDocumentCommand{\InlineClass}{o m +m}{%`  
 4197 `\LWR@htmlspanclass[#1]{#2}{#3}%`  
 4198 `}`  
 4199 `\end{warpHTML}`

**for PRINT output:** 4200 `\begin{warpprint}`

```
4201 \NewDocumentCommand{\InlineClass}{o m +m}{#3}%
4202 \end{warpprint}
```

Env LWR@BlockClassWP  $\{\langle WPstyle \rangle\} \{\langle HTMLstyle \rangle\} \{\langle class \rangle\}$  Low-level interface for <div> classes with an automatic float ID. These are often used when  $\text{\ifbool}\{\text{FormatWP}\}$ .

**for HTML output:**

```
4203 \begin{warpHTML}
4204 \NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{%
4205 {%
4206 \LWR@stoppars%
4207 \ifbool{FormatWP}{%
4208 {%
4209 \addtocounter{LWR@thisautoidWP}{1}%
4210 \LWR@htmltag{%
4211 div class="#3" %
4212 id="\LWR@origmbox{autoidWP-\arabic{LWR@thisautoidWP}}"%
4213 \ifblank{#1}{\ style="#1"}%
4214 }%
4215 }% FormatWP
4216 {% not FormatWP
4217 \LWR@htmltag{%
4218 div class="#3"%
4219 \ifblank{#2}{\ style="#2"}%
4220 }%
4221 }% not FormatWP
4222 \LWR@startpars%
4223 }
4224 {\LWR@htmldivclassend{#3}}
4225 \end{warpHTML}
```

**for PRINT output:**

```
4226 \begin{warpprint}
4227 \NewDocumentEnvironment{LWR@BlockClassWP}{m m m}{\}{\}{%
4228 \end{warpprint}
```

## 46.9 Closing HTML tags

**for HTML output:**

```
4229 \begin{warpHTML}
```

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

```
4230 \newcommand*{\LWR@printclosepart}
4231 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing part}}{\}}
4232 \newcommand*{\LWR@printclosechapter}
4233 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing chapter}}{\}}
4234 \newcommand*{\LWR@printclosesection}
```

```

4235 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing section}}{}}
4236 \newcommand*{\LWR@printclosesubsection}
4237 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsection}}{}}
4238 \newcommand*{\LWR@printclosesubsubsection}
4239 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subsubsection}}{}}
4240 \newcommand*{\LWR@printcloseparagraph}
4241 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing paragraph}}{}}
4242 \newcommand*{\LWR@printclosesubparagraph}
4243 {\ifbool{HTMLDebugComments}{\LWR@htmlcomment{Closing subparagraph}}{}}

```

Lists require closing HTML tags:

```

4244 \newcommand*{\LWR@printcloselistitem}
4245 {\LWR@htmltag{/li}}
4246 \newcommand*{\LWR@printclosedescitem}
4247 {\LWR@htmltag{/dd}}
4248 \newcommand*{\LWR@printcloseitemize}
4249 {\LWR@htmltag{/ul}}
4250 \newcommand*{\LWR@printcloseenumerate}
4251 {\LWR@htmltag{/ol}}
4252 \newcommand*{\LWR@printclosedescription}
4253 {\LWR@htmltag{/dl}}

```

```
4254 \end{warpHTML}
```

## 47 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 48 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:** 4255 `\begin{warpHTML}`

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

```

4256 \newcounter{LWR@spandepth}
4257 \setcounter{LWR@spandepth}{0}

```

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

```
4258 \newbool{LWR@doingstartpars}
4259 \boolfalse{LWR@doingstartpars}
```

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

```
4260 \newbool{LWR@doingapar}
4261 \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:

```
4262 \newcommand*{\LWR@ensuredoingapar}{%
4263 \ifbool{LWR@doingstartpars}%
4264 {\global\booltrue{LWR@doingapar}}%
4265 {}%
4266 }
```

\LWR@openparagraph

```
4267 \newcommand*{\LWR@openparagraph}
4268 {%
```

See if paragraph handling is enabled:

```
4269 \ifbool{LWR@doingstartpars}%
4270 {% handling pars
```

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

```
4271 \ifboolexpr{
4272 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
4273 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
4274 }% nested par tags?
```

If so: Do nothing if already started a lateximage page. Cannot nest a lateximage. Also do nothing if already inside a <span>. Do not nest paragraph tags inside a <span>.

```
4275 {}% no nested par tags
```

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

```
4276 {% yes nest par tags
4277 \LWR@htmltagc{\LWR@tagregularparagraph}%
```

Now have started a paragraph.

```
4278 \global\booltrue{LWR@doingapar}%
```

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

```
4279 \let\par\LWR@closeparagraph%
4280 }% end of yes nest par tags
4281 }% end of handling pars
4282 {}% not handling pars
4283 }
```

\LWR@closeparagraph

```
4284 \newcommand*{\LWR@closeparagraph}
4285 {%
4286 % \LWR@traceinfo{LWR@closeparagraph}%
```

See if paragraph handling is enabled:

```
4287 \ifbool{LWR@doingapar}%
```

If currently in paragraph mode:

```
4288 {% handling pars
```

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

```
4289 \ifboolexpr{
4290 test {\ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}} or
4291 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}}
4292 }%
```

Do nothing if already started a lateximage or a <span>, but add a parbreak if in a span but not a lateximage.

```
4293 {% no nested par tags
4294 \ifboolexpr{
4295 test {\ifnumcomp{\value{LWR@spandepth}}{>}{0}} and
4296 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=} {0}}
4297 }%
4298 {\ifbool{LWR@intabularmetadata}{\unskip\LWR@htmltagc{br /}}}%
4299 }%
4300 }% no nested par tags
```

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

```
4301 {% yes nest par tags
```

Print a closing tag and some extra vertical space:

```
4302 \unskip%
4303 \LWR@htmltagc{/\LWR@tagregularparagraph}%
4304 \LWR@orignewline%
```

No longer doing a paragraph:

```
4305 \global\boolfalse{LWR@doingapar}%
4306 % Disable the special \env{minipage} \& \cs{hspace} interaction
4307 % until a new minipage is found:
4308 % \begin{macrocode}
4309 \global\boolfalse{LWR@minipagethispar}%
4310 }% end of yes nest par tags
4311}% end of handling pars
```

Add a parbreak if in a span, but not in a table outside a row:

```
4312 {% not handling pars
4313 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
4314 {\ifbool{LWR@intabularmetadata}{\unskip\LWR@htmltagc{br /}}}%
4315 }%
4316}% not handling pars
```

In most cases, finish with a  $\LaTeX$  \par, but in the case of paragraphs between lines in a tabular fetch the next token instead:

```
4317 \ifboolexpr{%
4318 not bool {LWR@doingapar} and
4319 test {\ifnumcomp{\value{LWR@tabulardepth}}{>}{0}} and
4320 test {
4321 \ifnumcomp{\value{LWR@tabulardepth}}{=}{\value{LWR@tabularpardepth}}
4322 } and
4323 bool {LWR@intabularmetadata} and
4324 not bool {LWR@tableparcell} and
4325 test {\ifnumcomp{\value{LWR@lateximagedepth}}{=}{0}}
4326 }%
4327 {%
4328 \LWR@getmynexttoken%
4329 }{%
4330 \LWR@origpar%
4331 }%
4332 }

4333 \end{warpHTML}
```

## 48 Paragraph start/stop handling

These commands allow/disallow the generation of HTML paragraph tags.

Section 47 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:** 4334 `\begin{warpHTML}`

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

```
4335 \newcommand*{\LWR@startpars}%
4336 {%
4337 % \LWR@traceinfo{\LWR@startpars}%
```

Ignore if inside a span:

```
4338 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
4339 {}%
4340 {%
```

See if currently handling HTML paragraphs:

```
4341 \ifbool{LWR@doingstartpars}%
```

If already in paragraph mode, do nothing.

```
4342 {}%
```

If not currently in paragraph mode:

```
4343 {%
```

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

```
4344 \PushPreHook{par}{\LWR@openparagraph}%
```

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

```
4345 \let\par\LWR@closeparagraph
4346
4347 }% an intentionally blank line
```

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

```
4348 \global\setbool{LWR@doingstartpars}{true}%
```

No <par> tag yet to undo:

```
4349 \global\boolfalse{LWR@doingapar}%
4350 }% nestspan
4351 % \LWR@traceinfo{LWR@startpars: done}%
4352 }
```

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

```
4353 \newcommand*{\LWR@stoppars}%
4354 {%
```

Ignore if inside a span:

```
4355 \ifnumcomp{\value{LWR@spandepth}}{>}{0}%
4356 {}%
4357 {%
```

See if currently handling HTML paragraphs:

```
4358 \ifbool{LWR@doingapar}%
```

if currently in an HTML paragraph:

```
4359 {%
```

Print a closing tag:

```
4360 \unskip%
4361 \LWR@htmltagc{/\LWR@tagregularparagraph}%
4362 \LWR@orignewline%
```

No longer have an open HTML paragraph:

```
4363 \global\boolfalse{LWR@doingapar}%
```

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

```
4364 \global\boolfalse{LWR@minipagethispar}
4365
4366 }% an intentionally blank line
```

If was not in an HTML paragraph:

```
4367 {}%
```

See if currently allowing HTML paragraphs:

```
4368 \ifbool{LWR@doingstartpars}%
```

If so: clear the par hook to no longer catch paragraphs:

```
4369 {\ClearPreHook{par}}%
```

Else: do nothing

```
4370 {}%
```

no longer in paragraph mode

```
4371 \global\setbool{LWR@doingstartpars}{false}%
```

no <p> tag to undo:

```
4372 \global\boolfalse{LWR@doingapar}%
4373 }% nestspan
4374 }
```

```
4375 \end{warpHTML}
```

## 49 Page headers and footers

**for HTML & PRINT:** 4376 \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.

```
4377 \newcommand{\LWR@firstpagetop}{} % for the home page alone
4378 \newcommand{\LWR@pagetop}{} % for all other pages
4379 \newcommand{\LWR@pagebottom}{}%
```

\HTMLFirstPageTop {<*text and logos*>}

```
4380 \newcommand{\HTMLFirstPageTop}[1]{%
4381 \renewcommand{\LWR@firstpagetop}{#1}%
4382 }
```

`\HTMLPageTop`  $\{\langle text and logos \rangle\}$

```
4383 \newcommand{\HTMLPageTop}[1]{%
4384 \renewcommand{\LWR@pagetop}{#1}%
4385 }
```

`\HTMLPageBottom`  $\{\langle text and logos \rangle\}$

```
4386 \newcommand{\HTMLPageBottom}[1]{%
4387 \renewcommand{\LWR@pagebottom}{#1}%
4388 }
```

```
4389 \end{warpall}
```

## 50 CSS

**for HTML output:** 4390 `\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.

```
4391 \newcommand*{\LWR@currentcss}{lwarp.css}
```

`\CSSFilename`  $\{\langle new-css-filename.css \rangle\}$  Assigns the CSS file to be used by the following HTML pages.

```
4392 \newcommand*{\CSSFilename}[1]{%
4393 \renewcommand*{\LWR@currentcss}{#1}%
4394 \@onelevel@sanitize\LWR@currentcss%
4395 }
4396
4397 \end{warpHTML}
```

**for PRINT output:** 4398 `\begin{warpprint}`  
4399 `\newcommand*{\CSSFilename}[1]{}`  
4400 `\end{warpprint}`

## 51 Title, HTML meta author, HTML meta description

**for HTML output:** 4401 `\begin{warpHTML}`

`\title`  $\langle title \rangle$  Modified to remember `\thetitle`, which is used to set the HTML page titles.

```
4402 \let\LWR@origtitle\title
4403
4404 \renewcommand*{\title}[1]{%
4405 \LWR@origtitle{#1}%
4406 \begingroup%
4407 \renewcommand{\thanks}[1]{}%
4408 \protected@xdef\thetitle{#1}%
4409 \endgroup%
4410 }
```

```
4411 \end{warpHTML}
```

**for HTML & PRINT:** 4412 `\begin{warpall}`

`\HTMLTitle`  $\langle Titlename \rangle$  The Title to place into an HTML meta tag. The default is to use the document `\title`'s setting.

```
4413 \providecommand{\thetitle}{}
4414
4415 \newcommand{\theHTMLTitle}{\thetitle}
4416
4417 \newcommand{\HTMLTitle}[1]{\renewcommand{\theHTMLTitle}{#1}}
```

`\HTMLAuthor`  $\langle authorname \rangle$  The author to place into an HTML meta tag. If none given, the default is `\theauthor`, which is empty unless the **titling** package is used.

```
4418 \providecommand{\theauthor}{}
4419
4420 \newcommand{\theHTMLAuthor}{\theauthor}
4421
4422 \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.



Do not use double quotes, and do not exceed 150 characters.

`\HTMLDescription`  $\langle New HTML meta description. \rangle$  Assigns the HTML file's description meta tag.

```
4423 \newcommand{\LWR@currentHTMLDescription}{}
4424
```

```

4425 \newcommand{\HTMLDescription}[1]{%
4426 \renewcommand{\LWR@currentHTMLDescription}{#1}
4427 }
4428
4429 \end{warpall}

```

## 52 Footnotes

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

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.}}

```

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.

### 52.1 Regular page footnotes

In HTML documents, footnotes are placed at the bottom of the web page or the section, depending on `FootnoteDepth`, using the  $\LaTeX$  box `\LWR@footnotes`. Using this instead of the original `\footins` box avoids having footnotes be printed by the output routine, since footnotes should be printed per HTML page instead of per PDF page.

See section 52.4 for the implementation.

### 52.2 Minipage footnotes

See section 52.5 for how minipage footnotes are gathered. See section 82.3 for how minipage footnotes are placed into the document.

### 52.3 Titlepage thanks

See section 59.7 for titlepage footnotes.

### 52.4 Regular page footnote implementation

**for HTML & PRINT:** 4430 `\begin{warpall}`

**Ctrl** FootnoteDepth Determines how deeply to place footnotes in the HTML files, similar to `tocdepth`.  
 Default: 3 The default of 3 places footnotes before each `\subsubsection` or higher. See table 7 for a table of  $\TeX$  section headings.

```
4431 \newcounter{FootnoteDepth}
4432 \setcounter{FootnoteDepth}{3}

4433 \end{warpall}
```

**for HTML output:** 4434 `\begin{warpHTML}`

Patch  $\TeX$  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.

```
4435 \newbox\LWR@footnotes
```

Much of the following has unneeded print-mode formatting removed.

```
\@makefntext {<text>}
```

```
4436 \long\def\@makefntext#1{\@thefnmark~#1}
```

```
\@makefnmark
```

```
4437 \def\@makefnmark{%
4438 \@thefnmark%
4439 }
```

Footnotes may be in regular text, in which case paragraphs are tagged, or in a table data cell or `lateximage`, in which case paragraph tags must be added manually.

In a `lateximage` during HTML output, the `lateximage` is placed inside a print-mode `minipage`, but the footnotes are broken out by:

```

\def\@mpfn{footnote}
\def\thempfn{\thefootnote}
\let\@footnotetext\LWR@footnotetext

```

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

```

4440 \long\def\LWR@footnotetext#1{%
4441 \LWR@traceinfo{\LWR@footnotetext}%
4442 \global\setbox\LWR@footnotes=\vbox{%

```

Add to any current footnotes:

```

4443 \unvbox\LWR@footnotes%

```

Remember the footnote number for `\ref`:

```

4444 \protected@edef\@currentlabel{%
4445 \csname p@footnote\endcsname\@thefnmark%
4446 }% \@currentlabel

```

Open a group:

```

4447 \color@begingroup%

```

Use HTML superscripts in the footnote even inside a lateximage:

```

4448 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%

```

Use paragraph tags if in a tabular data cell or a lateximage:

```

4449 \ifthenelse{%
4450 \boolean{LWR@doingstartpars} \AND%
4451 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
4452 }%
4453 {}%
4454 {\LWR@htmltagc{\LWR@tagregularparagraph}}%

```

Append the footnote to the list:

```

4455 \@makefntext{#1}%

```

Closing paragraph tag:

```

4456 \ifthenelse{%
4457 \boolean{LWR@doingstartpars} \AND%
4458 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
4459 }%

```

```

4460 {\par}%
4461 {%
4462 \LWR@htmltagc{/\LWR@tagregularparagraph}%
4463 \LWR@orignewline%
4464 }%

```

Close the group:

```

4465 \color@endgroup%
4466 }% vbox

```

Paragraph handling:

```

4467 \LWR@ensuredoingapar%
4468 }%

```

```
\@footnotetext {<text>}
```

```
4469 \LetLtxMacro\@footnotetext\LWR@footnotetext
```

## 52.5 Minipage footnote implementation

Patch  $\text{\LaTeX}$  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.

```
4470 \newbox\LWR@mpfootnotes
```

```
\@mpfootnotetext {<text>}
```

```

4471 \long\def\@mpfootnotetext#1{%
4472 \LWR@traceinfo{\@mpfootnotetext}%
4473 \global\setbox\LWR@mpfootnotes\vbox{%
4474 \unvbox\LWR@mpfootnotes%
4475 \reset@font\footnotesize%
4476 \hsize\columnwidth%
4477 \@parboxrestore%
4478 \protected@edef\@currentlabel%
4479 {\csname p@mpfootnote\endcsname\@thefnmark}%
4480 \color@begingroup%

```

Use paragraph tags if in a tabular data cell or a `lateximage`:

```
4481 \ifthenelse{%
```

```

4482 \boolean{LWR@doingstartpars} \AND%
4483 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
4484 }%
4485 {%
4486 {\LWR@htmltagc{\LWR@tagregularparagraph}}}%

4487 \@makefnctext{%
4488 \ignorespaces#1%
4489 }%

```

Don't add the closing paragraph tag if are inside a lateximage:

```

4490 \ifthenelse{\cnttest{\value{LWR@lateximagedepth}}{>}{0}}%
4491 {%
4492 {%
4493 \LWR@htmltagc{/\LWR@tagregularparagraph}%
4494 \LWR@orignewline%
4495 }%
4496 \color@endgroup%
4497 }% vbox

```

Paragraph handling:

```

4498 \LWR@ensuredoingapar%
4499 \LWR@traceinfo{@mpfootnotetext: done}%
4500 }

```

`\thempfootnote` Redefined to remove the `\itshape`, which caused an obscure compiling error in some situations.

```

4501 \AtBeginDocument{
4502 \def\thempfootnote{@\alph@c@mpfootnote}
4503 }

```

## 52.6 Printing pending footnotes

`\LWR@printpendingfootnotes` Enclose the footnotes in a class, print, then clear.

```

4504 \newcommand*{\LWR@printpendingfootnotes}{%
4505 \ifvoid\LWR@footnotes\else
4506 \LWR@forcenewpage
4507 \begin{BlockClass}{footnotes}
4508 \LWR@origmedskip
4509 \unvbox\LWR@footnotes
4510 \setbox\LWR@footnotes=\vbox{}

```

```

4511 \end{BlockClass}
4512 \fi
4513 }

```

`\LWR@maybeprintpendingfootnotes` `{<depth>}` Used to print footnotes before sections only if formatting for an EPUB or word processor:

```

4514 \newcommand*\LWR@maybeprintpendingfootnotes}[1]{%
4515 \ifboolexpr{
4516 not test{\ifnumcomp{#1}{>}{\value{FootnoteDepth}}} or
4517 bool{FormatEPUB} or
4518 bool{FormatWP}
4519 }%
4520 {\LWR@printpendingfootnotes}%
4521 {}%
4522 }

```

`\LWR@printpendingmpfootnotes` Enclose the minipage footnotes in a class, print, then clear.

```

4523 \newcommand*\LWR@printpendingmpfootnotes{%
4524 \ifvoid\LWR@mpfootnotes\else
4525 \LWR@forcenewpage
4526 \begin{BlockClass}{footnotes}
4527 \LWR@origvspace*\baselineskip}
4528 \unvbox\LWR@mpfootnotes
4529 \setbox\LWR@mpfootnotes=\vbox{}
4530 \end{BlockClass}
4531 \fi
4532 }

4533 \end{warpHTML}

```

## 53 Marginpars

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

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

**for HTML output:** 4534 `\begin{warpHTML}`

`\marginpar` [*left*] {*right*}

```

4535 \renewcommand{\marginpar}[2] [] {%
4536 \ifbool{FormatWP}%
4537 {%
4538 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
4539 #2
4540 \end{LWR@BlockClassWP}
4541 }%
4542 {%
4543 \LWR@htmlspanclass{\marginpar}{#2}%
4544 }%
4545 }

```

`\marginparBlock` [*left*] {*right*}

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

HTML version.

```

4546 \newcommand{\marginparBlock}[2] [] {%
4547 \ifbool{FormatWP}%
4548 {%
4549 \begin{LWR@BlockClassWP}{width:2in; float:right; margin:10pt}{\marginblock}
4550 #2
4551 \end{LWR@BlockClassWP}
4552 }%
4553 {%
4554 \begin{BlockClass}[width:2in; float:right; margin:10pt]{\marginparblock}
4555 #2
4556 \end{BlockClass}
4557 }%
4558 }

```

`\reversemarginpar`

```

4559 \renewcommand*\reversemarginpar{}

```

`\normalmarginpar`

```

4560 \renewcommand*\normalmarginpar{}

```

```

4561 \end{warpHTML}

```

**for PRINT output:** 4562 `\begin{warpprint}`

`\marginparBlock` [ $\langle left \rangle$ ]  $\{\langle right \rangle\}$

For use when the marginpar will be more than one paragraph, and/or contains more than simple text.

Print version.

```
4563 \LetLtxMacro\marginparBlock\marginpar
```

```
4564 \end{warpprint}
```

## 54 Splitting HTML files

- Files are split according to `FileDepth` and `CombineHigherDepths`.
- Filenames are sanitized by `\LWR@filenameno blanks`.
- `\LWR@newhtmlfile` finishes an HTML page, adds a comment to tell where and how to split the file, then starts a new HTML page.

**for HTML & PRINT:** 4565 `\begin{warppall}`

`\Ctr FileDepth`  $\{\langle section depth \rangle\}$  determines how deeply to break into new HTML files, similar to `tocdepth`. The default of `-5` produces one large HTML file.

```
4566 \newcounter{FileDepth}
```

```
4567 \setcounter{FileDepth}{-5}
```

`\Bool CombineHigherDepths` Combile higher-level sections together into one file?

```
4568 \newbool{CombineHigherDepths}
```

```
4569 \booltrue{CombineHigherDepths}
```

```
4570 \end{warppall}
```

**for HTML output:** 4571 `\begin{warppHTML}`

`\LWR@thisfilename` The currently-active filename or number.

```
4572 \newcommand*\LWR@thisfilename{}
```

`\LWR@thisnewfilename` The filename being sanitized.

```
4573 \newcommand*\LWR@thisnewfilename{}
```

`\LWR@filenamoblanks`  $\langle filename \rangle$

Convert blanks into dashes, removes short words, store result in `\LWR@thisfilename`.



Be sure that this does not result in filename collisions! Use the optional TOC caption entry parameter for formatting. Remember to `\protect`  $\LaTeX$  commands which appear in section names and TOC captions.

```
4574 \newcommand*\LWR@filenamoblanks}[1]{%
4575 \begingroup
```

Locally temporarily disable direct-formatting commands, not used in filenames:

```
4576 \LWR@nullfonts%
4577 \renewcommand*\LWR@htmltagc}[1]{%
```

Replaces common symbols and short words with hyphens:

```
4578 \edef\LWR@thisnewfilename{#1}%
4579 \LWR@traceinfo{\LWR@filenamoblanks edef: !\LWR@thisnewfilename!}%
4580 \fullexpandarg%
```

Convert spaces into hyphens:

```
4581 \StrSubstitute{\LWR@thisnewfilename}{ }{-}[\LWR@thisnewfilename]
```

Convert punctutation into hyphens:

```
4582 \StrSubstitute{\LWR@thisnewfilename}{,}{-}[\LWR@thisnewfilename]
4583 \StrSubstitute{\LWR@thisnewfilename}{'}{-}[\LWR@thisnewfilename]
4584 \StrSubstitute{\LWR@thisnewfilename}%
4585 {\LWR@origampersand}{-}[\LWR@thisnewfilename]
4586 \StrSubstitute{\LWR@thisnewfilename}{+}{-}[\LWR@thisnewfilename]
4587 \StrSubstitute{\LWR@thisnewfilename}{,}{-}[\LWR@thisnewfilename]
4588 \StrSubstitute{\LWR@thisnewfilename}{/}{-}[\LWR@thisnewfilename]
4589 \StrSubstitute{\LWR@thisnewfilename}{:}{-}[\LWR@thisnewfilename]
4590 \StrSubstitute{\LWR@thisnewfilename}{;}{-}[\LWR@thisnewfilename]
4591 \StrSubstitute{\LWR@thisnewfilename}{=}{-}[\LWR@thisnewfilename]
4592 \StrSubstitute{\LWR@thisnewfilename}{?}{-}[\LWR@thisnewfilename]
4593 \StrSubstitute{\LWR@thisnewfilename}{@}{-}[\LWR@thisnewfilename]
4594 \StrSubstitute{\LWR@thisnewfilename}{"}{-}[\LWR@thisnewfilename]
4595 \StrSubstitute{\LWR@thisnewfilename}%
4596 {\textless}{-}[\LWR@thisnewfilename]
4597 \StrSubstitute{\LWR@thisnewfilename}%
4598 {\textgreater}{-}[\LWR@thisnewfilename]
4599 \StrSubstitute{\LWR@thisnewfilename}{\LWR@origpound}{-}[\LWR@thisnewfilename]
```

```

4600 \StrSubstitute{\LWR@thisnewfilename}{_}{-}[\LWR@thisnewfilename]

4601 \StrSubstitute{\LWR@thisnewfilename}{\ }{-}[\LWR@thisnewfilename]
4602 \StrSubstitute{\LWR@thisnewfilename}{\%}{-}[\LWR@thisnewfilename]
4603 \StrSubstitute{\LWR@thisnewfilename}{\{}{-}[\LWR@thisnewfilename]
4604 \StrSubstitute{\LWR@thisnewfilename}{\}}{-}[\LWR@thisnewfilename]
4605 \StrSubstitute{\LWR@thisnewfilename}{|}{-}[\LWR@thisnewfilename]
4606 \StrSubstitute{\LWR@thisnewfilename}%
4607 {\textbackslash}{-}[\LWR@thisnewfilename]
4608 \StrSubstitute{\LWR@thisnewfilename}{^}{-}[\LWR@thisnewfilename]
4609 \StrSubstitute{\LWR@thisnewfilename}{~}{-}[\LWR@thisnewfilename]
4610 \StrSubstitute{\LWR@thisnewfilename}{~}{-}[\LWR@thisnewfilename]
4611 % "~{" for babel
4612 \StrSubstitute{\LWR@thisnewfilename}{[]}{-}[\LWR@thisnewfilename]
4613 \StrSubstitute{\LWR@thisnewfilename}{]}{-}[\LWR@thisnewfilename]
4614 \StrSubstitute{\LWR@thisnewfilename}{'}{-}[\LWR@thisnewfilename]

```

Convert short words:

```

4615 \StrSubstitute{\LWR@thisnewfilename}{-s-}{-}[\LWR@thisnewfilename]
4616 \StrSubstitute{\LWR@thisnewfilename}{-S-}{-}[\LWR@thisnewfilename]
4617 \StrSubstitute{\LWR@thisnewfilename}{-a-}{-}[\LWR@thisnewfilename]
4618 \StrSubstitute{\LWR@thisnewfilename}{-A-}{-}[\LWR@thisnewfilename]
4619 \StrSubstitute{\LWR@thisnewfilename}{-an-}{-}[\LWR@thisnewfilename]
4620 \StrSubstitute{\LWR@thisnewfilename}{-AN-}{-}[\LWR@thisnewfilename]
4621 \StrSubstitute{\LWR@thisnewfilename}{-to-}{-}[\LWR@thisnewfilename]
4622 \StrSubstitute{\LWR@thisnewfilename}{-TO-}{-}[\LWR@thisnewfilename]
4623 \StrSubstitute{\LWR@thisnewfilename}{-by-}{-}[\LWR@thisnewfilename]
4624 \StrSubstitute{\LWR@thisnewfilename}{-BY-}{-}[\LWR@thisnewfilename]
4625 \StrSubstitute{\LWR@thisnewfilename}{-of-}{-}[\LWR@thisnewfilename]
4626 \StrSubstitute{\LWR@thisnewfilename}{-OF-}{-}[\LWR@thisnewfilename]
4627 \StrSubstitute{\LWR@thisnewfilename}{-and-}{-}[\LWR@thisnewfilename]
4628 \StrSubstitute{\LWR@thisnewfilename}{-AND-}{-}[\LWR@thisnewfilename]
4629 \StrSubstitute{\LWR@thisnewfilename}{-for-}{-}[\LWR@thisnewfilename]
4630 \StrSubstitute{\LWR@thisnewfilename}{-FOR-}{-}[\LWR@thisnewfilename]
4631 \StrSubstitute{\LWR@thisnewfilename}{-the-}{-}[\LWR@thisnewfilename]
4632 \StrSubstitute{\LWR@thisnewfilename}{-THE-}{-}[\LWR@thisnewfilename]

```

Convert multiple hyphens:

```

4633 \StrSubstitute{\LWR@thisnewfilename}{-----}{-}[\LWR@thisnewfilename]
4634 \StrSubstitute{\LWR@thisnewfilename}{----}{-}[\LWR@thisnewfilename]
4635 \StrSubstitute{\LWR@thisnewfilename}{---}{-}[\LWR@thisnewfilename]
4636 \StrSubstitute{\LWR@thisnewfilename}{--}{-}[\LWR@thisnewfilename]

```

If pdf<sub>l</sub>TeX and not utf8 encoding, don't try to convert emdash, endash:

```

4637 \ifPDFTeX%

```

```

4638 \ifdefstring{\inputencodingname}{utf8}{%
4639 \StrSubstitute{\LWR@thisnewfilename}{--}{-}[\LWR@thisnewfilename]
4640 % emdash
4641 \StrSubstitute{\LWR@thisnewfilename}{-}{-}[\LWR@thisnewfilename]
4642 % endash
4643 }{}%
4644 \else% not PDFTeX
4645 \StrSubstitute{\LWR@thisnewfilename}{--}{-}[\LWR@thisnewfilename]
4646 \StrSubstitute{\LWR@thisnewfilename}{-}{-}[\LWR@thisnewfilename]
4647 \fi%

```

Return the result:

```

4648 \global\let\LWR@thisfilename\LWR@thisnewfilename% return a global result
4649 \endgroup%
4650 \LWR@traceinfo{LWR@filenamoblanks: result is \LWR@thisfilename}%
4651 }

```

`\LWR@previousautopagelabel` `Ctr` Remembers which autopage label was most recently generated. Used to avoid duplicates.

```

4652 \newcounter{LWR@previousautopagelabel}
4653 \setcounter{LWR@previousautopagelabel}{-1}

```

`\LWR@newautopagelabel` `{\langle pagenumber counter \rangle}`

```

4654 \newcommand*{\LWR@newautopagelabel}[1]{%
4655 \ifnumequal{\value{LWR@previousautopagelabel}}{\value{page}}%
4656 {}% no action if this autopage label has already been defined
4657 {%
4658 \label{autopage-\arabic{#1}}%
4659 \setcounter{LWR@previousautopagelabel}{\value{page}}
4660 }%
4661 }

```

`\LWR@customizedMathJax` Additional MATHJAX definitions to be added to the start of each HTML page.

```

4662 \newcommand*{\LWR@customizedMathJax}{}

```

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

Examples:

```

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

4663 \newcommand*{\CustomizeMathJax}[1]{%
4664 \appto{\LWR@customizedMathJax}{%
4665 \(#1)\par
4666 }%
4667 }

```

`\LWR@customizeMathJax`

```

4668 \newcommand{\LWR@customizeMathJax}{%
4669 \ifbool{mathjax}{
4670 \LWR@stoppars
4671 \LWR@htmlcomment{Nullify \textbackslash{}ensuremath for MathJax:}
4672
4673 \(\newcommand\ensuremath[1]{##1}\)
4674
4675 \LWR@htmlcomment{Additional customizations for MathJax:}
4676
4677 \LWR@customizedMathJax
4678
4679 \LWR@startpars
4680 }{}
4681 }

4682 \end{warpHTML}

```

**for PRINT output:** 4683 `\begin{warpprint}`

`\CustomizeMathJax` The print-mode version:

```

4684 \newcommand*{\CustomizeMathJax}[1]{}
4685 \end{warpprint}

```

**for HTML output:** 4686 `\begin{warpHTML}`

`\LWR@newhtmlfile` `{\section name}`

Finishes the current HTML page with footnotes, footer, navigation, then starts a new HTML page with an HTML comment telling where to split the page and what the new

filename and CSS are, then adds navigation, side TOC, header, and starts the text body.

```
4687 \newcommand*{\LWR@newhtmlfile}[1]{
4688 \LWR@traceinfo{\LWR@newhtmlfile}
```

At the bottom of the ending file:

```
4689 \LWR@htmlendclassend{section}{tbody}
4690
4691 \LWR@printpendingfootnotes
4692
```

No footer between files if EPUB:

```
4693 \ifbool{FormatEPUB}
4694 {}
4695 {
4696 \LWR@htmlend{footer}
4697
4698 \LWR@pagebottom
4699
4700 \LWR@htmlend{footer}
4701 }
```

No bottom navigation if are finishing the home page or formatting for EPUB or a word-processor.

```
4702 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
4703 {}
4704 {\ifnumcomp{\value{\LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{}}
```

End of this HTML file:

```
4705 \LWR@stoppars
4706 \LWR@htmltag{/body}\LWR@orignewline
4707 \LWR@htmltag{/html}\LWR@orignewline
4708 \LWR@orignewpage
4709
4710 \addtocounter{\LWR@htmlfilenumber}{1}%
```

If using a filename, create a version without blanks. The filename without blanks will be placed into `\LWR@thisfilename`. If not using a filename, the file number will be used instead.

```
4711 \ifbool{FileSectionNames}%
4712 {\LWR@filenamenooblanks{#1}}
4713 {\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.

```
4714 \LWR@traceinfo{\LWR@newhtmlfile: about to print start file}%
```

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

```
4715 \begingroup%
4716 \LWR@nullfonts%
4717 \LWR@htmlblockcomment{%
4718 |Start file|}%
4719 \LWR@htmlsectionfilename{\LWR@thisfilename}|}%
4720 }
4721 \endgroup%
```

At the top of the starting file:

```
4722 \LWR@stoppars
4723
```

If pdf<sub>l</sub>TeX and not utf8 encoding, use a hyphen instead of an emdash:

```
4724 \ifPDFTeX%
4725 \ifdefstring{\inputencodingname}{utf8}{%
4726 \LWR@filestart{ -- #1}% there is an EMDash in front of the #1
4727 }{
4728 \LWR@filestart{ - #1}% hyphen
4729 }
4730 \else%
4731 \LWR@filestart{ -- #1}% there is an EMDash in front of the #1
4732 \fi%
4733
```

Track the page numbers:

```
4734 \setcounter{\LWR@latestautopage}{\value{page}}%
4735 \LWR@newautopagelabel{\LWR@latestautopage}%
```

No navigation between files if formatting for an EPUB or word processor:

```
4736 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
4737 {}
4738 {\LWR@topnavigation}
4739
```

No header if between files if formatting for an EPUB or word processor:

```
4740 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
4741 {}
4742 {
4743 \LWR@html element{header}
4744
4745 \LWR@pagetop
4746
4747 \LWR@html elementend{header}
4748 }
4749
```

Print title only if there is one. Skip if formatting for an EPUB or word processor:

```
4750 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
4751 {}
4752 {\ifcvoid{thetitle}{}\LWR@printthetitle}
4753
```

No sidetoc if formatting for an EPUB or word processor:

```
4754 \ifthenelse{\boolean{FormatEPUB}\OR\boolean{FormatWP}}
4755 {}
4756 {\LWR@sidetoc}
4757
```

Start of the <textbody>:

```
4758 \LWR@html elementclass{section}{textbody}
4759
```

Keep paragraph tags disabled for now:

```
4760 \LWR@stoppars
4761
```

If using MathJax, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
4762 \LWR@customizeMathJax

4763 \LWR@traceinfo{LWR@newhtmlfile: done}
4764 }

4765 \end{warpHTML}
```

## 55 Sectioning

Sectioning and cross-references have been emulated from scratch, rather than try to patch several layers of existing  $\TeX$  code and packages. Formatting is handled by CSS, so the emulated code has much less work to do than the print versions.

**Unicode** Section names and the resulting filenames with accented characters are partially supported, depending on the ability of **pdf $\LaTeX$**  to generate characters and **pdf $\text{t}\text{e}\text{x}$**  to read them. If extra symbols appear in the text, it may be that **pdf $\LaTeX$**  is actually producing a symbol over or under a character, resulting in **pdf $\text{t}\text{e}\text{x}$**  picking up the accent symbol separately.



$\LaTeX$  and Lua $\TeX$  directly support accented section and file names.

**for HTML output:** 4766 `\begin{warpHTML}`

### 55.1 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.

```
4767 \newbool{LWR@forcinghtmlpage}
4768 \boolfalse{LWR@forcinghtmlpage}
4769
4770 \newcommand*{\ForceHTMLPage}{%
4771 \global\booltrue{LWR@forcinghtmlpage}%
4772 }
```

`\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.

```
4773 \newbool{LWR@forcinghtmltoc}
4774 \boolfalse{LWR@forcinghtmltoc}
4775
4776 \newcommand*{\ForceHTMLTOC}{%
4777 \global\booltrue{LWR@forcinghtmltoc}%
4778 }
```

```
4779 \end{warpHTML}
```

**for PRINT output:** 4780 \begin{warpprint}  
 4781 \newcommand\*{\ForceHTMLPage}{}  
 4782 \newcommand\*{\ForceHTMLTOC}{}  
 4783 \end{warpprint}

**for HTML output:** 4784 \begin{warpHTML}

## 55.2 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.

```
4785 \newbool{LWR@mainmatter}
4786 \DeclareDocumentCommand{\mainmatter}{}-{}-%
4787 \booltrue{LWR@mainmatter}%
4788 }
```

`\frontmatter` Declare the front matter section of the document, using arabic numbering for the internal numbering. Does not reset the page number.

```
4789 \DeclareDocumentCommand{\frontmatter}{}-{}-%
4790 \boolfalse{LWR@mainmatter}%
4791 }
```

`\backmatter` Declare the back matter section of the document. Does not reset the page number.

```
4792 \DeclareDocumentCommand{\backmatter}{}-{}-%
4793 \boolfalse{LWR@mainmatter}
4794 }
```

## 55.3 Sectioning support macros

`\LWR@sectionnumber`  $\{ \langle section\ type \rangle \}$

Typeset a section number and its trailing space with CSS formatting:

```
4795 \newcommand*{\LWR@sectionnumber}[1]-{}-%
4796 \InlineClass{sectionnumber}{#1}%
4797 }
```

autosec A tag used by the TOC and index.

`\LWR@createautosec`  $\{\langle section type \rangle\}$

Create an autosection tag.

```
4798 \newcommand*\LWR@createautosec[1]{%
4799 \LWR@htmltag{#1 id="\LWR@origmbox{autosec-\arabic{page}}"}%
4800 }
```

`\LWR@pushoneclose`  $\{\langle depth \rangle\}$   $\{\langle printclose \rangle\}$  Stacks the new sectioning level's closing tag, to be used when this section is closed some time later.

 `\LWR@stoppars` must be executed first.

```
4801 \NewDocumentCommand{\LWR@pushoneclose}{m m}{%
4802 \LWR@traceinfo{\LWR@pushoneclose #1}%
4803 \pushclose{#2}{#1}%
4804 }
```

`\LWR@startnewdepth`  $\{\langle depth \rangle\}$   $\{\langle printclose \rangle\}$

Closes currently stacked tags of a lesser level, then opens the new nesting level by saving this new sectioning level's closing tag for later use.

 `\LWR@stoppars` must be executed first.

```
4805 \NewDocumentCommand{\LWR@startnewdepth}{m m}{%
```

Close any stacked sections up to this new one.

```
4806 \LWR@closeprevious{#1}%
```

Push a new section depth:

```
4807 \LWR@pushoneclose{#1}{#2}%
4808 }
```

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.

```
4809 \newcounter{LWR@prevFileDepth}
4810 \setcounter{LWR@prevFileDepth}{\LWR@depthsubparagraph}
```

`\@secCNTformat`  $\langle sectiontype \rangle$

```
4811 \def\@secCNTformat#1{\csname the#1\endcsname\protect\quad}
```

`\simplechapterdelim` Used by **tocbibind** and **anonchp**.

```
4812 \newcommand*\simplechapterdelim{}
```

`\@chapCNTformat`  $\langle sectiontype \rangle$

`\let` to `\@secCNTformat` by default, but may be redefined by `\simplechapter` and `\restorechapter` from **tocbibind** or **anonchp**.

```
4813 \let\@chapCNTformat\@secCNTformat
```

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.

```
4814 \newcounter{LWR@currentautosec}
```

`\LWR@section` \* [*TOC name*]  $\langle name \rangle$   $\langle sectiontype \rangle$

The common actions for the high-level sectioning commands.

```
4815 \DeclareDocumentCommand{\LWR@section}{m m m m}{%
4816 \LWR@traceinfo{LWR@section|#2|#3|}%
4817 \LWR@traceinfo{LWR@section: not an empty section}%
4818 \LWR@stoppars%
```

Cancel special minipage horizontal space interaction:

```
4819 \global\boolfalse{LWR@minipagethispar}%
```

Start a new HTML file unless starred, and if is a shallow sectioning depth.

Exception: Also start a new HTML file for `\part*`, for **appendix**.

Generate a new  $\LaTeX$  page so that toc and index page number points to the section:

```
4820 \LWR@traceinfo{LWR@section: testing whether to start a new HTML file}%
4821 \IfBooleanT{#1}{\LWR@traceinfo{LWR@section: starred}}%
4822 \ifbool{LWR@forcinghtmlpage}{\LWR@traceinfo{LWR@section: forcinghtmlpage}}{}%
4823 \ifthenelse{%
```

```

4824 \(%
4825 \(\NOT\equal{#1}{\BooleanTrue}\)\OR%
4826 \(\cnttest{\csuse{LWR@depth#4}}{=} {\LWR@depthpart}\)\OR%
4827 \(\boolean{LWR@forcinghtmlpage}\)\%
4828 \)%
4829 \AND%
4830 \cnttest{\csuse{LWR@depth#4}}{<=} {\value{FileDepth}}%
4831 \AND%
4832 \(%
4833 \NOT\boolean{CombineHigherDepths}\OR%
4834 \cnttest{\csuse{LWR@depth#4}}{<=} {\value{LWR@prevFileDepth}}%
4835 \)%
4836 \AND%

4837 \(% phantomsection
4838 \NOT\isempty{#3}%
4839 \OR%
4840 \(\NOT\equal{#1}{\BooleanTrue}\)\%
4841 \)%
4842 }%

```

If so: start a new HTML file:

```

4843 {% new file
4844 \LWR@traceinfo{LWR@section: new HTML file}%

```

See if there was an optional TOC name entry:

```

4845 \IfNoValueTF{#2}%

```

If no optional entry

```

4846 {\LWR@newhtmlfile{#3}}%

```

If yes an optional entry

```

4847 {\LWR@newhtmlfile{#2}}%
4848 }% new file

```

Else: No new HTML file:

```

4849 {% not new file

```

Generate a new  $\LaTeX$  page so that toc and index page number points to the section:

```

4850 \LWR@traceinfo{LWR@section: not a new HTML file, about to LWR@orignewpage}%
4851 \LWR@orignewpage%

```

```
4852
4853 }% not new file
```

Remember this section's name for \nameref:

```
4854 \IfValueT{#3}{%
4855 \LWR@traceinfo{LWR@section: about to LWR@setlatestname}%
4856 \IfValueTF{#2}{\LWR@setlatestname{#2}}{\LWR@setlatestname{#3}}%
4857 }%
```

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.

```
4858
4859 \ifbool{HTMLDebugComments}{%
4860 \begingroup%
4861 \LWR@nullfonts%
4862 \IfBooleanTF{#1}% starred
4863 {\LWR@htmlcomment{Opening #4*}}%
4864 {%
4865 \IfNoValueTF{#2}% short TOC
4866 {\LWR@htmlcomment{Opening #4 ‘#3’}}%
4867 {\LWR@htmlcomment{Opening #4 ‘#2’}}%
4868 }
4869 \endgroup%
4870 }{}%
4871
```

For inline sections paragraph and subparagraph, start a new paragraph now:

```
4872 \ifthenelse{%
4873 \cnttest{\csuse{LWR@depth#4}}{>=}{\LWR@depthparagraph}%
4874 }%
4875 {\LWR@startpars}%
4876 {}%
```

Create the opening tag with an autosec:

```
4877 \LWR@traceinfo{LWR@section: about to LWR@createautosec}%
4878 \LWR@createautosec{\csuse{LWR@tag#4}}%
```

```
4879 \setcounter{LWR@currentautosec}{\value{page}}
```

Check if starred:

```

4880 \IfBooleanTF{#1}%
4881 {%
4882 \LWR@traceinfo{LWR@section: starred}%

```

Starred, but also forcing a TOC entry, so add unnumbered TOC name or regular name:

```

4883 \ifbool{LWR@forcinghtmltoc}%
4884 {\addcontentsline{toc}{#4}{\IfValueTF{#2}{#2}{#3}}}%
4885 {%
4886 }% starred

```

Not starred, so step counter and add to TOC:

```

4887 {% not starred

```

Only add a numbered TOC entry if section number is not too deep:

```

4888 \ifthenelse{%
4889 \cnttest{\csuse{LWR@depth#4}}{<=} {\value{secnumdepth}}%
4890 }%
4891 {% if secnumdepth

```

If in the main matter, step the counter and add the TOC entry. For article class, **lwarp** assumes that all is mainmatter.

```

4892 \LWR@traceinfo{LWR@section: about to test main matter}%
4893 \ifbool{LWR@mainmatter}%
4894 {%
4895 \LWR@traceinfo{LWR@section: yes mainmatter}%
4896 \refstepcounter{#4}%

```

Add main matter numbered TOC entry with the TOC name or the regular name:

```

4897 \LWR@traceinfo{LWR@section: about to addcontentsline}%
4898 \addcontentsline{toc}{#4}%
4899 {%
4900 \protect\numberline{\csuse{the#4}}%
4901 {\ignorespaces\IfValueTF{#2}{#2}{#3}\protect\relax}%
4902 }%
4903 \LWR@traceinfo{LWR@section: finished addcontentsline}%
4904 }% end of if main matter

```

If not main matter, add unnumbered TOC name or regular name:

```

4905 {% not main matter
4906 \LWR@traceinfo{LWR@section: no main matter}%
4907 \addcontentsline{toc}{#4}{\IfValueTF{#2}{#2}{#3}}%

```

```
4908 }% end of not main matter
4909 }% end of secnumdepth
```

Deeper than secnumdepth, so add an unnumbered TOC entry:

```
4910 {%
4911 \addcontentsline{toc}{#4}{\IfValueTF{#2}{#2}{#3}}%
4912 }%
```

For part, print the section type:

```
4913 \ifbool{LWR@mainmatter}%
4914 {%
4915 \ifthenelse{%
4916 \(<\cnttest{\csuse{LWR@depth#4}}{<=} %
4917 {\value{secnumdepth}}\) \AND %
4918 \(<\cnttest{\csuse{LWR@depth#4}}{<=} {\LWR@depthpart}\) %
4919 }%
4920 {\csuse{#4name}~{}}%
4921 {}%
```

Print the section number:

```
4922 \LWR@traceinfo{LWR@section: about to print section number}%
4923 \ifthenelse{%
4924 \cnttest{\csuse{LWR@depth#4}}{<=} {\value{secnumdepth}}%
4925 }%
4926 {%
4927 \ifstrequal{#4}{chapter}%
4928 {\protect\LWR@sectionnumber{\@chapcntformat{#4}}}%
4929 {\protect\LWR@sectionnumber{\@seccntformat{#4}}}%
4930 }%
4931 {}%
4932 \LWR@traceinfo{LWR@section: finished print section number}%
4933 }{}%
4934 }% end of not starred
```

Print the section name:

```
4935 \LWR@traceinfo{LWR@section: about to print the section name}%
4936 #3%
```

Close the heading tag, such as /H2:

```
4937 \LWR@traceinfo{LWR@section: about to close the heading tag}%
4938 \LWR@htmltag{\csuse{LWR@tag#4end}}%
```

Generate a  $\text{\H}^{\text{E}}\text{\T}^{\text{X}}$  label:

```
4939 \LWR@traceinfo{LWR@section: about to create the LaTeX label}%
4940 \LWR@newautopagelabel{LWR@currentautosec}%
```

Start paragraph handling unless is an inline paragraph or subparagraph:

```
4941 \ifthenelse{%
4942 \cnttest{\csuse{LWR@depth#4}}{<}{\LWR@depthparagraph}%
4943 }%
4944 {\LWR@startpars}%
4945 {}%
```

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.

```
4946 \ifthenelse{%
4947 \NOT\equal{#1}{\BooleanTrue}\OR%
4948 \cnttest{\csuse{LWR@depth#4}}{=} {\LWR@depthpart}%
4949 }%
4950 {% not starred
4951 \setcounter{LWR@prevFileDepth}{\csuse{LWR@depth#4}}%
4952 }% not starred
4953 {}%
```

Reset to defaults if not a phantomsection:

```
4954 \ifstrempy{#3}%
4955 }%
4956 {%
4957 \global\boolfalse{LWR@forcinghtmlpage}%
4958 \global\boolfalse{LWR@forcinghtmltoc}%
4959 }%
4960 %
4961 \LWR@traceinfo{LWR@section: done}%
4962 }
```

## 55.4 `\section` and friends

```
\part * [TOC name] {name}
```

```

4963 \newcommand{\part@preamble}{}% for koma-script
4964
4965 \DeclareDocumentCommand{\part}{s o m}{%
4966 \LWR@maybeprintpendingfootnotes{\LWR@depthpart}%
4967 \LWR@stoppars%
4968
4969 \LWR@startnewdepth{\LWR@depthpart}{\LWR@printclosepart}%
4970
4971 \LWR@section{#1}{#2}{#3}{part}%
4972
4973 \part@preamble% for koma-script
4974 \renewcommand{\part@preamble}{}%
4975 }

```

`\chapter` \* [*TOC name*] [*heading name*] {*name*}

```

4976 \let\@printcites\relax% for quotchap package
4977
4978 \newcommand{\chapter@preamble}{}% for koma-script
4979
4980 \ifundefined{chapter}
4981 {}
4982 {%
4983 \DeclareDocumentCommand{\chapter}{s o o m}{%
4984 \IfValueTF{#2}{
4985 \LWR@traceinfo{chapter #2}%
4986 }{
4987 \LWR@traceinfo{chapter #4}%
4988 }
4989 \LWR@maybeprintpendingfootnotes{\LWR@depthchapter}%
4990 \LWR@stoppars%
4991
4992 \LWR@startnewdepth{\LWR@depthchapter}{\LWR@printclosechapter}%
4993
4994 \LWR@section{#1}{#2}{#4}{chapter}%
4995
4996 \@printcites% for quotchap package
4997
4998 \chapter@preamble% for koma-script
4999 \renewcommand{\chapter@preamble}{}%
5000 }
5001 }

```

`\section` \* [*TOC name*] [*heading name*] {*name*}

```

5002 \DeclareDocumentCommand{\section}{s o o m}{%
5003 \IfValueTF{#2}{
5004 \LWR@traceinfo{section #2}%

```

```

5005 }{
5006 \LWR@traceinfo{section #4}%
5007 }
5008 \LWR@maybeprintpendingfootnotes{\LWR@depthsection}%
5009 \LWR@stoppars%
5010
5011 \LWR@startnewdepth{\LWR@depthsection}{\LWR@printclosesection}%
5012
5013 \LWR@section{#1}{#2}{#4}{section}%
5014 }

```

`\subsection` \* [*(TOC name)*] {*(name)*}

```

5015 \DeclareDocumentCommand{\subsection}{s o m}{%
5016 \LWR@maybeprintpendingfootnotes{\LWR@depthsubsection}%
5017 \LWR@stoppars%
5018
5019 \LWR@startnewdepth{\LWR@depthsubsection}{\LWR@printclosesubsection}%
5020
5021 \LWR@section{#1}{#2}{#3}{subsection}%
5022 }

```

`\subsubsection` \* [*(TOC name)*] {*(name)*}

```

5023 \DeclareDocumentCommand{\subsubsection}{s o m}{%
5024 \LWR@maybeprintpendingfootnotes{\LWR@depthsubsubsection}%
5025 \LWR@stoppars%
5026
5027 \LWR@startnewdepth{\LWR@depthsubsubsection}%
5028 {\LWR@printclosesubsubsection}%
5029
5030 \LWR@section{#1}{#2}{#3}{subsubsection}%
5031 }

```

`\paragraph` \* [*(TOC name)*] {*(name)*}

```

5032 \DeclareDocumentCommand{\paragraph}{s o m}{%
5033 \LWR@maybeprintpendingfootnotes{\LWR@depthparagraph}%
5034 \LWR@stoppars%
5035
5036 \LWR@startnewdepth{\LWR@depthparagraph}{\LWR@printcloseparagraph}%
5037
5038 \LWR@section{#1}{#2}{#3}{paragraph}%
5039 }

```

`\subparagraph` \* [*(TOC name)*] {*(name)*}

```

5040 \DeclareDocumentCommand{\subparagraph}{s o m}{%
5041 \LWR@maybeprintpendingfootnotes{\LWR@depthsubparagraph}%
5042 \LWR@stoppars%
5043
5044 \LWR@startnewdepth{\LWR@depthsubparagraph}{\LWR@printclosesubparagraph}%
5045
5046 \LWR@section{#1}{#2}{#3}{subparagraph}%
5047 }

5048 \end{warpHTML}

```

## 56 Starting a new file

**for HTML & PRINT:** 5049 \begin{warpall}

`\HTMLLanguage` Default language for the HTML lang tag.

```

5050 \newcommand*{\LWR@currentHTMLLanguage}{en-US}
5051
5052 \newcommand*{\HTMLLanguage}[1]{%
5053 \renewcommand*{\LWR@currentHTMLLanguage}{#1}%
5054 }

5055 \end{warpall}

```

**for HTML output:** 5056 \begin{warpHTML}

`\LWR@filestart`  $\{\langle title\_suffix \rangle\}$

Creates the opening HTML tags.

```

5057 \newcommand*{\LWR@filestart}[1]{
5058 \LWR@traceinfo{\LWR@filestart !#1!}

```

Locally temporarily disable direct-formatting commands:

```

5059 \begingroup
5060 \LWR@nullfonts

```

Create the page's HTML header:

```

5061 \LWR@htmltag{!DOCTYPE html}\LWR@orignewline

```

The language is user-adjustable:

```
5062 \LWR@htmltag{html lang="\LWR@currentHTMLLanguage"}\LWR@orignewline
```

Start of the meta data:

```
5063 \LWR@htmltag{head}\LWR@orignewline
```

Charset is fixed at UTF-8:

```
5064 \LWR@htmltag{meta charset="UTF-8" /}\LWR@orignewline
```

Author:

```
5065 \ifthenelse{\equal{\theHTMLAuthor}{}}{%
5066 {}}%
5067 {\LWR@htmltag{meta name="author" content="\theHTMLAuthor" /}\LWR@orignewline}%
```

lwarp is the generator:

```
5068 \LWR@htmltag{meta name="generator" content="LaTeX lwarp package" /}%
5069 \LWR@orignewline
```

If there is a description, add it now:

```
5070 \ifdefempty{\LWR@currentHTMLDescription}{-}{-%
5071 \LWR@htmltag{%
5072 meta name="description" content="\LWR@currentHTMLDescription" /}%
5073 \LWR@orignewline
5074 }%}
```

Mobile-friendly viewport:

```
5075 \LWR@htmltag{meta name="viewport" %
5076 content="width=device-width, initial-scale=1.0" /}%
5077 \LWR@orignewline
```

IE patch:

```
5078 \LWR@htmltag{!{-}{-}[if lt IE 9]}\LWR@orignewline
5079 \LWR@htmltag{%
5080 script src="http://html5shiv.googlecode.com/svn/trunk/html5.js"}%
5081 \LWR@htmltag{/script}\LWR@orignewline
5082 \LWR@htmltag{![endif]{-}{-}}\LWR@orignewline
```

The page's title:

```
5083 \ifthenelse{\equal{\theHTMLTitle}{}}%
5084 {}%
5085 {\LWR@htmltag{title}\theHTMLTitle#1\LWR@htmltag{/title}\LWR@orignewline}%
```

The page's stylesheet:

```
5086 \LWR@htmltag{%
5087 link rel="stylesheet" type="text/css" href="\LWR@currentcss" /}%
5088 \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.

```
5089 \ifbool{mathjax}%
5090 {%
5091 \begingroup%
5092 \LWR@restoreoriglists%
5093 \boolfalse{LWR@verbtags}
5094 \verbatiminput{lwarp_mathjax.txt}%
5095 \booltrue{LWR@verbtags}
5096 \endgroup%
5097 \LWR@stoppars
5098 }% end of mathjax
5099 {}%
```

End of the header:

```
5100 \LWR@htmltag{/head}\LWR@orignewline
```

Start of the body:

```
5101 \LWR@htmltag{body}\LWR@orignewline
5102 \endgroup
5103 \LWR@traceinfo{LWR@filestart: done}
5104 }
```

```
5105 \end{warpHTML}
```

## 57 Starting HTML output

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

\LWR@LwarpStart Executed at the beginning of the entire document.

```

5107 \catcode'\$=\active
5108 \newcommand*{\LWR@LwarpStart}
5109 {%
5110 \LWR@traceinfo{\LWR@lwarpStart}

```

If formatting for a word processor, force filedepth to single-file only, force HTML debug comments off.

```

5111 \ifbool{FormatWP}{%
5112 \setcounter{FileDepth}{-5}%
5113 \boolfalse{HTMLDebugComments}%
5114 }{}

```

Expand and detokenize \HomeHTMLFilename and \HTMLFilename:

```

5115 \edef\LWR@strresult{\HomeHTMLFilename}
5116 \edef\HomeHTMLFilename{\detokenize\expandafter{\LWR@strresult}}
5117 \edef\LWR@strresult{\HTMLFilename}
5118 \edef\HTMLFilename{\detokenize\expandafter{\LWR@strresult}}

```

Force onecolumn and empty page style:

```

5119 \LWR@origonecolumn%
5120 \LWR@origpagestyle{empty}%

```

Reduce chance of line overflow in verbatim environments:

```

5121 \LWR@origscriptsize%

```

In PDF output, don't allow line breaks to interfere with HTML tags:

```

5122 \LWR@origraggedright%
5123 \LetLtxMacro{\}\{\LWR@endofline}%

```

Spread the lines for **pdftotext** to read them well:

```

5124 \linespread{1.3}%

```

For **pdftotext** to reliably identify paragraph splits:

```

5125 \setlength{\parindent}{0pt}
5126 \setlength{\parskip}{2ex}

```

For the lateximages record file:

```

5127 \immediate\openout\LWR@lateximagesfile=lateximages.txt

```

Removes space around the caption in the HTML:

```
5128 \setlength{\belowcaptionskip}{0ex}
5129 \setlength{\abovecaptionskip}{0ex}
```

Redefine the plain page style to be empty when used by index pages:

```
5130 \renewcommand{\ps@plain}{}
```

```
\centering Not used in the HTML environment:
\raggedleft
\raggedright 5131 \renewcommand*{\centering}{}
5132 \renewcommand*{\raggedleft}{}
5133 \renewcommand*{\raggedright}{}
```

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.

Tabular:

```
5134 \LetLtxMacro{\LWR@origtabular}{\tabular}
5135 \LetLtxMacro{\LWR@origendtabular}{\endtabular}
5136 \LetLtxMacro{\tabular}{\LWR@tabular}
5137 \LetLtxMacro{\endtabular}{\endLWR@tabular}
```

Float captions:

```
5138 \let\LWR@origcaption\caption
```

Labels: `\ltx@label` is used in **amsmath** environments and is also patched by [Label in HTML](#) **cleveref**.

```
5139 \let\LWR@origltx@label\ltx@label
5140 \let\ltx@label\LWR@htmlmathlabel
```

Logos:

```
5141 \let\TeX\LWR@TeX
5142 \let\LaTeX\LWR@LaTeX
5143 \let\LuaTeX\LWR@LuaTeX
5144 \let\LuaLaTeX\LWR@LuaLaTeX
5145 \let\XeTeX\LWR@XeTeX
5146 \let\XeLaTeX\LWR@XeLaTeX
5147 \let\ConTeXt\LWR@ConTeXt
```

Not yet started any paragraph handling:

```
5148 \global\boolfalse{LWR@doingapar}
```

```
5149 \global\boolfalse{LWR@doingstartpars}
```

Document and page settings:

```
5150 \mainmatter
5151 \LWR@origpagenumbering{arabic}
```

Start a new HTML file and a header:

```
5152 \LWR@traceinfo{LWR@lwarpStart: Starting new file.}
5153 \LWR@filestart{}
5154 \LWR@traceinfo{LWR@lwarpStart: Generating first header.}
5155 \LWR@htmltag{header}\LWR@orignewline
5156 \LWR@startpars
5157 \LWR@firstpagetop
5158 \LWR@stoppars
5159 \LWR@htmltag{/header}\LWR@orignewline
5160 \LWR@traceinfo{LWR@lwarpStart: Generating textbody.}
5161 \LWR@htmltag{section class="textbody"}
```

Patch the `itemize`, `enumerate`, and `description` environments and `\item`. This works with the native  $\TeX$  environments, as well as those provided by **enumitem**, **enumerate**, and **paralist**.

```
5162 \LWR@patchlists
```

Ensure that math mode is active to call **lwarp**'s patches:

```
5163 \catcode'\$=\active
```

Required for `\nameref` to work with SVG math:

```
5164 \immediate\write\@mainaux{\catcode'\string$\active}%
5165 \LetLtxMacro\LWR@syntaxhighlightone$% balance for editor syntax highlighting
```

Allow HTML paragraphs to begin:

```
5166 \LWR@startpars
```

If using MathJax, disable `\ensuremath` by printing a nullified definition at the start of each file, and add further customizations:

```
5167 \LWR@customizeMathJax

5168 \LWR@traceinfo{LWR@lwarpStart: done}
5169 }
5170 \catcode'\$=3% math shift until lwarp starts
```

```
5171 \end{warpHTML}
```

## 58 Ending HTML output

**for HTML output:** 5172 \begin{warpHTML}

`\LWR@requesttoc`  $\langle\{boolean}\rangle$   $\langle\{suffix}\rangle$  Requests that a toc, lof, or lot be generated.

```
5173 \newcommand*\LWR@requesttoc}[2]{%
5174 \ifbool{#1}
5175 {
5176 \expandafter\newwrite\csuse{tf@#2}
5177 \immediate\openout \csuse{tf@#2} \jobname.#2\relax
5178 }{}
5179 }
```

`\LWR@LwarpEnd` Final stop of all HTML output:

```
5180 \newcommand*\LWR@LwarpEnd}
5181 {
5182 \LWR@stoppars
5183 \LWR@closeprevious{\LWR@depthfinished}
```

At the bottom of the ending file:

Close the textbody:

```
5184 \LWR@htmlElementclassend{section}{textbody}
```

Print any pending footnotes:

```
5185 \LWR@printpendingfootnotes
```

Create the footer:

```
5186 \LWR@htmlElement{footer}
5187
5188 \LWR@pagebottom
5189
5190 \LWR@htmlElementend{footer}
```

No bottom navigation if are finishing the home page, or if formatting for an EPUB or word processor.

Presumably has a table-of-contents.

```
5191 \ifthenelse{\boolean{FormatEpub}\OR\boolean{FormatWP}}
5192 {}
5193 {
5194 \ifnumcomp{\value{LWR@htmlfilenumber}}{>}{0}{\LWR@botnavigation}{-}
5195 }
```

5196 \LWR@stoppars% final stop of all paragraphs

Finish the HTML file:

```
5197 \LWR@htmltag{/body}\LWR@orignewline
5198 \LWR@htmltag{/html}\LWR@orignewline
```

Seems to be required sometimes:

```
5199 \LWR@orignewpage
```

For lateximage commands:

```
5200 \immediate\closeout\LWR@lateximagesfile
5201 }
```

```
5202 \end{warpHTML}
```

## 59 Title page

**package support** **lwarp** supports the native  $\TeX$  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 59.8.

**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  $\TeX$  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.
- ⚠ Inside a `\titlepage` or `\titlingpage` environment, use `\thanks` instead of `\footnote` for acknowledgements, etc.

## 59.1 Setting the title, etc.

The following provide setting commands for both HTML and print outputs.

`\author` `{\author}` While using `\maketitle` and print mode, the author is treated as a single-column tabular and the `\and` feature finishes the current tabular then starts a new one for the next author. Each author thus is placed into its own tabular, and an affiliation may be placed on its own line such as

```
\author{Name \ Affiliation \and Second Name \ Second Affiliation}
```

For HTML, the entire author block is placed inside a `<div>` of class `author`, and each individual author is inside a `<div>` of class `oneauthor`.

`\@title` `\@title`, `\@author`, etc. store the values as originally assigned, including any `\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` `\printtitle`, etc. are user-level macros intended to be used in custom `titlepage` or `titlingpage` environments in cases where `\maketitle` is not desired. These commands preserve the `\thanks`, etc., and should not be used in the main text.

`\thetitle` `\thetitle`, `\theauthor`, and `\thedata` are available if **titling** has been loaded, and are sanitized user-level versions from which have been removed the `\thanks` and `\affiliation`, and `\and` is changed for inline text usage. The author is printed inline without `\affiliation` or `\thanks`, with `\and` placing commas between multiple authors. Thus, these commands are to be used in the main text whenever the user wishes to refer to the document's title and such. One practical use for this is to place the authors at the bottom of each HTML page, such as:

```
\HTMLPageBottom {\text}
```

---

```
\HTMLPageBottom{
\begin{center}\textcopyright~2016 \theauthor\end{center}
}
```

---

- ⚠ **\theauthor** `\theauthor` does not work well if **authblk** is used. If `\theauthor` is important, it is recommended to use the standard  $\TeX$  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.

## 59.2 \if@titlepage

**for HTML & PRINT:** 5203 `\begin{warpall}`

`\if@titlepage` Some classes do not provide `\if@titlepage`. In this case, provide it and force it false.

```
5204 \ifcsvoid{@titlepagefalse}{
5205 \newif\if@titlepage
5206 \@titlepagefalse
5207 }{}

5208 \end{warpall}
```

## 59.3 Changes for \affiliation

`\affiliation`  $\{<text>\}$

Adds the affiliation to the author for use in `\maketitle`.

Inside `titlepage`, this macro prints its argument. Outside, it is null.

**for HTML & PRINT:** 5209 `\begin{warpall}`  
5210 `\providerobustcmd{\affiliation}[1]{}`  
5211 `\end{warpall}`

**for PRINT output:** 5212 `\begin{warpprint}`

```

5213 \AtBeginEnvironment{titlepage}{
5214 \renewrobustcmd{\affiliation}[1]{\ \ \textsc{small#1}}
5215 }
5216
5217 \AtBeginDocument{
5218 \@ifpackageloaded{titling}{
5219 \AtBeginEnvironment{titlingpage}{
5220 \renewrobustcmd{\affiliation}[1]{\ \ \textsc{small#1}}
5221 }
5222 }{}% titling loaded
5223 }% AtBeginDocument

5224 \end{warpprint}
```

**for HTML output:** 5225 `\begin{warpHTML}`

Env `titlepage` Sets up a `<div>` of class `titlepage`. Provided even for **memoir** class, since it is used by `\maketitle`.

```

5226 \DeclareDocumentEnvironment{titlepage}{}
5227 {
5228 \renewrobustcmd{\affiliation}[1]{\ \ \InlineClass{affiliation}{##1}}
5229 \LWR@printpendingfootnotes
5230 \LWR@forcenewpage
5231 \BlockClass{titlepage}
5232 }
5233 {
5234 \endBlockClass
5235 \LWR@printpendingfootnotes
5236 }

5237 \end{warpHTML}
```

## 59.4 Printing the thanks

**for HTML & PRINT:** 5238 `\begin{warpall}`

`\printthanks` Forces the `\thanks` to be printed.

This is necessary in a `titlingpage` environment when `\maketitle` was not used.

```

5239 \newcommand*{\printthanks}{\@thanks}

5240 \end{warpall}
```

## 59.5 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:** 5241 `\begin{warpHTML}`

`\printtitle`

```
5242 \newcommand*{\printtitle}
5243 {
5244 \LWR@stoppars
5245 \LWR@htmltag{\LWR@tagtitle}%
5246 \@title%
5247 \LWR@htmltag{\LWR@tagtitleend}
5248 \LWR@startpars
5249 }
```

`\LWR@printthetitle` A private version which prints the title without footnotes, used to title each HTML page.

```
5250 \newcommand*{\LWR@printthetitle}
5251 {
5252 \LWR@stoppars
5253 \LWR@htmltag{\LWR@tagtitle}%
5254 \thetitle%
5255 \LWR@htmltag{\LWR@tagtitleend}
5256 \LWR@startpars
5257 }
```

`\printauthor` HTML version.

```
5258 \newcommand*{\printauthor}{
```

The entire author block is contained in a `<div>` named `author`:

```
5259 \begin{BlockClass}{author}
```

`\and` finishes one author and starts the next:

```
5260 \renewcommand{\and}{%
5261 \end{BlockClass}
5262 \begin{BlockClass}{oneauthor}
5263 }
```

Individual authors are contained in a `<div>` named `oneauthor`:

```

5264 \begin{BlockClass}{oneauthor}
5265 \@author
5266 \end{BlockClass}
5267 \end{BlockClass}
5268 }

```

`\printdate`

```

5269 \newcommand*\printdate{%
5270 \begin{BlockClass}{titledate}
5271 \@date
5272 \end{BlockClass}
5273 }

```

```
5274 \end{warpHTML}
```

## 59.6 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:** 5275 `\begin{warpprint}`

`\printtitle`

```
5276 \newcommand*\printtitle{{\Huge\@title}}
```

`\printauthor` Print mode.

```

5277 \newcommand*\printauthor
5278 {{{\large\begin{tabular}[t]{c}\@author\end{tabular}}}}

```

`\printdate`

```
5279 \newcommand*\printdate{{\small\textit{\@date}}}
```

```
5280 \end{warpprint}
```

## 59.7 `\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 52 for other kinds of footnotes.

See `\thanksmarkseries{series}`, below, to set the style of the footnote marks.

**for HTML output:** 5281 `\begin{warpHTML}`

```

5282 \@ifclassloaded{memoir}
5283 {
5284 \newcommand{\LWR@setfootnoteseries}{%
5285 \renewcommand\thefootnote{\@arabic\c@footnote}%
5286 }
5287 }{% not memoir
5288 \if@titlepage
5289 \newcommand{\LWR@setfootnoteseries}{%
5290 \renewcommand\thefootnote{\@arabic\c@footnote}%
5291 }
5292 \else
5293 \newcommand{\LWR@setfootnoteseries}{%
5294 \renewcommand\thefootnote{\@fnsymbol\c@footnote}%
5295 }
5296 \fi
5297 }% not memoir

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```
5298 \newcommand*{\LWR@maketitlesetup}{%
```

Redefine the footnote mark:

```

5299 \LWR@setfootnoteseries%
5300 \def\@makefnmark{\thefootnote}

```

`\thefootnote`  $\Rightarrow$  `\nameuse{arabic}{footnote}`, or  
`\thefootnote`  $\Rightarrow$  `\nameuse{fnsymbol}{footnote}`

Redefine the footnote text:

```
5301 \long\def\@makefntext##1{%
```

Make the footnote mark and some extra horizontal space for the tags:

```
5302 \@thefnmark~%
```

`\makethanksmark`  $\Rightarrow$  `\thanksfootmark`  $\Rightarrow$  `\tamark`  $\Rightarrow$   
`\@thefnmark`  $\Rightarrow$  `\itshape a` (or similar)

Print the text:

```
5303 ##1%
5304 }%
5305 }
```

`\@fnsymbol` `{\langle counter \rangle}`

Re-defined to use an HTML entity for the double vertical bar symbol. The original definition used `\|` which was not being seen by **pdftotext**.

```
5306 \def\@fnsymbol#1{\ifcase#1\or *\or \HTMLentity{dagger}\or \HTMLentity{Dagger}\or
5307 \HTMLentity{sect}\or \HTMLentity{para}\or \text{\HTMLUnicode{2016}}\or
5308 **\or \HTMLentity{dagger}\HTMLentity{dagger} \or
5309 \HTMLentity{Dagger}\HTMLentity{Dagger} \else@ctrerr\fi}
```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the **titling** package is adapted, simplified, and modified for HTML output.

```
5310 \renewcommand*\maketitle}{%
```

An HTML titlepage `<div>` is used for all classes.

```
5311 \begin{titlepage}
```

Set up special patches:

```
5312 \LWR@maketitlesetup
```

Typeset the title, etc:

```
5313 \@maketitle
```

Immediately generate any `\thanks` footnotes:

```
5314 \@thanks
```

Close the HTML titlepage div and cleanup:

```
5315 \end{titlepage}
5316 \setcounter{footnote}{0}%
5317 \global\let\thanks\relax
5318 \global\let\maketitle\relax
5319 \global\let@maketitle\relax
5320 \global\let@thanks\@empty
```

```

5321 \global\let\@author\@empty
5322 \global\let\@date\@empty
5323 \global\let\@title\@empty
5324 \global\let\title\relax
5325 \global\let\author\relax
5326 \global\let\date\relax
5327 \global\let\and\relax
5328 }

```

`\@maketitle` HTML mode. Typesets the title, etc.:

```

5329 \DeclareDocumentCommand{\@maketitle}{-}{%
5330 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}
5331 \@title
5332 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars
5333 \begin{BlockClass}{author}

```

For IEEEtran class:

```

5334 \renewcommand*\cr{}
5335 \renewcommand*\crcr{}
5336 \renewcommand*\noalign{}

5337 \renewcommand{\and}{
5338 \end{BlockClass}
5339 \begin{BlockClass}{oneauthor}
5340 }
5341 \begin{BlockClass}{oneauthor}
5342 \@author
5343 \end{BlockClass}
5344 \end{BlockClass}
5345 \begin{BlockClass}{titledate}
5346 \@date
5347 \end{BlockClass}
5348 }

```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
5349 \newcommand*\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
5350 \@thanks
```

Set up special patches:

```
5351 \LWR@maketitlesetup
```

Typeset the title, etc:

```
5352 \@maketitle
```

Immediately generate any \thanks footnotes:

```
5353 \@thanks
5354 }
```

```
5355 \end{warpHTML}
```

## 59.8 \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:** `5356 \begin{warpall}`

`\AddSubtitlePublished` Adds `\published` and `\subtitle`, and related.

```
5357 \newcommand*\AddSubtitlePublished{%
5358 \@ifpackageloaded{titling}{% yes titling package
5359 \newcommand{\@published}{}%
5360 \newcommand{\published}[1]{\gdef\@published{##1}}%
5361 \renewcommand*\maketitlehooka{\printpublished}%
5362 \newcommand*\printpublished{%
5363 \warpprintonly{\begin{center}\unskip}%
5364 \begin{BlockClass}{published}%
5365 \warpprintonly{\large\itshape}%
5366 \@published%
5367 \end{BlockClass}%
5368 \warpprintonly{\end{center}}}%
5369 }%
5370 \newcommand{\@subtitle}{}%
5371 \newcommand{\subtitle}[1]{\gdef\@subtitle{##1}}%
```

```

5372 \renewcommand*{\maketitlehookb}{\printsubtitle}%
5373 \newcommand*{\printsubtitle}{%
5374 \warpprintonly{\begin{center}\unskip}%
5375 \begin{BlockClass}{subtitle}%
5376 \warpprintonly{\Large\itshape}%
5377 \@subtitle%
5378 \end{BlockClass}%
5379 \warpprintonly{\end{center}}}%
5380 }%
5381 }% yes titling package
5382 {% no titling package
5383 \newcommand{\published}[1]{}%
5384 \newcommand*{\printpublished}{}%
5385 \newcommand{\subtitle}{}%
5386 \newcommand*{\printsubtitle}%
5387 }% no titling package
5388 }% \AddSubtitlePublished

5389 \end{warppall}

```

## 60 Abstract

The following code replaces the  $\LaTeX$  default, and will itself be replaced later if the **abstract** package is loaded.

**for HTML output:** 5390 \begin{warpHTML}

\abstractname User-redefinable title for the abstract.

Also over-written by the **babel** package.

```
5391 \providecommand*{\abstractname}{Abstract}
```

Some classes allow an optional name, so it is allowed here.

Env abstract

```

5392 \DeclareDocumentEnvironment{abstract}{0{\abstractname}}
5393 {
5394 \LWR@forcenewpage
5395 \BlockClass{abstract}
5396 \BlockClassSingle{abstracttitle}{#1}
5397 }
5398 {

```

```
5399 \endBlockClass
5400 }
```

```
5401 \end{warpHTML}
```

## 61 Quote and verse

### 61.1 Citations and attributions

`\attribution` For use inside quote, quotation, verse:

Ex: `\attribution{author name} --- \citetitle{book name}`

**for HTML output:**

```
5402 \begin{warpHTML}
5403 \ifPDFTeX%
5404 \ifdefstring{\inputencodingname}{utf8}{%
5405 \newcommand{\attribution}[1]{%
5406 \InlineClass{attribution}{--\,#1}% emdash
5407 }
5408 }{
5409 \newcommand{\attribution}[1]{%
5410 \InlineClass{attribution}{---\,#1}%
5411 }
5412 }
5413 \else%
5414 \newcommand{\attribution}[1]{%
5415 \InlineClass{attribution}{--\,#1}% emdash
5416 }
5417 \fi%
5418 \end{warpHTML}
```

**for PRINT output:**

```
5419 \begin{warpprint}
5420 \newcommand{\attribution}[1]{\textsc{---\,#1}}
5421 \end{warpprint}
```

`\citetitle` for use inside quote, quotation, verse:

**for HTML output:**

```
5422 \begin{warpHTML}
5423 \ifPDFTeX%
5424 \ifdefstring{\inputencodingname}{utf8}{%
5425 \newcommand{\citetitle}[1]{%
5426 \InlineClass{citetitle}{--\,#1}%
5427 }%
5428 }{
5429 \newcommand{\citetitle}[1]{%
```

```

5430 \InlineClass{citetitle}{---\,#1}%
5431 }%
5432 }
5433 \else%
5434 \newcommand{\citetitle}[1]{%
5435 \InlineClass{citetitle}{--\,#1}%
5436 }%
5437 \fi%
5438 \end{warpHTML}

```

```

for PRINT output: 5439 \begin{warpprint}
5440 \newcommand{\citetitle}[1]{\textsl{---\,#1}}
5441 \end{warpprint}

```

## 61.2 Quotes, quotations

```

for HTML output: 5442 \begin{warpHTML}

```

Env quote

```

5443 \renewenvironment*{quote}
5444 {
5445 \LWR@forcenewpage
5446 \LWR@htmlblocktag{blockquote}
5447 }
5448 {\LWR@htmlblocktag{/blockquote}}
5449
5450 \renewenvironment*{quotation}
5451 {
5452 \LWR@forcenewpage
5453 \LWR@htmlblocktag{blockquotation}
5454 }
5455 {\LWR@htmlblocktag{/blockquotation}}

5456 \end{warpHTML}

```

## 61.3 Verse

`\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 `\HTMLvleftskip` and `\HTMLleftmargini` are provided to control the margins in HTML output. These new lengths may be set by the user before any **verse** environment, and persist until they are manually changed again. One reason to change `\HTMLleftmargini` is if there is a wide `\flagverse` in use, such as the word “Chorus”, in which case the value of `\HTMLleftmargini` should be set to a wide enough length to contain “Chorus”. The default is wide enough for a stanza number.

 **spacing** Horizontal spacing relies on **pdftotext**'s ability to discern the layout (`-layout` option) of the text in the HTML-tagged PDF output. For some settings of `\HTMLleftmargini` or `\HTMLleftskip` the horizontal alignment may not work out exactly, in which case a label may be shifted by one space.

**for HTML & PRINT:** 5457 `\begin{warpall}`

The following lengths 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 `\TMLvleftskip` Sets `\vleftskip` inside a **verse** environment in HTML.

```

5458 \newlength{\HTMLvleftskip}
5459 \setlength{\HTMLvleftskip}{1em}

```

Len `\TMLleftmargini` Sets `\leftmargini` inside a **verse** environment in HTML.

```

5460 \newlength{\HTMLleftmargini}
5461 \setlength{\HTMLleftmargini}{4.5em}

```

```

5462 \end{warpall}

```

## 62 Verbatim and tabbing

**for HTML & PRINT:** 5463 `\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.

```
5464 \newlength{\VerbatimHTMLWidth}
5465 \setlength{\VerbatimHTMLWidth}{4in}
5466 \end{warpall}
```

**for HTML output:** 5467 \begin{warpHTML}

Bool LWR@verbtags Used to temporarily turn off verbatim tags while doing \verbatiminput in the HTML head.

```
5468 \newbool{LWR@verbtags}
5469 \booltrue{LWR@verbtags}
```

\LWR@atbeginverbatim [*1: style*] [*2: negative \baselineskip \vspace*] [*3: class*]

Encloses a verbatim environment with the given css class.

```
5470 \newcommand*{\LWR@atbeginverbatim}[3] []
5471 {%
```

Avoid excessive space between lines:

```
5472 \setlength{\parskip}{0ex}%
```

Stop generating HTML paragraph tags:

```
5473 \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.

```
5474 \ifbool{LWR@verbtags}{%
5475 \LWR@htmltag{pre class="#3"
5476 \ifthenelse{\equal{#1}{}}{}{style="#1"}}%
5477 }%
5478 \unskip\LWR@origvspace*{-#2\baselineskip}%
5479 \LWR@orignewline% pre
5480 }{}
```

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.

```
5481 \begingroup%
```

```
5482 \LWR@orignormalsize%
5483 \LWR@origttfamily%
```

Since inside a <pre>, restore the original list processing:

```
5484 \LWR@restoreoriglists%
```

Turn off **babel-french** extra space before punctuation:

```
5485 \LWR@FBcancel%
```

Do not produce HTML tags for \hspace inside a verse par. Restore plain  $\TeX$  \hspace functionality:

```
5486 \letLtxMacro{\hspace}{\LWR@orighspace}%
5487 }
```

`\LWR@afterendverbatim` Finishes enclosing a verbatim environment.

```
5488 \newcommand*{\LWR@afterendverbatim}{%
5489
5490 \endgroup%
```

At the end of the environment, close the pre:

```
5491 \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/pre}
5492
5493 }{ }%
```

Resume regular paragraph handling:

```
5494 \LWR@startpars%
5495 }
```

`\verbatiminput`  $\{ \langle filename \rangle \}$

Patch `\verbatiminput` to add HTML tags:

```
5496 \let\LWRV@origverbatim@input\verbatim@input
5497
5498 \renewcommand{\verbatim@input}[2]{%
5499 \ifbool{LWR@verbtags}{\LWR@forcenewpage}{ }%
5500 \LWR@atbeginverbatim{3.5}{Verbatim}%
5501 \LWRV@origverbatim@input{#1}{#2}%
5502 \unskip\LWR@origvspace*{-\baselineskip}\LWR@afterendverbatim%
5503 }
```

Env `verbatim`

```

5504 \AfterEndPreamble{
5505 \LWR@traceinfo{Patching verbatim.}
5506 \AtBeginEnvironment{verbatim}{%
5507 \LWR@forcenewpage%
5508 \LWR@atbeginverbatim{.5}{verbatim}%
5509 \unskip\LWR@origvspace*{-1.5\baselineskip}%
5510 }
5511 \AfterEndEnvironment{verbatim}{%
5512 \unskip\LWR@origvspace*{-\baselineskip}\LWR@afterendverbatim%
5513 }
5514 }

```

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.

```

5515 \LetLtxMacro\LWR@origtabbing\tabbing
5516 \LetLtxMacro\LWR@origendtabbing\endtabbing
5517
5518 \renewcommand*{\tabbing}{%
5519 \LWR@forcenewpage%
5520 \LWR@atbeginverbatim{3.5}{tabbing}%
5521 \LWR@origtabbing%
5522 }
5523
5524 \renewcommand*{\endtabbing}{%
5525 \LWR@origendtabbing%
5526 \unskip\LWR@origvspace*{-\baselineskip}\LWR@afterendverbatim%
5527 }

```

`\AtBeginDocument` because `\LWR@restoreorigformatting` has not yet been defined:

```

5528 \AtBeginDocument{
5529 \appto\LWR@restoreorigformatting{%
5530 \LetLtxMacro\tabbing\LWR@origtabbing%
5531 \LetLtxMacro\endtabbing\LWR@origendtabbing%
5532 }
5533 }

5534 \end{warpHTML}

```

## 63 Theorems

```
\newtheorem {<text>} [<counter>] -or- [<oldname>] {<text>}
```

A few minor changes are made to supply HTML tags.

- The entire theorem is placed into a <div> of class theoremcontents.
- The label for each theorem is placed inside a <span> of class theoremlabel.
- The contents are placed inside a <div> of class theoremcontents.

**for HTML output:** 5535 \begin{warpHTML}

```
\@begintheorem {<name>} {<number>}
```

```
5536 \renewcommand{\@begintheorem}[2]{%
5537 \LWR@forcenewpage
5538 \BlockClass{theoremcontents}
5539 \trivlist
5540 \item[\InlineClass{theoremlabel}{#1\ #2\ }]\itshape
5541 }
```

```
\@opargbegintheorem {<name>} {<number>} {<oparg>}
```

```
5542 \renewcommand{\@opargbegintheorem}[3]{%
5543 \LWR@forcenewpage
5544 \BlockClass{theoremcontents}
5545 \trivlist
5546 \item[\InlineClass{theoremlabel}{#1\ #2\ (#3)\ }]\itshape
5547 }
```

```
\@endtheorem
```

```
5548 \renewcommand*\@endtheorem}{%
5549 \endtrivlist
5550 \endBlockClass% theoremcontents
5551 }
```

```
5552 \end{warpHTML}
```

## 64 Lists

The environments `itemize`, `enumerate`, and `description` are patched when **lwarp** is started. These patches support the standard  $\TeX$  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  $\TeX$  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}
\end{itemize}
```

---

`\makeatlabel` While inside a list environment, **lwarp** nullifies a number of  $\TeX$  horizontal skip and fill commands, allowing the user to define `\makeatlabel` for print mode while HTML mode ignores those commands.

 **label font** When defining `\makeatlabel` in a list environment, use `\textbf` etc. instead of `\bfseries`.

### 64.1 List environment

**for HTML output:** 5553 `\begin{warpHTML}`

`\LWR@printcloselist` May be locally redefined by `enumerate` or `description`.

```
5554 \newcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
```

`\LWR@printopenlist` May be locally redefined by `enumerate` or `description`.

```
5555 \newcommand*{\LWR@printopenlist}{ul style="\LWR@origmbox{list-style-type:none}}}
```

`\@mklab` Removes PDF spacing.

```
5556 \AtBeginDocument{
5557 \def\@mklab#1{%
5558 % \hfil %
5559 #1}
5560 \let\makeLabel\@mklab
5561 }
```

`\@donoparitem` Modified for HTML output by replacing  $\TeX$  boxes with plain text. Also removes PDF spacing.

```
5562 \def\@donoparitem{%
5563 \@noparitemfalse
5564 % \global\setbox\@labels\hbox{\hskip -\leftmargin
5565 % \unhbox\@labels
5566 % \hskip \leftmargin}}%
5567 % \if@minipage\else
5568 % \@tempkipa\lastskip
5569 % \vskip -\lastskip
5570 % \advance\@tempkipa\@outerparskip
5571 % \advance\@tempkipa -\parskip
5572 % \vskip\@tempkipa
5573 % \fi
5574 }
```

`\@item` Modified for HTML output by replacing  $\TeX$  boxes with plain text. Also removes PDF spacing.

```
5575 \def\LWR@HTML@item[#1]{%
5576 \LWR@traceinfo{\@item}
5577 \if@noparitem
5578 \@donoparitem
5579 \else
5580 % \if@inlabel
5581 % \indent
5582 % \par
5583 % \fi
5584 % \ifhmode
5585 % \unskip\unskip
5586 % \par
5587 % \fi
5588 % \if@newlist
5589 % \if@nobreak
5590 % \@nbitem
5591 % \else
5592 % \addpenalty\@beginparpenalty
5593 % \addvspace\@topsep
```

```
5594 % \advvspace{-\parskip}%
5595 \fi
5596 \else
5597 \addpenalty\@itempenalty
5598 \advvspace\itemsep
5599 \fi
5600 \global\@inlabeltrue
5601 \fi
5602 % \everypar{%
5603 \@minipagefalse
5604 \global\@newlistfalse

5605 % \if@inlabel
5606 % \global\@inlabelfalse

5607 % {\setbox\z@\lastbox
5608 % \ifvoid\z@
5609 % \kern-\itemindent
5610 % \fi}%

5611 % \box\@labels
5612 % \penalty\z@
5613 % \fi

5614 % \if@nobreak
5615 % \@nobreakfalse
5616 % \clubpenalty \@M
5617 % \else
5618 % \clubpenalty \@clubpenalty
5619 % \everypar{}%
5620 % \fi}%

5621 \if@noitemarg
5622 \@noitemargfalse
5623 \if@nmbrrlist

5624 \refstepcounter\@listctr
5625 \fi
5626 \fi

5627 \makelabel{#1} % extra space
5628 % \sbox\@tempboxa{\makelabel{#1}}%
5629 % \global\setbox\@labels\hbox{%
5630 % \unhbox\@labels
5631 % \hskip \itemindent
5632 % \hskip -\labelwidth
5633 % \hskip -\labelsep
5634 % \ifdim \wd\@tempboxa >\labelwidth
```

```

5635 % \box\@tempboxa

5636 % \else
5637 % \hbox to\labelwidth {\unhbox\@tempboxa}%
5638 % \fi
5639 % \hskip \labelsep}%
5640 \ignorespaces%
5641 }

```

`\@nbitem`

```

5642 \def\@nbitem{%
5643 % \@tempskipa\@outerparskip
5644 % \advance\@tempskipa -\parskip
5645 % \addvspace\@tempskipa
5646 }

```

`\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.

```

5647 \newcommand*\LWR@listitem}{%
5648 \LWR@stoppars%
5649 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printcloselistitem}%
5650 \LWR@htmltag{li}%
5651 \LWR@startpars%
5652 \LWR@origitem%
5653 }

```

`\LWR@nulllistfills` Nullifies various TeX fill commands, in case they are used inside `\makelabel`.

```

5654 \newcommand*\LWR@nulllistfills}{%
5655 \renewcommand*\hss}{}%
5656 \renewcommand*\llap}[1]{##1}%
5657 \renewcommand*\rlap}[1]{##1}%
5658 \renewcommand*\hfil}{}%
5659 \renewcommand*\hfilneg}{}%
5660 \renewcommand*\hfill}{}%
5661 }

```

Env `list` `{(label)}` `{(commands)}`

```

5662 \newcommand*\LWR@liststart}{%

```

```

5663 \LWR@traceinfo{\LWR@liststart}%
5664 \LWR@stoppars%
5665 \LWR@pushoneclose{\LWR@depthlist}{\LWR@printcloselist}%
5666 \LWR@htmltag{\LWR@printopenlist}\LWR@originewline%
5667 \LWR@startpars%
5668 \setlength{\topsep}{Opt}%
5669 \setlength{\partopsep}{Opt}%
5670 \setlength{\itemsep}{Opt}%
5671 \setlength{\parsep}{Opt}%
5672 \setlength{\leftmargin}{Opt}%
5673 \setlength{\rightmargin}{Opt}%
5674 \setlength{\listparindent}{Opt}%
5675 \setlength{\itemindent}{Opt}%
5676 \setlength{\labelsep}{1em}%
5677 \LWR@nulllistfills%
5678 }

5679 \newcommand*{\LWR@listend}{%
5680 \LWR@traceinfo{\LWR@listend}%
5681 \LWR@stoppars%
5682 \LWR@closeprevious{\LWR@depthlist}%
5683 \LWR@startpars%
5684 }

```

## 64.2 Itemize

`\LWR@itemizeitem` [*⟨label⟩*]

Handles `\item` inside an itemize or enumerate.

See `\LWR@openparagraph` where extra `\hspace` is used to leave room for the label while inside a list during paragraph construction.

```

5685 \newcommand*{\LWR@itemizeitem}{%
5686 \LWR@stoppars%
5687 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printcloselistitem}%
5688 \LWR@htmltag{li}%
5689 \LWR@startpars%
5690 \LWR@origitem%
5691 }

```

Env `itemize` [*⟨options⟩*]

```

5692 \newcommand*{\LWR@itemizestart}{%
5693 \renewcommand*{\LWR@printcloselist}{\LWR@printcloseitemize}
5694 \renewcommand*{\LWR@printopenlist}{ul style="\LWR@origibox{list-style-type:none}}

```

```

5695 \let\item\LWR@itemizeitem%
5696 \LWR@nulllistfills%
5697 }

```

### 64.3 Enumerate

An HTML unordered list is used with customized L<sup>A</sup>T<sub>E</sub>X-generated labels.

Env `enumerate` [*options*]

```

5698 \newcommand*\LWR@enumeratestart}{%
5699 \renewcommand*\LWR@printcloselist}{\LWR@printcloseitemize}
5700 \renewcommand*\LWR@printopenlist}{ul style="\LWR@origmbox{list-style-type:none}"}
5701 \let\item\LWR@itemizeitem%
5702 \LWR@nulllistfills%
5703 }

```

### 64.4 Description

`\LWR@descitem` [*label*] Handles an `\item` inside a description.

```

5704 \newcommand*\LWR@descitem}[1] []%
5705 {%
5706 \LWR@stoppars%
5707 \LWR@setlatestname{#1}%
5708 \LWR@startnewdepth{\LWR@depthlistitem}{\LWR@printclosedescitem}%

```

Temporarily disable `\hspace`, which `article.cls`, etc. use per `\item` for descriptions only. This causes **lwarp** to mistakenly place an empty span between HTML list tags.

```

5709 \LetLtxMacro{\hspace}{\LWR@nohspace}%

```

Process the original `\item` code:

```

5710 \LWR@origitem []%

```

Restore `\hspace` for use in the item text:

```

5711 \LetLtxMacro{\hspace}{\LWR@hspace}%
5712 \LWR@htmltag{dt}#1\LWR@htmltag{/dt}%
5713 \LWR@orignewline%
5714 \LWR@htmltag{dd}%

```

```
5715 \LWR@startpars%,
5716 }
```

Env description [*(options)*]

```
5717 \newcommand*\LWR@descriptionstart}{%
5718 \renewcommand*\LWR@printcloselist}{\LWR@printclosedescription}
5719 \renewcommand*\LWR@printopenlist}{dl}
5720 \let\item\LWR@descitem%
5721 \LWR@nulllistfills%
5722 }
```

## 64.5 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  $\TeX$  environments, as well as those provided by `enumitem`, `enumerate`, and `paralist`.

```
5723 \newcommand*\LWR@patchlists}{%
5724 \LetLtxMacro\item\LWR@listitem%
5725 \LetLtxMacro\@item\LWR@HTML@item%
5726 \renewcommand*\@trivlist}{%
5727 \LWR@traceinfo{@trivlist start}%
5728 \LWR@liststart%
5729 \LWR@orig@trivlist%
5730 \LWR@traceinfo{@trivlist done}%
5731 }%
5732 \renewcommand*\trivlist}{%
5733 \LWR@traceinfo{trivlist}%
5734 \LWR@origtrivlist%
5735 }%
5736 \renewcommand*\endtrivlist}{%
5737 \LWR@traceinfo{endtrivlist start}%
5738 \LWR@origendtrivlist\LWR@listend%
5739 \LWR@traceinfo{endtrivlist done}%
5740 }%
5741 \renewcommand*\itemize}{%
5742 \LWR@itemizestart\LWR@origitemize%
5743 }%
5744 \renewcommand*\enumerate}{%
5745 \LWR@enumeratestart\LWR@origenumerate%
5746 }%
5747 \renewcommand*\description}{%
```

```

5748 \LWR@descriptionstart\LWR@origdescription%
5749 }%
5750 }

```

`\LWR@restoreoriglists` Restores the original trivlist environment.

```

5751 \newcommand*{\LWR@restoreoriglists}{%
5752 \LWR@traceinfo{\LWR@restoreoriglists}%
5753 \LetLtxMacro\item\LWR@origitem%
5754 \LetLtxMacro\@item\LWR@orig@item%
5755 \let\@trivlist\LWR@orig@trivlist%
5756 \let\trivlist\LWR@origtrivlist%
5757 \let\endtrivlist\LWR@origendtrivlist%
5758 \LetLtxMacro\itemize\LWR@origitemize%
5759 \LetLtxMacro\enditemize\LWR@endorigitemize%
5760 \LetLtxMacro\enumerate\LWR@origenumerate%
5761 \LetLtxMacro\endenumerate\LWR@endorigenumerate%
5762 \LetLtxMacro\description\LWR@origdescription%
5763 \LetLtxMacro\enddescription\LWR@endorigdescription%
5764 \let\@mklab\LWR@orig@mklab%
5765 \let\makelabel\LWR@origmakelabel%
5766 \let\@donoparitem\LWR@orig@donoparitem%
5767 \let\@nbitem\LWR@orig@nbitem%
5768 }

5769 \end{warpHTML}

```

## 65 Tabular

This is arguably the most complicated part of the entire package. Numerous tricks are employed to handle the syntax which is involved.

### 65.1 Limitations

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

#### Defining environments:

⚠ misplaced alignment  
alignment tab character &

- When defining environments or macros which include tabular and instances of the & character, it may be necessary to make & active before

the environment or macro is defined, then restore & to its default catcode after, using the following commands. These are ignored in print mode.

```
\StartDefiningTabulars
<define macros or environments using tabular and &
here>
\EndDefiningTabulars
```

△ floatrow

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
}
\EndDefiningTabulars
```

△ tabular inside another environment

### Cell contents:

△ paragraphs

- Multiple paragraphs in one cell of a p, b, m column must have `\newline` between paragraphs.

△ \multirow

- For **multirow**, insert `\mrowcell` into any empty multi-row cells. This will be a null function for the print output, and is a placeholder for parsing the table for HTML output.

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

vposn

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

- The **multirow** documentation regarding colored cells recommends using a negative number of rows. This will not work with **lwarp**, so `\warpprintonly` and `\warppHTMLonly` must be used to make versions for print and HTML.
- See section 243.2 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

⚠ empty cells

As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped:

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

vposn

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

⚠ macro in a table  
custom macros

- Using a custom macro inside a tabular data cell may result in an extra HTML data cell tag, corrupting the HTML table. To avoid this, use `\TabularMacro` just before the macro. This is ignored in print mode.

```
\TabularMacro\somemacro & more row contents \\
```

#### Column specifiers:

⚠ \* column specification

@ and !

\multirow

⚠ \newcolumnntype

- \* in a column specification is not used (so far). Repeat the column type the correct number of times.
- Only one each of @ and ! is used at each column, and they are used in that order.
- In `\multirow` cells, the print version may have extra instances of <, >, @, and ! cells on the second and later rows in the `\multirow` which do not appear in the HTML version.
- `\newcolumnntype` is ignored; unknown column types are set to l.

#### Rules:

vertical rules

width and trim

full-width rules

- Vertical rules next to either side of an @ or ! column are displayed on both sides of the column.
- Width options are honored. Trim options are converted to rounded top corners. Trim corners are not rounded with @ or ! columns, and full-width rules ignore trim.
- `\toprule`, `\midrule`, `\bottomrule`, and `\hline` ignore trim. When given an optional width, each cell is styled to create the custom border. Without an optional width, the entire row is given a class to assign the standard border.

**combined rules**

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

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

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

⚠ `\warpprintonly`  
misplaced `\noalign`

- For `\toprule` and `\bottomrule`, when combined with a `warpprint` or `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.

**colortbl:**⚠ **row/cell color**

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

`colortbl` ignores the overhang arguments.

**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 \\\}
```

## 65.2 Token lookahead

Used by `\LWR@futurenonpacelet` to look at the next token.

**for HTML output:** 5770 `\begin{warpHTML}`

`\LWR@mynexttoken`

5771 `\newcommand\LWR@mynexttoken\relax`

`\futurelet` copies the next token then executes a function to analyze

`\LWR@futurenonpacelet` does the same, but ignores intervening white space

Based on the **booktabs** style:

`\LWR@futurenonpacelet`

```
5772 \def\LWR@futurenonpacelet#1{\def\LWR@cs{#1}%
5773 \afterassignment\LWR@fnslone\let\nexttoken= }
5774 \def\LWR@fnslone{\expandafter\futurelet\LWR@cs\LWR@fnsltwo}
5775 \def\LWR@fnsltwo{%
5776 \expandafter\ifx\LWR@cs\@sptoken\let\next=\LWR@fnslthree%
5777 \else\let\next=\nexttoken\fi\next}
5778 \def\LWR@fnslthree{\afterassignment\LWR@fnslone\let\next= }
```

`\LWR@getmynexttoken` Looks ahead and copies the next token into `\LWR@mynexttoken`.

```
5779 \newcommand*{\LWR@getmynexttoken}{%
5780 \LWR@traceinfo{\LWR@getmynexttoken}%
5781 % nothing must follow this next line
5782 \LWR@futurenonpacelet\LWR@mynexttoken\LWR@tabledatacolumnstag
5783 }
```

### 65.3 Tabular variables

Bool `LWR@startedrow` True if should print a row tag before this column.

```
5784 \newbool{LWR@startedrow}
5785 \boolfalse{LWR@startedrow}
```

Bool `LWR@tabularcelladded` True if have added a data cell for this position.

```
5786 \newbool{LWR@tabularcelladded}
5787 \boolfalse{LWR@tabularcelladded}
```

Bool `LWR@doinghline` True if the next row will have an hline or midrule above it. Also used for `\midrule`.

```
5788 \newbool{LWR@doinghline}
5789 \boolfalse{LWR@doinghline}
```

Bool `LWR@doingtbrule` True if the next row will have a top/bottom rule above it.

```
5790 \newbool{LWR@doingtbrule}
5791 \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.
- ```
5792 \newbool{LWR@doingcmidrule}
5793 \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.
- ```
5794 \newbool{LWR@tableparcell}
```
- Bool LWR@skippingmrowcell True if are doing an empty \multirow cell, and thus there is no data tag to close.
- ```
5795 \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.
- ```
5796 \newbool{LWR@skippingmcolrowcell}
```
- Bool LWR@skipatbang True if just finished a \multicolumn so should not create the trailing @ or ! columns table data cells.
- ```
5797 \newbool{LWR@skipatbang}
```
- Bool LWR@emptyatbang True if finishing a row and should print empty @ or ! column table data cells.
- ```
5798 \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.
- ```
5799 \newbool{LWR@intabularmetadata}
5800 \boolfalse{LWR@intabularmetadata}
```
- Ctr LWR@tabularDepth Tracks whether & is being used inside a tabular.
- ```
5801 \newcounter{LWR@tabulardepth}
5802 \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.

```
5803 \newcounter{LWR@tabularpardepth}
5804 \setcounter{LWR@tabularpardepth}{0}
```

```
5805 \newcommand*{LWR@colsresult}{}%temp storage for column format results
5806 \newcommand*{LWR@pposition}{}
5807 \newcommand*{LWR@pleft}{}
5808 \newcommand*{LWR@pright}{}

```

`\LWR@tablecolspec` Holds the parsed column specification, of total width `LWR@tabletotalcols`, not counting `@` and `!` columns.

Will contain a string such as `llrrccpc`, exactly one letter per  $\LaTeX$  table column, without `@`, `!`, `>`, `<`, or the vertical bar.

```
5809 \newcommand*{LWR@tablecolspec}{}

```

`\LWR@strresult` Holds the result of `Str` functions.

```
5810 \providecommand*{LWR@strresult}{}
5811 \providecommand*{LWR@strresulttwo}{}

```

`\LWR@origcolspec` Holds the original column specs given to `tabular`.

```
5812 \newcommand*{LWR@origcolspec}{}

```

Ctrl `LWR@tablecolspecwidth` Holds the number of tokens in the table columns specification.

This includes one for each `@`, `!`, `<`, `>` column, and also one for each of the parameters of `p`, `@`, `!`, `<`, `>` columns, and three for each `D` column.

(This is not the total # of  $\LaTeX$  columns in the table.)

```
5813 \newcounter{LWR@tablecolspecwidth}

```

Ctrl `LWR@tablecolspecindex` While parsing the  $\LaTeX$  table column specification, starts at 1 and is incremented per token of the specification. 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.

```
5814 \newcounter{LWR@tablecolspecindex}

```

Ctrl `LWR@tablecolindex` While parsing the  $\LaTeX$  table column specification, starts at 1 and is incremented per

token of the specification. 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.

```
5815 \newcounter{LWR@tablecolindex}
```

Ctrl LWR@tabletotalcols 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@tabletotalcols.)

```
5816 \newcounter{LWR@tabletotalcols}
```

Ctrl LWR@tabletotalcolsnext Holds the next  $\LaTeX$  table column index while parsing, equal to one more than LWR@tabletotalcols.

```
5817 \newcounter{LWR@tabletotalcolsnext}
```

LWR@colatspec A data array of specifications for @ columns. The leftmost's index is leftedge, the others are counter values. See section 38.

LWR@colbangspec A data array of specifications for ! columns. The leftmost's index is leftedge, the others are counter values. See section 38.

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.

## 65.4 Handling &, @, !, and bar

For technical discussion regarding problems redefining \&, See:

<http://tex.stackexchange.com/questions/11638/>

[where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860](http://tex.stackexchange.com/questions/11638/where-do-i-find-futurelets-nasty-behaviour-documented/11860#11860)

```
\LWR@instertatbangcols
```

```
5818 \newcommand*{\LWR@insertatbangcols}{%
5819 \ifbool{LWR@skipatbang}%
5820 {}%
5821 {%
5822 \LWR@printatbang{at}{\arabic{LWR@tablecolindex}}%
5823 \LWR@printatbang{bang}{\arabic{LWR@tablecolindex}}%
5824 }%
5825 }
```

`\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.

```
5826 \newcommand*{\LWR@closetabledatacell}{%
5827 \global\booltrue{LWR@intabularmetadata}%
5828 \ifbool{LWR@exitingtabular}{}%
5829 {% not exiting tabular
5830 \ifbool{bool{LWR@skippingmrowcell} or bool{LWR@skippingmcolrowcell}}{%
5831 {%
```

If not skipping a `\multicolumnrow` cell, insert the @ and ! columns after this non-existent column.

```
5832 \ifbool{LWR@skippingmcolrowcell}%
5833 }{%
5834 {\LWR@insertatbangcols}%
5835 }%
5836 {% not skippingmrowcell
```

Insert any < then any @ and ! column contents, unless muted for the `\bottomrule` or a `\multicolumn`:

```
5837 \unskip%
5838 \ifbool{bool{LWR@tabularmutemods} or
5839 bool{LWR@skipatbang} or
5840 bool{LWR@emptyatbang}}{%
5841 }%
5842 }%
5843 }%
5844 {\LWR@getexparray{LWR@colafterspec}{\arabic{LWR@tablecolindex}}}%
```

Close paragraphs:

```
5845 \ifbool{LWR@tableparcell}{\LWR@stoppars}{}%
5846 \global\boolfalse{LWR@tableparcell}%
```

Close the table data cell.

Close any color <div>s.

```
5847 \whilebool{test {\ifnumcomp{\value{LWR@cellcolordepth}}{>}{0}}}{%
5848 \LWR@htmltag{/div}\LWR@orignewline%
5849 \addtocounter{LWR@cellcolordepth}{-1}%
5850 }%
```

Skip the @ and ! cells if are closing a multicolumn cell.

```
5851 \leavevmode\unskip\LWR@htmltag{/td}\LWR@orignewline%
```

```

5852 \global\booltrue{LWR@tabularcelladded}%
5853 \LWR@insertatbangcols%
5854 }% not skipping mrowcell
5855 }% not exiting tabular
5856 \global\boolfalse{LWR@skippingmrowcell}%
5857 \global\boolfalse{LWR@skippingmcolrowcell}%
5858 \global\boolfalse{LWR@skipatbang}%

```

Color control. Column is set by >{} for each cell, so it must be cleared here.

```

5859 \renewcommand*\LWR@cellHTMLcolor{}
5860 \renewcommand*\LWR@columnHTMLcolor{}
5861 \setcounter{LWR@cellcolordepth}{0}
5862 }

```

When not used inside a tabular, & performs its original function as recorded here ( with catcode 4 ).

```

5863 \let\LWR@origampmacro&

5864 \end{warpHTML}

```

### 65.4.1 Localizing & catcodes

**for HTML & PRINT:** 5865 \begin{warpall}

 **misplaced alignment tab character &** Place \StartDefiningTabulars and \EndDefiningTabulars 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.

```

5866 \newcommand{\StartDefiningTabulars}{%
5867 \LWR@traceinfo{StartDefiningTabulars}%
5868 \warpHTMLonly{\catcode'\&=\active}%
5869 }

```

\EndDefiningTabulars Place after defining something with & in it.

```

5870 \newcommand{\EndDefiningTabulars}{%
5871 \LWR@traceinfo{EndDefiningTabulars}%
5872 \warpHTMLonly{\catcode'\&=4}%
5873 }

```

```
5874 \end{warpall}
```

### 65.4.2 Handling &

**for HTML output:** 5875 \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.

```
5876 \newcommand*{\LWR@tabularampersand}{%
5877 \LWR@traceinfo{\LWR@tabularampersand}%
5878 \ifnumcomp{\value{\LWR@tabulardepth}}{>}{0}%
5879 {%
```

If not skipping a multirow cell, close the current data cell.

```
5880 \unskip%
5881 \LWR@closetabledatacell%
```

Move to the next column.

```
5882 \addtocounter{\LWR@tablecolindex}{1}%
```

Have not yet added data in this column:

```
5883 \boolfalse{\LWR@tabularcelladded}%
```

Look at the next token to decide multi or single column data tag.

```
5884 \LWR@getmynexttoken%
5885 }%
```

If not inside a tabular, performs the original action:

```
5886 {\LWR@origampmacro}%
5887 }
```

& 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.

### 65.4.3 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.

```
5888 \newcommand*{\LWR@tabularfinishrow}{%
```

If not exiting the tabular, or doing a rule, or have already started a row, finish this row:

```
5889 \ifboolexpr{%
5890 not bool {LWR@exitingtabular} or%
5891 bool{LWR@doingtbrule} or%
5892 bool{LWR@doingcmidrule} or%
5893 bool{LWR@doinghline} or%
5894 bool{LWR@startedrow}%
5895 }{%
```

To locally temporarily turn off `LWR@exitingtabular` so that table data tags will still be generated:

```
5896 \begingroup%
```

If generating a final row for the `\bottomrule` borders, turn off the @, !, <, and > column output:

```
5897 \ifbool{LWR@exitingtabular}{%
5898 \booltrue{LWR@tabularmutemods}%
5899 }{}%
```

Reenable the table data tags until finished with the final row:

```
5900 \global\boolfalse{LWR@exitingtabular}%
```

Generate table data tags and ampersands until the right edge:

```
5901 \whileboolexpr{%
5902 test {
5903 \ifnumcomp{\value{LWR@tablecolindex}}{<}{\value{LWR@tabletotalcols}}
5904 } or %
5905 (%
5906 bool{LWR@intabularmetadata} and%
5907 not bool{LWR@tabularcelladded} and%
5908 test {
5909 \ifnumcomp{\value{LWR@tablecolindex}}{=}{\value{LWR@tabletotalcols}}
```

```

5910 }%
5911)%
5912 }%
5913 {%
5914 \LWR@tabledatasinglecolumn%

```

The following is essentially `\LWR@tabularampersand` with `LWR@emptyatbang` added to empty the following cells:

```

5915 \LWR@closetabledatacell%
5916 \addtocounter{LWR@tablecolindex}{1}%
5917 \boolfalse{LWR@tabularcelladded}%
5918 \global\booltrue{LWR@emptyatbang}%

```

Starts the next cell:

```

5919 \ifnumcomp{\value{LWR@tablecolindex}}{<}{\value{LWR@tabletotalcols}}%
5920 {\LWR@getmynexttoken}%
5921 }%
5922 }%

```

Reenable the original `LWR@exitingtabular` to close the entire table:

```

5923 \endgroup%
5924 \global\boolfalse{LWR@emptyatbang}%
5925 }{}% ifboolexpr
5926 }

```

## 65.5 Handling `\\`

Inside `tabular`, `\\` is redefined to `\LWR@tabularendofline`

Throws away options `\\[dim]` or `\\*`

```
\LWR@tabularendofline
```

```
5927 \NewDocumentCommand{\LWR@tabularendofline}{s o}{}%
```

Finish the row:

```

5928 \ifnumcomp{\value{LWR@tablecolindex}}{<}{\value{LWR@tabletotalcols}}%
5929 {\LWR@tabularfinishrow}%
5930 {\LWR@closetabledatacell}%
5931 \LWR@htmltag{/tr}\LWR@orignewline%

```

**xcolor** row color support:

```
5932 \@rowcolors%
```

No longer inside a data cell:

```
5933 \global\booltrue{LWR@intabularmetadata}%
```

Not yet started a table row:

```
5934 \global\boolfalse{LWR@startedrow}%
```

Additional setup:

```
5935 \global\boolfalse{LWR@doinghline}%
5936 \global\boolfalse{LWR@doingtbrule}%
5937 \global\boolfalse{LWR@doingcmidrule}%
5938 \LWR@clearmidrules%
5939 \renewcommand*{\LWR@rowHTMLcolor}{}%
```

Start at first column:

```
5940 \setcounter{LWR@tablecolindex}{1}%
```

Have not yet added data in this column:

```
5941 \boolfalse{LWR@tabularcelladded}%
```

Look at the next token to decide between single column data tag or a special case:

```
5942 \LWR@getmynexttoken%
5943 }
```

## 65.6 Parsing @, >, <, !, bar columns

Holds the parsed argument for @, >, <, or ! columns:

```
5944 \newcommand*{\LWR@colparameter}{}
```

`\LWR@parseatcolumn` Handles @{text} columns.

```
5945 \newcommand*{\LWR@parseatcolumn}{%
```

Move to the next token after the '@':

```
5946 \LWR@traceinfo{at column}%
5947 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into \LWR@colparameter, expanding once:

```
5948 \LWR@traceinfo{about to read the next token:}%
5949 \expandarg%
5950 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
5951 \fullexpandarg%
```

Store the result into a data array, expanding once out of \LWR@colparameter:

```
5952 \LWR@traceinfo{have now read the next token}%
5953 \ifnumcomp{\value{LWR@tabletotalcols}}{=}{0}%
5954 {% left edge of the table:
5955 \LWR@traceinfo{at the left edge}%
5956 \LWR@setexparray{LWR@colatspec}{leftedge}{\LWR@colparameter}%
5957 \LWR@traceinfo{at the left edge: %
5958 \LWR@getexparray{LWR@colatspec}{leftedge}}%
5959 }%
5960 {% not at the left edge:
5961 \LWR@traceinfo{not at the left edge}%
5962 \LWR@setexparray{LWR@colatspec}{\arabic{LWR@tabletotalcols}}{\LWR@colparameter}%
5963 \LWR@traceinfo{at \arabic{LWR@tabletotalcols}: %
5964 \LWR@getexparray{LWR@colatspec}{\arabic{LWR@tabletotalcols}}}%
5965 }%
5966 \let\LWR@colparameter\relax%
5967 \booltrue{LWR@validtablecol}%
5968 }
```

\LWR@parsebangcolumn Handles !{text} columns.

```
5969 \newcommand*{\LWR@parsebangcolumn}{%
```

Move to the next token after the '!':

```
5970 \LWR@traceinfo{bang column}%
5971 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token into \LWR@colparameter, expanding once:

```
5972 \LWR@traceinfo{about to read the next token:}%
5973 \expandarg%
5974 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]
5975 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

5976 \LWR@traceinfo{have now read the next token}%
5977 \ifnumcomp{\value{LWR@tabletotalcols}}{=}{0}%
5978 {% left edge of the table:
5979 \LWR@traceinfo{at the left edge}%
5980 \LWR@setexparray{LWR@colbangspec}{leftedge}{\LWR@colparameter}%
5981 }%
5982 {% not at the left edge:
5983 \LWR@traceinfo{not at the left edge}%
5984 \LWR@setexparray{LWR@colbangspec}{\arabic{LWR@tabletotalcols}}{\LWR@colparameter}%
5985 \LWR@traceinfo{bang \arabic{LWR@tabletotalcols}: \LWR@colparameter!}%
5986 }%
5987 \let\LWR@colparameter\relax%
5988 \booltrue{LWR@validtablecol}%
5989 }

```

`\LWR@parsebeforecolumn` Handles `>{text}` columns.

```
5990 \newcommand*{\LWR@parsebeforecolumn}{%
```

Move to the next token after the `'>`:

```
5991 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```

5992 \expandarg%
5993 \StrChar{\LWR@origcolspec}{\arabic{LWR@tablecolspecindex}}[\LWR@colparameter]%
5994 \fullexpandarg%

```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```

5995 \LWR@setexparray{LWR@colbeforespec}{\arabic{LWR@tabletotalcolsnext}}{\LWR@colparameter}%
5996 \let\LWR@colparameter\relax%
5997 \booltrue{LWR@validtablecol}%
5998 }

```

`\LWR@parseaftercolumn` Handles `<{text}` columns.

```
5999 \newcommand*{\LWR@parseaftercolumn}{%
```

Move to the next token after the `'<`:

```
6000 \addtocounter{LWR@tablecolspecindex}{1}%
```

Read the next token, expanding once into `\LWR@colparameter`:

```
6001 \expandarg%
6002 \StrChar{\LWR@origcolspec}{\arabic{\LWR@tablecolspecindex}}[\LWR@colparameter]%
6003 \fullexpandarg%
```

Store the result into a data array, expanding once out of `\LWR@colparameter`:

```
6004 \LWR@setexparray{\LWR@colafterspec}{\arabic{\LWR@tabletotalcols}}{\LWR@colparameter}%
6005 \let\LWR@colparameter\relax%
6006 \booltrue{\LWR@validtablecol}%
6007 }
```

`\LWR@parsebarcolumn`      Handles vertical rules.

```
6008 \newcommand*{\LWR@parsebarcolumn}{%
6009 \LWR@traceinfo{bar column}%
```

Remember the bar at this position:

```
6010 \ifnumcomp{\value{\LWR@tabletotalcols}}{=}{0}%
6011 {% left edge of the table:
6012 \LWR@setexparray{\LWR@colbarspec}{leftedge}{tvertbarl}%
6013 }%
6014 {% not at the left edge:
6015 \LWR@setexparray{\LWR@colbarspec}{\arabic{\LWR@tabletotalcols}}{tvertbarr}%
6016 }%
6017 \booltrue{\LWR@validtablecol}%
6018 }
```

## 65.7 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.

```
6019 \newcommand*{\LWR@parsenormalcolumn}[1]{%
6020 \appto\LWR@tablecolspec{#1}%
6021 \addtocounter{\LWR@tabletotalcols}{1}%
6022 \addtocounter{\LWR@tabletotalcolsnext}{1}%
6023 \LWR@traceinfo{normal column \arabic{\LWR@tabletotalcols}: #1}%
6024 \LWR@setexparray{\LWR@colatspec}{\arabic{\LWR@tabletotalcolsnext}}{}%
6025 \LWR@setexparray{\LWR@colbangspec}{\arabic{\LWR@tabletotalcolsnext}}{}%
6026 \LWR@setexparray{\LWR@colbeforespec}{\arabic{\LWR@tabletotalcolsnext}}{}%
```

```

6027 \LWR@setexparray{LWR@colafterspec}{\arabic{LWR@tabletotalcolsnext}}{}%
6028 \LWR@setexparray{LWR@colbarspec}{\arabic{LWR@tabletotalcolsnext}}{}%
6029 \booltrue{LWR@validtablecol}%
6030 }

```

## 65.8 Parsing ‘p’, ‘m’, or ‘b’ columns

`\LWR@parsepcolumn`  $\langle\textit{thiscolumn}\rangle$  The width will be ignored.

```
6031 \newcommand*{\LWR@parsepcolumn}[1]{%
```

Converts to the given column type:

```
6032 \LWR@parsenormalcolumn{#1}%
```

Skips the following width token:

```
6033 \addtocounter{LWR@tablecolspecindex}{1}%
6034 }
```

## 65.9 Parsing ‘D’ columns

From the `dcolumn` package.

`\LWR@parseDcolumn`  $\langle\textit{thiscolumn}\rangle$  The three parameters will be ignored.

```
6035 \newcommand*{\LWR@parseDcolumn}[1]{%
```

Converts to the given column type.

```
6036 \LWR@parsenormalcolumn{#1}%
```

Skips the following three parameters.

```
6037 \addtocounter{LWR@tablecolspecindex}{3}%
6038 }
```

## 65.10 Parsing the column specifications



HTML css cannot exactly match the  $\text{\TeX}$  concept of a baseline for a table row. Table 8

Table 8: Tabular baseline

|   |     |     |     |   |
|---|-----|-----|-----|---|
| l | p   | m   | b   | r |
|   |     |     | bot |   |
|   |     | mid | bot |   |
| l | par | mid | bot | r |
|   | par | mid |     |   |
|   | par |     |     |   |

shows the  $\TeX$  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 9 for details.

Table 9 describes how each kind of column is converted to HTML.

Bool LWR@validtablecol True if found a valid table column type.

```
6039 \newbool{LWR@validtablecol}
```

Bool LWR@opttablecol True if found a table column optional argument.

```
6040 \newbool{LWR@opttablecol}
```

$\backslash$ LWR@parsetablecols  $\{ \langle colspecs \rangle \}$

Scans the column specification left to right.

Builds  $\backslash$ LWR@tablecolspec with the final specification, one column per entry. The final number of cells in each row is stored in LWR@tabletotalcols.

```
6041 \newcommand*{\LWR@parsetablecols}[1]{%
```

```
6042 \LWR@traceinfo{\LWR@parsetablecols}%
```

Remember the original supplied column spec:

```
6043 \renewcommand*{\LWR@origcolspec}{#1}%
```

Remove spaces:

```
6044 \expandarg%
```

```
6045 \StrSubstitute{\LWR@origcolspec}{ }{[\LWR@origcolspec]}%
```

Clear the parsed resulting column spec:

Table 9: Tabular HTML column conversions

- 
- l, r, c:** Converted to table cells without paragraph tags.  
Uses CSS `vertical-align:middle` so that top or bottom-aligned cells may go above or below this cell.
- p:** Converted to table cells with paragraph tags. Ref: Table 8,  $\text{\LaTeX}$  places the top line of a parbox aligned with the rest of the text line, so CSS `vertical-align:bottom` is used to have the HTML result appear with the paragraph extending below the L, R, C cells at the middle, if possible. This may be confusing as a P cell may not top-align with an L,R,C cell in the HTML conversion, especially in the presence of a B cell, and two P cells side-by-side will be aligned at the bottom instead of the top. Some adjustment of the CSS may be desired, changing `td.tdp`, `td.tdP`, `td.tdprule`, and `td.tdPrule` to `vertical-align: middle`. Another possibility is to change L,R,C, and P to `vertical-align: top` and not worry about the alignment of B and M cells or trying to approximate  $\text{\LaTeX}$  baselines.
- m:** With paragraph tags, CSS `vertical-align:middle`.
- b:** With paragraph tags, CSS `vertical-align:top` so that the bottom of the text is closest to the middle of the text line.
- P, M, B:** Horizontally-centered versions.
- S:** Converted to 'r'. Ignores optional argument. From the `siunitx` package.
- D:** Converted to 'c'. From the `dcolum` package.
- @, !, >, <:** One each, in that order.
- |:** Vertical rule.
- Unknown:** Converted to 'l'.
- `\newcolumn:` Currently treated as unknown.
-

```
6046 \renewcommand*{\LWR@tablecolspec}{}%
```

Total number of columns found so far. Also pre-initialize the first several columns of specs:

```
6047 \setcounter{\LWR@tabletotalcols}{0}%
6048 \setcounter{\LWR@tabletotalcolsnext}{1}%
6049 \LWR@setexparray{\LWR@colatspec}{leftedge}{}%
6050 \LWR@setexparray{\LWR@colatspec}{1}{}%
6051 \LWR@setexparray{\LWR@colatspec}{2}{}%
6052 \LWR@setexparray{\LWR@colatspec}{3}{}%
6053 \LWR@setexparray{\LWR@colbangspec}{leftedge}{}%
6054 \LWR@setexparray{\LWR@colbangspec}{1}{}%
6055 \LWR@setexparray{\LWR@colbangspec}{2}{}%
6056 \LWR@setexparray{\LWR@colbangspec}{3}{}%
6057 \LWR@setexparray{\LWR@colbeforespec}{1}{}%
6058 \LWR@setexparray{\LWR@colbeforespec}{2}{}%
6059 \LWR@setexparray{\LWR@colbeforespec}{3}{}%
6060 \LWR@setexparray{\LWR@colafterspec}{1}{}%
6061 \LWR@setexparray{\LWR@colafterspec}{2}{}%
6062 \LWR@setexparray{\LWR@colafterspec}{3}{}%
6063 \LWR@setexparray{\LWR@colbarspec}{leftedge}{}%
6064 \LWR@setexparray{\LWR@colbarspec}{1}{}%
6065 \LWR@setexparray{\LWR@colbarspec}{2}{}%
6066 \LWR@setexparray{\LWR@colbarspec}{3}{}%
```

Starting at the first column specification:

```
6067 \setcounter{\LWR@tablecolspecindex}{1}%
```

Place the colspecs string length into `\LWR@strresult`, and remember the number of characters in the column specification:

```
6068 \expandarg%
6069 \StrLen{\LWR@origcolspec}[\LWR@strresult]%
6070 \fullexpandarg%
6071 \LWR@traceinfo{original column spec length: \LWR@strresult}%
6072 \setcounter{\LWR@tablecolspecwidth}{\LWR@strresult}%
```

Haven't seen any optional arguments so far

```
6073 \boolfalse{\LWR@opttablecol}%
```

Scan through the column specifications:

```
6074 \whileboolexpr{%
6075 not test{%
6076 \ifnumcomp{\value{\LWR@tablecolspecindex}}{>}{\value{\LWR@tablecolspecwidth}}%
```

```
6077 }%
6078 }%
6079 {%
```

Place the next single-character column type into `\LWR@strresult`:

```
6080 \expandarg%
6081 \StrChar{\LWR@origcolspec}{\arabic{\LWR@tablecolspecindex}}[\LWR@strresult]%
6082 \LWR@traceinfo{position \arabic{\LWR@tablecolspecindex}: \LWR@strresult}%
6083 \fullexpandarg%
```

Not yet found a valid column type:

```
6084 \boolfalse{\LWR@validtablecol}%
```

Skip over any optional arguments, such as `siunitx` `S` column:

```
6085 \IfStrEq{\LWR@strresult}{[]}{\booltrue{\LWR@opttablecol}}{ }%
```

Throw away anything found inside the optional argument:

```
6086 \ifbool{\LWR@opttablecol}%
6087 {}% inside an optional argument
6088 {}% not an optional tabular argument
```

Not inside an optional argument, so consider the column type:

```
6089 \IfStrEq{\LWR@strresult}{l}{\LWR@parsenormalcolumn{l}}{ }%
6090 \IfStrEq{\LWR@strresult}{c}{\LWR@parsenormalcolumn{c}}{ }%
6091 \IfStrEq{\LWR@strresult}{r}{\LWR@parsenormalcolumn{r}}{ }%
6092 \IfStrEq{\LWR@strresult}{L}{\LWR@parsenormalcolumn{L}}{ }%
6093 \IfStrEq{\LWR@strresult}{C}{\LWR@parsenormalcolumn{C}}{ }%
6094 \IfStrEq{\LWR@strresult}{R}{\LWR@parsenormalcolumn{R}}{ }%
6095 \IfStrEq{\LWR@strresult}{J}{\LWR@parsenormalcolumn{J}}{ }%
6096 \IfStrEq{\LWR@strresult}{S}{\LWR@parsenormalcolumn{S}}{ }%
6097 \IfStrEq{\LWR@strresult}{\detokenize{@}}{\LWR@parseatcolumn}{ }%
6098 \IfStrEq{\LWR@strresult}{!}{\LWR@parsebangcolumn}{ }%
6099 \IfStrEq{\LWR@strresult}{>}{\LWR@parsebeforecolumn}{ }%
6100 \IfStrEq{\LWR@strresult}{<}{\LWR@parseaftercolumn}{ }%
6101 \IfStrEq{\LWR@strresult}{|}{\LWR@parsebarcolumn}{ }%
6102 \IfStrEq{\LWR@strresult}{p}{\LWR@parsepcolumn{p}}{ }%
6103 \IfStrEq{\LWR@strresult}{m}{\LWR@parsepcolumn{m}}{ }%
6104 \IfStrEq{\LWR@strresult}{b}{\LWR@parsepcolumn{b}}{ }%
```

From the `dcolumn` package:

```
6105 \IfStrEq{\LWR@strresult}{D}{\LWR@parseDcolumn{c}}{ }%
```

From the **tabularx** package. X column has no parameter, but will be given paragraph tags.

```
6106 \IfStrEq{\LWR@strresult}{X}{\LWR@parsenormalcolumn{X}}{}%
```

---

Many people define centered versions “P”, “M”, and “B”:  
`\newcolumnstype{P}[1]{>\centering\arraybackslash}p{#1}`

---

```
6107 \IfStrEq{\LWR@strresult}{P}{\LWR@parsepcolumn{P}}{}%
6108 \IfStrEq{\LWR@strresult}{M}{\LWR@parsepcolumn{M}}{}%
6109 \IfStrEq{\LWR@strresult}{B}{\LWR@parsepcolumn{B}}{}%
```

If this column was an invalid column type, convert it to an l column:

```
6110 \ifbool{LWR@validtablecol}{}%
6111 \LWR@traceinfo{invalid column type: \LWR@strresult}%
6112 \LWR@parsenormalcolumn{l}%
6113 }%
6114 }% not an optional column argument
```

If read the closing bracket, no longer inside the optional argument:

```
6115 \IfStrEq{\LWR@strresult}{]}{\boolfalse{LWR@opttablecol}}{}%
```

Move to the next character:

```
6116 \addtocounter{LWR@tablecolspecindex}{1}%
6117 }% whiledo
6118 \LWR@traceinfo{LWR@parsetablecols: done}%
6119 }%
```

## 65.11 colortbl and xparse tabular color support

These macros provide a minimal emulation of some **colortbl** macros which might appear between table cells. If **colortbl** is loaded, these macros will be replaced with functional versions.

For each of the HTML colors below, the text for the HTML color is set if requested, but the macro is empty if none has been set.

`\rownum` Reserve a counter register.

```
6120 \@ifundefined{rownum}{\newcount\rownum}{}
```

`\@rowcolors` Emulated in case `xcolor` is not used.

6121 `\newcommand*\@rowcolors}{}`

`\@rowc@lors` Emulated in case `xcolor` is not used.

6122 `\newcommand*\@rowc@lors}{}`

`\LWR@xcolorrowHTMLcolor` Emulated `xcolor` row color.

6123 `\newcommand*\LWR@xcolorrowHTMLcolor}{}`

`\LWR@columnHTMLcolor` HTMLstyle code for the column color.

6124 `\newcommand*\LWR@columnHTMLcolor}{}`

`\LWR@rowHTMLcolor` HTMLstyle code for the row color.

6125 `\newcommand*\LWR@rowHTMLcolor}{}`

`\LWR@cellHTMLcolor` HTMLstyle code for the cell color.

6126 `\newcommand*\LWR@cellHTMLcolor}{}`

`\LWR@ruleHTMLcolor` HTMLstyle code for the cell color.

6127 `\newcommand*\LWR@ruleHTMLcolor}{}`

Inside an HTML tabular, each of `\columncolor` etc. is `\let` to the `\LWR@HTML` versions below. When `colortbl` is loaded, its definitions override the following.

`\columncolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

`\LWR@HTMLcolumncolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

6128 `\NewDocumentCommand{\LWR@HTMLcolumncolor}{O{named} m o o}{}`

`\rowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

`\LWR@HTMLrowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*] Used before starting a tabular data cell, thus `\LWR@getmynexttoken`.

6129 `\NewDocumentCommand{\LWR@HTMLrowcolor}{O{named} m o o}{\LWR@getmynexttoken}`

`\cellcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

`\LWR@HTMLcellcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

6130 `\NewDocumentCommand{\LWR@HTMLcellcolor}{0{named} m o o}{}`

`\arrayrulecolor` [*model*] {*color*}

The version for use outside a tabular.

6131 `\newcommand{\arrayrulecolor}[2][named]{}`

`\LWR@HTMLarrayrulecolor` [*model*] {*color*}

The version for use inside a tabular.

6132 `\newcommand{\LWR@HTMLarrayrulecolor}[2][named]{\LWR@getmynexttoken}`

`\doublerulesepcolor` [*model*] {*color*}

The version for use outside a tabular.

6133 `\newcommand{\doublerulesepcolor}[2][named]{}`

`\LWR@HTMLdoublerulesepcolor` [*model*] {*color*}

The version for use inside a tabular.

6134 `\newcommand{\LWR@HTMLdoublerulesepcolor}[2][named]{\LWR@getmynexttoken}`

## 65.12 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.

6135 `\newcommand*{\LWR@maybenewtablerow}`

6136 `{%`

6137 `\ifbool{LWR@startedrow}{%`

6138 `}{}% started the row`

6139 `{}% not started the row`

Remember that now have started the row:

6140 `\global\booltrue{LWR@startedrow}{%`

Create the row tag, with a class if necessary.

```

6141 \global\booltrue{LWR@intabularmetadata}%
6142 \ifbool{LWR@doinghline}%
6143 {%
6144 \ifdefvoid{\LWR@ruleHTMLcolor}{%
6145 \LWR@htmltag{tr class="hline" }%
6146 }{%
6147 \LWR@htmltag{%
6148 tr class="hline" %
6149 style="border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor "%
6150 }%
6151 }%
6152 \LWR@orignewline%
6153 }%
6154 {% not doing hline
6155 \ifbool{LWR@doingtbrule}%
6156 {%
6157 \ifdefvoid{\LWR@ruleHTMLcolor}{%
6158 \LWR@htmltag{tr class="tbrule"}%
6159 }{%
6160 \LWR@htmltag{%
6161 tr class="tbrule" %
6162 style="border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor "%
6163 }%
6164 }%
6165 \LWR@orignewline%
6166 }%
6167 {\LWR@htmltag{tr}\LWR@orignewline}%
6168 }% end of not doing hline
6169 }% end of not started the row
6170 }

```

### 65.13 Printing vertical bar tags

`\LWR@printbartag`  $\{ \langle index \rangle \}$

Adds to a tabular data cell an HTML class name for a left/right vertical bar.

```

6171 \newcommand*{\LWR@printbartag}[1]{%
6172 \LWR@traceinfo{\LWR@printbartag !#1!}%
6173 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
6174 {}% muting or empty
6175 {% not muting
6176 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{#1}}%
6177 \ifdefempty{\LWR@tempone}{\LWR@tempone}%
6178 }% not muting

```

```
6179 \LWR@traceinfo{LWR@printbartag done}%
6180 }
```

## 65.14 Printing at or bang tags

```
\LWR@printatbang {<at -or- bang>} {<index>}
```

```
6181 \newcommand*{\LWR@printatbang}[2]{%
```

Fetch the column at or bang spec:

```
6182 \edef\LWR@atbangspec{\LWR@getexparray{LWR@col#1spec}{#2}}%
6183 \LWR@traceinfo{atbang: #2 !\LWR@atbangspec!}%
```

Only generate if is not empty;

```
6184 \ifdefempty{\LWR@atbangspec}%
6185 {}%
6186 {% not empty
6187 \LWR@htmltag{%
6188 td class="td#1%
6189 \LWR@subaddcmidruletrim{}{}%
6190 \LWR@printbartag{#2}%
6191 "%
6192 \LWR@tdstartstyles%
6193 \LWR@addcmidrulewidth%
6194 \LWR@addtabularrulecolors%
6195 \LWR@tdendstyles%
6196 }%
```

Create an empty cell if muting for the \bottomrule:

```
6197 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
6198 {}%
6199 {\LWR@atbangspec}%
6200 %
6201 \LWR@htmltag{/td}\LWR@orignewline%
6202 \global\booltrue{LWR@tabularcelladded}%
6203 }% not empty
6204 }%
```

```
\LWR@addleftmostbartag
```

```
6205 \newcommand*{\LWR@addleftmostbartag}{%
6206 \ifnumcomp{\value{LWR@tablecolindex}}{=} {1}{%
```

```
6207 \LWR@printbartag{leftedge}%
6208 }{}%
6209 }
```

`\LWR@tabularleftedge`

```
6210 \newcommand*\LWR@tabularleftedge{%
6211 \ifnumcomp{\value{LWR@tablecolindex}}{=}{1}%
6212 {%
6213 \LWR@printatbang{at}{leftedge}%
6214 \LWR@printatbang{bang}{leftedge}%
6215 }% left edge
6216 }{}% not left edge
6217 }
```

## 65.15 Data opening tag

`\LWR@thiscolspec` Temporary storage.

```
6218 \newcommand*\LWR@thiscolspec{}
```

`\LWR@tabledatasinglecolumnstag` Print a table data opening tag with style for alignment and color.

```
6219 \newcommand*\LWR@tabledatasinglecolumnstag{%
6220 {%
6221 \LWR@traceinfo{LWR@tabledatasinglecolumnstag}%
6222 \LWR@maybenewtablerow%
```

Don't start a new paragraph tag if have already started one:

```
6223 \ifbool{LWR@intabularmetadata}%
6224 {%
```

If have found the end of tabular command, do not create the next data cell:

```
6225 \ifbool{LWR@exitingtabular}{}%
6226 {% not exiting tabular
```

Print the @ and ! contents before first column:

```
6227 \LWR@tabularleftedge%
```

Fetch the current column's alignment character into `\LWR@strresult`:

```
6228 \StrChar{\LWR@tablecolspec}{\arabic{LWR@tablecolindex}}[\LWR@strresult]%
```

print the start of a new table data cell:

```
6229 \LWR@traceinfo{LWR@tabledatasinglecolumn: about to print td tag}%
6230 \LWR@htmltag{td class="td%
```

append this column's spec:

```
6231 \LWR@strresult%
```

If this column has a cmidrule, add "rule" to the end of the HTML class tag. Also add vertical bar tags.

```
6232 \LWR@addcmidruletrim%
6233 \LWR@addleftmostbartag%
6234 \LWR@printbartag{\arabic{LWR@tablecolindex}}%
6235 "%
```

Add styles for rules, alignment:

```
6236 \LWR@tdstartstyles%
6237 \LWR@addcmidrulewidth%
6238 \StrChar{\LWR@tablecolspec}{\arabic{LWR@tablecolindex}}[\LWR@thiscolspec]%
6239 \LWR@addformatwpalignment{\LWR@thiscolspec}%
```

Add styles for cell and rule colors:

```
6240 \LWR@addtabulararrowcolor%
6241 \LWR@addtabularrulecolors%

6242 \LWR@tdendstyles%
6243 }%
6244 \LWR@traceinfo{LWR@tabledatasinglecolumn: done printing td tag}%
```

If this is a p, m, b, or X column, allow paragraphs:

```
6245 \ifboolexpr{%
6246 test{ \ifdefstring{\LWR@strresult}{p} } or
6247 test{ \ifdefstring{\LWR@strresult}{m} } or
6248 test{ \ifdefstring{\LWR@strresult}{b} } or
6249 test{ \ifdefstring{\LWR@strresult}{P} } or
6250 test{ \ifdefstring{\LWR@strresult}{M} } or
6251 test{ \ifdefstring{\LWR@strresult}{B} } or
6252 test{ \ifdefstring{\LWR@strresult}{X} }
6253 }%
6254 {% allow pars
6255 \LWR@traceinfo{LWR@tabledatasinglecolumn: about to LWR@startpars}%
6256 \global\booltrue{LWR@tableparcell}%
6257 \LWR@startpars%
```

```

6258 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done with LWR@startpars}%
6259 }% allow pars
6260 {}% no pars

```

Print the > contents unless muted for the \bottomrule:

```

6261 \ifboolexpr{bool{LWR@tabularmutemods} or bool{LWR@emptyatbang}}%
6262 {}%
6263 {%
6264 \LWR@getexparray{LWR@colbeforespec}{\arabic{LWR@tablecolindex}}%
6265 }%
6266 \global\boolfalse{LWR@intabularmetadata}%
6267 }% not exiting tabular
6268 }{}% in tabular metadata
6269 \LWR@traceinfo{LWR@tabledatasinglecolumntag: done}%
6270 }%

```

## 65.16 Midrules

**LWR@midrules** LWR@midrules is a data array (section 38) 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 38) of columns containing 1 if a midrule should be left trimmed for each column.

**LWR@trimrrules** LWR@trimrrules is a data array (section 38) of columns containing r if a midrule should be right trimmed for each column.

**Ctrl LWR@midrulecounter** Indexes across the LWR@midrules and LWR@trim<l/r>rules data arrays.

```
6271 \newcounter{LWR@midrulecounter}
```

**Len \LWR@heavyrulewidth** The default width of the rule.

```
6272 \newlength{\LWR@heavyrulewidth}
6273 \setlength{\LWR@heavyrulewidth}{.08em}
```

**Len \LWR@lightrulewidth** The default width of the rule.

```
6274 \newlength{\LWR@lightrulewidth}
6275 \setlength{\LWR@lightrulewidth}{.05em}
```

**Len \LWR@cmidrulewidth** The default width of the rule.

```
6276 \newlength{\LWR@cmidrulewidth}
6277 \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.

```
6278 \newlength{\LWR@thiscmidrulewidth}
6279 \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.

```
6280 \newcommand*{\LWR@clearmidrules}
6281 {%
6282 \setcounter{LWR@midrulecounter}{1}%
6283 \whileboolexpr{%
6284 not test{%
6285 \ifnumcomp{\value{LWR@midrulecounter}}{>}{\value{LWR@tablecolspecwidth}}%
6286 }%
6287 }%
6288 {%
6289 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{Opt}%
6290 \setlength{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
6291 \LWR@setexparray{LWR@trimlrules}{\arabic{LWR@midrulecounter}}{}%
6292 \LWR@setexparray{LWR@trimrrules}{\arabic{LWR@midrulecounter}}{}%
6293 \addtocounter{LWR@midrulecounter}{1}%
6294 }%
6295 }
```

`\LWR@subcmidrule` `{<width>} {<trim>} {<leftcolumn>} {<rightcolumn>}`

Marks `LWR@midrules` data array elements to be non-zero widths from left to right columns. Also marks trimming for the L and/or R columns.

`LWR@doingcmidrule` is set to force an empty row at the end of the tabular to create the rule.

```
6296 \newcommand*{\LWR@subcmidrule}[4]{%
6297 \setcounter{LWR@midrulecounter}{#3}%
6298 \whileboolexpr{%
6299 not test {%
6300 \ifnumcomp{\value{LWR@midrulecounter}}{>}{#4}%
6301 }%
6302 }%
6303 {%
6304 \LWR@setexparray{LWR@midrules}{\arabic{LWR@midrulecounter}}{#1}%
6305 \addtocounter{LWR@midrulecounter}{1}%
6306 }
```

```

6306 }% whiledo
6307 \IfSubStr{#2}{1}{\LWR@setexparray{\LWR@trimrules}{#3}{1}}{}%
6308 \IfSubStr{#2}{r}{\LWR@setexparray{\LWR@trimrules}{#4}{r}}{}%
6309 \booltrue{\LWR@doingcmidrule}%
6310 }

```

`\LWR@docmidrule` [*(width)*] {*(trim)*} {*(leftcolumn-rightcolumn)*}

Marks `LWR@midrules` array elements to be a non-zero width from left to right columns. Also marks trimming for the L and/or R columns.

```

6311 \NewDocumentCommand{\LWR@docmidrule}{0{\LWR@cmidrulewidth} D(){} >{\SplitArgument{1}{-}}m}%
6312 {\LWR@subcmidrule{#1}{#2}#3}

```

Used to compute margins, tabular trims:

```

6313 \newlength{\LWR@templengthone}%
6314 \newlength{\LWR@templengthtwo}%
6315 \newlength{\LWR@templengththree}%

```

Used to add a style to a table data cell:

```

6316 \newboolean{\LWR@tdhavecellstyle}

```

`\LWR@tdstartstyles` Begins possibly adding a table data cell style.

```

6317 \newcommand*{\LWR@tdstartstyles}{\global\boolfalse{\LWR@tdhavecellstyle}}

```

`\LWR@tdaddstyle` Starts adding a table data cell style.

```

6318 \newcommand*{\LWR@tdaddstyle}{%
6319 \ifbool{\LWR@tdhavecellstyle}%
6320 {; }%
6321 { style="%
6322 \booltrue{\LWR@tdhavecellstyle}%
6323 }

```

`\LWR@tdendstyles` Finishes possibly adding a table data cell style. Prints the closing quote.

```

6324 \newcommand*{\LWR@tdendstyles}{%
6325 \ifbool{\LWR@tdhavecellstyle}{%
6326 "%
6327 \global\boolfalse{\LWR@tdhavecellstyle}%
6328 }{}%
6329 }

```

`\LWR@subaddcmidruletrim`  $\langle lefttrim \rangle$   $\langle righttrim \rangle$  Adds a `\cmidrule` with optional trim.

```
6330 \newcommand*\LWR@subaddcmidruletrim}[2]{%
6331 \setlength{\LWR@templengthone}{%
6332 \LWR@getexparray{LWR@midrules}{\arabic{LWR@tablecolindex}}}%
6333 }%
6334 \ifdimcomp{\LWR@templengthone}>{0pt}%
6335 {%
```

Print the class without left and right trim letters appended:

```
6336 \LWR@origtilde tdrule#1#2%
```

Remember the width of the rule:

```
6337 \setlength{\LWR@thiscmidrulewidth}{\LWR@templengthone}%
6338 }%
6339 {%
6340 \setlength{\LWR@thiscmidrulewidth}{0pt}%
6341 }%
6342 }
```

`\LWR@addcmidruletrim` Adds left or right trim to a `\cmidrule`.

```
6343 \newcommand*\LWR@addcmidruletrim{%
6344 \LWR@subaddcmidruletrim%
6345 {\LWR@getexparray{LWR@trimlrules}{\arabic{LWR@tablecolindex}}}%
6346 {\LWR@getexparray{LWR@trimrrules}{\arabic{LWR@tablecolindex}}}%
6347 }
```

`\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`.

```
6348 \newcommand{\LWR@addrulewidth}[2]{%
```

Only add a custom width if `thiswidth` is different than the `defaultwidth`, or if a color is being used:

```
6349 \ifboolexpr{%
6350 test{\ifdimcomp{#1}={}\{0pt}} or
6351 (
6352 (test{\ifdimcomp{#1}={}\{#2}} and not bool{FormatWP})
```

```

6353 and (test {\ifdefvoid{\LWR@ruleHTMLcolor}})
6354)
6355 }%
6356 {}% default width and color
6357 {}% custom width and/or color

```

Ensure that the width is wide enough to display in the browser:

```
6358 \LWR@forceminwidth{#1}%
```

Begin adding another style:

```
6359 \LWR@tdaddstyle%
```

The style itself:

```
6360 border-top:\LWR@printlength{\LWR@atleastonept} solid %
```

If default gray, the darkness of the color depends on the thickness of the rule:

```

6361 \ifdefvoid{\LWR@ruleHTMLcolor}{%
6362 \ifdimcomp{#1}{<}{\LWR@lightrulewidth}%
6363 {\LWR@origpound{ }AOA0A0}%
6364 {% lightrule or heavier
6365 \ifdimcomp{#1}{<}{\LWR@heavyrulewidth}%
6366 {\LWR@origpound{ }808080}%
6367 {black}%
6368 }% lightrule or heavier
6369 }{%
6370 \LWR@origpound\LWR@ruleHTMLcolor%
6371 }
6372 }% custom width and/or color
6373 }

```

`\LWR@addcmidrulewidth` Adds a style for the rule width.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

6374 \newcommand{\LWR@addcmidrulewidth}{%
6375 \LWR@addrulewidth{\LWR@thiscmidrulewidth}{\LWR@cmidrulewidth}%
6376 }

```

`\LWR@WPcell` `{(text-align)}` `{(vertical-align)}`

```

6377 \newcommand*{\LWR@WPcell}[2]{%
6378 \LWR@tdaddstyle%
6379 \LWR@origmbox{text-align:#1}; \LWR@origmbox{vertical-align:#2}%
6380 }

```

`\LWR@addformatwpalignment` If FormatWP, adds a style for the alignment.

Must be placed between `\LWR@tdstartstyles` and `\LWR@tdendstyles`.

```

6381 \newcommand*{\LWR@addformatwpalignment}[1]{%
6382 \ifbool{FormatWP}{%
6383 \IfSubStr{#1}{l}{\LWR@WPcell{left}{middle}}{}%
6384 \IfSubStr{#1}{c}{\LWR@WPcell{center}{middle}}{}%
6385 \IfSubStr{#1}{r}{\LWR@WPcell{right}{middle}}{}%
6386 \IfSubStr{#1}{p}{\LWR@WPcell{left}{bottom}}{}%
6387 \IfSubStr{#1}{m}{\LWR@WPcell{left}{middle}}{}%
6388 \IfSubStr{#1}{b}{\LWR@WPcell{left}{top}}{}%
6389 \IfSubStr{#1}{P}{\LWR@WPcell{center}{bottom}}{}%
6390 \IfSubStr{#1}{M}{\LWR@WPcell{center}{middle}}{}%
6391 \IfSubStr{#1}{B}{\LWR@WPcell{center}{top}}{}%
6392 }{}%
6393 }

```

## 65.17 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.

```

6394 \newcommand*{\LWR@addtabularrowcolor}{%
6395 \ifbool{LWR@tabularmutemods}{}{}%
6396 \ifdefvoid{\LWR@rowHTMLcolor}{%
6397 \ifdefvoid{\LWR@xcolorrowHTMLcolor}{}{}%
6398 {% xcolor row color
6399 \LWR@tdaddstyle%
6400 background:\LWR@origpound\LWR@xcolorrowHTMLcolor%
6401 }%
6402 }%
6403 {% explicit row color
6404 \LWR@tdaddstyle%
6405 background:\LWR@origpound\LWR@rowHTMLcolor%
6406 }%
6407 }%
6408 }

```

`\LWR@addtabularhrulecolor` Adds a cell's horizontal rule color style, if needed.

```

6409 \newcommand*{\LWR@addtabularhrulecolor}{%

```

If either form of horizontal rule is requested:

```

6410 \ifboolexpr {
6411 bool{\LWR@doinghline} or
6412 bool{\LWR@doingtbrule}
6413 }{%

```

And if there is a custom horizontal color:

```

6414 \ifdefvoid{\LWR@ruleHTMLcolor}{}%
6415 {%
6416 \LWR@tdaddstyle%
6417 border-top: 1px solid \LWR@origpound\LWR@ruleHTMLcolor%
6418 }{}%
6419 }{}%
6420 }

```

`\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.

```

6421 \newcommand*{\LWR@addtabularrulecolors}{%

```

Custom horizontal rule color:

```

6422 \LWR@addtabularhrulecolor%

```

No vertical rules if finishing the tabular with a row of empty cells:

```

6423 \ifbool{\LWR@tabularmutemods}{}{%

```

If at the leftmost cell, possibly add a leftmost vertical rule:

```

6424 \ifnumequal{\value{\LWR@tablecolindex}}{1}{%

```

Fetch the left edge's vertical bar specification:

```

6425 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{leftedge}}%

```

Add a custom style if a vertical bar was requested:

```

6426 \ifdefstring{\LWR@tempone}{tvertbar1}{%
6427 \LWR@tdaddstyle%
6428 border-left: 1px solid \LWR@origpound\LWR@vertruleHTMLcolor%
6429 }{}%
6430 }{}%

```

Possibly add a right vertical rule for this cell:

```
6431 \edef\LWR@tempone{\LWR@getexparray{\LWR@colbarspec}{\arabic{\LWR@tablecolindex}}}%
6432 \ifdefstring{\LWR@tempone}{\tvertbarr}{%
```

Add a custom style if a vertical bar was requested:

```
6433 \LWR@tdaddstyle%
6434 border-right: 1px solid \LWR@origpound\LWR@vertruleHTMLcolor%
6435 }{}%
6436 }%
6437 }
```

Ctrl LWR@cellcolordepth Counts how many cell color <div>s were added to the current tabular data cell.

```
6438 \newcounter{\LWR@cellcolordepth}
```

\LWR@subaddtabularcellcolor *{\HTML color}*

```
6439 \newcommand*{\LWR@subaddtabularcellcolor}[1]{%
6440 \LWR@htmltag{div class="cellcolor" style="%
6441 background:\LWR@origpound{ }{ }#1 %
6442 " }%
6443 \addtocounter{\LWR@cellcolordepth}{1}%
6444 }
```

\LWR@addtabularcellcolor Adds a cell color style, if needed.

```
6445 \newcommand*{\LWR@addtabularcellcolor}{%
6446 \ifdefvoid{\LWR@cellHTMLcolor}%
6447 {%
6448 \ifdefvoid{\LWR@rowHTMLcolor}%
6449 {%
6450 \ifdefvoid{\LWR@xcolorrowHTMLcolor}%
6451 {%
6452 \ifdefvoid{\LWR@columnHTMLcolor}%
6453 {%
6454 {\LWR@subaddtabularcellcolor{\LWR@columnHTMLcolor}}%
6455 }%
6456 {\LWR@subaddtabularcellcolor{\LWR@xcolorrowHTMLcolor}}%
6457 }%
6458 {\LWR@subaddtabularcellcolor{\LWR@rowHTMLcolor}}%
6459 }%
6460 {\LWR@subaddtabularcellcolor{\LWR@cellHTMLcolor}}%
6461 }
```

## 65.18 Multicolumns

### 65.18.1 Parsing multicolumns

```
6462 \newcounter{LWR@tablemulticolwidth}
```

Indexes into the multicolumn specification:

```
6463 \newcounter{LWR@tablemulticolspos}
```

Remembers multicolumn vertical rules if found in the column spec.

```
6464 \newbool{LWR@mccolvertbarl}
```

```
6465 \newbool{LWR@mccolvertbarr}
```

```
\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.

```
6466 \newcommand*{\LWR@printmccoltype}[1]{%
6467 \LWR@traceinfo{lwr@printmccoltype -#1-}%
```

Get one token of the column spec:

```
6468 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
```

Add to the HTML tag depending on which column type is found:

```
6469 \IfStrEq{\LWR@strresult}{l}{l}{}%
6470 \IfStrEq{\LWR@strresult}{c}{c}{}%
6471 \IfStrEq{\LWR@strresult}{r}{r}{}%
6472 \IfStrEq{\LWR@strresult}{p}{p}{}%
6473 \IfStrEq{\LWR@strresult}{m}{m}{}%
6474 \IfStrEq{\LWR@strresult}{b}{b}{}%
6475 \IfStrEq{\LWR@strresult}{P}{P}{}%
6476 \IfStrEq{\LWR@strresult}{M}{M}{}%
6477 \IfStrEq{\LWR@strresult}{B}{B}{}%
6478 \IfStrEq{\LWR@strresult}{S}{r}{}%
6479 \IfStrEq{\LWR@strresult}{X}{p}{}%

6480 \IfStrEq{\LWR@strresult}{|}{%
6481 \ifnumcomp{value{LWR@tablemulticolspos}}{=}{1}% left edge?
6482 {\booltrue{LWR@mccolvertbarl}}}% left edge
6483 {\booltrue{LWR@mccolvertbarr}}}% not left edge
6484 }{}%
6485 \LWR@traceinfo{lwr@printmccoltype done}%
6486 }
```

`\LWR@multicolpartext` Print the data with paragraph tags:

```
6487 \newcommand*{\LWR@multicolpartext}{%
6488 \LWR@startpars%
6489 \LWR@multicoltext%
6490 \LWR@stoppars%
6491 }
```

`\LWR@multicolother` `{<colspec>}` For @, !, >, <, print the next token without paragraph tags:

```
6492 \newcommand*{\LWR@multicolother}[1]{%
6493 \addtocounter{LWR@tablemulticolspos}{1}%
6494 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
6495 \LWR@strresult%
```

A valid column data type was found:

```
6496 \booltrue{LWR@validtablecol}%
6497 }
```

`\LWR@multicolskip` Nothing to print for this column type.

```
6498 \newcommand*{\LWR@multicolskip}{%
```

A valid column data type was found:

```
6499 \booltrue{LWR@validtablecol}%
6500 }
```

`\LWR@printmccoldata` `{<colspec>}` Print the data for any valid column type found.

```
6501 \newcommand*{\LWR@printmccoldata}[1]{%
6502 \LWR@traceinfo{lw@printmccoldata -#1}%
```

Not yet found a valid column type:

```
6503 \boolfalse{LWR@validtablecol}%
```

Get one token of the column spec:

```
6504 \StrChar{#1}{\arabic{LWR@tablemulticolspos}}[\LWR@strresult]%
```

Print the text depending on which column type is found. Also handles @, >, < as it comes to them.

```

6505 \IfStrEq{\LWR@strresult}{l}{\LWR@multicoltext}{}%
6506 \IfStrEq{\LWR@strresult}{c}{\LWR@multicoltext}{}%
6507 \IfStrEq{\LWR@strresult}{r}{\LWR@multicoltext}{}%
6508 \IfStrEq{\LWR@strresult}{D}{}%
6509 \addtocounter{LWR@tablemulticolspos}{3}% skip parameters
6510 \LWR@multicoltext%
6511 }{}%
6512 \IfStrEq{\LWR@strresult}{p}{\LWR@multicolpartext}{}%
6513 \IfStrEq{\LWR@strresult}{m}{\LWR@multicolpartext}{}%
6514 \IfStrEq{\LWR@strresult}{b}{\LWR@multicolpartext}{}%
6515 \IfStrEq{\LWR@strresult}{P}{\LWR@multicolpartext}{}%
6516 \IfStrEq{\LWR@strresult}{M}{\LWR@multicolpartext}{}%
6517 \IfStrEq{\LWR@strresult}{B}{\LWR@multicolpartext}{}%
6518 \IfStrEq{\LWR@strresult}{S}{\LWR@multicolpartext}{}%
6519 \IfStrEq{\LWR@strresult}{X}{\LWR@multicolpartext}{}%
6520 \IfStrEq{\LWR@strresult}{|}{\LWR@multicolskip}{}%
6521 \IfStrEq{\LWR@strresult}{\detokenize@}{\LWR@multicolother{#1}}{}%
6522 \IfStrEq{\LWR@strresult}{\detokenize!}{\LWR@multicolother{#1}}{}%
6523 \IfStrEq{\LWR@strresult}{\detokenize>}{\LWR@multicolother{#1}}{}%
6524 \IfStrEq{\LWR@strresult}{\detokenize<}{\LWR@multicolother{#1}}{}%

```

If an invalid column type:

```
6525 \ifbool{LWR@validtablecol}{\LWR@multicoltext}%
```

Tracing:

```
6526 \LWR@traceinfo{lwarp@printmccoldata done}%
6527 }
```

`\parsemulticolumnalignment`  $\{(1: colspec)\} \{(2: printresults)\}$

Scan the multicolumn specification and execute the printfunction for each entry.

Note that the spec for a `p{spec}` column, or `@`, `>`, `<`, is a token list which will NOT match `l`, `c`, `r`, or `p`.

```

6528 \newcommand*{\LWR@parsemulticolumnalignment}[2]{%
6529 \setcounter{LWR@tablemulticolspos}{1}%
6530 \StrLen{#1}[\LWR@strresult]%
6531 \setcounter{LWR@tablemulticolwidth}{\LWR@strresult}%

```

Scan across the tokens in the column spec:

```

6532 \whilebool{expr}{%
6533 not test {%
6534 \ifnumcomp{\value{LWR@tablemulticolspos}}{>}{\value{LWR@tablemulticolwidth}}%
6535 }

```

```
6536 }%
6537 {%
```

Execute the assigned print function for each token in the column spec:

```
6538 #2{#1}%
```

Move to the next token in the column spec:

```
6539 \addtocounter{LWR@tablemulticolspos}{1}%
6540 }%
6541 }
```

### 65.18.2 Multicolumn factored code

```
\LWR@addmulticolvertrulecolor
```

```
6542 \newcommand*{\LWR@addmulticolvertrulecolor}{%
```

No vertical rules if finishing the tabular with a row of empty cells:

```
6543 \ifbool{LWR@tabularmutemods}{}{%
```

Left side:

```
6544 \ifbool{LWR@mcolvertbarl}{%
6545 \LWR@tdaddstyle%
6546 border-left: 1px solid \LWR@origpound\LWR@vertruleHTMLcolor%
6547 }{}%
```

Right side:

```
6548 \ifbool{LWR@mcolvertbarr}{%
6549 \LWR@tdaddstyle%
6550 border-right: 1px solid \LWR@origpound\LWR@vertruleHTMLcolor%
6551 }{}%
6552 }%
6553 }
```

```
6554 \newcommand{\LWR@multicoltext}{}%
```

To find multicolumn right trim:

```
6555 \newcounter{LWR@lastmulticolumn}
```

```
\LWR@domulticolumn [1: vpos] [2: #rows] [3: numLaTeXcols] [4: numHTMLcols] [5: colspec]
 [6: text]
```

```
6556 \NewDocumentCommand{\LWR@domulticolumn}{o o m m +m}{%
6557 \LWR@traceinfo{\LWR@domulticolumn -#1- -#2- -#4- -#5-}%
```

Remember the text to be inserted, and remember that a valid column type was found:

```
6558 \renewcommand{\LWR@multicoltext}{%
6559 #6%
6560 \booltrue{\LWR@validtablecol}%
6561 }%
```

Compute the rightmost column to be included. This is used to create the right trim.

```
6562 \setcounter{\LWR@lastmulticolumn}{\value{\LWR@tablecolindex}}%
6563 \addtocounter{\LWR@lastmulticolumn}{#3}%
6564 \addtocounter{\LWR@lastmulticolumn}{-1}%
```

Row processing:

```
6565 \LWR@maybenewtablerow%
```

Begin the opening table data tag:

```
6566 \LWR@htmltag{td colspan="#4" %
```

```
6567 \IfValueT{#2}{ % rows?
6568 rowspan="#2" %
```

```
6569 \IfValueT{#1}{% vpos?
6570 \ifstrequal{#1}{b}{\style="\LWR@origmbox{vertical-align:bottom}" }{ }%
6571 \ifstrequal{#1}{t}{\style="\LWR@origmbox{vertical-align:top}" }{ }%
6572 }% vpos?
6573 }% rows?
```

```
6574 class="td%
```

Print the column type and vertical bars:

```
6575 \boolfalse{\LWR@mcolvertbarl}%
6576 \boolfalse{\LWR@mcolvertbarr}%
6577 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoltype}%
```

If this column has a cmidrule, add “rule” to the end of the HTML class tag.

If this position had a “Y” then add “rule” for a horizontal rule:

```
6578 \LWR@subaddcmidruletrim%
6579 {\LWR@getexparray{\LWR@trimlrules}{\arabic{\LWR@tablecolindex}}}%
6580 {\LWR@getexparray{\LWR@trimrrules}{\arabic{\LWR@lastmulticolumn}}}%
```

Also add vertical bar class.

```
6581 \ifbool{\LWR@mcolvertbarl}{ tvertbarl}{}%
6582 \ifbool{\LWR@mcolvertbarr}{ tvertbarr}{}%
```

Close the class tag’s opening quote:

```
6583 "%

6584 \LWR@tdstartstyles%

6585 \LWR@addtabulararrowcolor%

6586 \LWR@addcmidrulewidth%
6587 \LWR@addtabularhrulecolor%
6588 \LWR@addmulticolverterulecolor%
6589 \LWR@addformatwppalignment{#5}%
6590 \LWR@tdendstyles%
6591 }% end of the opening table data tag
6592 \global\boolfalse{\LWR@intabularmetadata}%
6593 \LWR@parsemulticolumnalignment{#5}{\LWR@printmccoldata}%
6594 }
```

### 65.18.3 Multicolumn

```
\LWR@htmlmulticolumn {<numcols>}{<alignment>}{<text>}
```

```
6595 \NewDocumentCommand{\LWR@htmlmulticolumn}{m m +m}%
6596 {%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
6597 \LWR@tabularhtmlcolumns{\arabic{\LWR@tablecolindex}}{#1}
```

Create the multicolumn tag:

```
6598 \LWR@domulticolumn{#1}{\arabic{\LWR@tabhtmlcoltotal}}{#2}{#3}%
```

Move to the next  $\LaTeX$  column:

```
6599 \addtocounter{LWR@tablecolindex}{#1}%
6600 \addtocounter{LWR@tablecolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
6601 \booltrue{LWR@skipatbang}%
6602 }
```

#### 65.18.4 Longtable captions

**longtable** captions use `\multicolumn`.

Bool LWR@starredlongtable Per the **caption** package, step the counter if `longtable*`.

```
6603 \newbool{LWR@starredlongtable}
6604 \boolfalse{LWR@starredlongtable}
```

Per the **caption** package. User-redefinable float type.

```
6605 \providecommand*\LTcapttype{table}
```

`\LWR@longtabledatacaptiontag` \* [*toc entry*] {*caption*}

```
6606 \NewDocumentCommand{\LWR@longtabledatacaptiontag}{s o +m}
6607 {%
```

Remember the latest name for `\nameref`:

```
6608 \IfValueTF{#2}{% optional given?
6609 \ifblank{#2}% optional empty?
6610 {\LWR@setlatestname{#3}}% empty
6611 {\LWR@setlatestname{#2}}% given and non-empty
6612 }% optional given
6613 {\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:

```
6614 \LWR@tabularhtmlcolumns{1}{\arabic{LWR@tabletotalcols}}
```

Create the multicolumn tag:

```

6615 \LWR@domulticolumn{\arabic{LWR@tabletotalcols}}{\arabic{LWR@tabhtmlcoltotal}}{P}%
6616 {% \LWR@domulticolumn
6617 \IfBooleanTF{#1}% star?

```

Star version, show a caption but do not make a LOT entry:

```

6618 {% yes star
6619 \LWR@figcaption%
6620 #3%
6621 \endLWR@figcaption%
6622 }%
6623 {% No star:

```

Not the star version:

Don't step the counter if \caption[] {A caption.}

```

6624 \ifbool{LWR@starredlongtable}%
6625 {%
6626 \ifblank{#2}% TOC entry
6627 }%
6628 {%
6629 \refstepcounter{\LTcaption}%
6630 \protected@edef\@currentlabel{%
6631 \csuse{p\LTcaption}\csuse{the\LTcaption}}%
6632 }%
6633 }{}%

```

Create an HTML caption. Afterwards, maybe make a LOT entry.

```

6634 \LWR@figcaption%
6635 \csuse{fnum\LTcaption}\CaptionSeparator#3%
6636 \endLWR@figcaption%

```

See if an optional caption was given:

```

6637 \ifblank{#2}% TOC entry empty

```

if the optional caption was given, but empty, do not form a TOC entry

```

6638 }%

```

If the optional caption was given, but might only be []:

```

6639 {% TOC entry not empty
6640 \IfNoValueTF{#2}% No TOC entry?

```

The optional caption is []:

```

6641 {% No TOC entry
6642 \addcontentsline%
6643 {\csuse{ext@LTcapttype}}}%
6644 {LTcapttype}%
6645 {%
6646 \protect\numberline%
6647 {\csuse{p@LTcapttype}\csuse{theLTcapttype}}}%
6648 {\ignorespaces #3\protect\relax}%
6649 }%
6650 }% end of No TOC entry

```

The optional caption has text enclosed:

```

6651 {% yes TOC entry
6652 \addcontentsline%
6653 {\csuse{ext@LTcapttype}}}%
6654 {LTcapttype}%
6655 {%
6656 \protect\numberline%
6657 {\csuse{p@LTcapttype}\csuse{theLTcapttype}}}%
6658 {\ignorespaces #2\protect\relax}%
6659 }%
6660 }% end of yes TOC entry
6661 }% end of TOC entry not empty
6662 }% end of no star

```

Skip any trailing @ or ! columns for this cell:

```

6663 \booltrue{LWR@skipatbang}%
6664 }% end of \LWR@domulticolumn
6665
6666 \addtocounter{LWR@tablecolindex}{\arabic{LWR@tabletotalcols}}
6667 \addtocounter{LWR@tablecolindex}{-1}
6668
6669 }

```

### 65.18.5 Counting HTML tabular columns

The  $\text{\LaTeX}$  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  $\text{\LaTeX}$  `\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.

```
6670 \newcounter{LWR@tabhtmlcolindex}
6671 \newcounter{LWR@tabhtmlcolend}
6672 \newcounter{LWR@tabhtmlcoltotal}
```

`\LWR@subtabularhtmlcolumns`  $\langle index \rangle$

Factored from `\LWR@tabularhtmlcolumns`, which follows.

```
6673 \newcommand*{\LWR@subtabularhtmlcolumns}[1]{%
```

Temporarily define a macro equal to the @ specification for this column:

```
6674 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colatspec}{#1}}%
```

If the @ specification is not empty, add to the count:

```
6675 \ifdefempty{\LWR@atbangspec}%
6676 {}%
6677 {\addtocounter{LWR@tabhtmlcoltotal}{1}}%
```

Likewise for the ! columns:

```
6678 \edef\LWR@atbangspec{\LWR@getexparray{LWR@colbangspec}{#1}}%
6679 \ifdefempty{\LWR@atbangspec}%
6680 {}%
6681 {\addtocounter{LWR@tabhtmlcoltotal}{1}}%
6682 }
```

`\LWR@tabularhtmlcolumns`  $\langle starting \text{\LaTeX} column \rangle$   $\langle number \text{\LaTeX} columns \rangle$

Compute the total number of HTML columns being spanned, considering the starting  $\text{\LaTeX}$  table column and the number of  $\text{\LaTeX}$  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`.

```
6683 \newcommand*{\LWR@tabularhtmlcolumns}[2]{%
```

Count the starting index, compute ending index, and begin with the count being the  $\text{\LaTeX}$  span, to which additional @ and ! columns may be added:

```
6684 \setcounter{LWR@tabhtmlcolindex}{#1}%
6685 \setcounter{LWR@tabhtmlcoltotal}{#2}%
6686 \setcounter{LWR@tabhtmlcolend}{#1}%
6687 \addtocounter{LWR@tabhtmlcolend}{#2}%
```

If at the left edge, add the at/bang columns for the left edge:

```
6688 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{=} {1} {%
6689 \LWR@subtabularhtmlcolumns{leftedge}%
6690 }{%}
```

Walk across the  $\LaTeX$  columns looking for @ and ! columns:

```
6691 \whileboolexpr{%
6692 test {%
6693 \ifnumcomp{\value{LWR@tabhtmlcolindex}}{<}{\value{LWR@tabhtmlcolend}}%
6694 }%
6695 }%
6696 {%
6697 \LWR@subtabularhtmlcolumns{\arabic{LWR@tabhtmlcolindex}}%
6698 \addtocounter{LWR@tabhtmlcolindex}{1}%
6699 }% whiledo
6700 }

6701 \end{warpHTML}
```

## 65.19 Multicolumnrow

A print-mode version is defined here, and is also used during HTML output while inside a `lateximage`.

See section 243 for the HTML versions.

```
for HTML & PRINT: 6702 \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>

After the user may have

```
6703 \AtBeginDocument{

 \@ifundefined{@xmultirow} determines if multirow was never loaded.

6704 \@ifundefined{@xmultirow}
6705 {}% no version of multirow was loaded
6706 {% \@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.

```
6707 \@ifpackageloaded{multirow}{% v2.0 or newer
6708 \ifpackagelater{multirow}{2016/09/01}% 2016/09/27 for v2.0
6709 {% v2.0+:
6710 \DeclareExpandableDocumentCommand{\LWR@origmulticolumnrow}%
6711 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
6712 {\multicolumn{#1}{#2}{\xmultirow[#3]{#4}[#5]{#6}[#7]{#8}}}%
6713 }
6714 {% loaded but older, probably not executed:
6715 \DeclareExpandableDocumentCommand{\LWR@origmulticolumnrow}%
6716 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
6717 {\multicolumn{#1}{#2}{\xmultirow{#4}[#5]{#6}[#7]{#8}}}%
6718 }
6719 }% 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.

```
6720 {% v1.6 or older did not \ProvidePackage
6721 \DeclareExpandableDocumentCommand{\LWR@origmulticolumnrow}%
6722 {+m +m +0{c} +m +0{0} +m +0{Opt} +m}%
6723 {\multicolumn{#1}{#2}{\xmultirow{#4}[#5]{#6}[#7]{#8}}}%
6724 }
```

The user-level interface. This is provided if the HTML version was not already given.

```
6725 \providecommand*\multicolumnrow{\LWR@origmulticolumnrow}
6726 }% \xmultirow defined, so multirow was loaded
6727 }% AtBeginDocument

6728 \end{warpall}
```

## 65.20 Utility macros inside a table

**for HTML output:** 6729 `\begin{warpHTML}`

Used to prevent opening a tabular data cell if the following token is one which does not create tabular data:

```
6730 \newcommand*\LWR@donothing{}
```

In case **bigdelim** is not loaded:

```
6731 \newcommand*{\ldelim}{-}
6732 \newcommand*{\rdelim}{-}

6733 \end{warpHTML}
```

## 65.21 Special-case tabular markers

**for HTML & PRINT:** 6734 \begin{warpall}

`\TabularMacro` Place this just before inserting a custom macro in a table data cell. Doing so tells **lwarp** not to automatically start a new HTML table data cell yet. See section 9.9.

```
6735 \newcommand*{\TabularMacro}{-}

6736 \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
}
\EndDefiningTabulars
```

**for HTML output:** 6737 \begin{warpHTML}

```
6738 \newcommand*{\ResumeTabular}{-}
6739 \global\boolfalse{LWR@exitingtabular}%
6740 \global\boolfalse{LWR@tabularmutemods}%
```

```
6741 \LWR@getmynexttoken%
6742 }
```

```
6743 \end{warpHTML}
```

**for PRINT output:** 6744 \begin{warpprint}

```
6745 \newcommand*{\ResumeTabular}{}
6746 \end{warpprint}
```

## 65.22 Checking for a new table cell

**for HTML output:** 6747 \begin{warpHTML}

Bool LWR@exitingtabular When \end is found, turns off the next opening data tag.

```
6748 \newbool{LWR@exitingtabular}
```

Bool LWR@tabularmutemods Mutes HTML output for @, !, < and >.

This is used while printing the final row to generate \bottomrules.

```
6749 \newbool{LWR@tabularmutemods}
```

\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:

```
6750 \newcommand*{\LWR@tabledatacolumnntag}%
6751 {%
6752 \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:

```
6753 \let\mynext\LWR@tabledatasinglecolumnntag%
```

If exiting the tabular:

```
6754 \ifdequal{\LWR@mynexttoken}{\end}%
6755 {\global\booltrue{LWR@exitingtabular}}{}%
```

longtable can have a caption in a cell

```
6756 \ifdefequal{\LWR@mynexttoken}{\caption}%
6757 {\let\mynext\LWR@donothing}{}
```

Look for other things which would not start a table cell:

```
6758 \ifdefequal{\LWR@mynexttoken}{\multicolumn}%
6759 {\let\mynext\LWR@donothing}{}%
6760 \ifdefequal{\LWR@mynexttoken}{\multirow}%
6761 {\let\mynext\LWR@donothing}{}%
6762 \ifdefequal{\LWR@mynexttoken}{\multicolumnrow}%
6763 {\let\mynext\LWR@donothing}{}%
6764 \ifdefequal{\LWR@mynexttoken}{\noalign}%
6765 {\let\mynext\LWR@donothing}{}
```

If an `\mrowcell`, this is a cell to be skipped over:

```
6766 \ifdefequal{\LWR@mynexttoken}{\mrowcell}%
6767 {\let\mynext\LWR@donothing}{}
```

If an `\mcolrowcell`, this is a cell to be skipped over:

```
6768 \ifdefequal{\LWR@mynexttoken}{\mcolrowcell}%
6769 {\let\mynext\LWR@donothing}{}%
6770 %
6771 \ifdefequal{\LWR@mynexttoken}{\TabularMacro}%
6772 {\let\mynext\LWR@donothing}{}%
6773 %
6774 \ifdefequal{\LWR@mynexttoken}{\hline}%
6775 {\let\mynext\LWR@donothing}{}%
6776 %
6777 \ifdefequal{\LWR@mynexttoken}{\firsthline}%
6778 {\let\mynext\LWR@donothing}{}%
6779 %
6780 \ifdefequal{\LWR@mynexttoken}{\lasthline}%
6781 {\let\mynext\LWR@donothing}{}%
6782 %
6783 \ifdefequal{\LWR@mynexttoken}{\toprule}%
6784 {\let\mynext\LWR@donothing}{}%
6785 %
6786 \ifdefequal{\LWR@mynexttoken}{\midrule}%
6787 {\let\mynext\LWR@donothing}{}%
6788 %
6789 \ifdefequal{\LWR@mynexttoken}{\cmidrule}%
6790 {\let\mynext\LWR@donothing}{}%
6791 %
6792 \ifdefequal{\LWR@mynexttoken}{\specialrule}%
6793 {\let\mynext\LWR@donothing}{}
```

```

6794 %
6795 \ifdefequal{\LWR@mynexttoken}{\cline}%
6796 {\let\mynext\LWR@donothing}{}%
6797 %
6798 \ifdefequal{\LWR@mynexttoken}{\bottomrule}%
6799 {\let\mynext\LWR@donothing}{}%
6800 %
6801 \ifdefequal{\LWR@mynexttoken}{\rowcolor}%
6802 {\let\mynext\LWR@donothing}{}%
6803 %
6804 \ifdefequal{\LWR@mynexttoken}{\arrayrulecolor}%
6805 {\let\mynext\LWR@donothing}{}%
6806 %
6807 \ifdefequal{\LWR@mynexttoken}{\doublerulesepcolor}%
6808 {\let\mynext\LWR@donothing}{}%
6809 %
6810 \ifdefequal{\LWR@mynexttoken}{\warpprintonly}%
6811 {\let\mynext\LWR@donothing}{}%
6812 %
6813 \ifdefequal{\LWR@mynexttoken}{\warpHTMLonly}%
6814 {\let\mynext\LWR@donothing}{}%
6815 %
6816 \ifdefequal{\LWR@mynexttoken}{\ldelim}%
6817 {\let\mynext\LWR@donothing}{}%
6818 %
6819 \ifdefequal{\LWR@mynexttoken}{\rdelim}%
6820 {\let\mynext\LWR@donothing}{}%

```

Ignore an empty line between rows:

```

6821 \ifdefequal{\LWR@mynexttoken}{\par}%
6822 {\let\mynext\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:

```

6823 \LWR@traceinfo{\LWR@tabledatacolumnstag: about to do mynext}%
6824 \mynext%
6825 \LWR@traceinfo{\LWR@tabledatacolumnstag: done}%
6826 }

```

```

6827 \end{warpHTML}

```

### 65.23 `\mrowcell`

**for HTML & PRINT:** 6828 `\begin{warpall}`

`\mrowcell` The user must insert `\mrowcell` into any `\multirow` cells which must be skipped.  
 This command has no action during print output.

6829 `\newcommand*{\mrowcell}{}`

6830 `\end{warpall}`

### 65.24 `\mcolrowcell`

**for HTML & PRINT:** 6831 `\begin{warpall}`

`\mcolrowcell` The user must insert `\mcolrowcell` into any `\multicolumnrow` cells which must be skipped. This command has no action during print output.  


6832 `\newcommand*{\mcolrowcell}{}`

6833 `\end{warpall}`

### 65.25 New tabular environment

**for HTML output:** 6834 `\begin{warpHTML}`

These are default definitions in case **booktabs** is not loaded, and are not expected to be used, but must exist as placeholders.

```
6835 \newcommand*\LWR@origtoprule}[1] [] {\hline}
6836 \newcommand*\LWR@origmidrule}[1] [] {\hline}
6837 \LetLtxMacro\LWR@origcmidrule\cline
6838 \newcommand*\LWR@origbottomrule}[1] [] {\hline}
6839 \newcommand*\LWR@origaddlinespace}[1] [] {}
6840 \newcommand*\LWR@origmorecmidrules{}
6841 \newcommand*\LWR@origspecialrule}[3] {\hline}
```

`\noalign` `{\text}` Redefined for use inside tabular.

6842 `\LetLtxMacro\LWR@orignoalign\noalign`

```

6843
6844 \newcommand{\LWR@tabularnoalign}[1]{%
6845 \begingroup%
6846 \global\advance\rownum\m@ne%
6847 \renewcommand*\LWR@xcolorrowHTMLcolor}{}%
6848 \multicolumn{\value{\LWR@tabletotalcols}}{1}{#1} \\
6849 \endgroup%
6850 % \@rowcolors%
6851 \LWR@getmynexttoken%
6852 }

```

`\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.

```

6853 \AtBeginDocument{
6854 \@ifpackageloaded{lwarp-tabls}
6855 {
6856 \newcommand*\LWR@HTMLhline}[1] [] [%
6857 \ifbool{FormatWP}%
6858 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalcols}}}%
6859 {\booltrue{\LWR@doinghline}}}%
6860 \LWR@getmynexttoken}%
6861 }
6862 {
6863 \newcommand*\LWR@HTMLhline}{%
6864 \ifbool{FormatWP}%
6865 {\LWR@docmidrule{1-\arabic{\LWR@tabletotalcols}}}%
6866 {\booltrue{\LWR@doinghline}}}%
6867 \LWR@getmynexttoken}%
6868 }
6869 }% AtBeginDocument

```

`\LWR@HTMLcline` `{\langle columns \rangle}`

```

6870 \NewDocumentCommand{\LWR@HTMLcline}{m}%
6871 {\LWR@docmidrule{#1}\LWR@getmynexttoken}%

```

`\LWR@nullifyNoAutoSpacing` For **babel-french**, turn off auto spacing at the start of the tabular, then nullify the autospacing commands inside the tabular, since they were not compatible with the tabular column parsing code, which uses `xstring`.

```

6872 \AtBeginDocument{
6873 \@ifundefined{frenchbsetup}%
6874 {% no babel-french
6875 \newcommand*\LWR@nullifyNoAutoSpacing}{%
6876 }% no babel-french
6877 {% yes babel-french

```

```

6878 \newcommand*\LWR@nullifyNoAutoSpacing{%
6879 \NoAutoSpacing%
6880 \renewcommand*\NoAutoSpacing{}%
6881 \renewcommand*\LWR@FBcancel{}%
6882 }
6883 }% yes babel-french
6884 }% AtBeginDocument

```

Env LWR@tabular [*<verticalposition>*] {*<colspecs>*}

The new tabular environment will be `\let` in `\LWR@LwarpStart`, since `siunitx` might redefine `tabular` in the user's document.

```

6885 \StartDefiningTabulars
6886
6887 \newenvironment*LWR@tabular}[2] []
6888 {%
6889 \LWR@traceinfo{LWR@tabular started}%
6890 \addtocounter{LWR@tabulardepth}{1}%

```

Not yet started a table row:

```
6891 \global\boolfalse{LWR@startedrow}%
```

Not yet doing any rules:

```

6892 \global\boolfalse{LWR@doinghline}%
6893 \global\boolfalse{LWR@doingtbrule}%
6894 \global\boolfalse{LWR@doingcmidrule}%

```

For **babel-french**, turn off auto spacing one time, then nullify the autospacing commands since were not compatible with the tabular parsing code.

```
6895 \LWR@nullifyNoAutoSpacing%
```

Have not yet found the end of tabular command. Unmute the @ and ! columns.

```

6896 \global\boolfalse{LWR@exitingtabular}%
6897 \global\boolfalse{LWR@tabularmutemods}%

```

Create the table tag:

```

6898 \global\booltrue{LWR@intabularmetadata}%
6899 \LWR@forcenewpage
6900 \LWR@htmlblocktag{table}%

```

Parse the table columns:

```
6901 \LWR@parsetablecols{#2}%
```

Table col spec is: \LWR@tablecolspec which is a string of llccrr, etc.

Do not place the table inside a paragraph:

```
6902 \LWR@stoppars%
```

Track column #:

```
6903 \setcounter{LWR@tablecolindex}{1}%
```

Have not yet added data in this column:

```
6904 \boolfalse{LWR@tabularcelladded}%
```

Start looking for midrules:

```
6905 \LWR@clearmidrules%
```

\\ becomes a macro to end the table row:

```
6906 \LetLtxMacro{\\}{\LWR@tabularendoffline}%
```

The following adjust for **colortbl**:

```
6907 \LetLtxMacro\columncolor\LWR@HTMLcolumncolor%
6908 \LetLtxMacro\rowcolor\LWR@HTMLrowcolor%
6909 \LetLtxMacro\cellcolor\LWR@HTMLcellcolor%
6910 \LetLtxMacro\arrayrulecolor\LWR@HTMLarrayrulecolor%
6911 \LetLtxMacro\doublerulesepcolor\LWR@HTMLdoublerulesepcolor%
6912 \renewcommand*{\LWR@columnHTMLcolor}{}%
6913 \renewcommand*{\LWR@rowHTMLcolor}{}%
6914 \renewcommand*{\LWR@cellHTMLcolor}{}%
6915 \@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.

```
6916 \edef\LWR@vertruleHTMLcolor{\LWR@ruleHTMLcolor}%
```

Tracking the depth of cell color <div>s:

```
6917 \setcounter{LWR@cellcolordepth}{0}%
```

The following may appear before a data cell is created, so after doing their actions, we look ahead with `\LWR@getmynexttoken` to see if the next token might create a new data cell:

The optional parameter for `\hline` supports the `tbls` package.

```

6918 \LWR@traceinfo{\LWR@tabular: redefining macros}%
6919 \LetLtxMacro\noalign\LWR@tabularnoalign%
6920 \LetLtxMacro\hline\LWR@HTMLhline%
6921 \LetLtxMacro\cline\LWR@HTMLcline%

6922 \DeclareDocumentCommand{\toprule}{o d()}%
6923 {%
6924 \IfValueTF{##1}%
6925 {\LWR@docmidrule[##1] () {1-\arabic{\LWR@tabletotalcols}}}%
6926 {%
6927 \ifbool{FormatWP}%
6928 {\LWR@docmidrule[##1] () {1-\arabic{\LWR@tabletotalcols}}}%
6929 {\booltrue{\LWR@doingtbrule}}}%
6930 }%
6931 \LWR@getmynexttoken}%
6932 %

6933 \DeclareDocumentCommand{\midrule}{o d()}%
6934 {%
6935 \IfValueTF{##1}%
6936 {\LWR@docmidrule[##1] () {1-\arabic{\LWR@tabletotalcols}}}%
6937 {%
6938 \ifbool{FormatWP}%
6939 {\LWR@docmidrule[##1] () {1-\arabic{\LWR@tabletotalcols}}}%
6940 {\booltrue{\LWR@doinghline}}}%
6941 }%
6942 \LWR@getmynexttoken}%
6943 %

6944 \DeclareDocumentCommand{\cmidrule}{0{\LWR@cmidrulewidth} d() m}%
6945 {\LWR@docmidrule[##1] (##2){##3}\LWR@getmynexttoken}%
6946 %

6947 \DeclareDocumentCommand{\bottomrule}{o d()}%
6948 {%
6949 \IfValueTF{##1}%
6950 {\LWR@docmidrule[##1] () {1-\arabic{\LWR@tabletotalcols}}}%
6951 {%
6952 \ifbool{FormatWP}%
6953 {\LWR@docmidrule[##1] () {1-\arabic{\LWR@tabletotalcols}}}%
6954 {\booltrue{\LWR@doingtbrule}}}%
6955 }%
6956 \LWR@getmynexttoken}%
6957 %

6958 \DeclareDocumentCommand{\addlinespace}{o}{}%
6959 \DeclareDocumentCommand{\morecmidrules}{-}{}%

```

```
6960 \DeclareDocumentCommand{\specialrule}{m m m d()}%
6961 {\LWR@docmidrule[##1](){1-\arabic{\LWR@tabletotalcols}}\LWR@getmynexttoken}%
```

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`.

```
6962 \renewcommand{\multicolumn}{\LWR@htmlmulticolumn}%
6963 \renewcommand*{\mrowcell}{%
6964 \LWR@maybenewtablerow%
6965 \LWR@tabularleftedge%
6966 \global\booltrue{\LWR@skippingmrowcell}%
6967 }%
6968 \renewcommand*{\mcolrowcell}{%
6969 \LWR@maybenewtablerow%
6970 \global\booltrue{\LWR@skippingmcolrowcell}%
6971 }%
6972 \LetLtxMacro\caption\LWR@longtabledatacaptiontag%
```

Reset for new processing:

```
6973 \global\boolfalse{\LWR@tableparcell}%
6974 \global\boolfalse{\LWR@skippingmrowcell}%
6975 \global\boolfalse{\LWR@skippingmcolrowcell}%
6976 \global\boolfalse{\LWR@skipatbang}%
6977 \global\boolfalse{\LWR@emptyatbang}%
```

Set & for its special meaning inside the tabular:

```
6978 \StartDefiningTabulars%
6979 \protected\gdef&{\LWR@tabularampersand}%
```

Nest one level deeper of tabular paragraph handling:

```
6980 \addtocounter{\LWR@tabularpardepth}{1}%
```

Look ahead for a possible table data cell:

```
6981 \LWR@traceinfo{\LWR@tabular: about to \LWR@getmynexttoken}%
6982 \LWR@getmynexttoken%
6983 }%
```

Ending the environment:

```
6984 {%
6985 \LWR@traceinfo{\LWR@tabular ending}%
```

Unnest one level of tabular paragraph handling:

```

6986 \addtocounter{LWR@tabularpardepth}{-1}%
6987 \ifboolexpr{%
6988 test {%
6989 \ifnumcomp{\value{LWR@tablecolindex}}{<}{\value{LWR@tabletotalcols}}
6990 } or %
6991 (%
6992 bool{LWR@intabularmetadata} and%
6993 not bool{LWR@tabularcelladded} and%
6994 test {%
6995 \ifnumcomp{\value{LWR@tablecolindex}}{=}{\value{LWR@tabletotalcols}}%
6996 }%
6997)%
6998 }%
6999 {%
7000 \LWR@tabularfinishrow%
7001 }%
7002 {%
7003 \LWR@closetabledatacell%
7004 }%
7005 \LWR@htmlblocktag{/tr}%

```

**xcolor** row color support:

```

7006 \@rowc@lors%

7007 \LWR@htmlblocktag{/table}%
7008 \global\boolfalse{LWR@intabularmetadata}%

```

Unnest one level of tabular:

```

7009 \addtocounter{LWR@tabulardepth}{-1}%

```

Restore & to its usual meaning:

```

7010 \protected\gdef&{\LWR@origampmacro}%
7011 \EndDefiningTabulars%
7012 \LWR@traceinfo{LWR@tabular finished ending}%
7013 }
7014
7015 \EndDefiningTabulars

7016 \end{warpHTML}

```

## 66 Cross-references

Sectioning commands have been emulated from scratch, so the cross-referencing commands are custom-written for them. Emulating both avoids several layers of patches.

The `zref` package is used to remember section name, file, and lateximage depth and number for each label.

Table 10 shows the data structures related to cross-referencing.

**for HTML output:** 7017 `\begin{warpHTML}`

### 66.1 Setup

`\@currentlabelname` To remember the most recently defined section name, description, or caption, for `\nameref`.

```
7018 \providecommand*\@currentlabelname{}
```

`\LWR@stripperperiod` `{\text}` [`(.)`]

Removes a trailing period.

```
7019 \def\LWR@stripperperiod#1.\ltx@empty#2\@nil{#1}%
```

`\LWR@setlatestname` `{\object name}`

Removes `\label`, strips any final period, and remembers the result.

```
7020 \newcommand*\LWR@setlatestname}[1]{%
```

Remove `\label` and other commands from the name, the strip any final period. See `zref-titleref` and `getttitlestring`.

```
7021 \GetTitleStringExpand{#1}%
```

```
7022 \edef\@currentlabelname{\detokenize\expandafter{\GetTitleStringResult}}%
```

```
7023 \edef\@currentlabelname{%
```

```
7024 \expandafter\LWR@stripperperiod\@currentlabelname%
```

```
7025 \ltx@empty.\ltx@empty\@nil%
```

```
7026 }%
```

```
7027 }
```

Table 10: Cross-referencing data structures

---

|                                                                                                                                                                                                                                                                 |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Original <math>\LaTeX</math>:</b>                                                                                                                                                                                                                            | (print and HTML) |
| <b><code>\refstepcounter</code>:</b> Steps the counter and sets <code>\@currentlabel</code> .                                                                                                                                                                   |                  |
| <b><code>\@currentlabel</code>:</b> <code>\p&lt;ctr&gt;\the&lt;ctr&gt;</code> Updated by <code>\refstepcounter</code> .                                                                                                                                         |                  |
| <b><code>\label</code>:</b> Writes to the .aux file:<br><code>\newlabel{&lt;label&gt;}{\@currentlabel}{\thepage}}</code>                                                                                                                                        |                  |
| <b><code>\newlabel</code>:</b> When the .aux file is read, sets <code>\r&lt;label&gt;</code> .                                                                                                                                                                  |                  |
| <b><code>\r&lt;label&gt;</code>:</b> Set to: <code>{\@currentlabel}{\thepage}</code>                                                                                                                                                                            |                  |
| <b><code>\ref</code>:</b> Returns the first part of <code>\r&lt;label&gt;</code> .                                                                                                                                                                              |                  |
| <b><code>\pageref</code>:</b> Returns the second part of <code>\r&lt;label&gt;</code> .                                                                                                                                                                         |                  |
| <b>Added by lwarp:</b>                                                                                                                                                                                                                                          | (HTML only)      |
| <b><code>\label</code>:</b> Adds HTML tags (section 66.3), plus <code>\splabel</code> data (section 66.2):                                                                                                                                                      |                  |
| <b><code>zLWR@name</code>:</b> The section name for this label.                                                                                                                                                                                                 |                  |
| <b><code>zLWR@htmlfilenumber</code>:</b> The file number or name for this label.                                                                                                                                                                                |                  |
| <b><code>zLWR@lateximagedepth</code>:</b> The <code>lateximagedepth</code> for this label.                                                                                                                                                                      |                  |
| <b><code>zLWR@lateximagenumber</code>:</b> The <code>lateximagenumber</code> for this label.                                                                                                                                                                    |                  |
| <b><code>\nameref</code>:</b> Emulated from <code>hyperref</code> for <code>lwarp</code> . See section 66.4.                                                                                                                                                    |                  |
| <b><code>\ref</code> and <code>\nameref</code>:</b> Adds HTML tags. See section 66.4.                                                                                                                                                                           |                  |
| <b>Added by amsmath:</b>                                                                                                                                                                                                                                        | (print and HTML) |
| <b><code>\label</code>:</b> Execution is delayed until the math environment is completed.                                                                                                                                                                       |                  |
| <b><code>\ltx@label</code>:</b> $\LaTeX$ <code>\label</code> , (HTML: patched by <code>lwarp</code> ;) later patched by <code>cleveref</code> .                                                                                                                 |                  |
| <b>Added by cleveref:</b>                                                                                                                                                                                                                                       | (print and HTML) |
| <b><code>\refstepcounter</code>:</b> Added: sets <code>\cref@currentlabel</code> .                                                                                                                                                                              |                  |
| <b><code>\cref@currentlabel</code>:</b> ( <code>&lt;type&gt;=&lt;ctr&gt;</code> unless an alias is used):<br><code>[&lt;type&gt;][\arabic{&lt;ctr&gt;}][&lt;parent ctrs&gt;]{\p&lt;ctr&gt;\the&lt;ctr&gt;}</code> Also see section 52.4 for use with footnotes. |                  |
| <b><code>\label</code>:</b> Writes to the .aux file:<br><code>\newlabel{&lt;label&gt;@cref}{\cref@currentlabel}{\thepage}}</code>                                                                                                                               |                  |
| <b><code>\newlabel</code>:</b> (Unchanged.) When the .aux file is read, sets <code>\r&lt;label&gt;@cref</code> .                                                                                                                                                |                  |
| <b><code>\r&lt;label&gt;@cref</code>:</b> Set to: <code>{\cref@currentlabel}{\thepage}</code>                                                                                                                                                                   |                  |
| <b>Utility functions:</b> See <code>\cref@getlabel</code> , <code>\cref@gettype</code> , <code>\cref@getcounter</code> , <code>\cref@getprefix</code> .                                                                                                         |                  |
| <b>Cross-referencing names:</b> <code>\crefname</code> and <code>\Crefname</code> assign human-readable names for references to this counter type.                                                                                                              |                  |
| <b>Additionally patched by lwarp:</b>                                                                                                                                                                                                                           | (HTML only)      |
| <b><code>\cref</code>, etc.:</b> Modified for <code>lwarp</code> . See section 80.                                                                                                                                                                              |                  |
| <b><code>\label</code> inside math:</b> See section 72.6.1.                                                                                                                                                                                                     |                  |
| <b>Footnotes:</b> See <code>\noteentry</code> in section 52.4.                                                                                                                                                                                                  |                  |

---

## 66.2 Zref setup

See:

[http://tex.stackexchange.com/questions/57194/  
extract-section-number-from-equation-reference](http://tex.stackexchange.com/questions/57194/extract-section-number-from-equation-reference)

Create a new property list called special:

```
7028 \zref@newlist{special}
```

Define a new property which has the name of the most recently declared section:

```
7029 \zref@newprop{zLWR@name}{\@currentlabelname}
```

Define a new property which has either a filename or a file number:

```
7030 \zref@newprop{zLWR@htmlfilenumber}{%
7031 \ifbool{FileSectionNames}{\LWR@thisfilename}{\arabic{LWR@htmlfilenumber}}%
7032 }%
```

Additional properties for lateximages:

```
7033 \zref@newprop{zLWR@lateximagedepth}{\arabic{LWR@lateximagedepth}}
7034 \zref@newprop{zLWR@lateximagenumber}{\arabic{LWR@lateximagenumber}}
```

zLWR@htmlfilenumber property holds the file number or name

Add a LWR@htmlfilenumber property, and lateximage properties to special:

```
7035 \zref@addprop{special}{zLWR@name}
7036 \zref@addprop{special}{zLWR@htmlfilenumber}
7037 \zref@addprop{special}{zLWR@lateximagedepth}
7038 \zref@addprop{special}{zLWR@lateximagenumber}
```

Returns the selected field:

```
7039 \newcommand*\LWR@sprof}[2]{%
7040 \zref@extractdefault{#1}{#2}{??}%
7041 }
```

`\LWR@nameref`  $\langle label \rangle$  Returns the section name for this label:

```
7042 \newcommand*\LWR@nameref}[1]{%
7043 \LWR@sprof{#1}{zLWR@name}%
7044 }
```

`\LWR@htmlfileref`  $\langle label \rangle$  Returns the file number or name for this label:

```
7045 \newcommand*\LWR@htmlfileref}[1]{%
DO NOT USE \LWR@traceinfo HERE! Will be expanded.
7046 \LWR@spref{#1}{zLWR@htmlfilenumber}%
7047 }
```

`\LWR@lateximagedepthref`  $\langle label \rangle$  Returns the lateximagedepth for this label:

```
7048 \newcommand*\LWR@lateximagedepthref}[1]{%
7049 \LWR@spref{#1}{zLWR@lateximagedepth}%
7050 }
```

`\LWR@lateximagenumberref`  $\langle label \rangle$  Returns the lateximagenumber for this label:

```
7051 \newcommand*\LWR@lateximagenumberref}[1]{%
7052 \LWR@spref{#1}{zLWR@lateximagenumber}%
7053 }
```

`\LWR@splabel`  $\langle label \rangle$  Sanitize the name and then creates the label:

```
7054 \newcommand*\LWR@splabel}[1]{%
7055 \LWR@traceinfo{LWR@splabel !#1!}%
7056 \LWR@setlatestname{\@currentlabelname}%
7057 \zref@labelbylist{#1}{special}%
7058 }
```

### 66.3 Labels

`\LWR@sublabel`  $\langle label \rangle$  Creates an HTML id tag.

`\detokenize` is used to allow underscores in the labels.

```
7059 \newcommand*\LWR@sublabel}[1]{%
7060 \LWR@traceinfo{LWR@sublabel !#1!}%
```

Create an HTML id tag unless are inside a lateximage, since it would appear in the image:

```
7061 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7062 }{%
7063 }% not lateximage
```

If not doing a lateximage, create an HTML ID tag: (To be factored...)

```

7064 \LWR@sanitize{#1}%
7065 \ifbool{LWR@doingstartpars}%
7066 {% pars allowed
7067 \ifbool{LWR@doingapar}%
7068 {% par started
7069 \LWR@htmltag{a \LWR@origmbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
7070 }% par started
7071 {% par not started
7072 \LWR@stoppars%
7073 \LWR@htmltag{a \LWR@origmbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
7074 \LWR@startpars%
7075 }% par not started
7076 }% pars allowed
7077 {% pars not allowed
7078 \LWR@htmltag{a \LWR@origmbox{id="\LWR@sanitized"}}\LWR@htmltag{/a}%
7079 }% pars not allowed
7080 }% not lateximage
7081 }

```

`\LWR@newlabel` (*<bookmark>*) {*<label>*} [*<type>*]

`\label` during HTML output when not in SVG math mode, removing extra spaces around the label, as done by regular  $\LaTeX$  `\label`.

`cleveref` later encases this to add its own cross-referencing.

The optional *<bookmark>* is per the **memoir** class, and is ignored.

The optional *<type>* is per the **ntheorem** package, and is ignored.

```

7082 \NewDocumentCommand{\LWR@newlabel}{d() m o}{%
7083 \LWR@traceinfo{LWR@newlabel: starting}%
7084 \LWR@traceinfo{LWR@newlabel: !#2!}%
7085 % \bspack%

```

Create a traditional  $\LaTeX$  label, as modified by `cleveref`:

```

7086 \LWR@origlabel{#2}%

```

Create a special label which holds the section number, `LWR@htmlfilenumber`, `LWR@lateximagedepth`, and `LWR@lateximagenumber`:

```

7087 \LWR@traceinfo{LWR@newlabel: filesectionnames is \ifbool{FileSectionNames}{true}{false}}%
7088 \LWR@traceinfo{LWR@newlabel: LWR@thisfilename is !\LWR@thisfilename!}%
7089 \LWR@traceinfo{LWR@newlabel: LWR@htmlfilenumber is \arabic{LWR@htmlfilenumber}}%
7090 \LWR@splabel{#2}%
7091 \LWR@sublabel{#2}%

```

```

7092 % \@esphack%
7093 \LWR@traceinfo{LWR@newlabel: done}%
7094 }

```

## 66.4 References

`\LWR@startref` `{<label>}` (Common code for `\ref` and `\nameref`.)

Open an HTML tag reference to a filename, # character, and a label.

```

7095 \newcommand*{\LWR@startref}[1]
7096 {%
7097 \edef\LWR@lidref{\LWR@lateximagedepthref{#1}}%
7098 \LWR@sanitize{#1}%
7099 \LWR@traceinfo{LWR@startref A: !#1!}%

```

Create the filename part of the link:

```

7100 \LWR@htmltag{a href="%
7101 \LWR@traceinfo{LWR@startref B}%
7102 \LWR@origmbox{\LWR@htmlrefsectionfilename{#1}}%
7103 \LWR@traceinfo{LWR@startref C}%
7104 \LWR@origpound%

```

Create the destination id:

See if `LWR@lateximagedepth` is unknown:

```

7105 \LWR@traceinfo{LWR@startref D: !#1!}%
7106 \ifthenelse{\equal{\LWR@lidref}{??}}%

```

“??” if `LWR@lateximagedepth` is unknown, so create a link with an unknown destination:

```

7107 {%
7108 \LWR@traceinfo{LWR@startref D0: ??}%
7109 ??%
7110 }%

```

If `LWR@lateximagedepth` is known. Use a `lateximage` if the depth is greater than zero, or a regular link otherwise:

```

7111 {%
7112 \LWR@traceinfo{LWR@startref D1: \LWR@lidref}%
7113 \ifthenelse{\cinttest{\LWR@lidref}{>}{0}}%

```

```

7114 {%
7115 \LWR@traceinfo{LWR@startref D2: \LWR@lidref}%
7116 lateximage\LWR@lateximagenumberref{#1}%
7117 }%
7118 {%
7119 \LWR@traceinfo{LWR@startref D3}%

```

`\detokenize` is used to allow underscores in the labels:

```

7120 \LWR@origmbox{\LWR@sanitized}%
7121 }%
7122 }%
7123 \LWR@traceinfo{LWR@startref E}%

```

Closing quote:

```

7124 "%}
7125 \LWR@traceinfo{LWR@startref F}%
7126 }

```

`\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)”.

```

7127 \NewDocumentCommand{\LWR@subnewref}{m m}{%
7128 \LWR@traceinfo{LWR@subnewref #1 #2}%
7129 \LWR@startref{#1}%
7130 \LWR@origref{#2}%
7131 \LWR@htmltag{/a}%
7132 }

```

`\ref` \* `{<label>}` `\ref` is `\let` to `\LWR@newref`

`\LWR@newref` \* `{<label>}` Create an internal document reference link, or without a link if starred per **hyperref**.

```

7133 \NewDocumentCommand{\LWR@newref}{s m}{%
7134 \LWR@traceinfo{LWR@newref !#2!}%
7135 \IfBooleanTF{#1}%
7136 {\LWR@origref{#2}}%
7137 {\LWR@subnewref{#2}{#2}}%
7138 }

```

`\pagerefPageFor` Text for page references.

```
7139 \newcommand*\pagerefPageFor}{see }
```

`\pageref` \*  $\langle label \rangle$  Create an internal document reference, or just the unlinked number if starred, per `hyperref`.

```
7140 \NewDocumentCommand{\LWR@newpageref}{s m}{%
7141 \IfBooleanTF{#1}%
7142 {(\pagerefPageFor\LWR@origref{#2})}%
7143 {(\cpageref{#2})}%
7144 }
```

`\nameref`  $\langle label \rangle$

```
7145 \newrobustcmd*\nameref}[1]{%
7146 \LWR@traceinfo{nameref}%
7147 \LWR@startref{#1}%
7148 \LWR@traceinfo{nameref B}%
7149 \LWR@nameref{#1}%
7150 \LWR@traceinfo{nameref C}%
7151 \LWR@htmltag{/a}%
7152 \LWR@traceinfo{nameref: done}%
7153 }
```

`\Nameref`  $\langle label \rangle$  In print, adds the page number. In HTML, does not.

```
7154 \LetLtxMacro\Nameref\nameref
```

## 66.5 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.

 Any reference to `\usepackage{hyperref}` must be placed inside a `warpprint` environment.

```
7155 % DO NOT TELL OTHER PACKAGES TO ASSUME HYPERREF, lest they attempt to patch it:
7156 % \EmulatesPackage{hyperref}[2015/08/01]% Disabled. Do not do this.
```

Emulates `hyperref`:

`\@currentHref` Added to support `backref`.

```
7157 \AtBeginDocument{
7158 \def\@currentHref{%
7159 autopage-\theLWR@currentautosec%
7160 }
7161 }
```

Create a link with a text name:

`\LWR@subhyperref` `{\URL}` `{\text}`

```
7162 \NewDocumentCommand{\LWR@subhyperref}{m +m}{%
7163 \LWR@traceinfo{\LWR@subhyperref !#1!}%
7164 \LWR@sanitize{#1}%
7165 \LWR@htmltag{%
7166 a href="\LWR@sanitized" %
7167 target="_{}blank"\LWR@orignewline%
7168 }%
7169 #2%
7170 \LWR@htmltag{/a}%
7171 \LWR@ensuredoingapar%
7172 }
```

`\LWR@subhyperrefclass` `{\URL}` `{\text}` `{\htmlclass}`

```
7173 \NewDocumentCommand{\LWR@subhyperrefclass}{m +m m}{%
7174 \LWR@htmltag{%
7175 a href="%
7176 \begingroup\@sanitize#1\endgroup%
7177 " %
7178 class="#3"\LWR@orignewline%
7179 }%
7180 #2%
7181 \LWR@htmltag{/a}%
7182 \LWR@ensuredoingapar%
7183 }
```

`\href` `[\options]` `{\URL}` `{\text}`

Create a link with accompanying text:

```
7184 \DeclareDocumentCommand{\LWR@hrefb}{O{} m +m}{%
7185 \LWR@ensuredoingapar%
```

```

7186 \LWR@subhyperref{#2}{#3}%
7187 \endgroup%
7188 }
7189
7190 \newrobustcmd*{\href}{%
7191 \begingroup%
7192 \catcode'\#=12
7193 \catcode'\%=12
7194 \catcode'\&=12
7195 \catcode'\~=12
7196 \catcode'_ =12
7197 \LWR@hrefb%
7198 }

```

`\nolinkurl`  $\{\langle URL \rangle\}$

Print the name of the link without creating the link:

```

7199 \newcommand*\LWR@nolinkurlb}[1]{%
7200 \LWR@ensuredoingapar%
7201 \def\LWR@templink{#1}%
7202 \@onelevel@sanitize\LWR@templink%
7203 \LWR@templink%
7204 \endgroup%
7205 }
7206
7207 \newrobustcmd*{\nolinkurl}{%
7208 \begingroup%
7209 \catcode'\#=12
7210 \catcode'\%=12
7211 \catcode'\&=12
7212 \catcode'\~=12
7213 \catcode'_ =12
7214 \LWR@nolinkurlb%
7215 }

```

`\url`  $\{\langle URL \rangle\}$

Create a link whose text name is the address of the link.

The `url` package may redefine `\url`, so it is `\let to \LWR@url` here and also redefined by `lwarp-url`.

```

7216 \DeclareDocumentCommand{\LWR@urlb}{m}{%
7217 \LWR@ensuredoingapar%
7218 \def\LWR@templink{#1}%
7219 \@onelevel@sanitize\LWR@templink%
7220 \href{\LWR@templink}{\LWR@templink}%

```

```
7221 \endgroup%
7222 }
7223
7224 \newrobustcmd*{\url}{%
7225 \begingroup%
7226 \catcode'\#=12
7227 \catcode'\%=12
7228 \catcode'\&=12
7229 \catcode'\~=12
7230 \catcode'_ =12
7231 \LWR@urlb%
7232 }
```

`\LWR@subinlineimage` [`<alntag>`] [`<class>`] [`<filename>`] [`<extension>`] [`<style>`]

```
7233 \newcommand*{\LWR@subinlineimage}[5] [] {%
7234 \ifblank{#1}%
7235 {\LWR@htmltag{img src="#3.#4" alt="#3" style="#5" class="#2"}}%
7236 {\LWR@htmltag{img src="#3.#4" alt="#1" style="#5" class="#2"}}%
7237 }

7238 \end{warpHTML}
```

Table 11: 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  $\TeX$  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.

---

## 67 Floats

Floats are supported, although partially through emulation.

Table 11 shows the data structure associated with each `<type>` of float.

`\@makecaption` is redefined to print the float number and caption text, separated by `\CaptionSeparator`, which works with the `babel` package to adjust the caption separator according to the language. French, for example, uses an en-dash instead of a colon: “Figure 123 – Caption text”.

## 67.1 Float captions

**for HTML output:** 7239 `\begin{warpHTML}`

`\LWR@floatbegin` `{<type>} [<placement>]`

Begins a `\newfloat` environment.

```
7240 \NewDocumentCommand{\LWR@floatbegin}{m o}{%
7241 \ifbool{FormatWP}{\newline}{}%
7242 \LWR@stoppars
```

There is a new float, so increment the unique float counter:

```
7243 \addtocounter{LWR@thisautoid}{1}%
7244 \booltrue{LWR@freezethisautoid}%
```

```
7245 \begingroup%
```

Settings while inside the environment:

```
7246 \LWR@origraggedright%
```

Open an HTML figure tag:

```
7247 \LWR@htmltag{figure id="\LWR@origmbox{autoid-\arabic{LWR@thisautoid}}" class="#1"}%
7248 \ifbool{FormatWP}{%
7249 \LWR@orignewline%
7250 \LWR@BlockClassWP}{\}{wp#1}%
7251 }{ }%
```

```
7252 \renewcommand*{\@capttype}{#1}%
7253 \caption@settype{#1}%
7254 \LWR@startpars%
7255 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
7256
7257 === begin #1 ===
7258
7259 }{ }%
7260 }
```

`\@float` Support packages which create floats directly.  
`\@dblfloat`

```
7261 \let\@float\LWR@floatbegin
7262 \let\@dblfloat\LWR@floatbegin
```

`\LWR@floatend` Ends a `\newfloat` environment.

```
7263 \newcommand*{\LWR@floatend}{%
7264 \ifboolexpr{bool{FormatWP} and bool{WPMarkFloats}}{%
7265
7266 === end ===
7267
7268 }{}%
7269 \LWR@stoppars%
```

Close an HTML figure tag:

```
7270 \ifbool{FormatWP}{\endLWR@BlockClassWP}{}%
7271 \LWR@htmlElementend{figure}%
7272 \endgroup%
7273 \boolfalse{LWR@freezethisautoid}%
7274 \LWR@startpars%
7275 \ifbool{FormatWP}{\newline}{}%
7276 }
```

`\end@float` Support packages which create floats directly.  
`\end@dblfloat`

```
7277 \let\end@float\LWR@floatend
7278 \let\end@dblfloat\LWR@floatend
```

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.

```
7279 \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.

```
7280 \newcounter{LWR@thisautoidWP}
```

Bool `LWR@freezethisautoid` Prevents multiple increments of `\LWR@thisautoid` inside a float.

```
7281 \newbool{LWR@freezethisautoid}
7282 \boolfalse{LWR@freezethisautoid}
```

`\LWR@newautoidanchor` Adds a new `<autoid>` anchor.

```
7283 \newcommand*{\LWR@newautoidanchor}{%
7284 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7285 }{}%
7286 {
```

```

7287 \ifbool{LWR@freezethisautoid}{}{%
7288 \addtocounter{LWR@thisautoid}{1}%
7289 \LWR@htmltag{a id="\LWR@origmbox{autoid-\arabic{LWR@thisautoid}}"}%
7290 \LWR@htmltag{/a}%
7291 }%
7292 }
7293 }

```

`\@capttype` Remembers which float type is in use.

```
7294 \newcommand*{\@capttype}{}

```

### 67.1.1 Caption inside a float environment

`\CaptionSeparator` How to separate the float number and the caption text.

```
7295 \AtBeginDocument{\providecommand*\CaptionSeparator}{:-~}}

```

`\@makecaption`  $\{\langle name \text{ and } num \rangle\} \{\langle text \rangle\}$

Prints the float type and number, the caption separator, and the caption text.

```

7296 \AtBeginDocument{\renewcommand*\@makecaption}[2]{%
7297 \LWR@traceinfo{\@makecaption}%
7298 #1\CaptionSeparator#2%
7299 \LWR@traceinfo{\@makecaption: done}%
7300 }%
7301 }

```

### 67.1.2 Caption and LOF linking and tracking

When a new HTML file is marked in the  $\LaTeX$  PDF file, the  $\LaTeX$  page number at that point is stored in `LWR@latestautopage`, (and the associated filename is remembered by the special  $\LaTeX$  labels). This page number is used to generate an `autopage HTML <id>` in the HTML output at the start of the new HTML file. Meanwhile, there is a float counter used to generate an `HTML autoid <id>` at the start of the float itself in the HTML file. The `autopage` and `autoid` values to use for each float are written to the `.lof`, etc. files just before each float's entry. These values are used by `\l@figure`, etc. to create the HTML links in the List of Figures, etc.

Ctrl `LWR@nextautoid` Tracks autoid for floats. Tracks autopage for floats.

Ctrl `LWR@nextautopage` These are updated per float as the `.lof`, `.lot` file is read.

```
7302 \newcounter{LWR@nextautoid}
7303 \newcounter{LWR@nextautopage}
```

`\LWRsetnextfloat`     $\langle autopage \rangle$      $\langle autoid \rangle$

This is written to the .lof, .lot file just before each float's usual entry. The `autopage` and `autoid` are remembered for `\l@figure` to use when creating the HTML links.

```
7304 \newcommand*\LWRsetnextfloat}[2]{%
7305 \setcounter{LWR@nextautopage}{#1}%
7306 \setcounter{LWR@nextautoid}{#2}%
7307 }
```

Ctrl `LWR@latestautopage`    Updated each time a new HTML file is begun. `\LWRsetnextfloat` is written with this and the `autoid` by the modified `\addcontentsline` just before each float's entry.

```
7308 \newcounter{LWR@latestautopage}
7309 \setcounter{LWR@latestautopage}{1}
```

Env `LWR@figcaption`    Encapsulates a caption inside `<figcaption>`, and if `FormatWP` then also a `<div>` with an italic style.

```
7310 \newenvironment*LWR@figcaption}
7311 {%
7312 \LWR@traceinfo{LWR@figcaption env start}%
7313 \LWR@htmlblocktag{figcaption}%
7314 \ifbool{FormatWP}{%
7315 \begin{BlockClass}[font-style:italic]{italic}
7316 \LWR@origvspace*{\baselineskip}
7317 }{}%
7318 \LWR@traceinfo{LWR@figcaption env start: done}%
7319 }
7320 {%
7321 \LWR@traceinfo{LWR@figcaption env end}%
7322 \ifbool{FormatWP}{\end{BlockClass}}{}%
7323 \LWR@htmlblocktag{/figcaption}%
7324 \LWR@traceinfo{LWR@figcaption env end: done}%
7325 }
```

After packages have loaded, remember the print-mode version of the following:

```
7326 \AtBeginDocument{
7327 \LetLtxMacro\LWR@origcaption@begin\caption@begin
7328 \LetLtxMacro\LWR@origcaption@end\caption@end
7329 }
```

`\LWR@caption@begin` Low-level patches to create HTML tags for captions.

```
7330 \newcommand{\LWR@caption@begin}[1]
7331 {
7332 \LWR@traceinfo{\LWR@caption@begin}%
```

Keep par and minipage changes local:

```
7333 \begingroup%
```

The **caption** code was not allowing the closing par tag:

```
7334 \@setpar{\LWR@closeparagraph\@par}%
```

No need for a minipage or `\parbox` inside the caption:

```
7335 \RenewDocumentEnvironment{minipage}{0{t} o 0{t} m}{-}{-}%
7336 \RenewDocumentCommand{\parbox}{0{t} o 0{t} m +m}{##5}%
```

Enclose the original caption code inside an HTML tag:

```
7337 \LWR@figcaption%
7338 \LWR@traceinfo{\LWR@caption@begin: about to LWR@origcaption@begin}%
7339 \LWR@origcaption@begin{#1}%
7340 \LWR@traceinfo{\LWR@caption@begin: done}%
7341 }
```

`\LWR@caption@end` Low-level patches to create HTML tags for captions.

```
7342 \newcommand{\LWR@caption@end}
7343 {%
7344 \LWR@traceinfo{\LWR@caption@end}%
7345 \LWR@origcaption@end%
```

Closing tag:

```
7346 \endLWR@figcaption%
7347 \endgroup%
7348 % \leavevmode% avoid bad space factor (0) error
7349 \LWR@traceinfo{\LWR@caption@end: done}%
7350 }
```

`\caption@begin` Low-level patches to create HTML tags for captions.

`\caption@end`

```
7351 \AtBeginDocument{
7352 \let\caption@begin\LWR@caption@begin
7353 \let\caption@end\LWR@caption@end
7354 }
```

`\captionlistentry` Tracks the float number for this caption used outside a float. Patched to create an HTML anchor.

```

7355 \let\LWR@origcaptionlistentry\captionlistentry
7356
7357 \renewcommand*\captionlistentry{%
7358 \LWR@ensuredoingapar%
7359 \LWR@origcaptionlistentry%
7360 }
7361
7362 \def\LWR@LTcaptionlistentry{%
7363 \LWR@ensuredoingapar%
7364 \LWR@htmltag{a id="\LWR@origmbox{autoid-\arabic{\LWR@thisautoid}}"}\LWR@htmltag{/a}%
7365 \bgroup
7366 \@ifstar{\egroup\LWR@LTcaptionlistentry}% gobble *
7367 {\egroup\LWR@LTcaptionlistentry}}%
7368 \def\LWR@LTcaptionlistentry#1{%
7369 \caption@listentry\@firstoftwo[\LTcapytype]{#1}}%

```

`\addcontentsline` Patched to write the autopage and autoid before each float's entry. No changes if writing .toc For a theorem, automatically defines `\ext@<type>` as needed, to mimic and reuse the float mechanism.

f

```

7370 \let\LWR@origaddcontentsline\addcontentsline
7371
7372 \renewcommand*\addcontentsline[3]{%
7373 \ifstrequal{#1}{toc}{-}{% not TOC
7374 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}%
7375 {}
7376 {\LWR@newautoidanchor}%
7377 \ifcsvoid{ext@#2}{\csdef{ext@#2}{#1}}{%
7378 \addtocontents{\@nameuse{ext@#2}}{%
7379 \protect\LWRsetnextfloat%
7380 {\arabic{\LWR@latestautopage}}%
7381 {\arabic{\LWR@thisautoid}}%
7382 }%
7383 }% not TOC
7384 \LWR@origaddcontentsline{#1}{#2}{#3}%
7385 }

```

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.

```

7386 \AtBeginDocument{
7387 \let\LWR@origcaptionof\captionof
7388
7389 \renewcommand*\captionof}{%
7390 \LWR@stoppars
7391 \LWR@origcaptionof%
7392 }
7393 }

7394 \end{warpHTML}

```

## 68 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  $\TeX$  infrastructure is used for TOC, along with some patches to generate HTML output.

**for HTML output:** `7395 \begin{warpHTML}`

### 68.1 Reading and printing the TOC

`\LWR@myshorttoc` `{\toc/lof/lot/sidetoc}`

Reads in and prints the TOC/LOF/LOT at the current position. While doing so, makes the `@` character into a normal letter to allow formatting commands in the section names.

Unlike in regular  $\TeX$ , the file is not reset after being read, since the sideroc may be referred to again in each HTML page.

```

7396 \newcommand*\LWR@myshorttoc}[1]{%
7397 \LWR@traceinfo{\LWR@myshorttoc: #1}%
7398 \LWR@ensuredoingapar%

```

Only if the file exists:

```
7399 \IfFileExists{\jobname.#1}{%
7400 \LWR@traceinfo{LWR@myshorttoc: loading}%
```



Make @ a regular letter. Many of the commands in the file will have @ characters in them, so @ must be made a regular letter.



For **pdf<sub>l</sub>atex**, also change to latin1 encoding. When reading back a file with accented characters, the encoding change seems to be required, rather than leaving it utf8.

```
7401 \begingroup%
7402 % \ifxetexorluatex%
7403 % \else
7404 % \inputencoding{latin1}% currently disabled
7405 % \fi
7406 \makeatletter%
```

Read in the TOC file:

```
7407 \@input{\jobname.#1}%
7408 % \makeatother
7409 \endgroup%
7410 }%
7411 {}%
7412 \LWR@traceinfo{LWR@myshorttoc: done}%
7413 }
```

`\LWR@subtableofcontents`  $\{ \langle toc/lof/lot \rangle \} \{ \langle sectionstarname \rangle \}$

Places a TOC/LOF/LOT at the current position.

```
7414 \NewDocumentCommand{\LWR@subtableofcontents}{m m}{%
```

Closes previous levels:

```
7415 \@ifundefined{chapter}
7416 {\LWR@closeprevious{\LWR@depthsection}}
7417 {\LWR@closeprevious{\LWR@depthchapter}}
```

Prints any pending footnotes so that they appear above the potentially large TOC:

```
7418 \LWR@printpendingfootnotes
```

Place the list into its own chapter (if defined) or section:

```
7419 \@ifundefined{chapter}{\section*{#2}}{\chapter*{#2}}
```

Create a new HTML nav containing the TOC/LOF/LOT:

```
7420 \LWR@htmlclass{nav}{#1}
```

Create the actual list:

```
7421 \LWR@myshorttoc{#1}
```

Close the nav:

```
7422 \LWR@htmlclassend{nav}{#1}
7423 }
```

```
\@starttoc {<ext>}
```

Patch \@starttoc to encapsulate the TOC inside HTML tags:

```
7424 \let\LWR@orig@starttoc\@starttoc
7425
7426 \renewcommand{\@starttoc}[1]{
7427 \LWR@htmlclass{nav}{#1}
7428 \LWR@orig@starttoc{#1}
7429 \LWR@htmlclassend{nav}{#1}
7430 }
```

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.)

```
7431 \newbool{LWR@copiedsidetoc}
7432 \boolfalse{LWR@copiedsidetoc}
```

\tableofcontents Patch \tableofcontents, etc. to print footnotes first. **newfloat** uses \listoffigures for all future float types.

```
7433 \AtBeginDocument{
7434 \let\LWR@origtableofcontents\tableofcontents
7435
7436 \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:

```
7437 \ifboolexpr{bool{FormatWP} and bool{WPMarkTOC}}{
```

```
7438
7439 === table of contents ===
7440
7441 }
7442 {
```

Copy the .toc file to .sidetoc for printing the sideroc. The original .toc file is renewed when \tableofcontents is finished.

```
7443 \ifbool{LWR@copiedsidetoc}{}{%
7444 \LWR@copyfile{\jobname.toc}{\jobname.sidetoc}%
7445 \booltrue{LWR@copiedsidetoc}%
7446 }%
7447 \LWR@printpendingfootnotes
7448 \LWR@origtableofcontents
7449 }
7450 }% \tableofcontents
7451 }% AtBeginDocument
```

#### \listoffigures

```
7452 \let\LWR@origlistoffigures\listoffigures
7453
7454 \renewcommand*{\listoffigures}{
7455 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
7456
7457 === list of figures ===
7458
7459 }
7460 {
7461 \LWR@printpendingfootnotes
7462 \LWR@origlistoffigures
7463 }
7464 }
```

#### \listoftables

```
7465 \let\LWR@origlistoftables\listoftables
7466
7467 \renewcommand*{\listoftables}{
7468 \ifboolexpr{bool{FormatWP} and bool{WPMarkLOFT}}{
7469
7470 === list of tables ===
7471
7472 }
7473 {
7474 \LWR@printpendingfootnotes
7475 \LWR@origlistoftables
```

```
7476 }
7477 }
```

## 68.2 High-level TOC commands

`\listof`  $\langle type \rangle$   $\langle title \rangle$

Emulate the `\listof` command from the `float` package (section 175). Used to create lists of custom float types. Also used to redefine the standard  $\text{\LaTeX}$  `\listoffigures` and `\listoftables` commands.

```
7478 \NewDocumentCommand{\listof}{m +m}{%
7479 \LWR@subtableofcontents{\@nameuse{ext@#1}}{#2}
7480 \expandafter\newwrite\csname tf@\csname ext@#1\endcsname\endcsname
7481 \immediate\openout \csname tf@\csname ext@#1\endcsname\endcsname
7482 \jobname.\csuse{ext@#1}\relax
7483 }
```

## 68.3 Side TOC

The “side TOC” is a table-of-contents positioned to the side.

It may be renamed by redefining `\sidetocname`, and may contain paragraphs.

css may be used to format the sideTOC:

*CSS related to sideTOC:*

---

**nav.sidetoc:** The entire sideroc.

**div.sidetoctitle:** The title.

**div.sidetoccontents:** The table of contents.

---

```
7484 \end{warpHTML}
```

**for HTML & PRINT:** `7485 \begin{warpall}`

**Ctrl SideTOCDepth** Controls how deep the side-TOC gets. Use a standard  $\text{\LaTeX}$  section level similar to `tocdepth`.

```
7486 \newcounter{SideTOCDepth}
7487 \setcounter{SideTOCDepth}{1}
```

`\sitetocname` Holds the default name for the sidenav.

```
7488 \newcommand{\sitetocname}{Contents}
```

```
7489 \end{warpall}
```

**for HTML output:** 7490 `\begin{warpHTML}`

`\LWR@sitetoc` Creates the actual side-TOC.

```
7491 \newcommand*\LWR@sitetoc{
```

```
7492 \LWR@forcenewpage
```

```
7493 \LWR@stoppars
```

```
7494
```

The entire sidenav is placed into a `nav` of class `sidenav`.

```
7495 \LWR@htmlclass{nav}{sidenav}
```

```
7496
```

```
7497 \setcounter{tocdepth}{\value{SideTOCDepth}}
```

```
7498
```

The title is placed into a `<div>` of class `sidenav_title`, and may contain paragraphs.

```
7499 \begin{BlockClass}{sidenav_title}
```

```
7500 \sitetocname
```

```
7501 \end{BlockClass}
```

The table of contents is placed into a `<div>` of class `sidenav_contents`.

```
7502 \begin{BlockClass}{sidenav_contents}
```

```
7503 \LinkHome
```

```
7504
```

```
7505 \LWR@myshorttoc{sidenav}
```

```
7506 \end{BlockClass}
```

```
7507 \LWR@htmlclassend{nav}{sidenav}
```

```
7508 }
```

## 68.4 Low-level TOC line formatting

`\numberline` `{\langle number \rangle}`

(Called from each line in the `.aux`, `.lof` files.)

Record this section number for further use:

```
7509 \newcommand*\LWR@numberline}[1]{%
7510 \LWR@sectionnumber{#1}\quad%
7511 }
7512
7513 \LetLtxMacro\numberline\LWR@numberline
```

`\hypertoc`  $\langle 1: depth \rangle \langle 2: type \rangle \langle 3: name \rangle \langle 4: page \rangle$

Called by `\l@section`, etc. to create a hyperlink to a section.

The autopage label is always created just after the section opens.

**#1** is depth

**#2** is section, subsection, etc.

**#3** the text of the caption

**#4** page number

```
7514 \NewDocumentCommand{\hypertoc}{m m +m m}{%
7515 \LWR@traceinfo{hypertoc !#1!#2!#3!#4!}%
```

Respond to tocdepth:

```
7516 \ifthenelse{\cnttest{#1}{<=} {\value{tocdepth}}}{%
7517 \LWR@startpars%
```

Create an HTML link to `filename#autosec-(page)`, with text of the caption, of the given HTML class.

```
7518 \LWR@subhyperrefclass{%
7519 \LWR@htmlrefsectionfilename{autopage-#4}\LWR@origpound\LWR@origmbox{autosec-#4}%
7520 }{#3}{toc#2}%
7521 \LWR@stoppars%
7522 }
7523 {}
7524 \LWR@traceinfo{hypertoc done}%
7525 }
```

Ctrl `lofdepth` TOC depth for figures.

```
7526 \@ifclassloaded{memoir}{%
7527 \newcounter{lofdepth}
7528 \setcounter{lofdepth}{1}
7529 }
```

Ctrl lotdepth TOC depth for tables.

```
7530 \@ifclassloaded{memoir}{%
7531 \newcounter{lotdepth}
7532 \setcounter{lotdepth}{1}
7533 }
```

`\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

```
7534 \newcommand{\hypertocfloat}[5]{%
7535 \LWR@startpars
```

If some float-creation package has not yet defined the float type's `lofdepth` counter, etc, define it here:

```
7536 \@ifundefined{c@#3depth}{%
7537 \newcounter{#3depth}%
7538 \setcounter{#3depth}{1}%
7539 }{ }%
```

Respond to `lofdepth`, etc.:

```
7540 \LWR@traceinfo{hypertocfloat depth is #1 #3depth is \arabic{#3depth}}%
7541 \ifthenelse{\cnttest{#1}{<=} {\arabic{#3depth}}}{%
7542 \LWR@startpars%
```

Create an HTML link to `filename#autoid-(float number)`, with text of the caption, of the given HTML class.

```
7543 \LWR@subhyperrefclass{%
7544 \LWR@htmlrefsectionfilename{autopage-\arabic{LWR@nextautopage}}%
7545 \LWR@origpound\LWR@origmbox{autoid-\arabic{LWR@nextautoid}}}%
7546 {#4}{toc#2}%
7547 \LWR@stoppars%
7548 }{ }%
7549 }
```

Automatically called by `\contentsline`:

`\l@part` `{<name>}` `{<page>}`

Uses `\DeclareDocumentCommand` in case the class does not happen to have a `\part`.

```
7550 \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`.

```
7551 \DeclareDocumentCommand{\l@chapter}{m m}
7552 {\hypertoc{0}{chapter}{#1}{#2}}
```

`\l@section` `{<name>}` `{<page>}`

```
7553 \renewcommand{\l@section}[2]{\hypertoc{1}{section}{#1}{#2}}
```

`\l@subsection` `{<name>}` `{<page>}`

```
7554 \renewcommand{\l@subsection}[2]{\hypertoc{2}{subsection}{#1}{#2}}
```

`\l@subsubsection` `{<name>}` `{<page>}`

```
7555 \renewcommand{\l@subsubsection}[2]{\hypertoc{3}{subsubsection}{#1}{#2}}
```

`\l@paragraph` `{<name>}` `{<page>}`

```
7556 \renewcommand{\l@paragraph}[2]{\hypertoc{4}{paragraph}{#1}{#2}}
```

`\l@subparagraph` `{<name>}` `{<page>}`

```
7557 \renewcommand{\l@subparagraph}[2]{\hypertoc{5}{subparagraph}{#1}{#2}}
```

`\l@figure` `{<name>}` `{<page>}`

```
7558 \renewcommand{\l@figure}[2]{\hypertocfloat{1}{figure}{lof}{#1}{#2}}
```

`\l@table` `{<name>}` `{<page>}`

```
7559 \renewcommand{\l@table}[2]{\hypertocfloat{1}{table}{lot}{#1}{#2}}
```

```
7560 \end{warpHTML}
```

## 69 Index and glossary

See:

[http://tex.stackexchange.com/questions/187038/  
how-to-mention-section-number-in-index-created-by-imakeidx](http://tex.stackexchange.com/questions/187038/how-to-mention-section-number-in-index-created-by-imakeidx)

Index links are tracked by the counter `LWR@autoindex`. This counter is used to create a label for each index entry, and a reference to this label for each entry in the index listing. This method allows each index entry to link directly to its exact position in the document.

**for HTML output:** 7561 `\begin{warpHTML}`

```
7562 \newcounter{LWR@autoindex}
7563 \setcounter{LWR@autoindex}{0}
7564
7565 \newcounter{LWR@autoglossary}
7566 \setcounter{LWR@autoglossary}{0}
```

`\printindex`

```
7567 \let\LWR@origprintindex\printindex
7568
7569 \renewcommand*\printindex
7570 {
7571 \LWR@startpars
7572 \LWR@origprintindex
7573 }
```

Env `theindex`

```
7574 \@ifundefined{chapter}
7575 {\newcommand*\LWR@indexsection[1]{\section*{#1}}}
7576 {\newcommand*\LWR@indexsection[1]{\chapter*{#1}}}
7577
7578 \renewenvironment*{theindex}{%
7579 \LWR@indexsection{\indexname}%
7580 \let\item\LWR@indexitem%
7581 \let\subitem\LWR@indexsubitem%
7582 \let\subsubitem\LWR@indexsubsubitem%
7583 }{}
```

`\LWR@indexitem`

```
7584 \newcommand{\LWR@indexitem}{
7585
7586 \InlineClass@indexitem}{}
7587 }
```

`\LWR@indexitem`

```
7588 \newcommand{\LWR@indexsubitem}{
7589
7590 \InlineClass@indexsubitem}{}
7591 }
```

`\LWR@indexitem`

```
7592 \newcommand{\LWR@indexsubsubitem}{
7593
7594 \InlineClass@indexsubsubitem}{}
7595 }
```

`\@wrindex` `{\langle term \rangle}` Redefined to write the `LWR@autoindex` counter instead of page

```
7596 \def\LWR@wrindex#1{%
7597 \addtocounter{LWR@autoindex}{1}%
7598 \LWR@newlabel{LWRindex-\arabic{LWR@autoindex}}%
7599 \protected@write\@indexfile{}%
7600 {\string\indexentry{#1}{\arabic{LWR@autoindex}}}%
7601 \endgroup
7602 \@esphack}
7603
7604 \let\@wrindex\LWR@wrindex
```

`\@wrglossary` `{\langle term \rangle}` Redefined to write the `LWR@latestautopage` counter instead of page

```
7605 \def\@wrglossary#1{%
7606 \addtocounter{LWR@autoglossary}{1}%
7607 \LWR@newlabel{LWRglossary-\theLWR@autoglossary}%
7608 \protected@write\@glossaryfile{}%
7609 {\string\glossaryentry{#1}{\theLWR@autoglossary}}%
7610 \endgroup
7611 \@esphack}
```

`\hyperindexref` `{\langle autosecnumber \rangle}`

`\hyperindexref{web address}` is inserted into `*.ind` by the xindy style file `lwarp.xdy`

```
7612 \newcommand*{\hyperindexref}[1]{\nameref{LWRindex-#1}}
```

```
7613 \end{warpHTML}
```

**for PRINT output:** A null command for print mode, in case **hyperref** was not used:

```
7614 \begin{warpprint}
7615 \newcommand{\hyperindexref}[1]{#1}
7616 \end{warpprint}
```

**for HTML & PRINT:** For the **glossaries** package, try to prevent an error where `\glo@name` was not found:

```
7617 \begin{warpall}
7618 \providecommand{\glo@name}{}
7619 \end{warpall}
```

## 70 Bibliography presentation

**for HTML output:** 7620 \begin{warpHTML}

`\bibliography`  $\{ \langle filenames \rangle \}$

Modified to use the base jobname instead of the `_html` jobname.

```
7621 \def\bibliography#1{%
7622 \if@filesw
7623 \immediate\write\@auxout{\string\bibdata{#1}}%
7624 \fi
7625 % \input@{\jobname.bbl}% original
7626 \input@{\BaseJobname.bbl}% lwarp
7627 \DeclareDocumentCommand{\etalchar}{m}{#1}% lwarp
7628 }
```

`\@biblabel`  $\{ \langle text-refnumber \rangle \}$

Modified to use the base jobname instead of the `_html` jobname.

```
7629 \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>

```

7630 \AtBeginDocument{
7631 \AtBeginEnvironment{thebibliography}{
7632 \providecommand*\LWR@newem}[1]{\textit{#1}}
7633
7634 \renewrobustcmd{\em}{%
7635 \begingroup
7636 \gdef\LWR@em@after{\LWR@em@finish\LWR@newem}%
7637 \afterassignment\LWR@em@after
7638 \toks@\bgroup
7639 }
7640
7641 \def\LWR@em@finish#1{%
7642 \xdef\LWR@em@after{\noexpand#1{\the\toks@}}%
7643 \endgroup
7644 \LWR@em@after\egroup
7645 }
7646 \DeclareDocumentCommand{\etalchar}{m}{#1}
7647 }% \AtBeginEnvironment{thebibliography}

```

Patch for **babelbib**:

```

7648 \BeforeBeginEnvironment{thebibliography}{%
7649 \DeclareDocumentCommand{\etalchar}{m}{#1}
7650 }% \BeforeBeginEnvironment
7651 }% \AtBeginDocument

7652 \end{warpHTML}

```

## 71 Restoring original formatting

**for HTML output:** 7653 \begin{warpHTML}

`\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`. A number of packages will `\appto` additional actions to this macro.

Various packages add to this macro using `\appto`.

```

7654 \newcommand*\LWR@restoreorigformatting){%
7655 \LWR@traceinfo{\LWR@restoreorigformatting}%
7656 \linespread{1}}%

```

```

7657 \LetLtxMacro\caption@begin\LWR@origcaption@begin%
7658 \LetLtxMacro\caption@end\LWR@origcaption@end%
7659 \let\par\LWR@origpar%

7660 \LetLtxMacro\ref\LWR@origref%{} syntax highlighting

7661 \let\normalsize\LWR@orignormalsize%
7662 \let\small\LWR@origsmall%
7663 \let\footnotesize\LWR@origfootnotesize%
7664 \let\scriptsize\LWR@origscriptsize%
7665 \let\tiny\LWR@origtiny%
7666 \let\large\LWR@origlarge%
7667 \let\Large\LWR@origLarge%
7668 \let\LARGE\LWR@origLARGE%
7669 \let\huge\LWR@orighuge%
7670 \let\Huge\LWR@origHuge%

7671 \RenewDocumentCommand{\InlineClass}{o m +m}{##3}%
7672 \RenewDocumentEnvironment{BlockClass}{o m}{-}{-}%
7673 \renewcommand{\BlockClassSingle}[2]{##2}%
7674 \LetLtxMacro{\hspace}{\LWR@orighspace}%

7675 \LetLtxMacro\hfill\LWR@orighfill%
7676 \LetLtxMacro\hfil\LWR@orighfil%
7677 \LetLtxMacro\rule\LWR@origrule%
7678 \LetLtxMacro\hrulefill\LWR@orighrulefill%
7679 \LetLtxMacro\dotfill\LWR@origdotfill%
7680 \let\vspace\LWR@origvspace%
7681 \let\hss\LWR@orighss%
7682 \let\llap\LWR@origllap%
7683 \let\rlap\LWR@origrlap%
7684 \let\hfilneg\LWR@orighfilneg%

7685 \let\raggedright\LWR@origraggedright%
7686 \let\raggedleft\LWR@origraggedleft%
7687 \let\centering\LWR@origcentering%

7688 \let\,\LWR@origcomma% disable HTML short unbreakable space
7689 \let\textellipsis\LWR@origtextellipsis%
7690 \let\textless\LWR@origtextless%
7691 \let\textgreater\LWR@origtextgreater%
7692 \LetLtxMacro{\textrm}{\LWR@origtextrm}%
7693 \LetLtxMacro{\textsf}{\LWR@origtextsf}%
7694 \LetLtxMacro{\texttt}{\LWR@origtexttt}%
7695 \LetLtxMacro{\textbf}{\LWR@origtextbf}%
7696 \LetLtxMacro{\textmd}{\LWR@origtextmd}%
7697 \LetLtxMacro{\textit}{\LWR@origtextit}%

```

```
7698 \LetLtxMacro{\textsl}{\LWR@origtextsl}%
7699 \LetLtxMacro{\textsc}{\LWR@origtextsc}%
7700 \LetLtxMacro{\textup}{\LWR@origtextup}%
7701 \LetLtxMacro{\textnormal}{\LWR@origtextnormal}%
7702 \LetLtxMacro{\emph}{\LWR@origemph}%
7703 \LetLtxMacro{\rmfamily}{\LWR@origrmfamily}%
7704 \LetLtxMacro{\sffamily}{\LWR@origsffamily}%
7705 \LetLtxMacro{\ttfamily}{\LWR@origttfamily}%
7706 \LetLtxMacro{\bfseries}{\LWR@origbfseries}%
7707 \LetLtxMacro{\mdseries}{\LWR@origmdseries}%
7708 \LetLtxMacro{\upshape}{\LWR@origupshape}%
7709 \LetLtxMacro{\slshape}{\LWR@origslshape}%
7710 \LetLtxMacro{\scshape}{\LWR@origscshape}%
7711 \LetLtxMacro{\itshape}{\LWR@origitshape}%
7712 \LetLtxMacro{\em}{\LWR@origem}%
7713 \LetLtxMacro{\normalfont}{\LWR@orignormalfont}%
7714 \let\sp\LWR@origsp%
7715 \let\sb\LWR@origsb%
7716 \LetLtxMacro\textsuperscript\LWR@origtextsuperscript%
7717 \LetLtxMacro@textsuperscript\LWR@orig@textsuperscript%
7718 \LetLtxMacro\textsubscript\LWR@origtextsubscript%
7719 \LetLtxMacro@textsubscript\LWR@orig@textsubscript%
7720 \LetLtxMacro\underline\LWR@origunderline%
7721 \let~\LWR@origtilde%
7722 \let\enskip\LWR@origenskip%
7723 \let\quad\LWR@origquad%
7724 \let\qquad\LWR@origqquad%
7725 \LetLtxMacro\tabular\LWR@origtabular%
7726 \LetLtxMacro\endtabular\LWR@origendtabular%
7727 \LetLtxMacro\noalign\LWR@orignoalign%
7728 \LetLtxMacro\hline\LWR@orighline%
7729 \LetLtxMacro\toprule\LWR@origtoprule%
7730 \LetLtxMacro\midrule\LWR@origmidrule%
7731 \LetLtxMacro\cmidrule\LWR@origcmidrule%
7732 \LetLtxMacro\bottomrule\LWR@origbottomrule%
7733 \LetLtxMacro\addlinespace\LWR@origaddlinespace%
7734 \LetLtxMacro\morecmidrules\LWR@origmorecmidrules%
7735 \LetLtxMacro\specialrule\LWR@origspecialrule%
7736 \let\newline\LWR@orignewline%
7737 \LetLtxMacro{\raisebox}{\LWR@origraisebox}%
7738 \LetLtxMacro\includegraphics\LWR@origincludegraphics%
7739 \LetLtxMacro{\scalebox}{\LWR@origscalebox}%
7740 \LetLtxMacro{\rotatebox}{\LWR@origrotatebox}%
7741 \let\reflectbox\LWR@origreflectbox%
7742 \LetLtxMacro\resizebox\LWR@origresizebox%
7743 \let\framebox\LWR@origframebox%

7744 \LetLtxMacro\mbox\LWR@origmbox%
```

```

7745 \let\makebox\LWR@origmakebox%
7746 \let\fbbox\LWRprint@fbbox%
7747 \let\fbboxBlock\LWRprint@fbbox%
7748 \LetLtxMacro{\fminipage}{\LWRprint@fminipage}%
7749 \LetLtxMacro{\endfminipage}{\endLWRprint@fminipage}%
7750 \LetLtxMacro{\minipage}{\LWR@origminipage}%
7751 \let\endminipage\LWR@origendminipage%
7752 \LetLtxMacro{\parbox}{\LWR@origparbox}%
7753 \let\TeX\LWR@origTeX%
7754 \let\LaTeX\LWR@origLaTeX%
7755 \let\LaTeXe\LWR@origLaTeXe%
7756 \renewcommand*{\Xe}{X\textsubscript{E}}%

7757 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
7758 %
7759 \LWR@restoreorigaccents%
7760 \LWR@restoreoriglists%
7761 %
7762 \LWR@FBcancel%
7763 }

7764 \end{warpHTML}

```

## 72 Math

### 72.1 Limitations

#### 72.1.1 Rendering tradeoffs

- Math rendering** Math may be rendered as SVG graphics or using the MATHJAX JavaScript display engine.
- SVG files** Rendering math as images creates a new SVG file for each expression, except that an MD5 hash is used to combine identical duplicates of the same inline math expression into a single file, which must be converted to SVG only once. Display math is still handled as individual files, since it may contain labels or references which are likely to change.
  - SVG inline** The SVG images are currently stored separately, but they could be encoded in-line directly into the HTML document. This may reduce the number of files and potentially speed loading the images, but slows the display of the rest of the document before the images are loaded.
  - PNG files** Others  $\text{\LaTeX}$ -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.

### 72.1.2 SVG option

**SVG math option** For SVG math, math is rendered as usual by  $\TeX$  into the initial PDF file using the current font<sup>15</sup>, then is captured from the PDF and converted to SVG graphics via a number of utility programs. The SVG format is a scalable-vector web format, so math may be typeset by  $\TeX$  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  $\TeX$  code which generated the math, allowing copy/paste of the  $\TeX$  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}{large}
```

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

 **SVG math in  $\TeX$  boxes** SVG math does not work inside  $\TeX$  boxes, since a `\newpage` is required before and after each image.

### 72.1.3 MATHJAX option

**MATHJAX math option** The popular MATHJAX alternative ([mathjax.org](http://mathjax.org)) may be used to display math.

Prog MathJax

<sup>15</sup>See section 345 regarding fonts and fractions.

When MATHJAX is enabled, math is rendered twice:

1. As regular  $\LaTeX$  PDF output placed inside an HTML comment, allowing equation numbering and cross referencing to be almost entirely under the control of  $\LaTeX$ , and
2. As detokenized printed  $\LaTeX$  commands placed directly into the HTML output for interpretation by the MATHJAX display scripts. An additional script is used to pre-set the equation number format and value according to the current  $\LaTeX$  values, and the MATHJAX cross-referencing system is ignored in favor of the  $\LaTeX$  internal system, seamlessly integrating with the rest of the  $\LaTeX$  code.

#### 72.1.4 Customizing MATHJAX

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

Examples:

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

#### 72.1.5 MATHJAX limitations

**MATHJAX limitations** Limitations when using MATHJAX include:

Prog MathJax

**chapter numbers**

- In document classes which have chapters,  $\tagged$  equations have the chapter number prepended in HTML output, unlike  $\LaTeX$ .  $\tag*$  equations (correctly) do not. This may be improved with future versions of the MATHJAX support script.

<https://groups.google.com/forum/#!topic/mathjax-users/jUtewUcE2bY>

**subequations**

- MATHJAX itself does not support subequations. This may be improved by parsing the  $\LaTeX$  math expression to manually insert tags, but this has not yet been done.

**footnotes in math**

- Footnotes inside equations are not yet supported while using MATHJAX.

- lateximage
  - Math appearing inside a `lateximage`, and therefore also inside a `Tikz` or `picture` environment, is rendered as SVG math even if `MATHJAX` is used in the rest of the document.
- siunitx
  - Usage of `siunitx` inside a math equation is supported via a third-party `MATHJAX` extension. While inside a math expression, do not use `\SI` or `\si` inside `\text`, where it will be rendered as normal text.  
<https://github.com/burnpanck/MathJax-siunitx>  
 Also see section 9.6.10.
- ⚠ siunitx inside an equation
- tabbing
  - A `tabbing` environment is emulated using an HTML `<pre>`. While `MATHJAX` is enabled inside `tabbing`, the browser may not correctly render the horizontal alignment of the math and text following after on the same line.
- ⚠ other macros and packages
  - Other math-related macros and packages are not supported by `MATHJAX`, including `\ensuremath`, **`bigdelim`**, **`units`**, and **`nicefrac`**, along with occasionally-used macros such as `\footnote` and `\relax`.

### 72.1.6 Display math

- `\displaymathnormal` By default, or when selecting `\displaymathnormal`, math display environments print their contents in `MATHJAX`, and render their contents in SVG math as well as use their contents in 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 for `MATHJAX`, 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.

## 72.2 Inline and display math

for HTML output: `7765 \begin{warpHTML}`

Ctrl `LWR@externalfilecnt` Counter for the external files which are generated and then referenced from the HTML:

`7766 \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.

```
7767 \newbool{LWR@indisplaymathimage}
```

`\$` Plain dollar signs appearing in the HTML output may be interpreted by MATHJAX to be math shifts. For a plain text dollar `\$`, use an HTML entity to avoid it being interpreted by MATHJAX, unless are inside a `lateximage`, in which case it will not be seen by MATHJAX.

```
7768 \let\LWR@origtextdollar\$
7769
7770 \renewcommand*{\$}{%
7771 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
7772 {\LWR@origtextdollar}%
7773 {\HTMLentity{dollar}}%
7774 }
```

`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.

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.

```
7775 \AtBeginDocument{
7776
7777 \IfFileExists{lwarp_baseline_marker.png}%
7778 {
7779 \ifpackageloaded{graphicx}{
7780 \newcommand*\LWR@addbaselinemarker}{%
7781 \LWR@origincludgraphics[%
7782 width=10sp,height=10sp%
7783]{lwarp_baseline_marker.png}%
7784 }
7785 }
7786 }
```

```

7784 }
7785 }{
7786 \@ifpackageloaded{graphics}{
7787 \newcommand*\LWR@addbaselinemarker}{%
7788 \LWR@originincludegraphics{lwarp_baseline_marker.png}%
7789 }
7790 }{
7791 \PackageWarning{lwarp}{Load graphicx or graphics
7792 for improved SVG math baselines,}
7793 \newcommand*\LWR@addbaselinemarker}{%
7794 \hspace*{10sp}%
7795 }
7796 }
7797 }
7798 }{% lwarp_baseline_marker.png not present
7799 \PackageWarning{lwarp}{File lwarp_baseline_marker.png is not installed alongside
7800 the lwarp-*.sty files, so SVG math baselines may not be accurate,}
7801 \newcommand*\LWR@addbaselinemarker}{%
7802 \hspace*{10sp}%
7803 }
7804 }
7805
7806 }% AtBeginDocument

```

`\LWR@subsingledollar` \*  $\langle 2: \textit{alt text} \rangle \langle 3: \textit{add'l hashing} \rangle \langle 4: \textit{math expression} \rangle$

For inline math. Uses MathJax, or for SVG math the image is measured and adjusted to the baseline of the HTML output, and placed inside a `lateximage`.

**image filename hashing** If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated  $\TeX$  expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple `alt` tag is still the same.

```

7807 \newlength{\LWR@singledollarwidth}
7808 \newlength{\LWR@singledollarheight}
7809 \newlength{\LWR@singledollardepth}
7810
7811 \newsavebox{\LWR@singledollarbox}

```

```

7812
7813 \NewDocumentCommand{\LWR@subsingledollar}{s m m m}{%
7814 \LWR@traceinfo{\LWR@subsingledollar}%

7815 \ifnumcomp{\value{\LWR@lateximagedepth}}{>}{0}{%
7816 {%
7817 \LWR@traceinfo{\LWR@subsingledollar: already in a lateximage}%
7818 #4% contents
7819 }%
7820 {% not in a lateximage
7821 \begingroup%

```

MathJax cannot parse the often complicated T<sub>E</sub>X expressions which appear in the various uses of `\ensuredmath`. `\ensuremath` forces the alt tag to “(math image)”. 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`, print the math expression.

```

7822 \ifboolexpr{%
7823 (
7824 bool{mathjax} or
7825 (bool{FormatWP} and bool{WPMarkMath})
7826) and
7827 (not test { \ifstrequal {#2} {(math image)} })% from \ensuredmath
7828 }%

```

For MATHJAX, print the math between `\(` and `\)`:

```

7829 {%
7830 {\textbackslash(\LWR@HTMLsanitize{#4}\textbackslash)}%
7831 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the  $\LaTeX$  code, and a CSS style to control the baseline adjustment.

```

7832 {% not mathjax
7833 \LWR@traceinfo{\LWR@subsingledollar: not mathjax}%

```

Measure the depth, width, and height of the math image:

```

7834 \begingroup%

```

Temporarily disable formatting while measuring the image parameters:

```

7835 \LWR@restoreorigformatting%
7836 \RenewDocumentEnvironment{lateximage}{s o o o}{-}{-}% inside group

```

```
7837 \LWR@orignormalsize%
```

Temporarily set font for the HTML PDF output:

```
7838 \LWR@traceinfo{Using font family \LWR@f@family}%
7839 \csuse{LWR@orig\LWR@f@family family}%
7840 \LWR@traceinfo{Using font series \LWR@f@series}%
7841 \csuse{LWR@orig\LWR@f@series series}%
7842 \LWR@traceinfo{Using font shape \LWR@f@shape}%
7843 \csuse{LWR@orig\LWR@f@shape shape}%
```

`lateximagedepth` must be nested to avoid generating paragraph tags.  $\mathcal{A}\mathcal{M}\mathcal{S}$  math modifies the `\text` macro such that `\addtocounter` does not always occur as expected. Lower-level code is used instead.

```
7844 \global\advance\c@LWR@lateximagedepth 1\relax%
```

Typeset and save the contents:

```
7845 \global\sbox{\LWR@singledollarbox}{#4}%
```

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.

```
7846 \global\sbox{\LWR@singledollarbox}{%
7847 \usebox{\LWR@singledollarbox}%
7848 \hspace*{-10sp}%
7849 \raisebox{-\dp\LWR@singledollarbox}{%
7850 \LWR@addbaselinemarker%
7851 }%
7852 }%
```

More low-level code to undo the counter change.

```
7853 \global\advance\c@LWR@lateximagedepth -1\relax% Due to AmS \text macro.
```

Measure the depth:

```
7854 \setlength{\LWR@singledollardepth}{%
7855 \LateximageFontScale\dp\LWR@singledollarbox%
7856 }%
```

Make the length a global change:

```
7857 \global\LWR@singledollardepth=\LWR@singledollardepth%
```

Likewise for width:

```

7858 \setlength{\LWR@singledollarwidth}{%
7859 \LateximageFontScale\wd\LWR@singledollarbox%
7860 }%
7861 \global\LWR@singledollarwidth=\LWR@singledollarwidth%
```

Likewise for total height:

```

7862 \setlength{\LWR@singledollarheight}{%
7863 \LateximageFontScale\ht\LWR@singledollarbox%
7864 }%
7865 \addtolength{\LWR@singledollarheight}{%
7866 \LateximageFontScale\dp\LWR@singledollarbox%
7867 }%
7868 \global\LWR@singledollarheight=\LWR@singledollarheight%

7869 \endgroup%
```

Set a style for the the height or width. The em unit is used so that the math scales according to the user's selected font size.

Start with the greater of the width or the height, biased towards the width:

```

7870 \ifdimgreater{\LWR@singledollarwidth}{.7\LWR@singledollarheight}{%
7871 \def\LWR@singledollarstyle{%
7872 width:\LWR@converttto{em}{\the\LWR@singledollarwidth} em%
7873 }%
7874 }{%
7875 \def\LWR@singledollarstyle{%
7876 height:\LWR@converttto{em}{\the\LWR@singledollarheight} em%
7877 }%
7878 }%
```

If a very narrow width, use the height.

```

7879 \ifdimless{\LWR@singledollarwidth}{.2em}%
7880 {%
7881 \def\LWR@singledollarstyle{%
7882 height:\LWR@converttto{em}{\the\LWR@singledollarheight} em%
7883 }%
7884 }%
7885 }%
```

If very wide and short, use the width:

```

7886 \ifdimless{\LWR@singledollarheight}{.2em}%
7887 {%
```

```

7888 \def\LWR@singledollarstyle{%
7889 width:\LWR@convertto{em}{\the\LWR@singledollarwidth} em%
7890 }%
7891 }%
7892 {}%

```

If there is significant text depth, add the depth to the style.

```

7893 \ifdimgreater{\LWR@singledollardepth}{0.05ex}{%
7894 \def\LWR@singledollardepthstyle{%
7895 \ ; % extra space
7896 \LWR@origmbox{%
7897 vertical-align:-\LWR@convertto{em}{\the\LWR@singledollardepth} em%
7898 } % extra space
7899 }%
7900 }{%
7901 \def\LWR@singledollardepthstyle{}%
7902 }%

```

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.

```

7903 \IfValueTF{#1}{%
7904 \LWR@findcurrenttextcolor% sets \LWR@tempcolor
7905 \begin{lateximage}*% use hashing
7906 [#2]% alt
7907 [% add'l hashing
7908 #3%
7909 FM\LWR@f@family%
7910 SR\LWR@f@series%
7911 SH\LWR@f@shape%
7912 CL\LWR@tempcolor%
7913]%
7914 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
7915 }{%
7916 \begin{lateximage}% no hashing
7917 [#2]% alt
7918 [% no add'l hashing
7919 [\LWR@singledollarstyle \LWR@singledollardepthstyle]% CSS
7920]%

```

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.)

```
7921 \LWR@addbaselinemarker%
7922 \hspace*{-10sp}%
```

Typeset the contents:

```
7923 \usebox{\LWR@singledollarbox}%
```

The closing baseline marker:

```
7924 \hspace*{-10sp}%
7925 \LWR@addbaselinemarker%

7926 \end{lateximage}%
7927 %
7928 }% not mathjax
7929 \endgroup%
7930 }% not in a lateximage
7931 \LWR@traceinfo{\LWR@subsingledollar: done}%
7932 }

7933 \LetLtxMacro\LWR@origdollar$
7934 \LetLtxMacro\LWR@secondorigdollar$% balance for editor syntax highlighting

7935 \LetLtxMacro\LWR@origopenparen\ (
7936 \LetLtxMacro\LWR@origcloseparen\)
7937 \LetLtxMacro\LWR@origopenbracket\ [
7938 \LetLtxMacro\LWR@origclosebracket\]
```

**\$** Redefine the dollar sign to place math inside a lateximage, or use MATHJAX:  
**\$\$**

```
7939 \begingroup
7940 \catcode'\$=\active%
7941 \protected\gdef$\{\@ifnextchar$\LWR@doubledollar\LWR@singledollar}%
```

Used by **chemformula** to escape single-dollar math:

```
7942 \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:

```
7943 \protected\gdef\LWR@doubledollar$#1$$#{%
```

If MATHJAX or formatting for a word processor, print the  $\mathbb{E}X$  expression:

```
7944 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
```

For MATHJAX, print the math between `\[` and `\]`:

```

7945 {
7946
7947 \textbackslash[%
7948 \LWR@HTMLsanitize{#1}%
7949 \textbackslash]
7950
7951 }% mathjax

```

For SVG, print the math inside a `lateximage`, with an `<alt>` tag of the  $\LaTeX$  code:

```

7952 {% not mathjax
7953 \begin{BlockClass}{displaymath}%
7954 \LWR@newautoidanchor%
7955 \booltrue{LWR@indisplaymathimage}%
7956 \begin{lateximage}%
7957 [%
7958 \textbackslash{[] % extra space
7959 \LWR@HTMLsanitize{#1} % extra space
7960 \textbackslash{]}%
7961]%
7962 \LWR@origdollar\LWR@origdollar#1\LWR@origdollar\LWR@origdollar%
7963 \end{lateximage}%
7964 \end{BlockClass}%
7965 }% not mathjax
7966 }%

```

`\LWR@singledollar` `{\langle alt text \rangle}{\langle math expression \rangle}`

```

7967 \protected\gdef\LWR@singledollar#1${%
7968 \ifbool{mathjax}{%
7969 \LWR@subsingledollar*%
7970 {% alt tag
7971 \textbackslash(%
7972 \LWR@HTMLsanitize{#1} % extra space
7973 \textbackslash)%
7974 }%
7975 {singledollar}% add'l hashing
7976 {#1}% contents
7977 }{% not mathjax
7978 \LWR@subsingledollar*%
7979 {% alt tag
7980 \textbackslash(%
7981 \LWR@HTMLsanitize{#1} % extra space
7982 \textbackslash)%
7983 }%
7984 {singledollar}% add'l hashing
7985 {\LWR@origensuredmath{#1}}% contents

```

```
7986 }% not mathjax
7987 }
```

```
\(Redefine to the above dollar macros.
\)
```

```
7988 \protected\gdef\(#1\){$#1$}
7989 \protected\gdef\[#1\]{$$#1$$}
7990
7991 \endgroup
7992
7993 \LetLtxMacro\LWR@openbracketnormal\[
7994 \LetLtxMacro\LWR@closebracketnormal\]
```

`\@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.

```
7995 \LetLtxMacro\LWR@origensuredmath\@ensuredmath
7996
7997 \renewcommand{\@ensuredmath}[1]{%
7998 \ifbool{mathjax}{%
7999 \LWR@subsingledollar*{(math image)}{%
8000 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
8001 }{\relax%
8002 \LWR@origensuredmath{#1}}%
8003 }%
8004 }{% SVG math
```

If already inside a `lateximage` in `math` mode, continue as-is.

```
8005 \ifmmode%
8006 \LWR@origensuredmath{#1}%
8007 \else%
```

Create an inline `math lateximage` with a simple `alt` tag and additional hashing according to the contents.

```
8008 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
8009 {\LWR@origensuredmath{#1}}%
8010 {%
8011 \LWR@subsingledollar*{(math image)}{%
8012 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}}%
8013 }{%
8014 \LWR@origensuredmath{#1}}%
8015 }%
```

```

8016 }%
8017 \fi%
8018 }%
8019 }

```

Remove the old math and displaymath environments:

```

8020 \let\math\relax
8021 \let\endmath\relax
8022 \let\displaymath\relax
8023 \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`.

```

8024 \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`.

```

8025 \NewEnviron{LWR@displaymathnormal}{\expandafter\[\BODY\]\@ignoretrue}

```

Set the default displaymath to the normal version:

```

8026 \LetLtxMacro\[\LWR@openbracketnormal%
8027 \LetLtxMacro\]\LWR@closebracketnormal%
8028 \LetLtxMacro\displaymath\LWR@displaymathnormal%
8029 \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.

```

8030 \newenvironment{LWR@displaymathother}
8031 {%
8032 \begin{BlockClass}{displaymath}%
8033 \LWR@newautoidanchor%
8034 \booltrue{LWR@indisplaymathimage}%
8035 \begin{lateximage}%
8036 [(display math)]%
8037 \LWR@origdollar\LWR@origdollar%
8038 }
8039 {%
8040 \LWR@origdollar\LWR@origdollar%
8041 \end{lateximage}%
8042 \end{BlockClass}%
8043 }

```

Env LWR@equationother A version of displaymath which can handle complicated objects, but does not supply MATHJAX or HTML alt tags.

```

8044 \newenvironment{LWR@equationother}
8045 {%
8046 \begin{BlockClass}{displaymathnumbered}%
8047 \LWR@newautoidanchor%
8048 \booltrue{LWR@indisplaymathimage}%
8049 \begin{lateximage}%
8050 [(display math)]%
8051 \LWR@origequation%
8052 }
8053 {%
8054 \LWR@origendequation%
8055 \end{lateximage}%
8056 \end{BlockClass}%
8057 }
```

### 72.3 MATHJAX support

Ctrl LWR@nextequation Used to add one to compute the next equation number.

```
8058 \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  $\text{\LaTeX}$ .

```
8059 \newcommand*{\LWR@syncmathjax}{%
```

If using chapters, place the chapter number in front of the equation. Otherwise, use the simple equation number.

```

8060 \ifcsdef{thechapter}{
8061 \InlineClass{hidden}{
8062 \textbackslash(
8063 \textbackslash{}seteqsection \{\thechapter\}
8064 \textbackslash)
8065 }
8066 }
8067 {}% not using chapters
```

MATHJAX doesn't allow setting the equation number to 1:

```
8068 \ifthenelse{\cnttest{\value{equation}}>0}
8069 {
```

Tell MATHJAX that the next set of equations begins with the current  $\text{\LaTeX}$  equation number, plus one.

```
8070 \setcounter{LWR@nextequation}{\value{equation}}
8071 \addtocounter{LWR@nextequation}{1}
```

Place the MATHJAX command inside “\ (“ and “\)” characters, to be printed to HTML, not interpreted by  $\text{\LaTeX}$ .

```
8072 \InlineClass{hidden}{
8073 \textbackslash(
8074 \textbackslash{seteqnumber \{\arabic{LWR@nextequation}\}}
8075 \textbackslash)
8076 }
8077 }{\}% not eq > 0
8078 }
```

`\LWR@hidelatexequation`  $\{ \langle environment \rangle \} \{ \langle contents \rangle \}$

Creates the  $\text{\LaTeX}$  version of the equation inside an HTML comment.

```
8079 \NewDocumentCommand{\LWR@hidelatexequation}{m +m}{%
```

Stop HTML paragraph handling and open an HTML comment:

```
8080 \LWR@stoppars
8081 \LWR@htmlopencomment
8082
```

Start the  $\text{\LaTeX}$  math environment inside the HTML comment:

```
8083 \begingroup
8084 \csuse{LWR@orig#1}
```

While in the math environment, restore various commands to their  $\text{\LaTeX}$  meanings.

```
8085 \LWR@restoreorigformatting
```

See `\LWR@htmlmathlabel` in section [72.6.1](#).

Print the contents of the equation:

```
8086 #2
```

End the  $\LaTeX$  math environment inside the HTML comment:

```
8087 \csuse{LWR@origend#1}
8088 \endgroup
8089
```

Close the HTML comment and resume HTML paragraph handling:

```
8090 \LWR@htmlclosecomment
8091 \LWR@startpars
8092 }
```

```
\LWR@addmathjax {<environment>} {<contents>}
```

Given the name of a math environment and its contents, create a MATHJAX instance. The contents are printed to HTML output, not interpreted by  $\LaTeX$ .

```
8093 \NewDocumentCommand{\LWR@addmathjax}{m +m}{%
```

Enclose the MATHJAX environment inside printed “\ (“ and “\)” characters.

```
8094 \LWR@origtilde\LWR@orignewline
8095 \textbackslash{}begin\{#1\}
```

Print the contents, sanitizing for HTML special characters.

```
8096 \LWR@HTMLsanitizeexpand{\detokenize\expandafter{#2}}
```

Close the MATHJAX environment:

```
8097 \textbackslash{}end\{#1\}
8098 \LWR@orignewline
8099 }
```

## 72.4 Equation environment

Remember existing equation environment:

```
8100 \let\LWR@origequation\equation
8101 \let\LWR@origendequation\endequation
8102 \csletcs{LWR@origequation*}{equation*}
8103 \csletcs{LWR@origendequation*}{endequation*}
```

`\LWR@doequation` 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.

```
8104 \newcommand*\LWR@doequation}[2]{%
8105
```

If `mathjax` or `FormatWP`, print the  $\LaTeX$  expression:

```
8106 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
```

MATHJAX output:

```
8107 {
```

Print commands to synchronize MATHJAX's equation number and format to the current  $\LaTeX$  chapter/section and equation number:

```
8108 \LWR@syncmathjax
```

Print the  $\LaTeX$  math inside an HTML comment:

```
8109 \LWR@hidelatexequation{#2}{#1}
8110 }
```

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`.

```
8111 {% not mathjax
```

Begin the `lateximage` with an `<alt>` tag containing the math source:

```
8112 \ifstrequal{#2}{equation*}{%
8113 \begin{BlockClass}{displaymath}%
8114 }{%
8115 \begin{BlockClass}{displaymathnumbered}%
8116 }%
8117 \LWR@newautoidanchor%
8118 \booltrue{LWR@indisplaymathimage}%
8119 \begin{lateximage}[%
8120 \ifstrequal{#2}{equation*}{%
8121 \ifdefequal{\LWR@equationtag}{\theequation}{%
```

```

8122 % no tag was given
8123 }{%
8124 (\LWR@equationtag) % tag was given
8125 }%
8126 }{%
8127 (\LWR@equationtag) % automatic numbering
8128 }%
8129 \textbackslash{begin\{#2\}} % extra space
8130 \LWR@HTMLSanitizeExpand{\detokenize\expandafter{#1}} % extra space
8131 \textbackslash{end\{#2\}}%
8132 }% alt tag

```

Create the actual  $\TeX$ -formatted equation inside the `lateximage` using the contents of the environment.

```

8133 \csuse{LWR@orig#2}
8134 #1% contents collected by \collect@body
8135 \csuse{LWR@origend#2}
8136 \end{lateximage}%
8137 \end{BlockClass}
8138 }% not mathjax
8139 }

```

After the environment, if `MATHJAX`, print the math to the HTML output for `MATHJAX` processing:

```

8140 \newcommand*\LWR@doendequation}[1]{%
8141 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8142 {%
8143 \LWR@addmathjax{#1}{\BODY}%
8144 }{%
8145 }%
8146 }

```

Remove existing equation environment:

```

8147 \let\equation\relax
8148 \let\endequation\relax
8149 \csletcs{equation*}{relax}
8150 \csletcs{endequation*}{relax}

```

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`.

```

8151 \NewEnviron{equation}
8152 {
8153 \LWR@doequation{\BODY}{equation}

```

```

8154 }
8155 [\LWR@doendequation{equation}]
8156
8157 \LetLtxMacro\LWR@equationnormal\equation
8158 \LetLtxMacro\LWR@endequationnormal\endequation

```

Env `equation*`

```

8159 \NewEnviron{equation*}
8160 {\LWR@doequation{\BODY}{equation*}}
8161 [\LWR@doendequation{equation*}]
8162
8163 \csletcs{LWR@equationnormalstar}{equation*}
8164 \csletcs{LWR@endequationnormalstar}{endequation*}

```

Remember the “less” version of `equation`, which use `MATHJAX` and `alt` tags, but does not support complicated contents such as some `Tikz` expressions.

```

8165 \LetLtxMacro\LWR@equationless\equation
8166 \LetLtxMacro\LWR@endequationless\endequation
8167 \csletcs{LWR@equationlessstar}{equation*}
8168 \csletcs{LWR@endequationlessstar}{endequation*}

```

## 72.5 `\displaymathnormal` and `\displaymathother`

`\displaymathnormal` By default, or when selecting `\displaymathnormal`, math display environments print their contents in `MATHJAX`, and render their contents in `svg math` as well as use their contents in 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 for `MATHJAX`, and the `HTML alt` tags become simple messages. The contents are internally processed as an environment instead of a macro argument, so complicated objects such as `Tikz` pictures are more likely to compile successfully.

`\displaymathnormal` Use when display math environments have simple math which is to sent to `MATHJAX`  
[simple math objects](#) or included in `HTML alt` tags.

```

8169 \newcommand*{\displaymathnormal}{%
8170 \ifbool{LWR@origmathjax}{\booltrue{mathjax}}{\boolfalse{mathjax}}%

```

```

8171 \LetLtxMacro\[\LWR@openbracketnormal%
8172 \LetLtxMacro\]\LWR@closebracketnormal%
8173 \LetLtxMacro\displaymath\LWR@displaymathnormal%
8174 \LetLtxMacro\enddisplaymath\endLWR@displaymathnormal%
8175 \LetLtxMacro\equation\LWR@equationnormal%
8176 \LetLtxMacro\endequation\LWR@endequationnormal%
8177 \csletcs{equation*}{LWR@equationnormalstar}%
8178 \csletcs{endequation*}{LWR@endequationnormalstar}%
8179 }

```

`\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.

```

8180 \newcommand*{\displaymathother}{%
8181 \boolfalse{mathjax}%
8182 \LetLtxMacro\displaymath\LWR@displaymathother%
8183 \LetLtxMacro\enddisplaymath\endLWR@displaymathother%
8184 \LetLtxMacro\[\LWR@displaymathother%
8185 \LetLtxMacro\]\endLWR@displaymathother%
8186 \LetLtxMacro\equation\LWR@equationother%
8187 \LetLtxMacro\endequation\endLWR@equationother%
8188 \csletcs{equation*}{displaymath}%
8189 \csletcs{endequation*}{enddisplaymath}%
8190 }

```

```
8191 \end{warpHTML}
```

**for PRINT output:** 8192 \begin{warpprint}

Print-mode versions:

```

8193 \newcommand*{\displaymathnormal}{}
8194 \newcommand*{\displaymathother}{}

```

```
8195 \end{warpprint}
```

**for HTML output:** 8196 \begin{warpHTML}

## 72.6 AMS Math environments

### 72.6.1 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.

```
8197 \newbool{LWR@amsmultiline}
8198 \boolfalse{LWR@amsmultiline}
```

```
\LWR@htmlmathlabel {<label>}
```

**lwarp** points `\ltx@label` here. This is used by `\label` when inside a  $\TeX$  AMS math environment's math display environment.

`\LWR@origltx@label` points to the  $\TeX$  original, modified by **lwarp**, then by **amsmath**, then by **cleveref**.

```
8199 \newcommand*{\LWR@htmlmathlabel}[1]{%
8200 \LWR@traceinfo{LWR@htmlmathlabelb #1}%
```

If `mathjax` or `FormatWP`, print the  $\TeX$  expression:

```
8201 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8202 {%
```

The combined  $\TeX$  & HTML label is printed in a `\text` field:

```
8203 \text{
```

Shift the label over to the right side of the environment to avoid over-printing the math:

```
8204 \ifbool{LWR@amsmultiline}{\hspace*{\totwidth@}}
```

Temporarily end the HTML comment, insert the  $\TeX$  & HTML label, then resume the HTML comment. `\@firstofone` is required to remove extra braces introduced by the **amsmath** package.)

```
8205 \LWR@htmlclosecomment%
8206 \LWR@origltx@label{#1}%
8207 \LWR@htmlopencomment%
8208 }% text
8209 }% mathjax
8210 {%
8211 \LWR@origltx@label{#1}%
8212 }%
8213 }
```

`\LWR@beginhideamsmath` Starts hiding  $\LaTeX$  math inside an HTML comment.

```
8214 \newcommand*{\LWR@beginhideamsmath}{
8215 \LWR@stoppars
8216 \LWR@origtilde\LWR@orignewline
8217 \LWR@htmlopencomment
8218
8219 \begingroup
8220 \LWR@restoreorigformatting
8221 }
```

`\LWR@endhideamsmath` Ends hiding  $\LaTeX$  math inside an HTML comment.

```
8222 \newcommand*{\LWR@endhideamsmath}{
8223 \endgroup
8224
8225 \LWR@htmlclosecomment
8226 \LWR@orignewline
8227 \LWR@startpars
8228 }
```

### 72.6.2 Environment patches

The following **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`.

```
8229 \let\LWR@origeqnarray\eqnarray
8230 \let\LWR@origendeqnarray\endeqnarray
```

To remember whether the starred environment was used, and thus whether to number the equations:

```
8231 \newbool{LWR@numbereqnarray}
8232 \booltrue{LWR@numbereqnarray}
```

Common code used by eqnarray and Beqnarray (from **fancybox**):

```
8233 \newcommand{\LWR@eqnarrayfactor}{%
```

If mathjax or FormatWP, print the  $\LaTeX$  expression:

```
8234 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8235 {%
```

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:

```
8236 \LWR@syncmathjax
8237 \boolfalse{LWR@amsmultiline}
8238 \ifbool{LWR@numbereqnarray}
8239 {
```

If numbering the equations, execute a copy inside an HTML comment block:

```
8240 \LWR@beginhideamsmath
8241 \LWR@origeqnarray
8242 \BODY
8243 \LWR@origendeqnarray
8244 \LWR@endhideamsmath
```

Then print the (sanitized) contents to the output for MATHJAX to interpret:

```
8245 \LWR@addmathjax{eqnarray}{\BODY}
8246 }%
8247 {% not LWR@numbereqnarray
```

If not numbering equations, just create the contents for MATHJAX:

```
8248 \LWR@addmathjax{eqnarray*}{\BODY}
8249 }% LWR@numbereqnarray
8250 }% mathjax
8251 {% not mathjax
8252 \ifbool{LWR@numbereqnarray}
8253 {
```

For numbered svg equations, first create a lateximage with an alt attribute containing sanitized copy of the source code:

```
8254 \begin{BlockClass}{displaymathnumbered}%
```

```

8255 \LWR@newautoidanchor%
8256 \booltrue{LWR@indisplaymathimage}%
8257 \begin{lateximage}[(\LWR@startingequationtag--\LWR@equationtag)
8258 \LWR@addmathjax{eqnarray}{\BODY}]

```

Then create the image contents using an actual eqnarray:

```

8259 \LWR@origeqnarray
8260 \BODY
8261 \LWR@origendeqnarray
8262 \end{lateximage}
8263 \end{BlockClass}
8264 }%
8265 {% not LWR@numbreqnarray

```

If not numbered, do the same, but an extra `\nonumber` seems to be required:

```

8266 \begin{BlockClass}{displaymath}
8267 \LWR@newautoidanchor%
8268 \booltrue{LWR@indisplaymathimage}%
8269 \begin{lateximage}[\LWR@addmathjax{eqnarray*}{\BODY}]
8270 \LWR@origeqnarray
8271 \BODY
8272 \nonumber
8273 \LWR@origendeqnarray
8274 \end{lateximage}
8275 \end{BlockClass}
8276 }% LWR@numbreqnarray
8277 }% not mathjax

```

Default to number equations in the future:

```

8278 \booltrue{LWR@numbreqnarray}
8279 }

```

`eqnarray` itself is made with a blank line before and after to force it to be on its own line:

```

8280 \RenewEnviron{eqnarray}
8281 {%
8282
8283 \LWR@eqnarrayfactor
8284
8285 }

```

The starred version is patched to turn off the numbering:

```

8286 \csgpreto{eqnarray*}{\boolfalse{LWR@numbreqnarray}}

```

The following  $\mathcal{A}\mathcal{M}\mathcal{S}$  environments are more easily patched in-place:

Env `multline`

```

8287 \BeforeBeginEnvironment{multline}{
8288
8289 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8290 {
8291 \LWR@syncmathjax
8292 \booltrue{LWR@amsmultline}
8293 \LWR@beginhideamsmath
8294 }
8295 {
8296 \begin{BlockClass}{displaymathnumbered}
8297 \LWR@newautoidanchor%
8298 \booltrue{LWR@indisplaymathimage}%
8299 \begin{lateximage}[\LWR@amsmathbodynumbered{multline}]
8300 }
8301 }
8302
8303 \AfterEndEnvironment{multline}{
8304
8305 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8306 {
8307 \LWR@endhideamsmath
8308 \boolfalse{LWR@amsmultline}
8309 \LWR@addmathjax{multline}{\the\@envbody}
8310 }
8311 {\end{lateximage}\end{BlockClass}}
8312
8313 }
```

Env `multline*`

```

8314 \BeforeBeginEnvironment{multline*}{
8315
8316 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8317 {
8318 \LWR@syncmathjax
8319 \booltrue{LWR@amsmultline}
8320 \LWR@beginhideamsmath
8321 }
8322 {
8323 \begin{BlockClass}{displaymath}
8324 \LWR@newautoidanchor
8325 \booltrue{LWR@indisplaymathimage}%
8326 \begin{lateximage}[\LWR@amsmathbody{multline*}]
8327 }
```

```

8328 }
8329
8330 \AfterEndEnvironment{multline*}{
8331
8332 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8333 {
8334 \LWR@endhideamsmath
8335 \boolfalse{LWR@amsmultline}
8336 \LWR@addmathjax{multline*}{\the\@envbody}
8337 }
8338 {\end{lateximage}\end{BlockClass}}
8339
8340 }
8341

```

Env **gather**

```

8342 \BeforeBeginEnvironment{gather}{
8343
8344 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8345 {
8346 \LWR@syncmathjax
8347 \boolfalse{LWR@amsmultline}
8348 \LWR@beginhideamsmath
8349 }
8350 {
8351 \begin{BlockClass}{displaymathnumbered}
8352 \LWR@newautoidanchor%
8353 \booltrue{LWR@indisplaymathimage}%
8354 \begin{lateximage}[\LWR@amsmathbodynumbered{gather}]
8355 }
8356 }
8357
8358 \AfterEndEnvironment{gather}{
8359
8360 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8361 {
8362 \LWR@endhideamsmath
8363 \LWR@addmathjax{gather}{\the\@envbody}
8364 }
8365 {\end{lateximage}\end{BlockClass}}
8366
8367 }

```

Env **gather\***

```

8368 \BeforeBeginEnvironment{gather*}{
8369

```

```

8370 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8371 {
8372 \LWR@syncmathjax
8373 \boolfalse{LWR@amsmultline}
8374 \LWR@beginhideamsmath
8375 }
8376 {
8377 \begin{BlockClass}{displaymath}
8378 \LWR@newautoidanchor%
8379 \booltrue{LWR@indisplaymathimage}%
8380 \begin{lateximage}[\LWR@amsmathbody{gather*}]
8381 }
8382 }
8383
8384 \AfterEndEnvironment{gather*}{
8385
8386 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8387 {
8388 \LWR@endhideamsmath
8389 \LWR@addmathjax{gather*}{\the\@envbody}
8390 }
8391 {\end{lateximage}\end{BlockClass}}
8392
8393 }

```

Env align

```

8394 \BeforeBeginEnvironment{align}{
8395
8396 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8397 {
8398 \LWR@syncmathjax
8399 \boolfalse{LWR@amsmultline}
8400 \LWR@beginhideamsmath
8401 }
8402 {
8403 \begin{BlockClass}{displaymathnumbered}
8404 \LWR@newautoidanchor%
8405 \booltrue{LWR@indisplaymathimage}%
8406 \begin{lateximage}[\LWR@amsmathbodynumbered{align}]
8407 }
8408 }
8409
8410 \AfterEndEnvironment{align}{
8411
8412 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8413 {
8414 \LWR@endhideamsmath
8415 \LWR@addmathjax{align}{\the\@envbody}

```

```

8416 }
8417 {\end{lateximage}\end{BlockClass}}
8418
8419 }

```

Env `align*`

```

8420 \BeforeBeginEnvironment{align*}{
8421
8422 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8423 {
8424 \LWR@syncmathjax
8425 \boolfalse{LWR@amsmultline}
8426 \LWR@beginhideamsmath
8427 }
8428 {
8429 \begin{BlockClass}{displaymath}
8430 \LWR@newautoidanchor%
8431 \booltrue{LWR@indisplaymathimage}%
8432 \begin{lateximage}[\LWR@amsmathbody{align*}]
8433 }
8434 }
8435
8436 \AfterEndEnvironment{align*}{
8437
8438 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8439 {
8440 \LWR@endhideamsmath
8441 \LWR@addmathjax{align*}{\the\@envbody}
8442 }
8443 {\end{lateximage}\end{BlockClass}}
8444
8445 }

```

Env `flalign`

```

8446 \BeforeBeginEnvironment{flalign}{
8447
8448 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8449 {
8450 \LWR@syncmathjax
8451 \boolfalse{LWR@amsmultline}
8452 \LWR@beginhideamsmath
8453 }
8454 {
8455 \begin{BlockClass}{displaymathnumbered}
8456 \LWR@newautoidanchor%
8457 \booltrue{LWR@indisplaymathimage}%

```

```

8458 \begin{lateximage}[\LWR@amsmathbodynumbered{flalign}]
8459 }
8460 }
8461
8462 \AfterEndEnvironment{flalign}{
8463
8464 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8465 {
8466 \LWR@endhideamsmath
8467 \LWR@addmathjax{flalign}{\the\@envbody}
8468 }
8469 {\end{lateximage}\end{BlockClass}}
8470
8471 }

```

Env **flalign\***

```

8472 \BeforeBeginEnvironment{flalign*}{
8473
8474 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8475 {
8476 \LWR@syncmathjax
8477 \boolfalse{LWR@amsmultiline}
8478 \LWR@beginhideamsmath
8479 }
8480 {
8481 \begin{BlockClass}{displaymath}
8482 \LWR@newautoidanchor%
8483 \booltrue{LWR@indisplaymathimage}%
8484 \begin{lateximage}[\LWR@amsmathbody{flalign*}]
8485 }
8486 }
8487
8488 \AfterEndEnvironment{flalign*}{
8489
8490 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8491 {
8492 \LWR@endhideamsmath
8493 \LWR@addmathjax{flalign*}{\the\@envbody}
8494 }
8495 {\end{lateximage}\end{BlockClass}}
8496
8497 }

```

Env **alignat**

```

8498 \BeforeBeginEnvironment{alignat}{
8499

```

```

8500 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8501 {
8502 \LWR@syncmathjax
8503 \boolfalse{LWR@amsmultline}
8504 \LWR@beginhideamsmath
8505 }
8506 {
8507 \begin{BlockClass}{displaymathnumbered}
8508 \LWR@newautoidanchor%
8509 \booltrue{LWR@indisplaymathimage}%
8510 \begin{lateximage}[\LWR@amsmathbodynumbered{alignat}]
8511 }
8512 }
8513
8514 \AfterEndEnvironment{alignat}{
8515
8516 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8517 {
8518 \LWR@endhideamsmath
8519 \LWR@addmathjax{alignat}{\the\@envbody}
8520 }
8521 {\end{lateximage}\end{BlockClass}}
8522
8523 }

```

Env **alignat\***

```

8524 \BeforeBeginEnvironment{alignat*}{
8525
8526 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8527 {
8528 \LWR@syncmathjax
8529 \boolfalse{LWR@amsmultline}
8530 \LWR@beginhideamsmath
8531 }
8532 {
8533 \begin{BlockClass}{displaymath}
8534 \LWR@newautoidanchor%
8535 \booltrue{LWR@indisplaymathimage}%
8536 \begin{lateximage}[\LWR@amsmathbody{alignat*}]
8537 }
8538 }
8539
8540 \AfterEndEnvironment{alignat*}{
8541
8542 \ifboolexpr{bool{mathjax} or (bool{FormatWP} and bool{WPMarkMath}) }%
8543 {
8544 \LWR@endhideamsmath
8545 \LWR@addmathjax{alignat*}{\the\@envbody}

```

```

8546 }
8547 {\end{lateximage}\end{BlockClass}}
8548
8549 }

8550 \end{warpHTML}

```

## 73 Lateximages

### 73.1 Description

Env `lateximage` A `lateximage` is a piece of the document which is typeset in  $\TeX$  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 71.)

A `lateximage` is typeset on its own PDF page inside an HTML comment which starts on the preceding page and ends on following page, and instructions are written to `lateximage.txt` for `lwarpmk` to extract the `lateximage` from the page of the PDF file then generate an accompanying `.svg` file image file. Meanwhile, instructions to show this image are placed into the HTML file after the comment.

An HTML `<span>` is created to hold both the HTML comment, which will have the `pdftotext` conversion, and also the link to the final `.svg` image.

A  $\TeX$  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.

[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}{large}
```

For inline `svg` math, font size is instead controlled by `\LateximageFontScale`, which defaults to:

```
\newcommand*{\LateximageFontScale}{.75}
```

## 73.2 Support counters and macros

**for HTML output:** 8551 `\begin{warpHTML}`

Ctrl `LWR@lateximagenumber` Sequence the images.

```
8552 \newcounter{LWR@lateximagenumber}
8553 \setcounter{LWR@lateximagenumber}{0}
```

Ctrl `LWR@lateximagedepth` Do not create `\lateximage` inside of `\lateximage`.

```
8554 \newcounter{LWR@lateximagedepth}
8555 \setcounter{LWR@lateximagedepth}{0}
```

A few utility macros to write special characters:

```
8556 \edef\LWR@hashmark{\string#} % for use in \write
8557 \edef\LWR@percent{\@percentchar} % for use in \write
```

Ctrl `LWR@LIpage` Used to reference the PDF page number of a lateximage to be written into `lateximages.txt`.

```
8558 \newcounter{LWR@LIpage}
8559 \end{warpHTML}
```

## 73.3 Font size

**for HTML & PRINT:** 8560 `\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.*

```
8561 \newcommand*{\LateximageFontSizeName}{large}
```

`\LateximageFontScale` Declares how large to scale inline SVG math images. The `.svg` file text size should blend well with the surrounding HTML text size. The default is `.75`, but it may be redefined as needed depending on the HTML font.

```
8562 \newcommand*{\LateximageFontScale}{.75}
```

```
8563 \end{warpall}
```

### 73.4 Sanitizing math expressions for HTML

for HTML output: 8564 `\begin{warpHTML}`

`\LWR@HTMLsanitize`  $\langle text \rangle$

Math expressions are converted to `lateximages`, and some math environments may contain `&`, `<`, or `>`, which should not be allowed inside an HTML `<alt>` tag, so must convert them to HTML entities.

Two versions follow, depending on expansion needs. There may be a better way...

```
8565 \newrobustcmd{\LWR@HTMLsanitize}[1]{%
```

Cancel French **babel** character handling, and fully expand the strings:

```
8566 \begingroup%
8567 \LWR@FBcancel%
8568 \fullexpandarg%
```

The `&`, `<`, and `>` may be interpreted by the browser:

```
8569 \protect\StrSubstitute{\detokenize{#1}}%
8570 {\detokenize{&}}{\detokenize{&#amp;}}[\LWR@strresult]%
```

```
8571 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8572 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%
```

```
8573 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8574 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%
```

The double quote occasionally causes problems.

```
8575 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8576 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

MathJax allows expressions to be defined with `\newcommand`. These expressions would appear with `##` for each argument, and each must be changed to a single `#`. This must be done after all the above changes. Attempting another conversion after this causes an error upon further expansion.

```
8577 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8578 {\detokenize{##}}{\LWR@origpound}[\LWR@strresult]%
```

```
8579 \LWR@strresult%
8580 \endgroup%
8581 }
```

`\LWR@HTMLsanitizeexpand`  $\langle text \rangle$

This version expands the argument before sanitizing it.

```
8582 \newrobustcmd{\LWR@HTMLsanitizeexpand}[1]{%
```

Cancel French **babel** character handling, and fully expand the strings:

```
8583 \begingroup%
8584 \LWR@FBcancel%
8585 \fullexpandarg%
```

The difference between this and `\LWR@HTMLsanitize` (without “expand”) is the following `\expandafter`:

```
8586 \protect\StrSubstitute{\detokenize\expandafter{#1}}%
8587 {\detokenize{&}}{\detokenize{&}}[\LWR@strresult]%
```

```
8588 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8589 {\detokenize{<}}{\detokenize{<}}[\LWR@strresult]%
```

```
8590 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8591 {\detokenize{>}}{\detokenize{>}}[\LWR@strresult]%
```

```
8592 \protect\StrSubstitute{\detokenize\expandafter{\LWR@strresult}}%
8593 {\detokenize{"}}{\detokenize{"}}[\LWR@strresult]%
```

`\LWR@HTMLsanitizeexpand` is not used for defining new MathJax macros, so the `##` conversion is not needed here.

```
8594 \LWR@strresult%
8595 \endgroup%
8596 }
```

## 73.5 Equation numbers

`\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.

```
8597 \newcounter{\LWR@startingequation}
8598
8599 \@ifundefined{chapter}
8600 {
8601 \renewcommand{\the\LWR@startingequation}{%
```

```

8602 \arabic{LWR@startingequation}%
8603 }
8604 }
8605 {% chapter defined
8606 \renewcommand{\theLWR@startingequation}{%
8607 \ifnumcomp{\value{chapter}}{>}{0}{\arabic{chapter}.}{}%
8608 \arabic{LWR@startingequation}%
8609 }
8610 }

```

Bool True for the first equation tag, false for later tags in the same environment.

LWR@isstartingequation

```
8611 \newbool{LWR@isstartingequation}
```

\LWR@startingequationtag Prints the starting equation number or tag.

```
8612 \let\LWR@startingequationtag\theLWR@startingequation
```

\LWR@equationtag Prints the ending equation number or tag.

This is reset by lateximage, may be temporarily overwritten by \tag calling \LWR@remembertag.

```
8613 \newcommand*{\LWR@equationtag}{}
```

Only if svg math, patch \tag after packages have loaded, in case someone else modified \tag.

```

8614 \AtBeginDocument{
8615
8616 \ifbool{mathjax}{\% not mathjax

```

\LWR@remembertag  $\langle tag \rangle$

For use inside the math environments while using svg math. Sets \theLWR@startingequation and \theequation to the given tag.

```

8617 \NewDocumentCommand{\LWR@remembertag}{m}{%
8618 \ifbool{LWR@isstartingequation}%
8619 {%
8620 \global\boolfalse{LWR@isstartingequation}%
8621 \xdef\LWR@startingequationtag{#1}%
8622 }{}%
8623 \xdef\LWR@equationtag{#1}%
8624 }%

```

Patches for  $\mathcal{AMS}$  math `\tag` macro to remember the first tag:

```

8625 \LetLtxMacro\LWR@origmake@df@tag@@\make@df@tag@@
8626 \LetLtxMacro\LWR@origmake@df@tag@@@make@df@tag@@@
8627
8628 \renewcommand*\make@df@tag@@[1]{%
8629 \LWR@remembertag{#1}%
8630 \LWR@origmake@df@tag@@{#1}%
8631 }
8632
8633 \renewcommand*\make@df@tag@@@[1]{%
8634 \LWR@remembertag{#1}%
8635 \LWR@origmake@df@tag@@@{#1}%
8636 }
8637
8638 }% not mathjax
8639 }% AtBeginDocument

```

### 73.6 HTML `<alt>` tags

`\LWR@amsmathbody`  $\langle envname \rangle$  For use inside the optional argument to a `lateximage` to add the contents of a AMS math environment to the `<alt>` tag.

```

8640 \newcommand*\LWR@amsmathbody[1]
8641 {%
8642 \textbackslash\begin\}\{#1\} % extra space
8643 \LWR@HTMLSanitizeexpand{\detokenize\expandafter{\the@envbody}}%
8644 \textbackslash\end\}\{#1\}%
8645 }

```

`\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.

```

8646 \newcommand*\LWR@amsmathbodynumbered[1]
8647 {%
8648 \ifnumcomp{\value{LWR@startingequation}}{=}{\value{equation}}%
8649 {(\LWR@equationtag)}%
8650 {(\LWR@startingequationtag--\LWR@equationtag)} % extra space
8651 \LWR@amsmathbody{#1} % extra space
8652 }

```

### 73.7 lateximage

Env `lateximage` \* [`<2: <alt> tag`] [`<3: add'l hashing`] [`<4: CSS style`]

Typesets the contents and then renders the result as an SVG file.

The optional `<alt>` tag is included in the HTML code for use with copy/paste.

[image filename hashing](#) If starred, a hashed filename is used. If so, the hash is based on the `alt` tag and also the additional hashing argument.

This may be used to provide an expression with a simple `alt` tag but also enough additional information to provide a unique hash.

An example is when the expression is a complicated  $\TeX$  expression, which would not copy/paste well. A simplified tag may be used, while the complicated expression is duplicated in the additional hashing argument.

Another example is when the expression is simple, but the image depends on options. These options may be decoded into text form and included in the additional hashing argument in order to make the hash unique according to the set of options, even if the simple `alt` tag is still the same.

```
8653 \catcode'\$=\active%
8654
8655 \NewDocumentEnvironment{lateximage}{s O{(image)} O{} O{}}
8656 {%
8657 \LWR@traceinfo{lateximage: starting on \jobname.pdf page \arabic{page}}%
8658 \LWR@traceinfo{lateximage: entering depth is \arabic{LWR@lateximagedepth}}%
```

Nested `lateximages` remain one large `lateximage`:

```
8659 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}%
```

If nesting inside an already-existing `lateximage`, simply record one more level.  $\mathcal{A}\mathcal{M}\mathcal{S}$  packages redefine `\addtocounter` to do nothing if inside a `\text`, so lower-level  $\TeX$  macros are used for tracking nested `lateximages`.

```
8660 {%
8661 % \addtocounter{LWR@lateximagedepth}{1}%
8662 \global\advance\c@LWR@lateximagedepth 1\relax% Due to AmS \text macro.
8663 }%
```

Otherwise, this is the outer-most `lateximage`:

```
8664 {% start of outer-most lateximage
```

Remember the next equation number to be allocated, in case it must be printed in a multi-equation environment:

```
8665 \LWR@traceinfo{lateximage: starting outer-most lateximage}%
8666 \setcounter{LWR@startingequation}{\value{equation}}%
8667 \addtocounter{LWR@startingequation}{1}%
8668 \booltrue{LWR@isstartingequation}%
8669 \let\LWR@startingequationtag\theLWR@startingequation%
```

The default equation tag, unless overwritten by `\tag`:

```
8670 \let\LWR@equationtag\theequation%
```

Starting a new lateximage:

```
8671 \addtocounter{LWR@lateximagenumber}{1}%
8672 \LWR@traceinfo{lateximage: LWR@lateximagenumber is \arabic{LWR@lateximagenumber}}%
```

While inside a lateximage, locally do not use mathjax:

```
8673 \boolfalse{mathjax}%
```

Be sure that are doing a paragraph:

```
8674 \LWR@ensuredoingapar%
```

Next file:

```
8675 \addtocounter{LWR@externalfilecnt}{1}%
8676 \LWR@traceinfo{lateximage: LWR@externalfilecnt is \arabic{LWR@externalfilecnt}}%
```

Figure out what the next page number will be. `\setcounterpageref` assigns `LWR@LIpage` to the page number for the reference `LWRlateximageXXX`:

```
8677 \setcounterpageref{LWR@LIpage}{LWRlateximage\arabic{LWR@lateximagenumber}}%
8678 \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:

```
8679 \LWR@htmltag{span id="lateximage\arabic{LWR@lateximagenumber}" % extra space
8680 class="lateximagesource"}%
```

Write instructions to the `lateximages.txt` file:

```
8681 \LWR@traceinfo{lateximage: about to write to lateximages.txt}%
8682 \IfBooleanTF{#1}% starred
```

```

8683 {% hash
8684 \LWR@traceinfo{lateximage: hash true, adding %
8685 !\detokenize\expandafter{#2}!\detokenize\expandafter{#3}!}%

```

Compute and save the hashed file name for later use:

```

8686 \edef\LWR@hashedname{%
8687 \LWR@mdfive{\detokenize\expandafter{#2}-!-#3}%
8688 % \LWR@mdfive{\detokenize\expandafter{#2}-!\detokenize\expandafter{#3}}%
8689 }%
8690 \LWR@traceinfo{lateximage: hash is \LWR@hashedname}%

```

Write the page, hashing, and hashed name:

```

8691 \immediate\write\LWR@lateximagesfile{%
8692 |\arabic{LWR@LPage}|true|\LWR@hashedname|%
8693 }%
8694 }% hash
8695 {% no hash

```

No hash, so write the page, no hashing, and the image number:

```

8696 \LWR@traceinfo{lateximage: hash false}%
8697 \immediate\write\LWR@lateximagesfile{%
8698 |\arabic{LWR@LPage}|false|lateximage-\arabic{LWR@externalfilecnt}|%
8699 }%
8700 }% no hash

```

Place an open comment tag. This will hide any traces of the lateximage PDF page which were picked up by **pdftotext**.

```

8701 \LWR@traceinfo{lateximage: about to create open comment}%
8702 \LWR@htmlopencomment%

```

One level deeper. At this outer-most lateximage, it is known that this is not being used inside an  $\mathcal{AMS}$   $\text{\textbackslash text}$ , since the outer-most level will never be in math mode.

```

8703 \addtocounter{LWR@lateximagedepth}{1}%

```

Start the new PDF page:

```

8704 \LWR@traceinfo{lateximage: about to create a new page}%
8705 \LWR@orignewpage%

```

Typeset the image in a “standard” width page and font size:

```

8706 \LWR@traceinfo{lateximage: about to create minipage}%
8707 \LWR@origminipage{6in}%

```

```
8708 \csuse{LWR@orig\LateximageFontSizeName}%
```

Temporarily restore formatting to its PDF definitions: Do not produce HTML tags for `\hspace`, etc. inside a `lateximage`.

```
8709 \LWR@traceinfo{lateximage: about to temporarily restore formatting}%
8710 \LWR@restoreorigformatting%
```

Use full-page footnotes instead of minipage footnotes. These become HTML footnotes.

```
8711 \def\@mpfn{footnote}%
8712 \def\thempfn{\thefootnote}%
8713 \LetLtxMacro\@footnotetext\LWR@footnotetext%
```

Create the `LWRlateximage<number>` label:

```
8714 \LWR@traceinfo{lateximage: about to create label}%
8715 \LWR@origlabel{LWRlateximage\arabic{LWR@lateximagenumber}}%
8716 \LWR@traceinfo{lateximage: finished creating the label}%
```

Enable print-mode math functions:

```
8717 \LetLtxMacro$\LWR@origdollar%
8718 \catcode'\$=3% math shift
8719 \LetLtxMacro\(\LWR@origopenparen%
8720 \LetLtxMacro\)\LWR@origcloseparen%
```

Only enable print-mode display math if are not already inside display math:

```
8721 \ifbool{LWR@indisplaymathimage}{}{% not in display math
8722 \LetLtxMacro\[\LWR@origopenbracket%
8723 \LetLtxMacro\]\LWR@origclosebracket%
8724 \let\equation\LWR@origequation%
8725 \let\endequation\LWR@origendequation%
8726 \csletcs{equation*}{LWR@origequation*}%
8727 \csletcs{endequation*}{LWR@origendequation*}%
8728 }% not in display math
```

For `chemformula`:

```
8729 \LetLtxMacro\LWR@newsingledollar$%
8730 \LetLtxMacro\LWR@newsingledollar$% syntax highlighting
```

```
8731 }% end of outer-most lateximage
8732 \LWR@traceinfo{lateximage: finished start of environment}%
8733 }% end of \begin{lateximage}
```

`\endlateximage` When the environment closes:

```
8734 {% start of \end{lateximage}
8735 \LWR@traceinfo{lateximage: starting end of lateximage}%
```

Nested more than one deep?

```
8736 \LWR@traceinfo{lateximage: internal depth was \arabic{LWR@lateximagedepth}}%
8737 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{1}%
```

If nesting inside an already existing lateximage, simply record one less level. Uses a lower-level  $\TeX$  macro due to  $\mathcal{A}\mathcal{M}\mathcal{S}$  `\text` change of `\addtocounter`.

```
8738 {%
8739 \LWR@traceinfo{lateximage: unnesting}%
8740 \global\advance\c@LWR@lateximagedepth -1\relax%
8741 }%
```

If this is the outer-most lateximage:

```
8742 {% end of outer-most lateximage
```

Finish the lateximage minipage and start a new PDF page:

```
8743 \LWR@traceinfo{lateximage: ending outer-most lateximage}%
8744 \LWR@origendminipage%
8745 \LWR@orignewpage%
8746 \LWR@origscriptsize%
```

Close the HTML comment which encapsulated any traces of the lateximage picked up by **pdftotext**:

```
8747 \LWR@origvspace*{.5\baselineskip}%
8748 \LWR@htmlclosecomment%
8749 \LWR@traceinfo{lateximage: The page after the image is \arabic{page}}%
```

Create a link to the lateximage, allowing its natural height:

```
8750 \IfBooleanTF{#1}% starred
8751 {% hash
8752 \LWR@subinlineimage[#2]{lateximage}%
8753 {%
8754 lateximages\OSPathSymbol%
8755 \LWR@origmbox{\LWR@hashedname}%
8756 }{svg}{#4}%
8757 }% hash
8758 {% no hash
8759 \LWR@subinlineimage[#2]{lateximage}%
```

```

8760 {%
8761 lateximages\OSPathSymbol%
8762 \LWR@origmbox{lateximage-\theLWR@externalfilecnt}%
8763 }{svg}{#4}%
8764 }% no hash

```

Be sure that are doing a paragraph:

```
8765 \LWR@ensuredoingapar%
```

Close the HTML span which has the **pdftotext** comment and also the link to the .svg image:

```

8766 \LWR@htmltag{/span}%
8767 \ifbool{HTMLDebugComments}{%
8768 \LWR@htmlcomment{End of lateximage}%
8769 }{}%

```

Undo one lateximage level. This is not inside an  $\mathcal{M}\mathcal{S}$  \text, so regular \addtocounter may be used here.

```

8770 \addtocounter{LWR@lateximagedepth}{-1}%
8771 }% end of outer-most lateximage
8772 \LWR@traceinfo{lateximage: exiting depth is \arabic{LWR@lateximagedepth}}%
8773 \LWR@traceinfo{lateximage: done}%
8774 }%
8775 \catcode'\$=3% math shift
8776 \end{warpHTML}

```

**for PRINT output:** 8777 \begin{warpprint}

Env lateximage [ $\langle alt \rangle tag$ ] [ $\langle CSS style \rangle$ ]

varwidth is used to create a box of the natural width of its contents.

```

8778 \NewDocumentEnvironment{lateximage}{s o o o}
8779 {\begin{varwidth}[b]{\linewidth}}
8780 {\end{varwidth}}

```

```
8781 \end{warpprint}
```

## 74 center, flushleft, flushright

**for HTML output:** 8782 \begin{warpHTML}

Env `center` Replace center functionality with CSS tags:

```
8783 \renewenvironment*{center}
8784 {
8785 \LWR@forcenewpage
8786 \ifbool{FormatWP}
8787 {\BlockClass[\LWR@origmbox{text-align:center}]{center}}
8788 {\BlockClass{center}}
8789 }
8790 {\endBlockClass}
```

Env `flushright`

```
8791 \renewenvironment*{flushright}
8792 {
8793 \LWR@forcenewpage
8794 \ifbool{FormatWP}
8795 {\BlockClass[\LWR@origmbox{text-align:right}]{flushright}}
8796 {\BlockClass{flushright}}
8797 }
8798 {\endBlockClass}
```

Env `flushleft`

```
8799 \renewenvironment*{flushleft}
8800 {
8801 \LWR@forcenewpage
8802 \ifbool{FormatWP}
8803 {\BlockClass[\LWR@origmbox{text-align:left}]{flushleft}}
8804 {\BlockClass{flushleft}}
8805 }
8806 {\endBlockClass}
```

`\leftline`  $\{\langle text \rangle\}$

```
8807 \renewcommand{\leftline}[1]{\begin{flushleft}#1\end{flushleft}}
```

`\centerline`  $\{\langle text \rangle\}$

```
8808 \renewcommand{\centerline}[1]{\begin{center}#1\end{center}}
```

`\rightline`  $\{\langle text \rangle\}$

```
8809 \renewcommand{\rightline}[1]{\begin{flushright}#1\end{flushright}}
```

```
8810 \end{warpHTML}
```

## 75 Pre-loaded packages

for HTML output: 8811 \begin{warpHTML}

If **textcomp** was loaded before **lwarp**, perhaps as part of the font-related packages, explicitly load the lwarp patches now:

```
8812 \@ifpackageloaded{textcomp}
8813 {
8814 \LWR@origRequirePackage{lwarp-textcomp}
8815 }
8816 {}
```

If **graphics** or **graphicx** were loaded before **lwarp**, perhaps by **xunicode**, explicitly load the lwarp patches now:

```
8817 \@ifpackageloaded{graphics}
8818 {
8819 \LWR@origRequirePackage{lwarp-graphics}
8820 }
8821 {}
```

```
8822 \end{warpHTML}
```

## 76 Siunitx

Pkg `siunitx` The **lwarp** core passes a few options to **siunitx**.

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

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

**NOTE:** As of this writing, the **siunitx** extension for **MATHJAX** is not currently hosted at any public CDN, thus **siunitx** is not usable with **MATHJAX** unless a local copy of this extension is created first.

for HTML output: 8823 \begin{warpHTML}

Options for `siunitx`:

```
8824 \newrobustcmd{\LWR@siunitx@textcelsius}{\HTMLentity{deg}C}
8825 \newrobustcmd{\LWR@siunitx@textdegree}{\HTMLentity{deg}}
8826 \newrobustcmd{\LWR@siunitx@textprime}{\HTMLunicode{2032}}
```

```

8827 \newrobustcmd{\LWR@siunitx@textdblprime}{\HTMLUnicode{2033}}
8828 \newrobustcmd{\LWR@siunitx@textplanckbar}{\text{\textit{\HTMLUnicode{0127}}}}
8829
8830 \appto\LWR@restoreorigformatting{%
8831 \renewrobustcmd{\LWR@siunitx@textcelsius}{\text{\ensuremath{^\circ}C}}%
8832 \renewrobustcmd{\LWR@siunitx@textdegree}{\text{\ensuremath{^\circ}}}%
8833 \renewrobustcmd{\LWR@siunitx@textprime}{\text{\ensuremath{^\prime}}}%
8834 \renewrobustcmd{\LWR@siunitx@textdblprime}{\text{\ensuremath{^\prime\prime}}}%
8835 \renewrobustcmd{\LWR@siunitx@textplanckbar}{\text{\ensuremath{\hbar}}}%
8836 }
8837
8838 \PassOptionsToPackage{
8839 detect-mode=true,
8840 per-mode=symbol,% fraction is not seen by pdftotext
8841 text-celsius = {\LWR@siunitx@textcelsius},
8842 text-degree = {\LWR@siunitx@textdegree},
8843 text-arcminute = {\LWR@siunitx@textprime} ,
8844 text-arcsecond = {\LWR@siunitx@textdblprime} ,
8845 }{siunitx}

8846 \end{warpHTML}

```

## 77 Graphics print-mode modifications

### 77.1 General limitations

-  **.pdf image files** For `\includegraphics` with .pdf files, the user should provide a .pdf image file, and also a .svg, .png, or .jpg version of the same image. **These should be referred to without a file extension:**
-  **no file extension**

```
\includegraphics{filename} % print:.pdf, HTML:.svg or other
```

For print output, **lwarp** will automatically choose the .pdf if available, or some other format otherwise. For HTML, one of the other formats is used instead.

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

```
Enter => pdftocairo -svg filename.pdf
```

If a .pdf file is referred to with its file extension, a link to the .pdf file will appear in the HTML output.

```
\includegraphics{filename.pdf} % creates a link in HTML
```

Pkg `epstopdf` For .eps files, use **epstopdf** to provide a PDF version, and also provide a SVG version as well.

**other image files** For .png, .jpg, or .gif image files, 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.

⚠ **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 **warp**; the entire image will be shown.

⚠ **viewports**

**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 a new `class` key.

**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.

`\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  $\TeX$ , so expect some ugly results for scaling and rotating.

## 77.2 Print-mode modifications

**for PRINT output:** For print output, accept and then discard the new `class` key:

```
8847 \begin{warpprint}
8848 \define@key{Gin}{class}{}

```

Print-mode additions for the **overpic** package. See section 257 for the HTML version.

```
8849 \AtBeginDocument{
8850 \@ifpackageloaded{overpic}{
8851 \newcommand*\overpicfontsize{12}
8852 \newcommand*\overpicfontskip{14}
8853 }{}
8854 }
8855 \end{warpprint}

```

## 78 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` defintions. These are defined inside `warpall` because they are also used for HTML while inside a `lateximage`. They are defined `\AtBeginDocument` so that the `xcolor` originals may first be loaded and saved for reuse.

The framed versions are modified to allow a background color of `none`, in which case only the frame is drawn, allowing the background page color to show.

for HTML & PRINT: 8856 `\begin{warpall}`

After `xparse` may have been loaded ...

8857 `\AtBeginDocument{`

... and *only* if `xcolor` was loaded:

8858 `\@ifpackageloaded{xcolor}{`

8859 `\LWR@traceinfo{patching xcolor}`

`\colorboxBlock` `\colorboxBlock` is the same as `\colorbox`:

8860 `\LetLtxMacro\colorboxBlock\colorbox`

In HTML mode, the following is done when `xcolor` is loaded. Following is the print-mode action:

8861 `\warpprintonly{`

8862 `\LetLtxMacro\LWRprint@colorboxBlock\colorbox`

8863 `\LetLtxMacro\LWRorigprint@fcolorbox\fcolorbox`

8864 `\LetLtxMacro\LWRorigprint@fcolorboxBlock\fcolorbox`

8865 `}`

`\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`.)

8866 `\newsavebox{\LWR@colorminipagebox}`

```

8867
8868 \DeclareDocumentCommand{\LWRprint@fcolorbox}{o m o m +m}{%
8869 \LWR@traceinfo{\LWRprint@fcolorbox #2 #4}%

```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```

8870 \begin{lrbox}{\LWR@colorminipagebox}%
8871 #5%
8872 \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.

```

8873 \ifthenelse{\equal{#4}{none}}%
8874 {% #4 none
8875 \LWR@traceinfo{background is none}%
8876 {% scope the \colorlet
8877 \colorlet{\LWR@currentcolor}{.}%
8878 \color{#2}%
8879 \fbox{%
8880 \color{\LWR@currentcolor}%
8881 \usebox{\LWR@colorminipagebox}%
8882 }% fbox
8883 }% colorlet
8884 }% #4 none
8885 {% #4 not none
8886 \LWR@traceinfo{background not none}%
8887 \IfValueTF{#1}%
8888 {%
8889 \IfValueTF{#3}%
8890 {\LWRorigprint@fcolorbox[#1]{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
8891 {\LWRorigprint@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
8892 }%
8893 {% no value #1
8894 \IfValueTF{#3}%
8895 {\LWRorigprint@fcolorbox{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
8896 {\LWRorigprint@fcolorbox{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
8897 }% no value #1
8898 }% #4 not none
8899 \LWR@traceinfo{\LWRprint@fcolorbox done}%
8900 }

```

`\fcolorboxBlock` [*framemodel*] [*framecolor*] [*boxmodel*] [*boxcolor*] [*text*]

In print mode, `\fcolorboxBlock` is the same as `\fcolorbox`.

```
8901 \LetLtxMacro\LWRprint@fcolorboxBlock\LWRprint@fcolorbox
```

```
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:

```
8902 \NewDocumentEnvironment{LWRprint@fcolorminipage}{o m o m O{c} O{ } o m}
8903 {%
8904 \LWR@traceinfo{*** fcolorminipage: #2 #4 #8}%
```

Pre-load the contents into an LR box so that they can be used inside a `\fcolorbox`:

```
8905 \begin{lrbox}{\LWR@colorminipagebox}%
```

If inner alignment is not given, use the outer alignment instead:

```
8906 \IfValueTF{#7}%
8907 {\begin{minipage}[#5][#6][#7]{#8}}%
8908 {\begin{minipage}[#5][#6][#5]{#8}}%
8909 }%
8910 {%
8911 \end{minipage}%
8912 \end{lrbox}%
8913 \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.

```
8914 \ifthenelse{\equal{#4}{none}}%
8915 {% #4 none
8916 {% scope the \colorlet
8917 \colorlet{LWR@currentcolor}{.}%
8918 \color{#2}%
8919 \fbox{%
8920 \color{LWR@currentcolor}%
8921 \usebox{\LWR@colorminipagebox}%
8922 }% fbox
8923 }% colorlet
8924 }% #4 none
8925 {% #4 not none
8926 \IfValueTF{#1}%
8927 {%
8928 \IfValueTF{#3}%
8929 {\LWR@origprint@fcolorbox[#1]{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
```

```

8930 {\LWRorigprint@fcolorbox[#1]{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
8931 }%
8932 {% no value #1
8933 \IfValueTF{#3}%
8934 {\LWRorigprint@fcolorbox{#2}[#3]{#4}{\usebox{\LWR@colorminipagebox}}}%
8935 {\LWRorigprint@fcolorbox{#2}{#4}{\usebox{\LWR@colorminipagebox}}}%
8936 }% no value #1
8937 }% #4 not none
8938 \LWR@traceinfo{*** finished end fcolorminipage}%
8939 }

```

`\LWR@restoreorigprintxcolor` Used to activate print-mode additions for **xcolor**. In print mode, this is used immediately following. In HTML mode, this is used inside a `lateximage`.

```

8940 \newcommand*\LWR@restoreorigprintxcolor}{%
8941 \LWR@traceinfo{\LWR@restoreorigprintxcolor}%
8942 \LetLtxMacro\colorboxBlock\LWRprint@colorboxBlock%
8943 \LetLtxMacro\fcolorbox\LWRprint@fcolorbox%
8944 \LetLtxMacro\fcolorboxBlock\LWRprint@fcolorboxBlock%
8945 \LetLtxMacro\fcolorminipage\LWRprint@fcolorminipage%
8946 \LetLtxMacro\endfcolorminipage\endLWRprint@fcolorminipage%
8947 }
8948
8949 \appto\LWR@restoreorigformatting{%
8950 \LWR@restoreorigprintxcolor%
8951 }

```

If print mode, immediately activate the print-mode enhancements for **xcolor**:

```

8952 \warpprintonly{\LWR@restoreorigprintxcolor}
8953
8954 \LWR@traceinfo{xcolor patches done}
8955 }{}% xcolor loaded
8956 }% AtBeginDocument

8957 \end{warppall}

```

## 79 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: 8958 `\begin{warpprint}`

```
8959 \AtBeginDocument{
8960 \@ifpackageloaded{chemmacros}{
```

Env `polymerdelims`

```
8961 \DeclareDocumentEnvironment{polymerdelims}{}
8962 {}{}
```

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 134.4.

```
8963 \DeclareDocumentEnvironment{redoxreaction}{m m}
8964 {\rule{0pt}{#1}}{\rule[-#2]{0pt}{#2}}
```

```
8965 }{}% chemmacros
8966 }% AtBeginDocument
```

```
8967 \end{warpprint}
```

## 80 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 section 80 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 10 on page 392 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: 8968 `\begin{warpHTML}`

`\AtEndPreamble` forces `cleveref` to be loaded last:

```
8969 \AtEndPreamble{
8970 \RequirePackage{cleveref}
8971 }
```

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.

```
8972 \AfterEndPreamble{
8973 \LWR@traceinfo{Patching cleveref.}
```

`\@@@setcref` `{\<kindofref>} {\<label>}`

`\@templabel` becomes the section number.

```
8974 \def\LWR@orig@@@setcref#1#2{\cref@getlabel{#2}{\@templabel}#1{\@templabel}{}}%
8975
8976 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% before v0.21
8977 \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
8978 }{
8979 \ifdefequal{\@@@setcref}{\LWR@orig@@@setcref}{% as of v0.21
8980 \renewcommand*\@@@setcref}[2]{#1{\ref{#2}}{}}
8981 }{
8982 \PackageWarning{lwarp-cleveref}{
8983 Unknown verison of cleveref.
8984 \protect\cref\space will fail.
8985 }%
8986 }
8987 }
```

`\@@@setcrefrange` `{\<text>} {\<label>} {\<label>}`

```
8988 \def\LWR@orig@@@setcrefrange#1#2#3{%
8989 \cref@getlabel{#2}{\@labela}%
```

```

8990 \cref@getlabel{#3}{\@labelb}%
8991 #1{\@labela}{\@labelb}{-}{-}{-}%
8992
8993 \ifdefequal{\@@setcrefrange}{\LWR@orig@@setcrefrange}{
8994 \renewcommand{\@@setcrefrange}[3]{%
8995 #1{\ref{#2}}{\ref{#3}}{-}{-}{-}%
8996 }
8997 }{
8998 \ifdefequal{\@@setcrefrange}{\LWR@orig@@setcrefrange}{
8999 \renewcommand{\@@setcrefrange}[3]{%
9000 #1{\ref{#2}}{\ref{#3}}{-}{-}{-}%
9001 }
9002 }{
9003 \PackageWarning{lwarp-cleveref}{
9004 Unknown verison of cleveref.
9005 \protect\crefrange\space will fail.
9006 }
9007 }
9008 }
9009

```

`\cpagerefFor` Redefinable word between “page(s)” and the page numbers.

```

9010 \newcommand*{\cpagerefFor}{for}

```

`\@@@setcpageref` `{\langle typeofref \rangle}{\langle label \rangle}`, where `typeofref` is “page” or “pages”

```

9011 \def\LWR@orig@@setcpageref#1#2{% before v0.21
9012 \cref@getpageref{#2}{\@temppage}#1{\@temppage}{-}{-}%
9013
9014 \def\LWR@orig@@@setcpageref#1#2{% as of v0.21
9015 \cpageref@getlabel{#2}{\@temppage}#1{\@temppage}{-}{-}%
9016
9017 \ifdefequal{\@@setcpageref}{\LWR@orig@@setcpageref}{
9018 \renewcommand*{\@@setcpageref}[2]{%
9019 #1{\cpagerefFor\ \cref{#2}}{-}{-}%
9020 }
9021 }{
9022 \ifdefequal{\@@@setcpageref}{\LWR@orig@@@setcpageref}{
9023 \renewcommand*{\@@@setcpageref}[2]{%
9024 #1{\cpagerefFor\ \cref{#2}}{-}{-}%
9025 }
9026 }
9027 {
9028 \PackageWarning{lwarp-cleveref}{
9029 Unknown verison of cleveref.
9030 \protect\cpageref\space will fail.

```

```

9031 }
9032 }
9033 }

9034 \def\LWR@orig@@setcpagerefrange#1#2#3{% before v0.21
9035 \cref@getpageref{#2}{\@pagea}%
9036 \cref@getpageref{#3}{\@pageb}%
9037 #1{\@pagea}{\@pageb}{-}{-}{-}}%
9038
9039 \def\LWR@orig@@setcpagerefrange#1#2#3{% as of v0.21
9040 \cpageref@getlabel{#2}{\@pagea}%
9041 \cpageref@getlabel{#3}{\@pageb}%
9042 #1{\@pagea}{\@pageb}{-}{-}{-}}%
9043
9044 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
9045 \renewcommand*{\@@setcpagerefrange}[3]{%
9046 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{-}{-}{-}}%
9047 }
9048 }{
9049 \ifdefequal{\@@setcpagerefrange}{\LWR@orig@@setcpagerefrange}{
9050 \renewcommand*{\@@setcpagerefrange}[3]{%
9051 #1{\cpagerefFor\ \cref{#2}}{\cref{#3}}{-}{-}{-}}%
9052 }
9053 }
9054 {
9055 \PackageWarning{lwarp-cleveref}{
9056 Unknown verison of cleveref.
9057 \protect\cpagerefrange\space will fail.
9058 }
9059 }
9060 }
9061
9062 }% AfterEndPreamble

```

Remember and patch some label-related defintions. These will be further encased and patched by other packages later.

```

9063 \LetLtxMacro\LWR@origlabel\label
9064 \RenewDocumentCommand{\label}{-}{\LWR@newlabel}
9065
9066 \LetLtxMacro\LWR@origref\ref
9067 \RenewDocumentCommand{\ref}{-}{\LWR@newref}%
9068
9069 \LetLtxMacro\LWR@origpageref\pageref
9070 \RenewDocumentCommand{\pageref}{-}{\LWR@newpageref}
9071
9072 \end{warpHTML}

```

## 81 Picture

Env `picture` The `picture` environment is enclosed inside a `\lateximage`.

for HTML output: 9073 `\begin{warpHTML}`

Env `picture`

```
9074 \BeforeBeginEnvironment{picture}{\begin{lateximage}}
9075
9076 \AfterEndEnvironment{picture}{\end{lateximage}}

9077 \end{warpHTML}
```

## 82 Boxes and Minipages

A CSS flexbox is used for minipages and parboxes, allowing external and internal vertical positioning.

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

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

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

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

**size** When using `\linewidth`, `\textwidth`, and `\textheight`, widths and heights are scaled proportionally to a 6×9 inch text area.

**no-width minipages** A minipage of width exactly `\linewidth` is automatically given no HTML width.

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

 **text alignment**

Nested minipages adopt their parent's text alignment in HTML, whereas in regular  $\TeX$  PDF output they do not. Use a `flushleft` or similar environment in the child minipage to force a text alignment.

**for HTML output:** 9078 `\begin{warpHTML}`

## 82.1 Counters and lengths

**Ctrl** `LWR@minipagedepth` Used to only reset the line width at the outermost minipage.

```
9079 \newcounter{LWR@minipagedepth}
9080 \setcounter{LWR@minipagedepth}{0}
```

**Len** `\WR@minipagewidth` Used to convert the width into printable units.

```
9081 \newlength{\LWR@minipagewidth}
```

**Len** `\WR@minipageheight` Used to convert the height into printable units.

```
9082 \newlength{\LWR@minipageheight}
```

## 82.2 Footnote handling

Also see section 52 for other forms of footnotes. Minipage footnotes are gathered in section 52.5, and then placed into the document in section 82.3.

## 82.3 Minipage handling

**Bool** `LWR@minipagefullwidth` Should the next minipage have no HTML width?

```
9083 \newbool{LWR@minipagefullwidth}
9084 \boolfalse{LWR@minipagefullwidth}
```

`\minipagefullwidth` Requests that the next minipage have no width tag in HTML:

**for HTML output:** 9085 `\newcommand*{\minipagefullwidth}{\booltrue{LWR@minipagefullwidth}}`  
9086 `\end{warpHTML}`

**for PRINT output:** 9087 `\begin{warpprint}`  
9088 `\newcommand*{\minipagefullwidth}{}`  
9089 `\end{warpprint}`

**for HTML output:** 9090 `\begin{warpHTML}`

Bool `LWR@minipagethispar` Has a minipage been seen this paragraph? If true, prevents paragraph tags around horizontal space between minipages.

```
9091 \newbool{LWR@minipagethispar}
9092 \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.

```
9093 \RenewDocumentEnvironment{minipage}{0{t} o 0{t} m}
9094 {%
```

Temporarily open a group, in which width and height is computed based on a virtual page size instead of the extra-large PDF page used during HTML tag generation.

The following used to be an actual  $\TeX$  minipage.

```
9095 \begingroup
```

Compute width, adjusted for frames:

```
9096 \setlength{\LWR@minipagewidth}{#4}%
9097 \ifthenelse{\cinttest{\value{LWR@minipagedepth}}{=}{0}}{%
```

Only create a new page if not yet nested:

```
9098 \LWR@orignewpage%
```

Adjust virtual page size:

```
9099 \addtolength{\LWR@minipagewidth}{3em}% room for frames
9100 \setlength{\linewidth}{6in}%
9101 \setlength{\textwidth}{6in}%
9102 \setlength{\textheight}{9in}%
9103 }{}%
9104 \LWR@traceinfo{computed width is \LWR@printlength{\LWR@minipagewidth}}%
```

Compute height:

```
9105 \setlength{\LWR@minipageheight}{\textheight}% default unless specified
9106 \IfValueT{#2}{\setlength{\LWR@minipageheight}{#2}}%
```

Track nesting depth:

```
9107 \addtocounter{LWR@minipagedepth}{1}%
```

$\LaTeX$  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.

```
9108 \ifbool{FormatWP}{\newline}{}%
```

```
9109 \LWR@stoppars%
```

If FormatWP, add a text frame:

```
9110 \ifbool{FormatWP}{%
```

```
9111
```

```
9112 \addtocounter{LWR@thisautoidWP}{1}%
```

```
9113 \LWR@htmltag{div id="\LWR@origmbox{autoidWP-\arabic{LWR@thisautoidWP}}" class="wpmminipage"}%
```

```
9114
```

```
9115 }{}%
```

Create the <div> tag with optional alignment style:

```
9116 \LWR@traceinfo{minipage: creating div class}%
```

```
9117 \LWR@htmltag{div class="minipage" style="%
```

```
9118 \ifthenelse{equal{#1}{t}}{\LWR@origmbox{vertical-align:bottom} ; }{}%
```

```
9119 \ifthenelse{equal{#1}{c}}{\LWR@origmbox{vertical-align:middle} ; }{}%
```

```
9120 \ifthenelse{equal{#1}{b}}{\LWR@origmbox{vertical-align:top} ; }{}%
```

```
9121 \ifthenelse{equal{#3}{t}}{\LWR@origmbox{justify-content:flex-start} ; }{}%
```

```
9122 \ifthenelse{equal{#3}{c}}{\LWR@origmbox{justify-content:center} ; }{}%
```

```
9123 \ifthenelse{equal{#3}{b}}{\LWR@origmbox{justify-content:flex-end} ; }{}%
```

```
9124 \ifthenelse{equal{#3}{s}}{\LWR@origmbox{justify-content:space-between} ; }{}%
```

Print the width and optional height styles:

```
9125 \LWR@traceinfo{minipage: about to print the width of \LWR@printlength{\LWR@minipagewidth}}%
```

```
9126 \ifbool{LWR@minipagefullwidth}%
```

```
9127 {\boolfalse{LWR@minipagefullwidth}}%
```

```
9128 {%
```

```
9129 \ifthenelse{\lengthtest{#4}=\linewidth}%
```

```
9130 }{}%
```

```
9131 {width:\LWR@printlength{\LWR@minipagewidth} ; }%
```

```
9132 }%
```

```
9133 \LWR@traceinfo{minipage: about to print the height}%
```

```
9134 \IfValueT{#2}{height:\LWR@printlength{\LWR@minipageheight} ; }%
```

```
9135 "%
```

Finish with an empty line to start the contents on a new line.

```
9136
9137 % 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.

```
9138 \setlength{\linewidth}{#4}% the original width
9139 \setlength{\textwidth}{6in}%
9140 \setlength{\textheight}{9in}%
```

`\raggedright` cancels hyphenation, which will be done by HTML instead.

```
9141 \LWR@origraggedright%
```

Set minipage footnotes:

```
9142 \def\@mpfn{mpfootnote}%
9143 \def\thempfn{\thempfootnote}\c@mpfootnote\z@%
9144 \let\@footnotetext\@mpfootnotetext%
```

Resume paragraph tag handling for the contents of the minipage:

```
9145 \LWR@startpars%
9146 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
9147
9148 === begin minipage ===
9149
9150 }{%
9151 \LWR@traceinfo{minipage: finished starting the minipage}%
9152 }% finished \minipage
9153 {% \endminipage
```

Print pending minipage footnotes:

```
9154 \LWR@printpendingmpfootnotes%
```

End the environment with closing tag:

```
9155 \ifboolexpr{bool{FormatWP} and bool{WPMarkMinipages}}{%
9156
9157 === end minipage ===
9158
9159 }{%
9160 \LWR@stoppars%
```

The following used to be an actual  $\LaTeX$  minipage.

```

9161 \endgroup%
9162
9163 \ifbool{FormatWP}{-%
9164
9165 \LWR@html elementend{div}%
9166
9167 }{}%
9168 \LWR@html divclassend{minipage}%
9169
9170 \addtocounter{LWR@minipagedepth}{-1}%
9171 \LWR@startpars%
9172 \ifbool{FormatWP}{\newline}{}%

```

Prevent paragraph tags around horizontal white space until the start of the next paragraph:

```

9173 \global\booltrue{LWR@minipagethispar}%
9174 }

```

## 82.4 Parbox, mbox, makebox, framebox, fbox, raisebox

**for HTML output:** `\parbox` [*<pos>*] [*<height>*] [*<inner-pos>*] {*<width>*} {*<text>*}

A parbox uses the minipage code:

```

9175 \RenewDocumentCommand{\parbox}{O{t} o O{t} m +m}
9176 {
9177 \LWR@traceinfo{parbox of width #4}%
9178 \begin{minipage}[#1][#2][#3]{#4}%
9179 #5
9180 \end{minipage}%
9181 }

```

`\mbox` {*<text>*} Nullified for HTML.

```

9182 \renewcommand*\mbox[1]{#1}

```

`\makebox` (<<()>posn) [*<width>*] [*<pos>*] {*<text>*}

```

9183 \RenewDocumentCommand{\makebox}{d() o o m}{-%

```

Check for the optional width:

```

9184 \IfValueTF{#2}%
9185 {%

```

Check for the horizontal text alignment. For stretched, the best HTML can do is justified alignment.

```

9186 {% scope
9187 \def\LWR@align{center}%
9188 \ifstrequal{#3}{l}{\def\LWR@align{left}}{}%
9189 \ifstrequal{#3}{r}{\def\LWR@align{right}}{}%
9190 \ifstrequal{#3}{s}{\def\LWR@align{justify}}{}%

```

To print the width argument:

```

9191 \setlength{\LWR@tempwidth}{#2}%

```

inline-block allows width and text-align to be used in a <span>.

```

9192 \InlineClass[%
9193 \LWR@origmbox{display:inline-block} ; %
9194 \LWR@origmbox{text-align}:\LWR@align\ ; %
9195 width:\LWR@printlength{\LWR@tempwidth}%
9196]%
9197 {makebox}%

9198 {#4}%
9199 }% scope
9200 }%

```

Without a width argument, the text is simply used inline:

```

9201 {#4}% no width
9202 }

```

`\framebox` [*<width>*] [*<pos>*] {*<text>*}

```

9203 \LetLtxMacro\LWR@origframebox\framebox
9204
9205 \RenewDocumentCommand{\framebox}{o o m}{%
9206 \fbox{\makebox[#1][#2]{#3}}%
9207 }

```

`\LWR@forceminwidth` {*<legth>*}

Sets `\LWR@atleastonept` to be at least 1pt.

```

9208 \newlength{\LWR@atleastonept}
9209
9210 \newcommand*\LWR@forceminwidth[1]{%

```

```

9211 \setlength{\LWR@atleastonept}{#1}%
9212 \ifthenelse{%
9213 \lengthtest{\LWR@atleastonept>0pt}\AND%
9214 \lengthtest{\LWR@atleastonept<1pt}}%
9215 }%
9216 {\setlength{\LWR@atleastonept}{1pt}}%
9217 {}%
9218 }

```

`\LWR@blackborderpadding` Prints the HTML attributes for a black border and padding.

`\LWR@forceminwidth` must be used first in order to set the border width.

```

9219 \newcommand*\LWR@blackborderpadding{%
9220 border:\LWR@printlength{\LWR@atleastonept} solid black ; %
9221 padding:\LWR@printlength{\fboxsep}%
9222 }

```

`\fbox`  $\{ \langle text \rangle \}$

Creates a framed inline span enclosing the text.

Remember the print-mode version:

```

9223 \let\LWRprint@fbox\fbox

```

Create a new HTML version, but don't use it until after `xcolor` may have loaded:

```

9224 \newcommand{\LWRhtml@fbox}[1]{%
9225 \LWR@traceinfo{HTML fbox}%
9226 \LWR@forceminwidth{\fboxrule}%
9227 \InlineClass[%
9228 \LWR@blackborderpadding%
9229]{fbox}{#1}
9230 }

```

`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`:

```

9231 \AtBeginDocument{\let\fbox\LWRhtml@fbox}

```

`\fboxBlock`  $\{ \langle text \rangle \}$  Creates a framed HTML `<div>` of the text.

A print-output version is also supplied below.

```

9232 \newcommand{\fboxBlock}[1]{%
9233 \LWR@forceminwidth{\fboxrule}%

```

```

9234 \begin{BlockClass}[%
9235 \LWR@blackborderpadding%
9236]{fboxBlock}
9237 #1
9238 \end{BlockClass}
9239 }

```

Env `fminipage` [*align*] [*height*] [*align*] [*width*]

Creates a framed HTML <div> around its contents.

A print-output version is also supplied below.

```

9240 \NewDocumentEnvironment{fminipage}{0{t} o 0{t} m}
9241 {%
9242 \LWR@traceinfo{fminipage #1 #2 #3 #4}%
9243 \LWR@forceminwidth{\fboxrule}%
9244 \setlength{\LWR@tempwidth}{#4}%
9245 \IfValueT{#2}{\setlength{\LWR@tempheight}{#2}}%
9246 \begin{BlockClass}[%
9247 \LWR@blackborderpadding ; %
9248 \IfValueT{#2}{height:\LWR@printlength{\LWR@tempheight} ; }%
9249 width:\LWR@printlength{\LWR@tempwidth}%
9250]{fminipage}%
9251 }
9252 {%
9253 \end{BlockClass}%
9254 \LWR@traceinfo{fminipage done}%
9255 }

```

`\raisebox` [*raiselen*] [*height*] [*depth*] [*text*]

```

9256 \LetLtxMacro{\LWR@origraisebox}{\raisebox}
9257
9258 \RenewDocumentCommand{\raisebox}{m o o m}{%
9259 #4%
9260 }

```

```

9261 \end{warpHTML}

```

**for HTML & PRINT:** 9262 `\begin{warpall}`

`LWRprint@fminipage` is defined inside `warpall`. For print output, it is `\let` to `fminipage`. For HTML output, the HTML version of `fminipage` is used instead, but the print version is still available for use inside a `lateximage`.

Env `LWRprint@fminipage` [*1:align*] [*2:height*] [*3:inner-align*] [*4:width*]

Creates a frame around its contents.

```
9263 \newsavebox{\LWR@fminipagebox}
9264
9265 \NewDocumentEnvironment{LWRprint@fminipage}{0{t} o 0{t} m}
9266 {%
```

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:

```
9267 \IfValueTF{#3}%
9268 {\def\LWR@thisalign{#3}}
9269 {\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.

```
9270 \IfValueTF{#2}%
9271 {\minipage[#1][#2+2\fboxsep+2\fboxrule][\LWR@thisalign]{#4+2\fboxsep+2\fboxrule}}%
9272 {\minipage[#1]{#4+2\fboxsep+2\fboxrule}}%
```

Capture the contents of the environment:

```
9273 \begin{lrbox}{\LWR@fminipagebox}%
```

Nest the contents inside an inner minipage of the desired size:

```
9274 \IfValueTF{#2}%
9275 {\minipage[#1][#2][\LWR@thisalign]{#4}}%
9276 {\minipage[#1]{#4}}%
9277 }
9278 {%
```

Close the inner minipage and the LR box with the contents:

```
9279 \endminipage%
9280 \end{lrbox}%
```

Create a frame around the contents of the environment:

```
9281 \fbox{\usebox{\LWR@fminipagebox}}%
```

The entire thing is placed inside the outer minipage:

```
9282 \endminipage%
9283 }
```

```
9284 \end{warppall}
```

**for PRINT output:** 9285 \begin{warpprint}

For print output, the following are \let to become active.

```
\fboxBlock {<text>}
```

Creates a framed HTML <div> around the text.

```
9286 \let\fboxBlock\fbox
```

Env fminipage [*align*] [*height*] [*align*] {*width*}

Creates a frame around its contents.

```
9287 \LetLtxMacro{fminipage}{\LWRprint@fminipage}
```

```
9288 \LetLtxMacro{endfminipage}{\endLWRprint@fminipage}
```

```
9289 \end{warpprint}
```

## 83 Direct formatting

△ \bfseries, etc. \textbf, etc. are supported, but \bfseries, etc. are not yet supported.

△ HTML special chars &, <, and > have special meanings in HTML. If \&, \textless, and \textgreater are used, the proper result should occur in HTML, but there may be HTML parsing problems if these special characters occur unescaped in program listings or other verbatim text.

For high-level block and inline custom CSS classes, see section 46.8.

**for HTML output:** 9290 \begin{warpHTML}

```
\LWR@HTMLtextstyle {<FormatWP style>} {<class>} {<text>}
```

If FormatWP, adds an explicit style to the text span class. This is used by LIBREOFFICE to mark its imported text using the given style.

```
9291 \DeclareRobustCommand{\LWR@HTMLtextstyle}[3]{%
```

```
9292 \ifbool{FormatWP}%
```

```
9293 {\LWR@htmlspanclass[#1]{#2}{#3}}%
```

```
9294 {\LWR@htmlspanclass{#2}{#3}}%
```

```
9295 }
```

`\emph`  $\langle text \rangle$

```
9296 \DeclareRobustCommand{\LWR@HTMLemph}[1]{\LWR@htmlspan{em}{#1}}
9297 \DeclareRobustCommand{\LWR@nulllemp}[1]{#1}
9298 \LetLtxMacro{\emph}{\LWR@HTMLemph}
```

`\textmd`  $\langle text \rangle$

```
9299 \DeclareRobustCommand{\LWR@HTMLtextmd}[1]{%
9300 \LWR@HTMLtextstyle{font-weight:normal}{textmd}{#1}%
9301 }
9302 \DeclareRobustCommand{\LWR@nulltextmd}[1]{#1}
9303
9304 \LetLtxMacro{\textmd}{\LWR@HTMLtextmd}
```

`\textbf`  $\langle text \rangle$

```
9305 \DeclareRobustCommand{\LWR@HTMLtextbf}[1]{\LWR@htmlspan{b}{#1}}
9306 \DeclareRobustCommand{\LWR@nulltextbf}[1]{#1}
9307 \LetLtxMacro{\textbf}{\LWR@HTMLtextbf}
```

`\textrm`  $\langle text \rangle$

```
9308 \DeclareRobustCommand{\LWR@HTMLtextrm}[1]{%
9309 \LWR@HTMLtextstyle{font-family:serif}{textrm}{#1}%
9310 }
9311
9312 \DeclareRobustCommand{\LWR@nulltextrm}[1]{#1}
9313
9314 \LetLtxMacro{\textrm}{\LWR@HTMLtextrm}
```

`\textsf`  $\langle text \rangle$

```
9315 \DeclareRobustCommand{\LWR@HTMLtextsf}[1]{%
9316 \LWR@HTMLtextstyle{font-family:sans}{textsf}{#1}%
9317 }
9318 \DeclareRobustCommand{\LWR@nulltextsf}[1]{#1}
9319 \LetLtxMacro{\textsf}{\LWR@HTMLtextsf}
```

`\texttt`  $\langle text \rangle$

```
9320 \DeclareRobustCommand{\LWR@HTMLtexttt}[1]{\LWR@htmlspan{kbd}{#1}}
9321 \DeclareRobustCommand{\LWR@nulltexttt}[1]{#1}
9322 \LetLtxMacro{\texttt}{\LWR@HTMLtexttt}
```

`\textup`  $\langle text \rangle$

```

9323 \DeclareRobustCommand{\LWR@HTMLtextup}[1]{%
9324 \LWR@HTMLtextstyle{font-variant:normal}{textup}{#1}%
9325 }
9326
9327 \DeclareRobustCommand{\LWR@nulltextup}[1]{#1}
9328
9329 \LetLtxMacro{\textup}{\LWR@HTMLtextup}

```

`\textit`  $\langle text \rangle$

```

9330 \DeclareRobustCommand{\LWR@HTMLtextit}[1]{\LWR@htmlspan{i}{#1}}
9331 \DeclareRobustCommand{\LWR@nulltextit}[1]{#1}
9332 \LetLtxMacro{\textit}{\LWR@HTMLtextit}

```

`\textsc`  $\langle text \rangle$

```

9333 \DeclareRobustCommand{\LWR@HTMLtextsc}[1]{%
9334 \LWR@HTMLtextstyle{font-variant:small-caps}{textsc}{#1}%
9335 }
9336
9337 \DeclareRobustCommand{\LWR@nulltextsc}[1]{#1}
9338
9339 \LetLtxMacro{\textsc}{\LWR@HTMLtextsc}

```

`\textsl`  $\langle text \rangle$

```

9340 \DeclareRobustCommand{\LWR@HTMLtextsl}[1]{%
9341 \LWR@HTMLtextstyle{font-style:oblique}{textsl}{#1}%
9342 }
9343
9344 \DeclareRobustCommand{\LWR@nulltextsl}[1]{#1}
9345
9346 \LetLtxMacro{\textsl}{\LWR@HTMLtextsl}

```

`\textnormal`  $\langle text \rangle$

```

9347 \DeclareRobustCommand{\LWR@HTMLtextnormal}[1]{\textmd{\textrm{\textup{#1}}}}
9348 \DeclareRobustCommand{\LWR@nulltextnormal}[1]{#1}
9349 \LetLtxMacro{\textnormal}{\LWR@HTMLtextnormal}

9350 \DeclareRobustCommand{\LWR@nullrmfamily}{-}
9351 \DeclareRobustCommand{\LWR@nullsffamily}{-}
9352 \DeclareRobustCommand{\LWR@nullttfamily}{-}
9353 \DeclareRobustCommand{\LWR@nullbfseries}{-}

```

```

9354 \DeclareRobustCommand{\LWR@nullmdseries}{-}
9355 \DeclareRobustCommand{\LWR@nullupshape}{-}
9356 \DeclareRobustCommand{\LWR@nullslshape}{-}
9357 \DeclareRobustCommand{\LWR@nullscshape}{-}
9358 \DeclareRobustCommand{\LWR@nullitshape}{-}
9359 \DeclareRobustCommand{\LWR@nullem}[1]{-}
9360 \DeclareRobustCommand{\LWR@nullnormalfont}{-}

```

`\LWR@nullfonts` Removes formatting during filename operations.

 Use only inside a group.

The following are *not* made robust, since they must be expanded to their nullified versions.

```

9361 \newcommand*{\LWR@nullfonts}{-}
9362 \LetLtxMacro{\emph}{\LWR@nullemph}%
9363 \LetLtxMacro{\textmd}{\LWR@nulltextmd}%
9364 \LetLtxMacro{\textbf}{\LWR@nulltextbf}%
9365 \LetLtxMacro{\textrm}{\LWR@nulltextrm}%
9366 \LetLtxMacro{\textsf}{\LWR@nulltextsf}%
9367 \LetLtxMacro{\texttt}{\LWR@nulltexttt}%
9368 \LetLtxMacro{\textup}{\LWR@nulltextup}%
9369 \LetLtxMacro{\textit}{\LWR@nulltextit}%
9370 \LetLtxMacro{\textsc}{\LWR@nulltextsc}%
9371 \LetLtxMacro{\textsl}{\LWR@nulltextsl}%
9372 \LetLtxMacro{\textnormal}{\LWR@nulltextnormal}%
9373 \LetLtxMacro{\rmfamily}{\LWR@nullrmfamily}%
9374 \LetLtxMacro{\sffamily}{\LWR@nullsffamily}%
9375 \LetLtxMacro{\ttfamily}{\LWR@nullttfamily}%
9376 \LetLtxMacro{\bfseries}{\LWR@nullbfseries}%
9377 \LetLtxMacro{\mdseries}{\LWR@nullmdseries}%
9378 \LetLtxMacro{\upshape}{\LWR@nullupshape}%
9379 \LetLtxMacro{\slshape}{\LWR@nullslshape}%
9380 \LetLtxMacro{\scshape}{\LWR@nullscshape}%
9381 \LetLtxMacro{\itshape}{\LWR@nullitshape}%
9382 \LetLtxMacro{\em}{\LWR@nullem}%
9383 \LetLtxMacro{\normalfont}{\LWR@nullnormalfont}%

9384 \renewcommand*{\,}{-}%
9385 \renewcommand*{~}{-}%
9386 \renewcommand*{\newline}{ }%
9387 \renewcommand*{\textellipsis}{-}%

9388 \renewcommand*{\HTMLUnicode}[1]{-}%
9389 \renewcommand*{\HTMLentity}[1]{-}%

```

Ampersand becomes “and”, which is a short word and is then removed from the filename.

```
9390 \renewcommand*{\&}{and}%

9391 \renewcommand{\textsuperscript}[1]{##1}%
9392 \renewcommand{\textsubscript}[1]{##1}%

9393 \renewcommand{\underline}[1]{##1}%

9394 \RenewDocumentCommand{\LWR@htmlspanclass}{o m +m}{##3}%
9395 \DeclareExpandableDocumentCommand{\InlineClass}{+o +m +m}{##3}%
9396 \DeclareRobustCommand{\LWR@HTMLtextstyle}[3]{##3}%
```

Nullify math macros.

```
9397 \def\(\##1\){}%
9398 \def\[##1\]{}%
9399 \RenewDocumentCommand{\LWR@subsingledollar}{s m m m}{}
```

Use the simpler form with `\texorpdfstring`:

```
9400 \let\texorpdfstring\relax%
9401 \newcommand{\texorpdfstring}[2]{##2}%
9402 }
```

Remembers the current font family, series, and shape.

```
9403 \newcommand*{\LWR@f@family}{rm}
9404 \newcommand*{\LWR@f@series}{md}
9405 \newcommand*{\LWR@f@shape}{up}
```

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

Prints the text with the current font choices.

```
9406 \newcommand*{\LWR@textcurrentfont}[1]{%
9407 \csuse{text\LWR@f@family}{%
9408 \csuse{text\LWR@f@series}{%
9409 \csuse{text\LWR@f@shape}{%
9410 #1%
9411 }%
9412 }%
9413 }%
9414 }
```

`\mdseries`

9415 `\renewrobustcmd*{\mdseries}{\renewcommand*{\LWR@f@series}{md}}`

`\bfseries`

9416 `\renewrobustcmd*{\bfseries}{\renewcommand*{\LWR@f@series}{bf}}`

`\rmfamily`

9417 `\renewrobustcmd*{\rmfamily}{\renewcommand*{\LWR@f@family}{rm}}`

`\sffamily`

9418 `\renewrobustcmd*{\sffamily}{\renewcommand*{\LWR@f@family}{sf}}`

`\ttfamily`

9419 `\renewrobustcmd*{\ttfamily}{\renewcommand*{\LWR@f@family}{tt}}`

`\upshape`

9420 `\renewrobustcmd*{\upshape}{\renewcommand*{\LWR@f@shape}{up}}`

`\itshape`

9421 `\renewrobustcmd*{\itshape}{\renewcommand*{\LWR@f@shape}{it}}`

`\scshape`

9422 `\renewrobustcmd*{\scshape}{\renewcommand*{\LWR@f@shape}{sc}}`

`\normalfont`

9423 `\renewrobustcmd*{\normalfont}{\rmfamily\mdseries\upshape}`

`\sp`  $\langle text \rangle$

For `siunitx`. Must work in math mode.

9424 `\renewcommand{\sp}[1]{\text{<sup>#1</sup>}}`

`\sb`  $\langle text \rangle$

For **siunitx**. Must work in math mode.

```
9425 \renewcommand{\sb}[1]{\text{_{#1}}{}}
```

`\textsuperscript`  $\langle text \rangle$

```
9426 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\@textsuperscript`  $\langle text \rangle$

```
9427 \renewcommand{\@textsuperscript}[1]{\LWR@htmlspan{sup}{#1}}
```

`\textsubscript`  $\langle text \rangle$

```
9428 \AtBeginDocument{
9429 \renewrobustcmd{\textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
9430 }
```

`\@textsubscript`  $\langle text \rangle$

```
9431 \AtBeginDocument{
9432 \renewcommand{\@textsubscript}[1]{\LWR@htmlspan{sub}{#1}}
9433 }
```

`\up`  $\langle text \rangle$  Prints superscript.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
9434 \AtBeginDocument{\let\up\textsuperscript}
```

`\fup`  $\langle text \rangle$  Prints superscript.

Supports **fmtcount** package.

This is `\let` at the beginning of the document in case some other package has changed the definition.

```
9435 \AtBeginDocument{\let\fup\textsuperscript}
```

`\underline`  $\langle text \rangle$

```

9436 \renewcommand{\underline}[1]{%
9437 \LWR@HTMLtextstyle%
9438 {text-decoration:underline;text-decoration-skip}%
9439 {underline}{#1}%
9440 }

```

`\LWR@overline` `{\langle text \rangle}`

```

9441 \newcommand{\LWR@overline}[1]{%
9442 \LWR@HTMLtextstyle%
9443 {text-decoration:overline;text-decoration-skip}%
9444 {overline}{#1}%
9445 }

```

`\LWR@currenttextcolor` The color to use for text and `\rule`, defaulting to black:

```

9446 \newcommand*{\LWR@currenttextcolor}{black}

```

`\LWR@tempcolor` The color converted to HTML colorspace.

`\LWR@tempcolortwo`

```

9447 \newcommand*{\LWR@tempcolor}{}
9448 \newcommand*{\LWR@tempcolortwo}{}

```

`\LWR@findcurrenttextcolor` Sets `\LWR@tempcolor` to the current color.

```

9449 \newcommand*{\LWR@findcurrenttextcolor}{%
9450 \renewcommand{\LWR@tempcolor}{black}%
9451 }

```

`\LWR@textcurrentcolor` `{\langle text \rangle}` Like `\textcolor` but uses the current `\color` instead.

```

9452 \NewDocumentCommand{\LWR@textcurrentcolor}{m}{%
9453 \renewcommand*{\LWR@currenttextcolor}{black}%
9454 #1%
9455 }

```

```

9456 \end{warpHTML}

```

## 84 Skips, spaces, font sizes

for HTML output: 9457 `\begin{warpHTML}`

`\,` must be redefined after `\RequirePackage{printlen}`

Direct-formatting space commands become HTML entities:

```
9458 \renewrobustcmd*{\,}{\HTMLUnicode{202f}} % HTML thin non-breakable space
```

```
9459
```

```
9460 \renewrobustcmd*{\~}{\HTMLentity{nbsp}}
```

```
9461
```

```
9462 \renewrobustcmd*{\textellipsis}{\HTMLUnicode{2026}}
```

Direct-formatting font sizes are ignored:

```
9463 \renewrobustcmd*{\normalsize}{}
9464 \renewrobustcmd*{\small}{}
9465 \renewrobustcmd*{\footnotesize}{}
9466 \renewrobustcmd*{\scriptsize}{}
9467 \renewrobustcmd*{\tiny}{}
9468 \renewrobustcmd*{\large}{}
9469 \renewrobustcmd*{\Large}{}
9470 \renewrobustcmd*{\LARGE}{}
9471 \renewrobustcmd*{\huge}{}
9472 \renewrobustcmd*{\Huge}{}

9473 \DeclareDocumentCommand{\onecolumn}{}{}
9474
9475 \DeclareDocumentCommand{\twocolumn}{0}{}{
9476
9477 #1
9478
9479 }
```

`\hfill`

```
9480 \renewcommand*{\hfill}{\quad}
```

`\hrulefill`

```
9481 \renewcommand*{\hrulefill}{\rule{1in}{1pt}}
```

`\dotfill`

```
9482 \renewcommand*{\dotfill}{\dots}
```

`\newpage`

```
9483 \renewcommand*{\newpage}{
9484
9485 }
```

`\newline` Uses the HTML `<br />` element.

```
9486 \newrobustcmd*{\LWR@newlinebr}{\unskip\LWR@htmltag{br /}\LWR@orignewline}%
9487 \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`.

```
9488 \LetLtxMacro\LWR@origendofline\\
9489 \NewDocumentCommand{\LWR@endofline}{s o}
9490 {%
9491 \newline%
9492 }
```

`\LWR@minipagestartpars` Minipages are often placed side-by-side inside figures, with a bit of horizontal space to separate them. Since HTML does not allow a `<div>` to be inside a `p`, paragraphs must be turned off during the generation of the minipage, then turned on after the minipage is complete. When this occurs between side-by-side minipages, `lwarp` correctly suppresses the paragraph tags between the minipages, unless some other text is between the minipages. Such text forms its own paragraph, resulting in text after a minipage to be on its own line. Since people often place small horizontal space between minipages, it is desirable to maintain this space if possible. `lwarp` tries to do this by remembering that a minipage has been seen, in which case paragraph tags are suppressed around `\hspace`, `\enskip`, `\quad`, and `\qquad` until the end of the paragraph, when the closing `p` tag is created.

When a minipage is seen, the boolean `LWR@minipagethispar` is set, telling the following horizontal whitespace commands to try to suppress their surrounding paragraph tags. `LWR@minipagethispar` is cleared at the next end of paragraph, when the HTML paragraph closing tag is generated.

Placed just before `\hspace`, `\quad`, or `\qquad`'s HTML output.

```
9493 \newcommand*{\LWR@minipagestartpars}{%
9494 \ifbool{LWR@minipagethispar}{\LWR@startpars}{}%
9495 }
```

`\LWR@minipagestoppars` Placed just after `\hspace`, `\quad`, or `\qqquad`'s HTML output.

```
9496 \newcommand*\LWR@minipagestoppars}{%
9497 \ifbool{LWR@minipagethispar}{\LWR@stoppars}{}%
9498 }
```

`\quad` Handles special minipage & horizontal space interactions.

```
9499 \renewcommand*\quad}{%
9500 \LWR@minipagestoppars%
9501 \HTMLUnicode{2001}%
9502 \LWR@minipagestartpars%
9503 }
```

`\qqquad` Handles special minipage & horizontal space interactions.

```
9504 \renewcommand*\qqquad}{\quad\quad}
```

`\enskip` Handles special minipage & horizontal space interactions.

```
9505 \renewcommand*\enskip}{%
9506 \LWR@minipagestoppars%
9507 \HTMLUnicode{2000}%
9508 \LWR@minipagestartpars%
9509 }
```

Len `\WR@tempwidth` Used to compute span width, height, raise for `\hspace` and `\rule`:

```
Len \WR@tempheight 9510 \newlength{\LWR@tempwidth}
Len \WR@tempraise 9511 \newlength{\LWR@tempheight}
9512 \newlength{\LWR@tempraise}
```

`\LWR@hspace` \*  $\{(\textit{length})\}$

Handles special minipage & horizontal space interactions.

Prints a span of a given width. Ignores the optional star.

`\hspace{\fill}` is converted to `\hspace{2em}`, equal to `\qqquad`.

```
9513 \NewDocumentCommand{\LWR@hspace}{s m}{%
9514 \setlength{\LWR@tempwidth}{#2}%
```

If `\fill`, change to `\qqquad`:

```

9515 \ifnum\gluestretchorder\LWR@tempwidth>0%
9516 \setlength{\LWR@tempwidth}{2em}%
9517 \fi%

```

Only if the width is not zero:

```

9518 \ifdimcomp{\LWR@tempwidth}{=}{0pt}{-}{%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

9519 \LWR@minipagestoppars%

```

Support the HTML thin wrappable space:

```

9520 \ifdimcomp{\LWR@tempwidth}{=}{.16667em}%
9521 {%
9522 \HTMLUnicode{2009}% thin breakable space
9523 }%

```

Print the span with the converted width. Not rounded.

```

9524 {%
9525 \LWR@htmltagc{%
9526 span style="width:\LWR@printlength{\LWR@tempwidth}; % extra space
9527 display:inline-block"%
9528 }%

```

If formatting for a word processor, approximate with a number of \quads, in case a span of a given width is not supported:

```

9529 \ifbool{FormatWP}{%
9530 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
9531 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
9532 \quad%
9533 \addtolength{\LWR@templengthone}{-1em}%
9534 }%
9535 }{}%

```

Close the span:

```

9536 \LWR@htmltagc{/span}%
9537 }%

```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

9538 \LWR@minipagestartpars%

```

```
9539 }% width not 0
9540 }
```

`\LWR@nohspace` \*  $\langle length \rangle$

Used to disable `\hspace` while creating description `\items`.

```
9541 \NewDocumentCommand{\LWR@nohspace}{s m}{}
```

`\hspace` \*  $\langle length \rangle$

Handles special minipage & horizontal space interactions.

```
9542 \LetLtxMacro{\hspace}{\LWR@hspace}
```

`\LWR@vspace` \*  $\langle length \rangle$  Nullified `vspace`.

```
9543 \NewDocumentCommand{\LWR@vspace}{s m}{}
```

`\vspace` \*  $\langle length \rangle$  Nullified.

```
9544 \LetLtxMacro\vspace\LWR@vspace
```

`\linebreak` [ $\langle num \rangle$ ] Inserts an HTML br tag.

```
9545 \renewcommand*{\linebreak}[1] [] {\newline}
```

`\nolinebreak` [ $\langle num \rangle$ ]

```
9546 \renewcommand*{\nolinebreak}[1] [] {}
```

`\pagebreak` [ $\langle num \rangle$ ] Starts a new paragraph.

```
9547 \renewcommand*{\pagebreak}[1] [] {
9548
9549 }
```

`\nopagebreak` [ $\langle num \rangle$ ]

```
9550 \renewcommand*{\nopagebreak}[1] [] {}
```

`\enlargethispage` \*  $\langle len \rangle$

```
9551 \RenewDocumentCommand{\enlargethispage}{s m}{}
```

```
\clearpage
\cleardoublepage
```

```
9552 \renewcommand*\clearpage{}
9553 \renewcommand*\cleardoublepage{}
```

```
\LWR@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.

```
9554 \NewDocumentCommand{\LWR@rule}{o m m}{%
```

The width is copied into a temporary  $\TeX$  length, from which comparisons and conversions may be made:

```
9555 \setlength{\LWR@tempwidth}{#2}%
```

If it's zero-width then skip the entire rule:

```
9556 \ifthenelse{\lengthtest{\LWR@tempwidth=0pt}}
9557 {}% zero- width
9558 {}% non-zero width
```

If it's non-zero width, set a minimal thickness so that it more reliably shows in the browser:

```
9559 \ifthenelse{%
9560 \lengthtest{\LWR@tempwidth>0pt}\AND%
9561 \lengthtest{\LWR@tempwidth<1pt}}%
9562 }%
9563 {\setlength{\LWR@tempwidth}{1pt}}{}
```

Likewise with height:

```
9564 \setlength{\LWR@tempheight}{#3}%
9565 \ifthenelse{%
9566 \lengthtest{\LWR@tempheight>0pt}\AND%
9567 \lengthtest{\LWR@tempheight<1pt}}%
9568 }%
9569 {\setlength{\LWR@tempheight}{1pt}}{}
```

If had a minipage this paragraph, try to inline the rule without generating paragraph tags:

```
9570 \LWR@minipagestoppar%
```

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  $\text{\LaTeX}$  code.

```
9571 \LWR@htmltagc{%
9572 span
9573 style="%
```

The background color is used to draw the filled rule. The color may be changed by `\textcolor`.

```
9574 \ifbool{FormatWP}{-}{background:\LWR@currenttextcolor ; }%
```

The width and height are printed, converted to PT:

```
9575 width:\LWR@printlength{\LWR@tempwidth} ; %
9576 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  $\text{\LaTeX}$  length allows a typical  $\text{\LaTeX}$  expression to be used as an argument for the raise, whereas printing the raise argument directly to HTML output without conversion to a  $\text{\LaTeX}$  length limits the allowable syntax. To do: A superior method would compute a ratio of  $\text{\LaTeX}$  ex height, then print that to HTML with an ex unit.

```
9577 \IfValueT{#1}%
9578 {%
9579 \setlength{\LWR@tempraise}{Opt-#1}%
9580 \setlength{\LWR@tempraise}{\LWR@tempraise*2}%
9581 \LWR@orignewline%
9582 -ms-transform: translate(Opt,\LWR@printlength{\LWR@tempraise}); %
9583 \LWR@orignewline%
9584 -webkit-transform: translate(Opt,\LWR@printlength{\LWR@tempraise}); %
9585 \LWR@orignewline%
9586 transform: translate(Opt,\LWR@printlength{\LWR@tempraise}); %
9587 \LWR@orignewline%
9588 }%
```

Display inline-block to place the span inline with the text:

```
9589 display:inline-block;"%
9590 }%
```

If formatting for a word processor, approximate with a number of underscores, in case a span of a given width is not supported:

```
9591 \ifbool{FormatWP}{-}{
9592 \setlength{\LWR@templengthone}{\LWR@tempwidth}%
9593 \whiledo{\lengthtest{\LWR@templengthone>1em}}{%
```

```

9594 _{}%
9595 \addtolength{\LWR@templengthone}{-1em}%
9596 }%
9597 }{}%
```

Close the span:

```
9598 \LWR@htmltagc{/span}%
```

If had a minipage this paragraph, try to inline the white space without generating paragraph tags:

```

9599 \LWR@minipagestartpars%
9600 }% non-zero width
9601 }
```

```
\rule [<raise>] {<width>} {<height>}
```

Handles special minipage & horizontal space interactions.

```
9602 \renewrobustcmd{\rule}{\LWR@rule}
```

```
9603 \end{warpHTML}
```

## 85 \phantomsection

**for HTML output:** 9604 \begin{warpHTML}

`\phantomsection` Emulate the hyperref `\phantomsection` command, often used to insert the bibliography into table of contents:

```

9605 \DeclareDocumentCommand{\phantomsection}{}{}%
9606 \section*{}%
9607 }
```

```
9608 \end{warpHTML}
```

## 86 \LaTeX and other logos

Logos for HTML and print modes:

Some of these logos may be redefined in a later package, so after loading other packages, and at the beginning of the document, their definitions are finally `\let` in `\LWR@LwarpStart`.

For CSS conversions, see:

<http://edward.oconnor.cx/2007/08/tex-poshlet>

<http://nitens.org/taraborelli/texlogo>

## 86.1 HTML logos

**for HTML output:** 9609 `\begin{warpHTML}`

`\TeX`  $\TeX$

`latexlogo` is a CSS class used to properly typeset the E and A in  $\TeX$  and friends.

`latexlogofont` is a CSS class used to select the font for the rest of the logo in  $\TeX$ , `LuaTeX`, `ConTeXt`, etc.

```
9610 \let\LWR@origTeX\TeX
9611
9612 \newcommand*{\LWR@TeX}
9613 {%
9614 \InlineClass{latexlogofont}%
9615 {%
9616 \LWR@HTMLtextstyle%
9617 {text-transform:uppercase}%
9618 {latexlogo}%
9619 {T\textsubscript{e}X}%
9620 }%
9621 }
```

`\LaTeX`  $\TeX$ ,  $\TeX 2\epsilon$   
`\LaTeXe`

```
9622 \let\LWR@origLaTeX\LaTeX
9623
9624 \newcommand*{\LWR@LaTeX}
9625 {%
9626 \InlineClass{latexlogofont}%
9627 {%
9628 \LWR@HTMLtextstyle%
9629 {text-transform:uppercase}%
9630 {latexlogo}%
9631 {LaT\textsubscript{e}X}%
9632 }%
9633 }
```

```

9634
9635 \let\LWR@origLaTeXe\LaTeXe
9636
9637 \renewcommand*{\LaTeXe}
9638 {\LaTeX\InlineClass{latexlogofont}%
9639 {\,2\textsubscript{\textit{\HTMLUnicode{3B5}}}}}

```

```

\LuaTeX LuaTEX, Lua \TeX
\LuaLaTeX
9640 \newcommand*{\LWR@LuaTeX}{\InlineClass{latexlogofont}{Lua}\TeX}
9641 \newcommand*{\LWR@LuaLaTeX}{\InlineClass{latexlogofont}{Lua}\LaTeX}

```

```

\XeTeX XETEX, X \mathbb{T} EX
\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 X \mathbb{T} EX and spaces \mathbb{T} EX
appropriately.

```

```

9642 \newcommand*{\Xe}
9643 {X\textsubscript{\HTMLUnicode{18e}}}
9644 \newcommand*{\LWR@XeTeX}{\InlineClass{xetexlogo}{\Xe}\TeX}
9645 \newcommand*{\LWR@XeLaTeX}{\InlineClass{xelatexlogo}{\Xe}\LaTeX}

```

```

\ConTeXt ConTEXt

9646 \newcommand*{\LWR@ConTeXt}
9647 {\InlineClass{latexlogofont}{Con}\TeX{}}%
9648 \InlineClass{latexlogofont}{t}}

```

```

\BibTeX BIBTEX, MakeIndex
\MakeIndex
9649 \providecommand*{\BibTeX}
9650 {\InlineClass{latexlogofont}{B\textsc{ib}}\TeX}
9651
9652 \newcommand*{\MakeIndex}
9653 {\InlineClass{latexlogofont}{\textit{MakeIndex}}}

```

```

\AmS $\mathcal{A}\mathcal{M}\mathcal{S}$

amslogo is a css class used for the $\mathcal{A}\mathcal{M}\mathcal{S}$ logo.

9654 \AtBeginDocument{\DeclareDocumentCommand{\AmS}{-}
9655 {\InlineClass{amslogo}{\textit{A\textsubscript{M}S}}}}

```

```

\MiKTeX MiKTeX
9656 \newcommand*\MiKTeX{\InlineClass{latexlogofont}{MiK}\TeX}

\LyX LyX

lyxlogo is a css class used for the LyXlogo.

9657 \newcommand*\LyX{\InlineClass{lyxlogo}{LyX}}

9658 \end{warpHTML}

```

## 86.2 Print logos

```

for PRINT output: 9659 \begin{warpprint}
9660 \newcommand*\XeTeXrevE{
9661 {\hspace{- .1667em}\raisebox{- .5ex}{\reflectbox{E}}\hspace{- .125em}}
9662 \providecommand*\XeTeX{\mbox{X\XeTeXrevE\TeX}}
9663 \providecommand*\XeLaTeX{\mbox{X\XeTeXrevE\LaTeX}}
9664 \providecommand*\AMS{%
9665 \leavevmode\hbox{\$ \mathcal A \kern-.2em \lower.376ex%
9666 \hbox{\$ \mathcal M\$} \kern-.2em \mathcal S\$}}
9667 \newcommand*\LyX{\textsf{LyX}}
9668 \providecommand*\LuaTeX{\mbox{Lua\TeX}}
9669 \providecommand*\LuaLaTeX{\mbox{Lua\LaTeX}}
9670 \providecommand*\BibTeX{\mbox{B\textsc{ib}\TeX}}
9671 \providecommand*\MakeIndex{\mbox{\textit{MakeIndex}}}
9672 \providecommand*\ConTeXt{\mbox{Con\TeX{t}}}
9673 \providecommand*\MiKTeX{\mbox{MiK\TeX}}
9674 \end{warpprint}

```

## 87 \AtBeginDocument, \AtEndDocument

```

for HTML output: 9675 \begin{warpHTML}

\LWR@LwarpStart Automatically sets up the HTML-related actions for the start and end of the document.
 \LWR@LwarpEnd
9676 \AfterEndPreamble{\LWR@LwarpStart}
9677 \AtEndDocument{\LWR@LwarpEnd}

9678 \end{warpHTML}

```

## 88 Koma-script

Load patches to **koma-script**.

```
for HTML output: 9679 \begin{warpHTML}

9680 \@ifclassloaded{scrbook}{\RequirePackage{lwarp-patch-komascript}}{}
9681 \@ifclassloaded{scrartcl}{\RequirePackage{lwarp-patch-komascript}}{}
9682 \@ifclassloaded{scrreprt}{\RequirePackage{lwarp-patch-komascript}}{}

9683 \end{warpHTML}
```

## 89 Memoir

Load patches to **memoir**.

```
for HTML output: 9684 \begin{warpHTML}

9685 \@ifclassloaded{memoir}{\RequirePackage{lwarp-patch-memoir}}{}

9686 \end{warpHTML}
```

## 90 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.

The following adjustments apply to the lwarp-\* package listings:

---

File 2 **lwarp-a4.sty**

§ 91 Package **a4**

Pkg a4 **a4** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4}  
2 \newcommand\*{\WideMargins}{}

---

File 3 **lwarp-a4wide.sty**

§ 92 Package **a4wide**

Pkg a4wide **a4wide** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a4wide}

---

File 4 **lwarp-a5comb.sty**

§ 93 Package **a5comb**

Pkg a5comb **a5comb** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{a5comb}

---

File 5 **lwarp-abstract.sty**

§ 94 Package **abstract**

*(Emulates or patches code by PETER WILSON.)*

Pkg abstract **abstract** is supported and patched by **lwarp**.

 **missing TOC** If using the number option with file splits, be sure to place the table of contents before the abstract. The number option causes a section break which may cause a

file split, which would put a table of contents out of the home page if it is after the abstract.

for HTML output:

**memoir** provides an abstract environment even though it is not an **article** or **report** class. Meanwhile, **lwarp** loads **book** to emulate **memoir**, but **book** does not have an abstract environment, so when the **abstract** package is loaded for emulation there is no pre-existing abstract to redefine, which would cause an error. Thus, a null abstract is provide here:

```
1 \ProvideDocumentEnvironment{abstract}{}{}{}
```

Accept all options for **lwarp-abstract**:

```
2 \LWR@ProvidesPackagePass{abstract}

3 \AtBeginDocument{
4 \BeforeBeginEnvironment{abstract}{
5 \LWR@forcenewpage
6 \BlockClass{abstract}
7 }
8 \AfterEndEnvironment{abstract}{\endBlockClass}
9 }
10
11 \renewcommand{\@bsrunintitle}{%
12 \hspace*{\abstitleskip}%
13 {\abstractnamefont%
14 \InlineClass{abstractrunintitle}{\abstractname}%
15 \@bslabeldelim}%
16 }
17
18 \@ifclassloaded{memoir}
19 {
20 \renewenvironment{abstract}{%
21 % \titlepage
22 \null\vfil
23 \@beginparpenalty\@lowpenalty
24 \if@bsrunin
25 \else
26 \if@bsstyle
27 \abstitlestyle{\BlockClassSingle{abstracttitle}{\abstractname}}
28 \else
29 \ifnumber@bs
30 \num@bs
31 \else
32 \begin{\absnamepos}%
33 \abstractnamefont \BlockClassSingle{abstracttitle}{\abstractname}
34 \endparpenalty\@M
35 \end\absnamepos%
36 %% \vspace{\abstitlekip}%
```

```

37 \fi
38 \fi
39 \vspace{\abstitlekip}%
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 6 **lwarp-acro.sty**

§ 95 Package **acro**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg acro **acro** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{acro}

\DeclareAcronym is used in the preamble, where **lwarp** has not yet made the dollar active, so temporarily enable **lwarp** math catcode just for this definition:

```

2 \ExplSyntaxOn
3 \NewDocumentCommand \LWR@DeclareAcronym {mm}
4 {
5 \acro_declare_acronym:nn {#1} {#2}
6 \catcode'\$=3% lwarp
7 }
8 \ExplSyntaxOff
9
10 \RenewDocumentCommand{\DeclareAcronym}{}{
11 \catcode'\$=\active% lwarp
12 \LWR@DeclareAcronym
13 }

```

Modified to activate the current font:

```

14 \ExplSyntaxOn
15 \cs_gset_protected:Npn \acro_write_short:nn #1#2
16 {
17 \mode_if_horizontal:F { \leavevmode }
18 \group_begin:
19 \bool_if:NTF \l__acro_custom_format_bool
20 { \l__acro_custom_format_tl }
21 { \l__acro_short_format_tl }
22 {\LWR@textcurrentfont{#2}}% lwarp

```

```

23 \group_end:
24 }
25
26 \cs_gset_protected:Npn \acro_write_alt:nn #1#2
27 {
28 \mode_if_horizontal:F { \leavevmode }
29 \group_begin:
30 \bool_if:NTF \l__acro_custom_format_bool
31 { \l__acro_custom_format_tl }
32 { \l__acro_alt_format_tl }
33 {\LWR@textcurrentfont{#2}}% lwarp
34 \group_end:
35 }
36
37 \cs_gset_protected:Npn \acro_write_long:nn #1#2
38 {
39 \mode_if_horizontal:F { \leavevmode }
40 \group_begin:
41 \bool_if:NTF \l__acro_custom_long_format_bool
42 { \l__acro_custom_long_format_tl }
43 { \use:n }
44 {
45 \use:x
46 {
47 \exp_not:n {#1}
48 {
49 \bool_if:NTF \l__acro_first_upper_bool
50 { \exp_not:N __acro_first_upper_case:n { \exp_not:n {
51 \LWR@textcurrentfont{#2}}% lwarp
52 } } }
53 { \exp_not:n {\LWR@textcurrentfont{#2}} }% lwarp
54 }
55 }
56 }
57 \group_end:
58 }
59 \ExplSyntaxOff

```

---

File 7 **lwarp-acronym.sty**

§ 96 Package **acronym**

*(Emulates or patches code by TOBIAS OETIKER.)*

Pkg acronym **acronym** is patched for use by **lwarp**.

 **\acresetall** does not work with **cleveref**, causing multiply-defined labels. **lwarp**

patches **acronym** for HTML, but not for print mode.

for HTML output: `1 \LWR@ProvidesPackagePass{acronym}`

Uses `\textit` instead of `\itshape`:

```
2 \renewcommand{\acfia}[1]{%
3 {\textit{\AC@acl{#1}}} (\ifAC@starred\acs*{#1}\else\acs{#1}\fi)}
```

Removes the mbox to allow math inside:

```
4 \renewcommand*{\AC@acs}[1]{%
5 % \mbox{
6 \expandafter\AC@get\csname fn@#1\endcsname\@firstoftwo{#1}}
7 % }
```

Modified for **cleveref** and **zref**:

```
8 \renewcommand*{\AC@und@newl@bel}[3]{%
9 \@ifundefined{#1@#3}%
10 {%
11 \global\expandafter\let\csname#2@#3\endcsname\@nnil
12 \global\expandafter\let\csname#2@#3@cref\endcsname\@nnil% lwarp
13 }%
14 {%
15 \global\expandafter\let\csname#1@#3\endcsname\relax
16 \global\expandafter\let\csname#1@#3@cref\endcsname\relax% lwarp
17 \global\expandafter\let\csname Z@R@#3\endcsname\relax% lwarp
18 }%
19 }%
```

Modified for **cleveref** and **zref**:

```
20 \renewcommand*{\AC@testdef}[3]{%
21 \ifstrequal{#1}{Z@R}{}{% lwarp
22 \@ifundefined{s@#2}\@secondoftwo\@firstofone
23 {%
24 \expandafter\ifx\csname s@#2\endcsname\empty
25 \expandafter\@firstofone
26 \else
27 \expandafter\xdef\csname s@#2\endcsname{%
28 \expandafter\expandafter
29 \expandafter\@gobble
30 \csname s@#2\endcsname
31 }%
32 \expandafter\@gobble
33 \fi
34 }%
35 {%
```

---

```

36 \@testdef{#1}{#2}{#3}%
37 }%
38 }% lwarp
39 }%

```

---

File 8 `lwarp-adjmulticol.sty`

§97 Package **adjmulticol**

*(Emulates or patches code by BORIS VEYTSMAN.)*

Pkg `adjmulticol` **adjmulticol** is emulated.

Emulation similar to **multicols** is used, with adjusted margins. If the number of columns is specified as 1, it is set so, but if two or greater are used, **lwarp** allows a variable number of columns up to three.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{adjmulticol}`

`2 \RequirePackage{multicol}`

`adjmulticols * {<numcols> {<left 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@origmbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
14 \LWR@origmbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}%
15]{\LWR@mcolstype}%
16 }
17 {\endBlockClass}

```

---

File 9 **lwarp-addlines.sty**

§ 98 Package **addlines**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg **addlines** **addlines** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{addlines}

2 \newcommand*\addlines[1][1]{}
3 \let\addline\addlines
4 \newcommand*\removelines[1][1]{}
5 \let\removeline\removelines

```

---

File 10 **lwarp-afterpage.sty**

§ 99 Package **afterpage**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg **afterpage** Emulated.

**for HTML output:** Discard all options for **lwarp-afterpage**:

```

1 \LWR@ProvidesPackageDrop{afterpage}

2 \newcommand{\afterpage}[1]{#1}

```

---

File 11 **lwarp-algorithmicx.sty**

§ 100 Package **algorithmicx**

*(Emulates or patches code by SZÁSZ JÁNOS.)*

Pkg **algorithmicx** **algorithmicx** is supported with minor adjustments.

**for HTML output:** 1 \LWR@ProvidesPackagePass{algorithmicx}

Inside the algorithmic environment, level indenting is converted to a `<span>` of the required length, and comments are placed inside a `<span>` which is floated right.

 **package conflicts** If using `\newfloat`, `trivfloat`, and/or `algorithmicx` together, see section 331.1.

**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 12 `lwarp-alltt.sty`

§ 101 Package **alltt**

(Emulates or patches code by JOHANNES BRAAMS.)

Pkg alltt **alltt** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{alltt}

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching alltt.}
4 \AtBeginEnvironment{alltt}{%
5 \LWR@forcenewpage
6 \LWR@atbeginverbatim{3.5}{alltt}%
7 }
8 \AfterEndEnvironment{alltt}{\unskip\LWR@origvspace*{-\baselineskip}\LWR@afterendverbatim}
9 }

```

---

File 13 **lwarp-amsthm.sty**

§ 102 Package **amsthm**

*(Emulates or patches code by PUBLICATIONS TECHNICAL GROUP — AMERICAN MATHEMATICAL SOCIETY.)*

The original source code is located in `amscldotx.dtx`, and printed in `amscldotpdf.pdf`.

Pkg amsthm **amsthm** is patched for use by **lwarp**.

---

Table 12: AMSthm package — CSS styling of theorems and proofs

**Theorem:** `<div>` of class `amsthmbody<theoremstyle>`

**Theorem Name:** `<span>` of class `amsthmname<theoremstyle>`

**Theorem Number:** `<span>` of class `amsthmnumber<theoremstyle>`

**Theorem Note:** `<span>` of class `amsthmnote<theoremstyle>`

**Proof:** `<div>` of class `amsthmproof`

**Proof Name:** `<span>` of class `amsthmproofname`

where `<theoremstyle>` is `plain`, `definition`, etc.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{amsthm}

```

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 \renewcommand{\theoremstyle}[1]{%
4 \ifundefined{th@#1}{%
5 \PackageWarning{amsthm}{Unknown theoremstyle '#1'}%
6 \thm@style{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }{%
9 \thm@style{#1}%
10 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
11 }%
12 }

```

Patched to remember the style for this theorem type:

```

13 \def\xnthm#1#2{%
14 \csedef{LWR@thmstyle#2}{\LWR@newtheoremstyle}% lwarp
15 \let\@tempa\relax
16 \exp\@ifdefinable\csname #2\endcsname{%
17 \global\exp\let\csname end#2\endcsname\@endtheorem
18 \ifx *#1% unnumbered, need to get one more mandatory arg
19 \edef\@tempa##1{%
20 \gdef\exp\nx\csname#2\endcsname{%
21 \nx\@thm{\exp\nx\csname th@the\thm@style\endcsname}%
22 }{##1}}}%
23 \else % numbered theorem, need to check for optional arg
24 \def\@tempa{\@oparg{\ynthm{#2}}{}}%
25 \fi
26 \AtBeginEnvironment{#2}{\edef\LWR@thmstyle{\csuse{LWR@thmstyle#2}}}% lwarp
27 }%
28 \@tempa
29 }

```

Patched to enclose with css:

```

30 \newcommand{\LWR@haveamsthmname}{
31 \renewcommand{\thmname}[1]{\InlineClass{amsthmname\LWR@thmstyle}{##1}}
32 }
33
34 \newcommand{\LWR@haveamsthmnumber}{
35 \renewcommand{\thmnumber}[1]{\InlineClass{amsthmnumber\LWR@thmstyle}{##1}}
36 }
37
38 \newcommand{\LWR@haveamsthmnote}{
39 \renewcommand{\thmnote}[1]{\InlineClass{amsthmnote\LWR@thmstyle}{##1}}
40 }
41
42 \LWR@haveamsthmname
43 \LWR@haveamsthmnumber

```

```
44 \LWR@haveamsthmnote
```

Patches for CSS:

```
45 \def\@begintheorem#1#2[#3]{%
46 \item[
47 % \deferred@thm@head{
48 % \the\thm@headfont \thm@indent
49 \@ifempty{#1}{\let\thmname@gobble}{\LWR@haveamsthmname}% lwarp
50 \@ifempty{#2}{\let\thmnumber@gobble}{\LWR@haveamsthmnumber}% lwarp
51 \@ifempty{#3}{\let\thmnote@gobble}{\LWR@haveamsthmnote}% lwarp
52 \thm@swap\swappedhead\thmhead{#1}{#2}{#3}%
53 \the\thm@headpunct~
54 \thmheadnl % possibly a newline.
55 \hskip\thm@headsep
56 % }%
57]
58 \ignorespaces}
```

Patched for CSS:

```
59 \def\@thm#1#2#3{%
60 \ifhmode\unskip\unskip\par\fi
61 \normalfont
62 \LWR@forcenewpage% lwarp
63 \BlockClass{amsthmbody\LWR@thisthmstyle}% lwarp
64 \trivlist
65 \let\thmheadnl\relax
66 \let\thm@swap@gobble
67 \thm@notefont{\fontseries\mdefault\upshape}%
68 \thm@headpunct{.}% add period after heading
69 \thm@headsep 5\p@ plus\p@ minus\p@\relax
70 \thm@space@setup
71 #1% style overrides
72 \@topsep \thm@preskip % used by thm head
73 \@topsepadd \thm@postskip % used by \@endparenv
74 \def\@tempa{#2}\ifx\@empty\@tempa
75 \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
76 \else
77 \refstepcounter{#2}%
78 \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
79 \fi
80 \@tempa
81 }
```

**cleveref** patches `\@thm` to do `\cref@thmoptarg` if an optional argument is given. **lwarp** then patches `\cref@thmoptarg` `\AtBeginDocument`.

```
82 \AtBeginDocument{
```

```

83 \def\cref@thmoptarg[#1]#2#3#4{%
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\mdefault\upshape}%
92 \thm@headpunct{.}% add period after heading
93 \thm@headsep 5\p@ plus\p@ minus\p@\relax%
94 \thm@space@setup%
95 #2% style overrides
96 \@topsep \thm@preskip % used by thm head
97 \@topsepadd \thm@postskip % used by \@endparenv
98 \def\@tempa{#3}\ifx\@empty\@tempa%
99 \def\@tempa{\@oparg{\@begintheorem{#4}{}}{}}[]}%
100 \else%
101 \refstepcounter[#1]{#3}% <<< cleveref modification
102 \def\@tempa{\@oparg{\@begintheorem{#4}{\csname the#3\endcsname}}{}}[]}%
103 \fi%
104 \@tempa
105 }%
106 }% AtBeginDocument
107
108 \def\@endtheorem{\endtrivlist\endBlockClass\@endpefalse }

```

Proof QED symbol:

```

109 \AtBeginDocument{
110 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
111 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
112 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
113 }

```

Patched for CSS:

```

114 \renewenvironment{proof}[1][\proofname]{\par
115 \LWR@forcenewpage% lwarp
116 \BlockClass{amsthmproof}% lwarp
117 \pushQED{\qed}%
118 \normalfont \topsep6\p@\@plus6\p@\relax
119 \trivlist
120 \item[
121 \InlineClass{amsthmproofname}{#1@addpunct{.}}\ignorespaces% changes
122]{%
123 \InlineClass{theoremendmark}{\popQED}\endtrivlist%
124 \endBlockClass% lwarp
125 \@endpefalse

```

---

126 }

---

File 14 **lwarp-anonchap.sty**

§ 103 Package **anonchap**

*(Emulates or patches code by PETER WILSON.)*

Pkg **anonchap** **anonchap** is emulated.

 **tocloft & other packages** 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  $\TeX$  commands to create the titles, allowing other packages to work with it.

The code is shared by **tocbibind**.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anonchap}

2 \newcommand{\simplechapter}[1][\@empty]{%
3 \def\@chapcntformat##1{%
4 #1~\csname the##1\endcsname\simplechapterdelim\protect\quad%
5 }%
6 }
7
8 \newcommand{\restorechapter}{%
9 \let\@chapcntformat\@secntformat%
10 }
```

---

File 15 **lwarp-anysize.sty**

§ 104 Package **anysize**

*(Emulates or patches code by MICHAEL SALZENBERG, THOMAS ESSER.)*

Pkg **anysize** **anysize** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{anysize}

2 \def\papersize#1#2{}
3 \def\marginsize#1#2#3#4{}
```

---

 File 16 **lwarp-appendix.sty**

 § 105 Package **appendix**

*(Emulates or patches code by PETER WILSON.)*

Pkg appendix **appendix** is patched for use by **lwarp**.

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

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{appendix}

2 \renewcommand*{\@chap@pppage}{%
3 \part*{\appendixpagename}
4 \if@dotoc@pp
5 \addappheadtotoc
6 \fi
7 }
8
9 \renewcommand*{\@sec@pppage}{%
10 \part*{\appendixpagename}
11 \if@dotoc@pp
12 \addappheadtotoc
13 \fi
14 }
```

---

 File 17 **lwarp-arabicfront.sty**

 § 106 Package **arabicfront**

Pkg arabicfront **arabicfront** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{arabicfront}
```

---

File 18 **lwarp-array.sty**

§ 107 Package **array**

Pkg array **array** is used as-is for print output, and emulated for HTML.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{array}

2 \let\LWR@origfirstline\firstline
3 \let\LWR@origlastline\lastline
4
5 \appto\LWR@restoreorigformatting{%
6 \let\firstline\LWR@origfirstline%
7 \let\lastline\LWR@origlastline%
8 }
9
10 \renewcommand*\firstline{\LWR@HTMLhline}%
11 \renewcommand*\lastline{\LWR@HTMLhline}%

```

---

File 19 **lwarp-atbegshi.sty**

§ 108 Package **atbegshi**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg atbegshi Emulated.

**for HTML output:** Discard all options for **lwarp-atbegshi**:

```

1 \LWR@ProvidesPackageDrop{atbegshi}[2011/10/05]

2 \newcommand*\AtBeginShipout}[1]{}
3 \newbox\AtBeginShipoutBox
4 \newcommand*\AtBeginShipoutNext}[1]{}
5 \newcommand*\AtBeginShipoutFirst}[1]{}
6 \newcommand*\AtBeginShipoutDiscard{}
7 \newcommand*\AtBeginShipoutInit{}
8 \newcommand*\AtBeginShipoutAddToBox}[1]{}
9 \newcommand*\AtBeginShipoutAddToBoxForeground}[1]{}
10 \newcommand*\AtBeginShipoutUpperLeft}[1]{}
11 \newcommand*\AtBeginShipoutUpperLeftForeground}[1]{}
12 \newcommand*\AtBeginShipoutOriginalShipout}[1]{}

```

---

```

13 \def\AtBeginShipoutBoxWidth{Opt}
14 \def\AtBeginShipoutBoxHeight{Opt}
15 \def\AtBeginShipoutBoxDepth{Opt}
16

```

---

File 20 **lwarp-authblk.sty**

§ 109 Package **authblk**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg authblk **authblk** is patched for HTML.

**package support** **lwarp** supports the native  $\TeX$  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 59.8.

*(Emulates or patches code by PATRICK W. DALY.)*

**for HTML output:**

Require that **authblk** be loaded before **titling**:

```

1 \@ifpackageloaded{titling}{
2 \PackageError{lwarp-authblk}
3 {Package authblk must be loaded before titling}
4 {Titling appends authblk's author macro, so authblk must be loaded first.}
5 }
6 {}

```

Load **authblk**:

```

7 \LWR@ProvidesPackagePass{authblk}

```

Patch to add a class for the affiliation:

```

8 \LetLtxMacro\LWRAB@affil\affil
9
10 \renewcommand{\affil}[2] [] {%
11 \LWRAB@affil[#1]{\protect\InlineClass{affiliation}{#2}}
12 }

```

Create an HTML break for an `\authorcr`:

```

13 \renewcommand*{\authorcr}{\protect\LWR@newlinebr}

```

---

File 21 **lwarp-axodraw2.sty**

§ 110 Package **axodraw2**

*(Emulates or patches code by JOHN C. COLLINS, J.A.M. VERMASEREN.)*

Pkg axodraw2 **axodraw2** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{axodraw2}

2 \BeforeBeginEnvironment{axopicture}{\begin{lateximage}[(axopicture)]}
3
4 \AfterEndEnvironment{axopicture}{\end{lateximage}}
```

---

File 22 **lwarp-backref.sty**

§ 111 Package **backref**

*(Emulates or patches code by DAVID CARLISLE AND SEBASTIAN RAHTZ.)*

Pkg backref **backref** is patched for use by **lwarp**.

 **loading** Note that **backref** must be explicitly loaded, and is not automatically loaded by **hyperref** when generating HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{backref}
```

Force the hyperref option:

```

2 \def\backref{}\let\backrefxxx\hyper@section@backref
```

---

File 23 **lwarp-balance.sty**

§ 112 Package **balance**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg balance Emulated.

**for HTML output:**

Discard all options for **lwarp-balance**:

```
1 \LWR@ProvidesPackageDrop{balance}
2 \newcommand*{\balance}{}
3 \newcommand*{\nobalance}{}

```

---

File 24 **lwarp-bigdelim.sty**

§ 113 Package **bigdelim**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg `bigdelim` **bigdelim** is used as-is for print or `lateximage`, and patched for HTML.

The delimiters are displayed in HTML by printing the delimiter, the text, and a thick border across the side of the `\multirow` which indicates the actual height of the delimiter. The delimiter character is given a `<span>` class of `ldelim` or `rdelim`, and the default CSS sets this to `font-size:200%`.

⚠ use `\mrowcell` `\ldelim` and `\rdelim` use `\multirow`, so `\mrowcell` must be used in the proper number of empty cells in the same column below `\ldelim` or `\rdelim`, but not in cells which are above or below the delimiter:

---

```
\begin{tabular}{l|ll}
<empty> & a & b \\
\ldelim{\{}{2}{.25in}[left] & c & d \\
\mrowcell & e & f \\
<empty> & g & h \\
\end{tabular}

```

---

```

 a b
left { c d
 e f
 g h

```

---

**for HTML output:** First, remove the temporary definitions of `\ldelim` and `\rdelim`, which were previously defined for tabular scanning in case **bigdelim** was not loaded:

```
1 \let\ldelim\relax
2 \let\rdelim\relax

```

Next, load the package's new definitions:

```
3 \LWR@ProvidesPackagePass{bigdelim}

```

Remember the print-mode versions:

```

4 \LetLtxMacro\LWR@origldelim\ldelim
5 \LetLtxMacro\LWR@origrdelim\rdelim

\ldelim {\langle:delimiter\rangle} {\langle:#rows\rangle} {\langle:width\rangle} [\langle:text\rangle]
\rdelim

6 \RenewDocumentCommand{\ldelim}{m m m O{}}{%
7 \renewcommand{\LWR@multirowborder}{right}%
8 \multirow{#2}{#3}{#4 \InlineClass{ldelim}{#1}}%
9 }
10
11 \RenewDocumentCommand{\rdelim}{m m m O{}}{%
12 \renewcommand{\LWR@multirowborder}{left}%
13 \multirow{#2}{#3}{\InlineClass{rdelim}{#1} #4}%
14 }

```

When entering a lateximage, restore the print-mode versions:

```

15 \appto\LWR@restoreorigformatting{%
16 \LetLtxMacro{\ldelim}{\LWR@origldelim}%
17 \LetLtxMacro{\rdelim}{\LWR@origrdelim}%
18 }

```

---

File 25 **lwarp-bigstrut.sty**

§ 114 Package **bigstrut**

*(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)*

Pkg bigstrut **bigstrut** is used as-is for print or lateximage, and patched for HTML.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bigstrut}

2 \LetLtxMacro\LWR@origbigstrut\bigstrut
3
4 \renewcommand\bigstrut[1][x]{
5
6 \appto\LWR@restoreorigformatting{%
7 \LetLtxMacro{\bigstrut}{\LWR@origbigstrut}%
8 }

```

---

File 26 **lwarp-blowup.sty**

§ 115 Package **blowup**

Pkg blowup **blowup** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{blowup}
2 \newcommand*\blowUp[1] {}
```

---

File 27 **lwarp-bookmark.sty**

§ 116 Package **bookmark**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg bookmark **bookmark** is emulated.

**for HTML output:** Discard all options for **lwarp-bookmark**:

```
1 \LWR@ProvidesPackageDrop{bookmark}
2 \newcommand*\bookmarksetup[1] {}
3 \newcommand*\bookmarksetupnext[1] {}
4 \newcommand*\bookmark[2] [] {}
5 \newcommand*\bookmarkdefinestyle[2] {}
6 \newcommand*\bookmarkget[1] {}
7 \newcommand*\BookmarkAtEnd[1] {}
```

---

File 28 **lwarp-booktabs.sty**

§ 117 Package **booktabs**

*(Emulates or patches code by SIMON FEAR.)*

Pkg booktabs **booktabs** is emulated during HTML output, and used as-is during print output and inside an HTML lateximage.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{booktabs}
```

Booktabs emulation is spread among the tabular code. The original definitions are saved here for use in HTML lateximages. The HTML versions temporarily overwrite these print versions when tabular is started.

```
2 \LetLtxMacro\LWR@origtoprule\toprule
3 \LetLtxMacro\LWR@origmidrule\midrule
4 \LetLtxMacro\LWR@origcmidrule\cmidrule
5 \LetLtxMacro\LWR@origbottomrule\bottomrule
6 \LetLtxMacro\LWR@origaddlinespace\addlinespace
7 \LetLtxMacro\LWR@origmorecmidrules\morecmidrules
8 \LetLtxMacro\LWR@origspecialrule\specialrule
```

---

File 29 **lwarp-boxedminipage.sty**

§ 118 Package **boxedminipage**

Pkg boxedminipage **boxedminipage** is superceded by **boxedminipage2e**.

**for HTML output:** `1 \LWR@loadnever{boxedminipage}{boxedminipage2e}`

---

File 30 **lwarp-boxedminipage2e.sty**

§ 119 Package **boxedminipage2e**

*(Emulates or patches code by SCOTT PAKIN.)*

Pkg boxedminipage2e **boxedminipage2e** is emulated.

**for HTML output:** Discard all options for **lwarp-boxedminipage2e**:

```
1 \LWR@ProvidesPackageDrop{boxedminipage2e}

2 \newenvironment{boxedminipage}{%
3 \begin{BlockClass}{framebox}%
4 \minipage%
5 }
6 {
7 \endminipage%
8 \end{BlockClass}
9 }
```

File 31 **lwarp-breakurl.sty**§ 120 Package **breakurl***(Emulates or patches code by VILAR CAMARA NETO.)*Pkg breakurl **breakurl** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{breakurl}

2 \LetLtxMacro\burl\url
3
4 \NewDocumentCommand{\LWR@burlaltb}{0{} +m m}{%
5 \LWR@ensuredoingapar%
6 \def\LWR@templink{#2}%
7 \@onelevel@sanitize\LWR@templink%
8 \def\LWR@templinktwo{#3}%
9 \@onelevel@sanitize\LWR@templinktwo%
10 \LWR@subhyperref{\LWR@templink}{\LWR@templinktwo}%
11 \LWR@ensuredoingapar%
12 \endgroup%
13 }
14
15 \newrobustcmd*{\burlalt}{%
16 \begingroup%
17 \catcode'\#=12
18 \catcode'\%=12
19 \catcode'\&=12
20 \catcode'\~=12
21 \catcode'_ =12
22 \LWR@burlaltb%
23 }
24
25 \LetLtxMacro\urlalt\burlalt

```

File 32 **lwarp-bytefield.sty**§ 121 Package **bytefield***(Emulates or patches code by SCOTT PAKIN.)*Pkg bytefield **bytefield** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{bytefield}

2 \BeforeBeginEnvironment{bytefield}{\begin{lateximage}[(bytefield)]}
3
4 \AfterEndEnvironment{bytefield}{\end{lateximage}}
```

---

File 33 **lwarp-cancel.sty**

§ 122 Package **cancel**

Pkg cancel **cancel** is used as-is for SVG math, and emulated for HTML text output.

**for HTML output:**

```

1 \LWR@origRequirePackage{lwarp-xcolor}% for \convertcolorspec
2 \LWR@ProvidesPackagePass{cancel}
```

`\cancelto` is math-only, so is used as-is.

```

3 \LetLtxMacro\LWR@origcancel\cancel
4 \LetLtxMacro\LWR@origbcancel\bcancel
5 \LetLtxMacro\LWR@origxcancel\xcancel
6
7 \appto\LWR@restoreorigformatting{%
8 \LetLtxMacro\cancel\LWR@origcancel%
9 \LetLtxMacro\bcancel\LWR@origbcancel%
10 \LetLtxMacro\xcancel\LWR@origxcancel%
11 }
```

`\LWR@cancelcolor` `{<text>}{<color>}{<class>}{<colorstyle>}{<FormatWPstyle>}`

Add colors if not empty:

```

12 \newcommand{\LWR@cancelcolor}[5]{%
13 \ifcsempy{#2}%
14 {\LWR@HTMLtextstyle{#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 34 **lwarp-caption.sty**§ 123 Package **caption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg caption **caption** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{caption}

2 \renewcommand\caption@ibox[3]{%
3 \@testopt{\caption@iibox{#1}{#2}{#3}}{%
4 \wd\@tempboxa%
5 \linewidth% lwarp
6 }%
7 \LWR@traceinfo{caption@ibox: done}%
8 }

9 \long\def\caption@iibox#1#2#3[#4]{%
10 \@testopt{\caption@iibox{#1}{#2}{#3}{#4}}\captionbox@hj@default
11 }

12 \long\def\caption@iibox#1#2#3#4[#5]#6{%
13 \setbox\@tempboxa\hbox{#6}%
14 \begingroup
15 #1*% set \caption@position
16 \caption@iftop{%
17 \LWR@traceinfo{caption@iibox top}%
18 \endgroup
19 \parbox[t]{#4}{%
20 #1\relax
21 \caption@setposition t%
22 }%
23 {\caption#2{#3}}% lwarp
24 \captionbox@hrule
25 \csname caption@hj@#5\endcsname
26 \unhbox\@tempboxa
27 #6% lwarp
28 }%
29 }-%
30 \LWR@traceinfo{caption@iibox bottom}%

```

```

31 \endgroup
32 \parbox[b]{#4}{%
33 #1\relax
34 \caption@setposition b%
35 % \csname caption@hj@#5\endcsname
36 % \unhbox\@tempboxa
37 #6% lwarp
38 % \captionbox@hrule
39 % \vtop{\caption#2{#3}}}%
40 {\caption#2{#3}}% lwarp
41 }%
42 }%
43 \LWR@traceinfo{caption@iiibox: done}%
44 }
45
46 \def\caption@caption{%
47 \caption@iftype
48 {%
49 \caption@checkgrouplevel\@empty\caption
50 \caption@star
51 {\caption@refstepcounter\@capttype}%
52 {\caption@dblarg{\@caption\@capttype}}}%
53 {\caption@Error{\noexpand\caption outside float}%
54 \caption@gobble}%
55 }
56
57 \long\def\caption@@caption#1[#2]#3{%

58 \ifcaption@star \else
59 \caption@prepareanchor{#1}{#2}%
60 \memcaptioninfo{#1}{\csname the#1\endcsname}{#2}{#3}%
61 \@nameuse{nag@hascaptiontrue}%
62 \fi

63 \par
64 \caption@beginex{#1}{#2}{#3}%
65 \caption@setfloatcapt{%
66 \caption@boxrestore
67 \if@minipage
68 \@setminipage
69 \fi
70 \caption@normalsize
71 \ifcaption@star
72 \let\caption@makeanchor\@firstofone
73 \fi
74 \@makecaption{\csname fnum@#1\endcsname}%
75 {\ignorespaces\caption@makeanchor{#3}}\par
76 \caption@if@minipage\@minipagetrue\@minipagefalse}%
77 \caption@end%

```

78 }

```

\caption@@@make {<caption label>} {<caption text>}

79 \renewcommand\caption@@@make[2]{%
80 \LWR@startpars% lwarp
81% \sbox\@tempboxa{#1}%
82% \ifdim\wd\@tempboxa=\z@
83% \let\caption@lsep\relax
84% \fi
85 \caption@ifempty{#2}{%
86 \let\caption@lsep\@empty
87 \let\caption@tfmt\@firstofone
88 }%
89 \@setpar{\LWR@closeparagraph\@par}% lwarp
90 \caption@applyfont
91 \caption@fmt
92 {\ifcaption@star\else
93 \begingroup
94 \captionlabelfont
95 #1%
96 \endgroup
97 \fi}%
98 {\ifcaption@star\else
99 \begingroup
100 \caption@iflf\captionlabelfont
101 \relax\caption@lsep
102 \endgroup
103 \fi}%
104 {\caption@textfont
105 \caption@ifstrut
106 {\vrule\@height\ht\strutbox\@width\z@}%
107 {}}%
108 \nobreak\hskip\z@skip % enable hyphenation
109 \caption@tfmt{#2}
110 \LWR@ensuredoingapar% lwarp
111 \caption@ifstrut
112 {\ifhmode\@finalstrut\strutbox\fi}%
113 {}}%
114 \par}}
115 \LWR@stoppars% lwarp
116 }

\caption@@@make@ {<>} {<>}

117 \renewcommand{\caption@@@make@}[2]{%
118 \caption@stepthecounter
119 \caption@beginhook
120 \caption@@@make{#1}{#2}%

```

```

121 \caption@endhook
122 }

123 % \DeclareCaptionBox{none}{#2}
124 \DeclareCaptionBox{parbox}{%
125 #2%
126 }
127 \DeclareCaptionBox{colorbox}{%
128 #2%
129 }

```

---

File 35 `lwarp-caption2.sty`

§ 124 Package **caption2**

Pkg `caption2` **caption2** is not used. The user is recommended to use **caption** instead.

**for HTML output:** `1 \LWR@loadnever{caption2}{caption}`

---

File 36 `lwarp-ccaption.sty`

§ 125 Package **ccaption**

Pkg `ccaption` **ccaption** is not used. The user is recommended to use **caption** instead.

**for HTML output:** `1 \LWR@loadnever{ccaption}{caption}`

---

File 37 `lwarp-changebar.sty`

§ 126 Package **changebar**

Pkg `changebar` **changebar** is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{changebar}`

```

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 38 **lwarp-changepage.sty**

§ 127 Package **changepage**

*(Emulates or patches code by PETER WILSON.)*

Pkg changepage **changepage** is emulated.

**for HTML output:** Discard all options for **lwarp-changepage**:

```

1 \LWR@ProvidesPackageDrop{changepage}

2 \newif\ifoddpge
3 \DeclareRobustCommand{\checkoddpge}{\oddpagetrue}
4 \DeclareRobustCommand{\changetext}[5]{}
5 \DeclareRobustCommand{\changepage}[9]{}
6
7 \@ifundefined{adjustwidth}{
8 \newenvironment{adjustwidth}[2]{}{}
9 \newenvironment{adjustwidth*}[2]{}{}
10 }{
11 \renewenvironment{adjustwidth}[2]{}{}
12 \renewenvironment{adjustwidth*}[2]{}{}
13 }

14 \DeclareDocumentCommand{\strictpagecheck}{}{}
15 \DeclareDocumentCommand{\easypagecheck}{}{}

```

---

File 39 **lwarp-chngpage.sty**

§ 128 Package **chngpage**

Pkg chngpage **chngpage** is superceded by **changepage**.

**for HTML output:** `1 \LWR@loadnever{chngpage}{changepage}`

File 40 **lwarp-chappg.sty**

§ 129 Package **chappg**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg chappg **chappg** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{chappg}

2 \renewcommand{\pagenumbering}[2] [] {}
3 \providecommand{\chappgsep}{--}
```

File 41 **lwarp-chapterbib.sty**

§ 130 Package **chapterbib**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg chapterbib **chapterbib** is patched for use by **lwarp**.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{chapterbib}

2 \xdef\@savedjobname{\BaseJobname}
3 \let\@currentipfile\@savedjobname
```

File 42 **lwarp-chemfig.sty**

§ 131 Package **chemfig**

*(Emulates or patches code by CHRISTIAN TELLECHEA.)*

Pkg chemfig **chemfig** is patched for use by **lwarp**.

The images are not hashed because they depend on external settings which may be changed at any time, and are unlikely to be reused inline anyhow.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{chemfig}
```

```

2 \LetLtxMacro\LWR@chemfig@origchemfig\chemfig
3
4 \DeclareDocumentCommand\chemfig{s O{} O{} m}{%
5 \begin{lateximage}[(chemfig)]%
6 \IfBooleanTF{#1}{%
7 \LWR@chemfig@origchemfig* [#2] [#3] {#4}%
8 }{%
9 \LWR@chemfig@origchemfig [#2] [#3] {#4}%
10 }
11 \end{lateximage}%
12 }
13
14 \LetLtxMacro\LWR@chemfig@origCF@lewis@b\CF@lewis@b
15
16 \def\CF@lewis@b#1#2{%
17 \begin{lateximage}[(chemfig)]%
18 \LWR@chemfig@origCF@lewis@b{#1}{#2}%
19 \end{lateximage}%
20 }
21
22 \preto{\schemestart}{\begin{lateximage}[(chemfig)]}
23 \appto{\CF@schemestop}{\end{lateximage}}
24
25 \LetLtxMacro\LWR@chemfig@origchemleft\chemleft
26
27 \def\chemleft#1#2\chemright#3{%
28 \begin{lateximage}[(chemfig)]%
29 \LWR@chemfig@origchemleft#1#2\chemright#3%
30 \end{lateximage}%
31 }
32
33 \LetLtxMacro\LWR@chemfig@origchemup\chemup
34
35 \def\chemup#1#2\chemdown#3{%
36 \begin{lateximage}[(chemfig)]%
37 \LWR@chemfig@origchemup#1#2\chemdown#3%
38 \end{lateximage}%
39 }

```

---

File 43 **lwarp-chemformula.sty**

§ 132 Package **chemformula**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemformula **chemformula** is patched for use by **lwarp**.

The SVG images are hashed according to contents and local options. Global options are assumed to be constant document-wide.

**⚠ chemformula with MATHJAX** **chemformula** works best without MATHJAX. If MATHJAX is used, `\displaymathother` must be used before `array`, and then `\displaymathnormal` may be used after. (The **chemformula** package adapts to `array`, but does not know about MATHJAX, and MATHJAX does not know about **chemformula**.)

While using MATHJAX, `\displaymathother` may also be used for other forms of display and inline math which contain **chemformula** expressions.

**for HTML output:** `1 \LWR@ProvidesPackagePass{chemformula}[2017/03/23]`

`2 \ExplSyntaxOn`

`\ch` Enclose in an inline SVG image or MathJax. The `alt` tag is the contents of the `\ch` expression. The filename is hashed, and also has additional hashing information based on the local options.

```
3 \RenewDocumentCommand \ch { 0{}m }
4 {%
```

To work inside `align` with `\displaymathother`, a simple version must be used to work with **chemformula**'s adaptation to `align`.

```
5 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}% lwarp
6 {
7 \chemformula_ch:nn {#1} {#2}% original
8 }
```

If used as the outer level, must temporarily ensure MATHJAX is disabled:

```
9 {
10 \begingroup%
11 \boolfalse{mathjax}%
```

An inline image is used, adjusted for the baseline:

```
12 \LWR@subsingledollar*{% lwarp
13 \textbackslash{ch}\{\LWR@HTMLSanitize{#2}\}% alt text
14 }{%
15 \protect\LWR@HTMLSanitize{\detokenize\expandafter{#1}}% add'l hashing
16 }%
17 {%
18 \chemformula_ch:nn {#1} {#2}% original
19 }%
20 \endgroup%
21 }
22 }
```

`\chcpd` Similar to `\ch`.

```

23 \cs_gset_protected:Npn \chemformula_chcpd:nn #1#2
24 {
25 \begingroup%
26 \boolfalse{mathjax}%
27 \LWR@subsingledollar*{% lwarp
28 \textbackslash{}chcpd{\LWR@HTMLSanitize{#2}\}%
29 }{%
30 \protect\LWR@HTMLSanitize{\detokenize\expandafter{#1}}%
31 }{% original
32 \group_begin:
33 \tl_if_blank:nF {#2}
34 {
35 \keys_set:nn {chemformula} {#1}
36 __chemformula_save_catcodes:
37 __chemformula_sanitize:Nn
38 \l__chemformula_chemformula_tmpa_tl
39 {#2}
40 __chemformula_input_compound_no_check:Nv
41 \l__chemformula_compound_tl
42 \l__chemformula_chemformula_tmpa_tl
43 __chemformula_prepare_output:N \l__chemformula_compound_tl
44 \chemformula_write:V \l__chemformula_compound_tl
45 }
46 \group_end:
47 }
48 \endgroup
49 }

```

`\charrow` If standalone, appears in a regular lateximage.

```

50 \RenewDocumentCommand \charrow { mO{}O{} }
51 {
52 \begin{lateximage}[(charrow)]
53 \group_begin:
54 __chemformula_draw_arrow:nnn {#1} {#2} {#3}
55 \group_end:
56 \end{lateximage}
57 }

```

`\chname` If standalone, appears in a regular lateximage, hashed according to contents.

```

58 \RenewDocumentCommand \chname { R(){}R(){} }
59 {
60 \begin{lateximage}*[%
61 \textbackslash{}chname(\LWR@HTMLSanitize{#1})(\LWR@HTMLSanitize{#2})
62]%
63 \chemformula_chwritebelow:nn {#1} {#2}
64 \end{lateximage}

```

```
65 }
```

`\chlewis` Placed inline, hashed according to contents and options.

```
66 \RenewDocumentCommand \chlewis { 0{}mm }
67 {
68 \begingroup%
69 \boolfalse{mathjax}%
70 \LWR@subsingledollar*{\textbackslash{}chlewis\{#2\}\{#3\}}%
71 {
72 \protect\LWR@HTMLsanitize{\detokenize\expandafter{#1}}%
73 }{
74 \chemformula_lewis:nnn {#1} {#2} {#3}
75 }
76 \endgroup%
77 }
```

**lwarp** redefines the `$` character, so special handling is required to escape math expressions inside `\ch`.

This boolean tracks a new kind of escaped math:

```
78 \bool_new:N \l__chemformula_first_last_LWRdollar_bool
```

`\chemformula_input_escape_math`

Adds additional escaping for the new dollar definition:

```
79 \cs_gset_protected:Npn __chemformula_input_escape_math:n #1
80 {
81 __chemformula_first_last_math:n {#1}
82 \bool_if:NT \l__chemformula_first_last_dollar_bool
83 {
84 \bool_set_true:N \l__chemformula_first_last_math_bool
85 __chemformula_read_escape_dollar:w #1 \q_nil
86 }
87 \bool_if:NT \l__chemformula_first_last_mathbraces_bool
88 {
89 \bool_set_true:N \l__chemformula_first_last_math_bool
90 __chemformula_read_escape_mathbraces:w #1 \q_nil
91 }
```

Added by **lwarp**:

```
92 \bool_if:NT \l__chemformula_first_last_LWRdollar_bool% lwarp
93 {
94 \bool_set_true:N \l__chemformula_first_last_math_bool% lwarp
95 __chemformula_read_escape_LWRdollar:w #1 \q_nil% lwarp
96 }
```

```
97 }
```

```
\chemformula_read_escape_LWRdollar
```

The following parses the contents inside the new dollars.

**lwarp** keeps the dollar as its original math shift until the document starts. While **chemmacros** is being patched, the dollar must temporarily be set to its new meaning during the following definition.

```
98 \begingroup
99 \catcode'\$=\active
100
101 \cs_new_protected:Npn __chemformula_read_escape_LWRdollar:w $#1$ \q_nil
102 {
103 __chemformula_read_escape_math:n {#1}
104 }
105
106 \endgroup
```

```
\chemformula_bool_set_if_first_last
```

The following looks at the first and last tokens for delimiters to escape math inside  $\ch$ . The original definition is modified to look for the control sequences which are used by the new meaning of  $\$$ .

```
107 \cs_new_protected:Npn __chemformula_bool_cs_set_if_first_last:NnNN #1#2#3#4
108 {
109 \int_zero:N \l__chemformula_tmpa_int
110 \int_zero:N \l__chemformula_tmpb_int
111 \int_set:Nn \l__chemformula_tmpa_int { \tl_count:n {#2} }
112 \tl_map_inline:nn {#2}
113 {
114 \int_incr:N \l__chemformula_tmpb_int
115 \int_compare:nT { \l__chemformula_tmpb_int = 1 }
116 {
```

At the start, the `cs_` version compares control sequences:

```
117 \ifdefstrequal{##1}{#3}% lwarp
118 {
119 \bool_set_true:N #1
120 }% lwarp
121 }
122 }
```

At the end, compare more control sequences:

```
123 \int_compare:nT { \l__chemformula_tmpb_int = \l__chemformula_tmpa_int }
124 {
```

```

125 \ifdefstrequal{##1}{#4}
126 {}
127 {
128 \bool_set_false:N #1
129 }
130 }
131 }
132 }

```

\chemformula\_first\_last\_math

Modified to check for the new meaning of \$ at first/last:

```

133 \cs_gset_protected:Npn __chemformula_first_last_math:n #1
134 {
135 \bool_set_false:N \l__chemformula_first_last_math_bool
136 \bool_set_false:N \l__chemformula_first_last_dollar_bool
137 \bool_set_false:N \l__chemformula_first_last_LWRdollar_bool% lwarp
138 \bool_set_false:N \l__chemformula_first_last_mathbraces_bool
139 __chemformula_bool_set_if_first_last:Nnnn
140 \l__chemformula_first_last_dollar_bool
141 {#1}
142 { $ } { $ }
143 \bool_if:NF \l__chemformula_first_last_dollar_bool
144 {
145 __chemformula_bool_set_if_first_last:Nnnn
146 \l__chemformula_first_last_mathbraces_bool
147 {#1}
148 { \ () { \ } }

```

Added by lwarp:

```

149 \bool_if:NF \l__chemformula_first_last_mathbraces_bool% lwarp
150 {
151 __chemformula_bool_cs_set_if_first_last:NnNN
152 \l__chemformula_first_last_LWRdollar_bool
153 {#1}
154 { \LWR@newsingledollar } { \LWR@newsingledollar }
155 }% lwarp
156 }
157 }

```

158 \ExplSyntaxOff

---

File 44 **lwarp-chemgreek.sty**

§ 133 Package **chemgreek**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemgreek **chemgreek** is patched for use by **lwarp**.

**Greek symbols** To use text-mode symbols, use packages **textalpha** or **textgreek**. Using the other packages supported by **chemgreek** will result in math-mode greek characters, which will result in SVG images being used. These images will be hashed.

⚠ package selection

⚠ **X<sub>Y</sub>TeX, Lua<sub>TeX</sub>** If using X<sub>Y</sub>TeX or Lua<sub>TeX</sub>, select the fontspec mapping:

```
\selectchemgreekmapping{fontspec}
```

**for HTML output:** 1 \LWR@ProvidesPackagePass{chemgreek}[2016/02/10]

```
2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemgreek_text:n #1
5 { { \text {#1} } }
6
7 \appto\LWR@restoreorigformatting{%
8 \cs_set_protected:Npn \chemgreek_text:n #1%
9 { \ensuremath { \text {#1} } } }%
10 }
11
12 \ExplSyntaxOff
```

---

File 45 **lwarp-chemmacros.sty**

§ 134 Package **chemmacros**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemmacros **chemmacros** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{chemmacros}

SVG file hashing assumes that the relevant options are constant for the entire document.

### § 134.1 Changes to the user's document

△ `\makepolymerdelims` When using `\makepolymerdelims`, enclose the entire expression inside a `polymerdelims` environment, such as (from the `chemmacros` manual):

```
\begin{polymerdelims}
\chemfig{-[@{op,.75}]CH_2-CH(-[6]Cl)-[@{c1,0.25}]}
\makepolymerdelims{5pt}[27pt]{op}{c1}
\end{polymerdelims}
```

△ `redox reactions` Redox reactions must be enclosed inside a `redoxreaction` environment. For print output, extra space must be included above and/or below the result, so they are declared as arguments to the environment, instead of being manually entered as per the `chemmacros` manual. For HTML output, the extra space is ignored and a `lateximage` is used instead.

```
\begin{redoxreaction}{7mm}{7mm}
\OX{a,Na} \rightarrow \OX{b,Na}\pch{redox(a,b){oxidation}
\end{redoxreaction}
```

### § 134.2 Code

### § 134.3 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
```

### § 134.4 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.

```

9 \DeclareDocumentEnvironment{polymerdelims}{}
10 {\begin{lateximage}[(polymer)]}
11 {\end{lateximage}}

```

Env `redoxreaction`  $\{\langle space\ above\rangle\} \{\langle space\ below\rangle\}$

For HTML output, the above and below space is ignored, and a `lateximage` is used instead. For the print output version, see section 79.

```

12 \DeclareDocumentEnvironment{redoxreaction}{m m}
13 {\begin{lateximage}[(redox-reaction)]}
14 {\end{lateximage}}

```

```

15 \ExplSyntaxOn

```

### § 134.5 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
```

### § 134.6 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
```

### § 134.7 Nomenclature

```
139 \AtBeginDocument{
140 \@ifchemmacrosmoduleloaded{nomenclature}{
141 \PackageInfo{lwarp}{Patching~chemmacros~module~nomenclature}
```

```

142
143 \cs_gset_protected:Npn \chemmacros_charge:n #1
144 {
145 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}
146 {\chemmacros_chemformula:n { }^{#1} }}
147 {
148 \ifmmode
149 {\chemmacros_chemformula:n { }^{#1} }}
150 \else
151 { \textsuperscript{\ensuremath{#1}} }
152 \fi
153 }
154 }
155
156
157 \LetLtxMacro\LWR@chemmacros@origchemprime\chemprime
158
159 \protected\def\chemprime { \HTMLUnicode{2032} }
160
161 \appto\LWR@restoreorigformatting%
162 \LetLtxMacro\chemprime\LWR@chemmacros@origchemprime%
163 }

164 \ChemCompatibilityFrom{5.8}
165 \cs_gset_protected:Npn __chemmacros_cip:n #1
166 {
167 \tl_set:Nn \l__chemmacros_tmpa_tl {#1}
168 \int_step_inline:nnnn {0} {1} {9}
169 {
170 \tl_replace_all:Nnn \l__chemmacros_tmpa_tl
171 {##1}
172 { { \l__chemmacros_cip_number_tl ##1} }
173 }
174 {
175 \l__chemmacros_cip_inner_tl
176 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
177 \l__chemmacros_tmpa_tl
178 }}% lwarp
179 }
180 }
181 \EndChemCompatibility

182 \RenewDocumentCommand \Sconf { 0{S} } {
183 \begin{lateximage}[\textbackslash{}Sconf{[]#1{}}]
184 \chemmacros_sconf:n {#1}
185 \end{lateximage}
186 }
187
188 \RenewDocumentCommand \Rconf { 0{R} } {
189 \begin{lateximage}[\textbackslash{}Rconf{[]#1{}}]

```

```
190 \chemmacros_rconf:n {#1}
191 \end{lateximage}
192 }

193 \cs_gset_protected:Npn \chemmacros_hapto:n #1
194 {
195 \begingroup
196 \boolfalse{mathjax}
197 \LWR@subsingledollar*{\textbackslash{}hapto\{#1\}}{\chemmacros}{
198 \chemmacros_coordination_symbol:n
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:n
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:n
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

```

### § 134.8 Particles

```

244 \AtBeginDocument{
245 \@ifchemmacrosmoduleloaded{particles}{
246 \PackageInfo{lwarp}{Patching~chemmacros~module~particles}
247
248 \cs_gset_protected:Npn \chemmacros_declare_nucleophile:Nn #1#2
249 {
250 \cs_set_protected:cpn {__chemmacros_ \chemmacros_remove_backslash:N #1:}
251 {
252 \bool_if:NTF \l__chemmacros_nucleophile_elpair_bool
253 {
254 \chemmacros_elpair:n { #2 }
255 \chemmacros_if_compatibility:nnT {>=} {5.3}
256 { \skip_horizontal:N \l__chemmacros_nucleophile_dim }
257 \chemmacros_chemformula:n { {}^{}- }
258 }
259 { \chemmacros_chemformula:n { #2^{}- } }
260 }
261 \DeclareDocumentCommand #1 {o}
262 {%
263 \begin{lateximage}%
264 \group_begin:%
265 \IfNoValueF {##1}%
266 { \chemmacros_set_keys:nn {particles} {##1} }%
267 \use:c {__chemmacros_ \chemmacros_remove_backslash:N #1:}%
268 \group_end:%
269 \end{lateximage}%
270 }
271 }
272
273 \RenewChemNucleophile \Nuc {Nu}
274 \RenewChemNucleophile \ba {ba}
275
276 }{}% \@ifchemmacrosmoduleloaded
277 }% AtBeginDocument

```

### § 134.9 Phases

```

278 \AtBeginDocument{
279 \@ifchemmacrosmoduleloaded{phases}{
280 \PackageInfo{lwarp}{Patching~chemmacros~module~phases}
281

```

```

282 \cs_undefine:N \chemmacros_phase:n
283 \cs_new_protected:Npn \chemmacros_phase:n #1
284 {
285 \chemmacros_leave_vmode:
286 \bool_if:NTF \l__chemmacros_phases_sub_bool
287 {
288 \ifnumequal{\value{LWR@lateximagedepth}}{0}
289 {
290 \textsubscript{(#1)}
291 }
292 {
293 \chemformula_subscript:n {(#1)}
294 }
295 }
296 {
297 \skip_horizontal:N \l__chemmacros_phases_space_dim
298 \chemmacros_text:n {(#1)}
299 }
300 }
301
302 }{}% \@ifchemmacrosmoduleloaded
303 }% AtBeginDocument

```

## § 134.10 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

```

### § 134.11 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

```

## § 134.12 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

```

## § 134.13 Reactions

```

\chemmacros_declare_reaction_env {<chem>} {<math>} {<args number>} {<argument list ({#2}{#3}...)}

467 \AtBeginDocument{
468 \@ifchemmacrosmoduleloaded{reactions}{
469 \PackageInfo{lwarp}{Patching~chemmacros~module~orbital}
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 \chemmacros_add_reaction_description:n {##1}
477 __chemmacros_begin_reaction:
478 \chemmacros_reaction_read:nnw {#2} {#4}
479 }
480 {
481 __chemmacros_end_reaction:
482 }
483 }
484 \cs_generate_variant:Nn \chemmacros_declare_reaction_env:nnnn {nnnV}
485
486 \RenewChemReaction {reaction} {equation}
487 \RenewChemReaction {reaction*} {equation*}
488 \RenewChemReaction {reactions} {align}
489 \RenewChemReaction {reactions*} {align*}
490
491 }{}% \@ifchemmacrosmoduleloaded
492 }% AtBeginDocument

```

## § 134.14 Redox

```

493 \AtBeginDocument{
494 \@ifchemmacrosmoduleloaded{redox}{
495 \PackageInfo{lwarp}{Patching~chemmacros~module~redox}
496
497 \NewDocumentCommand \LWR@chemmacros@ox { s m >{\SplitArgument{1}{,}}m }
498 {
499 \IfBooleanTF {#1}
500 { \chemmacros_ox:nnnn {#1} {#2} #3 }
501 { \chemmacros_ox:nnnn { } {#2} #3 }
502 }
503
504 \RenewDocumentCommand \ox { s 0{ } m }
505 {
506 \begingroup
507 \boolfalse{mathjax}
508 \IfBooleanTF {#1}

```

```

509 {
510 \LWR@subsingledollar*{% yes hash
511 \textbackslash{}ox*\{\LWR@HTMLSanitize{#3}\}% alt
512 }{%
513 star \protect\LWR@HTMLSanitize{\detokenize\expandafter{#2}}%
514 }{%
515 \LWR@chemmacros@ox* {#2} {#3}% contents
516 }%
517 }
518 {
519 \LWR@subsingledollar*{% yes hash
520 \textbackslash{}ox*\{\LWR@HTMLSanitize{#3}\}% alt
521 }{%
522 \protect\LWR@HTMLSanitize{\detokenize\expandafter{#2}}%
523 }{%
524 \LWR@chemmacros@ox {#2} {#3}% contents
525 }%
526 }
527 \endgroup
528 }
529
530 }{}% \@ifchemmacrosmoduleloaded
531 }% AtBeginDocument

```

### § 134.15 Scheme

Bug fix for chemmacros when using newfloat:

```

532 \AtBeginDocument{
533 \@ifchemmacrosmoduleloaded{scheme}{
534 \PackageInfo{lwarp}{Patching-chemmacros-module-scheme}
535 }
536 \ifdefstring{\schemename}{los}{
537 \SetupFloatingEnvironment{scheme}{
538 name = \chemmacros_translate:n {scheme-name}
539 }
540 }{}
541 }
542 }{}% \@ifchemmacrosmoduleloaded
543 }% AtBeginDocument

```

## § 134.16 Spectroscopy

```
544 \AtBeginDocument{
545 \@ifchemmacrosmoduleloaded{spectroscopy}{
546 \PackageInfo{lwarp}{Patching~chemmacros~module~spectroscopy}
547
548 \ChemCompatibilityTo{5.8}
549 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
550 {
551 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
552 {
553 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
554 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
555 }
556 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
557 % \chemmacros_chemformula:n { ^{#1} }
558 #1
559 \bool_if:NTF \l__chemmacros_nmr_parse_bool
560 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
561 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
562 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
563 \tl_use:N \l__chemmacros_nmr_method_tl
564 }
565 \EndChemCompatibility
566 \ChemCompatibilityFrom{5.8}
567 \cs_gset_protected:Npn __chemmacros_nmr_base:nn #1#2
568 {
569 \group_begin:
570 \tl_use:N \l__chemmacros_nmr_base_format_tl
571 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
572 {
573 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl { \{ }
574 \tl_put_right:Nn \g__chemmacros_nmr_element_coupled_tl { \} }
575 }
576 \tl_put_left:Nn \g__chemmacros_nmr_element_coupled_tl {#2}
577 % \chemmacros_chemformula:n { ^{#1} }
578 #1
579 \tl_if_blank:VF \g__chemmacros_nmr_element_coupled_tl
580 {
581 \bool_if:NTF \l__chemmacros_nmr_parse_bool
582 { \chemformula_ch:nV {} } \g__chemmacros_nmr_element_coupled_tl }
583 { \chemmacros_chemformula:V \g__chemmacros_nmr_element_coupled_tl }
584 }
585 \tl_use:N \l__chemmacros_nmr_element_method_connector_tl
586 \tl_use:N \l__chemmacros_nmr_method_tl
587 \group_end:
588 }
589 \EndChemCompatibility
590
591
```

```
592 \cs_gset_protected:Npn \chemmacros_nmr_position:n #1
593 {
594 \chemmacros_chemformula:x
595 {
596 \exp_not:V \g__chemmacros_nmr_element_tl
597 \bool_if:NF \l__chemmacros_nmr_position_side_bool
598 {
599 \tl_if_eq:NnTF \l__chemmacros_nmr_position_tl {^}% lwarp
600 { \textsuperscript{\exp_not:n { {#1} }} }% lwarp
601 { \textsubscript{\exp_not:n { {#1} }} }% lwarp
602 }
603 \exp_not:V \l__chemmacros_nmr_position_tl
604 \exp_not:n { {#1} }
605 }
606 \bool_if:NT \l__chemmacros_nmr_position_side_bool
607 {
608 \tl_use:N \l__chemmacros_nmr_position_tl
609 __chemmacros_nmr_position:n {#1}
610 }
611 }
612
613 \cs_gset_protected:Npn __chemmacros_nmr_coupling:w (#1;#2)
614 {
615 \tl_set:Nn \l__chemmacros_nmr_coupling_bonds_tl
616 {
617 \l__chemmacros_nmr_coupling_bonds_pre_tl
618 #1
619 \l__chemmacros_nmr_coupling_bonds_post_tl
620 }
621 \bool_if:NTF \l__chemmacros_nmr_coupling_nuclei_sub_bool
622 {
623 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
624 {
625 \c_math_subscript_token
626 \textsubscript% lwarp
627 {
628 \l__chemmacros_nmr_coupling_nuclei_pre_tl
629 \chemmacros_chemformula:n {#2}
630 \l__chemmacros_nmr_coupling_nuclei_post_tl
631 }
632 }
633 }
634 {
635 \tl_set:Nn \l__chemmacros_nmr_coupling_nuclei_tl
636 {
637 \l__chemmacros_nmr_coupling_nuclei_pre_tl
638 \chemmacros_chemformula:n {#2}
639 \l__chemmacros_nmr_coupling_nuclei_post_tl
640 }
641 }
```

```

642 _chemmacros_nmr_coupling_aux_i:w
643 }
644
645 \AfterEndPreamble{% After \AtBeginDocument
646 % \NMR{<num>,<elem>}{<num>,<unit>}[<solvent>] ALL arguments are optional
647 % \NMR* same but without ": δ" at end
648 \cs_gset_protected:Npn \chemmacros_nmr:nnnn #1#2#3#4
649 {
650 \bool_if:NT \l__chemmacros_nmr_list_bool { \item \scan_stop: }
651 \group_begin:
652 \chemmacros_leave_vmode:
653 \bool_set_false:N \l__chemmacros_nmr_frequency_bool
654 \bool_set_false:N \l__chemmacros_nmr_solvent_bool
655 \tl_if_empty:nF {#3}
656 { \bool_set_true:N \l__chemmacros_nmr_frequency_bool }
657 \tl_if_empty:nF {#4}
658 { \bool_set_true:N \l__chemmacros_nmr_solvent_bool }
659 \bool_if:nT
660 {
661 \l__chemmacros_nmr_frequency_bool
662 ||
663 \l__chemmacros_nmr_solvent_bool
664 }
665 { \bool_set_true:N \l__chemmacros_nmr_delimiters_bool }
666 \bool_if:nT
667 {
668 \l__chemmacros_nmr_frequency_bool
669 &&
670 \l__chemmacros_nmr_solvent_bool
671 }
672 { \bool_set_true:N \l__chemmacros_nmr_comma_bool }
673 \tl_if_empty:nTF {#2}
674 {
675 _chemmacros_nmr_nucleus:VV
676 \l__chemmacros_nmr_isotope_default_tl
677 \l__chemmacros_nmr_element_default_tl
678 }
679 { _chemmacros_nmr_nucleus:w #2 \q_stop }
680 \mode_if_math:TF
681 {
682 \text
683 {
684 \group_begin:
685 \tl_use:N \l__chemmacros_nmr_format_tl
686 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
687 _chemmacros_nmr_base:VV
688 \g__chemmacros_nmr_isotope_tl
689 \g__chemmacros_nmr_element_tl
690 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
691 { ~ ()

```

```

692 \bool_if:NT \l__chemmacros_nmr_frequency_bool
693 { __chemmacros_nmr_frequency:n {#3} }
694 \bool_if:NT \l__chemmacros_nmr_comma_bool
695 { , ~ }
696 \bool_if:NT \l__chemmacros_nmr_solvent_bool
697 { \chemmacros_chemformula:n {#4} }
698 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
699 {) }
700 \tl_if_blank:nT {#1} {::~}
701 }}}% lwarp
702 \group_end:
703 }
704 \tl_if_blank:nT {#1}
705 {
706 \delta
707 \text { \l__chemmacros_nmr_delta_tl }
708 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {=}
709 }
710 }
711 {
712 \group_begin:
713 \tl_use:N \l__chemmacros_nmr_format_tl
714 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
715 __chemmacros_nmr_base:VV
716 \g__chemmacros_nmr_isotope_tl
717 \g__chemmacros_nmr_element_tl
718 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
719 {~()}
720 \bool_if:NT \l__chemmacros_nmr_frequency_bool
721 { __chemmacros_nmr_frequency:n {#3} }
722 \bool_if:NT \l__chemmacros_nmr_comma_bool
723 {,~}
724 \bool_if:NT \l__chemmacros_nmr_solvent_bool
725 {
726 \bool_if:NTF \l__chemmacros_nmr_parse_bool
727 { \chemformula_ch:nn { } {#4} }
728 {#4}
729 }
730 \bool_if:NT \l__chemmacros_nmr_delimiters_bool
731 {)}}
732 }}}% lwarp
733 \tl_if_blank:nT {#1} {::}
734 \group_end:
735 \tl_if_blank:nT {#1}
736 {
737 \tl_use:N \c_space_tl
738 \c_math_toggle_token
739 \delta
740 \c_math_toggle_token
741 \l__chemmacros_nmr_delta_tl

```

```

742 \bool_if:NT \l__chemmacros_nmr_use_equal_bool {~=}
743 }
744 }
745 \group_end:
746 }
747}% AfterEndPreamble
748
749
750\RenewDocumentCommand \chemmacros_data:w { smo }
751 {
752 \bool_if:NT \l__chemmacros_nmr_list_bool { \item }
753 {
754 \tl_use:N \l__chemmacros_nmr_format_tl #2
755 \tl_use:N \l__chemmacros_nmr_format_tl
756 \LWR@textcurrentcolor{\LWR@textcurrentfont{% lwarp
757 #2
758 \IfNoValueF {#3} { ~ (#3) }
759 \IfBooleanT {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { : } }
760 }}% lwarp
761 }
762 \IfBooleanF {#1} { \bool_if:NT \l__chemmacros_nmr_use_equal_bool { ~ = } }
763 }
764
765 }{}% \@ifchemmacrosmoduleloaded
766}% AtBeginDocument

```

## § 134.17 Thermodynamics

```

767\AtBeginDocument{
768\@ifchemmacrosmoduleloaded{thermodynamics}{
769\PackageInfo{lwarp}{Patching~chemmacros~module~thermodynamics}
770
771\cs_gset_protected:Npn \chemmacros_state:nn #1#2
772 {
773 \group_begin:
774 \boolfalse{mathjax}
775 \chemmacros_set_keys:nn {thermodynamics} {#1}
776 \LWR@subsingledollar*{% yes hashing
777 \textbackslash}state{\LWR@HTMLsanitize{#2}\}% alt
778 }{%
779 chemmacros_state% add'l hashing
780 #1% options
781 LSP \tl_use:N \l__chemmacros_state_sp_left_tl% super/subscripts
782 LSB \tl_use:N \l__chemmacros_state_sb_left_tl
783 RSP \tl_use:N \l__chemmacros_state_sp_right_tl
784 RSB \tl_use:N \l__chemmacros_state_sb_right_tl
785 }
786 {
787 \LWR@origensuredmath{

```

```

788 \chemmacros_text:V \l__chemmacros_state_pre_tl
789 \c_math_superscript_token
790 { \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**.

```

791 \tl_if_empty:NTF \l__chemmacros_state_sb_left_tl
792 {}
793 {
794 \c_math_subscript_token
795 { \chemmacros_text:V \l__chemmacros_state_sb_left_tl }
796 }
797 #2
798 \c_math_superscript_token
799 { \chemmacros_text:V \l__chemmacros_state_sp_right_tl }
800 \tl_if_empty:NTF \l__chemmacros_state_sb_right_tl
801 {}
802 {
803 \c_math_subscript_token
804 { \chemmacros_text:V \l__chemmacros_state_sb_right_tl }
805 }
806 \chemmacros_text:V \l__chemmacros_state_post_tl
807 }
808 }
809 \group_end:
810 }
811 \cs_generate_variant:Nn \chemmacros_state:nn { nV }
812
813 \cs_gset_protected:Npn \chemmacros_declare_state:Nn #1#2
814 {
815 \chemmacros_define_keys:xn
816 {thermodynamics/\chemmacros_remove_backslash:N #1}
817 {
818 pre .meta:nn = {chemmacros/thermodynamics} { pre = ##1 } ,
819 post .meta:nn = {chemmacros/thermodynamics} { post = ##1 } ,
820 superscript-left .meta:nn = {chemmacros/thermodynamics} { superscript-left = ##1 } ,
821 superscript-right .meta:nn = {chemmacros/thermodynamics} { superscript-right = ##1 } ,
822 superscript .meta:n = { superscript-right = ##1 } ,
823 subscript-left .meta:nn = {chemmacros/thermodynamics} { subscript-left = ##1 } ,
824 subscript-right .meta:nn = {chemmacros/thermodynamics} { subscript-right = ##1 } ,
825 subscript .meta:n = { subscript-left = ##1 } ,
826 subscript-pos .choices:nn =
827 { left , right }
828 { \tl_set_eq:NN \l__chemmacros_state_sb_pos_tl \l_keys_choice_tl } ,
829 symbol .tl_set:N = \l__chemmacros_state_symbol_tl ,
830 unit .tl_set:N = \l__chemmacros_state_unit_tl
831 }
832 \DeclareDocumentCommand #1 { sO{}D(){}m }

```

```

833 {
834 \group_begin:
835 \chemmacros_set_keys:nx
836 {thermodynamics/\chemmacros_remove_backslash:N #1}
837 {#2}
838 \tl_if_blank:nF {##3}
839 {
840 \chemmacros_set_keys:nx {thermodynamics}
841 { subscript-\l__chemmacros_state_sb_pos_tl = \exp_not:n {##3} }
842 }
843 \chemmacros_state:nV {##2} \l__chemmacros_state_symbol_tl
844 \chemmacros_set_keys_groups:nnn {thermodynamics} {variables} {##2}
845 \IfBooleanF {##1} { = ~ \SI {##4} { \l__chemmacros_state_unit_tl } }
846 \group_end:
847 }
848 }

```

The pre-existing macros are redefined with the new definition:

```

849 \RenewChemState \enthalpy { symbol = H , unit = \kilo\joule\per\mole }
850 \RenewChemState \entropy { symbol = S , unit = \joule\per\kelvin\per\mole , pre = }
851 \RenewChemState \gibbs { symbol = G , unit = \kilo\joule\per\mole }
852
853 }{}% \@ifchemmacrosmoduleloaded
854 }% AtBeginDocument

855 \ExplSyntaxOff

```

---

File 46 **lwarp-chemnum.sty**

§ 135 Package **chemnum**

*(Emulates or patches code by CLEMENS NIEDERBERGER.)*

Pkg chemnum **chemnum** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{chemnum}

2 \ExplSyntaxOn
3
4 \cs_gset_protected:Npn \chemnum_compound_write:n #1
5 {
6 \chemnum_get_compound_property:nn {#1} {pre-main-label-code}
7 \group_begin:
8 \bool_if:NTF \l__chemnum_compound_local_bool
9 { \l__chemnum_local_label_format_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 47 `lwarp-cite.sty`

### § 136 Package `cite`

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg `cite` `cite` is patched for use by `lwarp`.

**for HTML output:** `1 \LWR@ProvidesPackagePass{cite}`

For the `[super]` option, the `\kern` must be removed:

```

2 \def\LWRCT@biblabel#1{\@citess{#1}\kern-\labelsep\,}
3
4 \ifdefstrequal{\@biblabel}{\LWRCT@biblabel}
5 {
6 \def\@biblabel#1{\@citess{#1}}
7 }{}

```

For the `[super]` option, `\textsuperscript` is used instead of math superscript:

---

```

8 \def\@citess#1{#1}
9
10 \DeclareDocumentCommand\citepunct{}{\,\,\relax}

```

---

File 48 **lwarp-color.sty**

§ 137 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**.

⚠ **missing colors** It should be sufficient for the user's document to load **color** then load **xcolor** as well.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{color}
2 \RequirePackage{xcolor}

```

---

File 49 **lwarp-colortbl.sty**

§ 138 Package **colortbl**

Pkg colortbl **colortbl** is emulated.

⚠ **row/cell color** Only use `\rowcolor` and `\cellcolor` at the start of a row, in that order.

**colortbl** ignores the overhang arguments.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{colortbl}

```

Remember the print-mode definitions:

```

2 \LetLtxMacro\LWR@origcolumncolor\columncolor
3 \LetLtxMacro\LWR@origrowcolor\rowcolor
4 \LetLtxMacro\LWR@origcellcolor\cellcolor
5 \LetLtxMacro\LWR@origarrayrulecolor\arrayrulecolor
6 \LetLtxMacro\LWR@origdoublerulesepcolor\doublerulesepcolor
7
8 \appto\LWR@restoreorigformatting{%
9 \LetLtxMacro\columncolor\LWR@origcolumncolor%
10 \LetLtxMacro\rowcolor\LWR@origrowcolor%
11 \LetLtxMacro\cellcolor\LWR@origcellcolor%
12 \LetLtxMacro\arrayrulecolor\LWR@origarrayrulecolor%
13 \LetLtxMacro\doublerulesepcolor\LWR@origdoublerulesepcolor%
14 }

```

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.

```
15 \RenewDocumentCommand{\LWR@HTMLcolumncolor}{0{named} m o o}{%
16 \convertcolorspec{#1}{#2}{HTML}\LWR@columnHTMLcolor%
17 \LWR@addtabularcellcolor%
18 }
```

\LWR@getmynexttoken is used for \rowcolor because it is used inside the data area of the tabular.

`\rowcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

```
19 \RenewDocumentCommand{\LWR@HTMLrowcolor}{0{named} m o o}{%
20 \convertcolorspec{#1}{#2}{HTML}\LWR@rowHTMLcolor%
21 \LWR@getmynexttoken%
22 }
```

`\cellcolor` [*model*] {*color*} [*left overhang*] [*right overhang*]

```
23 \RenewDocumentCommand{\LWR@HTMLcellcolor}{0{named} m o o}{%
24 \convertcolorspec{#1}{#2}{HTML}\LWR@cellHTMLcolor%
25 \LWR@addtabularcellcolor%
26 }
```

`\arrayrulecolor` [*model*] {*color*}

The version for use outside a tabular.

```
27 \renewcommand{\arrayrulecolor}[2] [named] {%
28 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
29 }
```

`\LWR@arrayrulecolor` [*model*] {*color*}

The version for use inside a tabular.

```
30 \renewcommand{\LWR@HTMLarrayrulecolor}[2] [named] {%
31 \convertcolorspec{#1}{#2}{HTML}\LWR@ruleHTMLcolor%
32 \LWR@getmynexttoken%
33 }
```

`\doublerulesepcolor` [*model*] {*color*}

The version for use outside a tabular.

```
34 \renewcommand{\doublerulesepcolor}[2] [named] {}
```

---

`\LWR@doublerulesepcolor` [*<model>*] {*<color>*}

The version for use inside a tabular.

```
35 \renewcommand{\LWR@HTMLdoublerulesepcolor}[2] [named]{\LWR@getmynexttoken}
```

---

File 50 **lwarp-continue.sty**

§ 139 Package **continue**

Pkg `continue` **continue** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{continue}

2 \newcommand*\flagcont{}
3 \newcommand*\flagend{}
4 \newcommand*\flagword{}
5 \newcommand*\preflagword{}
6 \newcommand*\postflagword{}
7 \newlength\contsep
8 \newlength\contdrop
```

---

File 51 **lwarp-crop.sty**

§ 140 Package **crop**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg `crop` Emulated.

**for HTML output:** Discard all options for **lwarp-crop**:

```
1 \LWR@ProvidesPackageDrop{crop}

2 \newcommand*\crop[1] [] {}
3 \newcommand*\cropdef[6] [] {}
```

---

File 52 **lwarp-cuted.sty**

§ 141 Package **cuted**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg cuted **cuted** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{cuted}

2 \newenvironment{strip}{}{}
3 \newskip\stripsep
4 \def\oldcolsbreak#1{}
```

---

File 53 **lwarp-cutwin.sty**

§ 142 Package **cutwin**

*(Emulates or patches code by PETER WILSON AND ALAN HOENIG.)*

Pkg cutwin Emulated.

**for HTML output:** Discard all options for **lwarp-cutwin**:

```
1 \LWR@ProvidesPackageDrop{cutwin}

2 \newcommand*\opencutleft{}
3 \newcommand*\opencutright{}
4 \newcommand*\opencutcenter{}
5 \newcommand*\cutfuzz{}
6
7 \newenvironment{cutout}[4]
8 {\marginpar{\windowpagestuff}}
9 {}
10
11 \newcommand*\windowpagestuff{}
12
13 \newcommand*\pageinwindow}{%
14 % \begin{minipage}{.3\linewidth}
15 \windowpagestuff
16 % \end{minipage}
17 }
18
19 \newenvironment{shapedcutout}[3]
20 {\marginpar{\picinwindow}}
21 {}
22
23 \newcommand*\putstuffinpic{}
24
25 \newcommand*\picinwindow}{%
26 \begin{picture}(0,0)
27 \putstuffinpic
28 \end{picture}}
```

---

File 54 **lwarp-dblfloatfix.sty**

§ 143 Package **dblfloatfix**

Pkg dbfloatfix **dblfloatfix** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfloatfix}

---

File 55 **lwarp-dblfnote.sty**

§ 144 Package **dblfnote**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg dblfnote **dblfnote** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{dblfnote}

```

2 \newcounter{DFNsloppiness}
3 \newdimen\DFNcolumnsep
4 \newdimen\DFNcolumnwidth
5 \def\DFNallowcbreak{}
6 \def\DFNinhibitcbreak{}
7 \def\DFNtrysingle{}
8 \def\DFNalwaysdouble{}
9 \def\DFNruleboth{}
10 \def\DFNruleleft{}

```

---

File 56 **lwarp-dcolumn.sty**

§ 145 Package **dcolumn**

Pkg dcolumn **dcolumn** is emulated by the **lwarp** core.

1 \LWR@ProvidesPackageDrop{dcolumn}

File 57 `lwarp-diagbox.sty`

§ 146 Package **diagbox**

*(Emulates or patches code by LEO LIU.)*

Pkg diagbox **diagbox** is patched for use by **lwarp**.

**for HTML output:** `1 \LWR@ProvidesPackagePass{diagbox}`

To restore print-mode inside a lateximage:

```
2 \LetLtxMacro\LWR@origdiagbox@double\diagbox@double
3 \LetLtxMacro\LWR@origdiagbox@triple\diagbox@triple
4
5 \appto\LWR@restoreorigformatting{%
6 \LetLtxMacro\diagbox@double\LWR@origdiagbox@double%
7 \LetLtxMacro\diagbox@triple\LWR@origdiagbox@triple%
8 }
```

```
\LWR@diagbox@AB {\langle E/W \rangle} {\langle A \rangle} {\langle E/W \rangle} {\langle B \rangle}
9 \newcommand{\LWR@diagbox@AB}[4]{
10 \begingroup%
11 \LetLtxMacro\\\newline%
12 \BlockClassSingle{diagbox#1}{#2}%
13 \BlockClassSingle{diagbox#3}{#4}%
14 \endgroup%
15 \LWR@stoppars%
16 }
```

```
\LWR@diagboxNW {\langle A \rangle} {\langle B \rangle}
17 \newcommand{\LWR@diagboxNW}[2]{%
18 \LWR@diagbox@AB{E}{#2}{W}{#1}%
19 }
```

Likewise for NE, SW, SE:

```
20 \newcommand{\LWR@diagboxNE}[2]{%
21 \LWR@diagbox@AB{W}{#1}{E}{#2}%
22 }
23
24 \let\LWR@diagboxSW\LWR@diagboxNE
25 \let\LWR@diagboxSE\LWR@diagboxNW
```

```

\diagbox@double {<keys>} {<A>} {}
 26 \def\diagbox@double#1#2#3{%
 27 \setkeys{diagbox}{dir=NW,#1}%
 28 \csuse{LWR@diagbox\diagbox@dir}{#2}{#3}%
 29 }

```

```

\LWR@diagboxTNW {<title>} {<A>} {}
 30 \newcommand{\LWR@diagboxTNW}[3]{%
 31 \BlockClassSingle{diagboxtitleN}{#1}
 32 \LWR@diagboxNW{#2}{#3}
 33 }

```

Likewise for NE, SW, SE:

```

 34 \newcommand{\LWR@diagboxTNE}[3]{%
 35 \BlockClassSingle{diagboxtitleN}{#1}
 36 \LWR@diagboxNE{#2}{#3}
 37 }
 38
 39 \newcommand{\LWR@diagboxTSW}[3]{%
 40 \LWR@diagboxSW{#2}{#3}
 41 \BlockClassSingle{diagboxtitleS}{#1}
 42 }
 43
 44 \newcommand{\LWR@diagboxTSE}[3]{%
 45 \LWR@diagboxSE{#2}{#3}
 46 \BlockClassSingle{diagboxtitleS}{#1}
 47 }

```

```

\diagbox@triple {<keys>} {<A>} {<T>} {}
 48 \def\diagbox@triple#1#2#3#4{%
 49 \setkeys{diagbox}{dir=NW,#1}%
 50 \csuse{LWR@diagboxT\diagbox@dir}{#3}{#2}{#4}%
 51 }

```

---

File 58 **lwarp-draftwatermark.sty**

§ 147 Package **draftwatermark**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg draftwatermark **draftwatermark** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{draftwatermark}

2 \newcommand{\SetWatermarkAngle}[1]{}
3 \newcommand{\SetWatermarkColor}[1]{}
4 \newcommand{\SetWatermarkLightness}[1]{}
5 \newcommand{\SetWatermarkFontSize}[1]{}
6 \newcommand{\SetWatermarkScale}[1]{}
7 \newcommand{\SetWatermarkHorCenter}[1]{}
8 \newcommand{\SetWatermarkVertCenter}[1]{}
9 \newcommand{\SetWatermarkText}[1]{}

```

---

File 59 **lwarp-easy-todo.sty**

§ 148 Package **easy-todo**

*(Emulates or patches code by JUAN RADA-VILELA.)*

Pkg easy-todo **easy-todo** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{easy-todo}

```

`\listoftodos` Modified to correct buggy use of `\flushright`.

```

2 \let\LWR@origlistoftodos\listoftodos
3
4 \renewcommand{\listoftodos}{%
5 \begingroup
6 \renewcommand{\flushright}{}
7 \LWR@origlistoftodos
8 \endgroup
9 }

```

`\todoii` Modified to use `\textcolor` instead of `\color`.

```

10 \renewcommand{\todoii}[2]{%
11 \ifthenelse{\equal{@todoobeyfinal}{true}}{%
12 \ifoptionfinal{\todoenable{false}}{\todoenable{true}}%
13 }{}%
14 \ifthenelse{\equal{@todoenable}{true}}{%
15 \refstepcounter{todos}%
16 \noindent{%
17 \todocolor%
18 \LWR@textcurrentcolor{%
19 \normalfont\scriptsize{\bfseries{\thetodos.#1}}%
20 }%
21 }%

```

---

```

22 \addcontentsline{lod}{todos}{\protect{\thetodos. }#2}%
23 }{}%
24 }

```

---

File 60 **lwarp-ebook.sty**

§ 149 Package **ebook**

*(Emulates or patches code by JØRGEN STEENSGAARD.)*

Pkg ebook **ebook** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ebook}

```

2 \setcounter{secnumdepth}{0}
3 \setcounter{tocdepth}{2}
4
5 \providecommand{\pagefill}[1][0.001mm]{\noindent}
6
7 \providecommand{\ebook}{
8 \setcounter{secnumdepth}{0}
9 \setcounter{tocdepth}{2}
10 }

```

---

File 61 **lwarp-ellipsis.sty**

§ 150 Package **ellipsis**

*(Emulates or patches code by PETER J. HESLIN.)*

Pkg ellipsis **ellipsis** is emulated.

```

1 \LWR@ProvidesPackageDrop{ellipsis}
2
3 \newcommand{\ellipsisgap}{0.1em}

```

---

File 62 **lwarp-emptypage.sty**

§ 151 Package **emptypage**

Pkg emptypage **emptypage** is ignored.

**for HTML output:** Discard all options for `lwarp-emptypage`:

```
1 \LWR@ProvidesPackageDrop{emptypage}
```

---

File 63 `lwarp-endfloat.sty`

§ 152 Package **endfloat**

Pkg `endfloat` **endfloat** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{endfloat}

2 \newcommand\figureplace{}
3 \newcommand\tableplace{}
4 \newcommand\floatplace[1]{}
5 \newcounter{posttable}
6 \newcounter{postfigure}
7 \newcommand*\theposttbl{}
8 \newcommand*\thepostfig{}
9 \newcommand{\AtBeginFigures}[1]{}
10 \newcommand{\AtBeginTables}[1]{}
11 \newcommand{\AtBeginDelayedFloats}[1]{}
12 \newcommand*\processdelayedfloats{}
13 \newcommand*\efloatseparator{}
14 \def\efloattype{}
15 \providecommand\efloatheading[1]{}
16 \providecommand\efloatpreamble{}
17 \providecommand\efloatpostamble{}

```

---

File 64 `lwarp-endheads.sty`

§ 153 Package **endheads**

Pkg `endheads` **endheads** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{endheads}

2 \newcommand{\changesinglepageabbrev}[1]{}
3 \newcommand{\changemultiplepageabbrev}[1]{}
4 \newcommand{\changenotesname}[1]{}
5 \newcommand{\changenotesheader}[1]{}
6 \newcommand{\changenotescontentsname}[1]{}
7 \newcommand{\changechapternotesline}[1]{}
8 \newcommand{\checknoteheaders}{}

```

---

```

9 \newif\ifnotesincontentson \notesincontentsonfalse
10 \newcommand{\notesincontents}{\notesincontentsontrue}
11 \newif\ifendnoteheaderson \endnoteheadersonfalse
12 \newcommand{\setupendnoteheaders}{%
13 \endnoteheadersontrue%
14 }
15 \newif\iftitleinnotes \titleinnotesttrue
16 \newcommand{\styleforchapternotebegin}{}
17 \newcommand{\styleforchapternoteend}{}
18 \newcommand{\setstyleforchapternotebegin}[1]{%
19 \renewcommand{\styleforchapternotebegin}{#1}%
20 }
21 \newcommand{\setstyleforchapternoteend}[1]{%
22 \renewcommand{\styleforchapternoteend}{#1}%
23 }
24 \newcommand{\resetendnotes}{}
25 \newif\ifnotesbychapteron \notesbychapteronfalse
26 \newcommand{\notesbychapter}{\notesbychapterontrue}

```

---

File 65 **lwarp-endnotes.sty**

§ 154 Package **endnotes**

*(Emulates or patches code by JOHN LAVAGNINO.)*

Pkg **endnotes** Used as-is.

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

```

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

```

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

```

\ForceHTMLPage
\theendnotes

```

**for HTML output:** 1 \LWR@ProvidesPackagePass{endnotes}

```

2 \def\enoteformat{%
3 \% \rightskip\z@ \leftskip\z@ \parindent=1.8em
4 \leavevmode
5 \% \llap{
6 \makeenmark
7 }

```

---

```

8 }
9
10 \def\@makeenmark{\hbox{\LWR@htmlspan{sup}{\normalfont\theenmark}}}
11 \def\makeenmark{\@makeenmark}

```

---

File 66 **lwarp-enumerate.sty**§ 155 Package **enumerate**

Pkg `enumerate` **enumerate** is supported with no changes.

This package is only required because it was used in the past to drop and then emulate the package. It cannot be removed because an older version which dropped the package may still remain, for example in a local vs. distribution directory, but it is now supported directly by **lwarp** and thus must no longer be dropped.

**for HTML output:** `1 \LWR@ProvidesPackagePass{enumerate}`

---

File 67 **lwarp-enumitem.sty**§ 156 Package **enumitem**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg `enumitem` **enumitem** is supported with minor adjustments.

**for HTML output:** `1 \LWR@ProvidesPackagePass{enumitem}`

**for HTML output:** `2 \begin{warpHTML}`

```

\newlist {<name>} {<type>} {<maxdepth>}
\renewlist {<name>} {<type>} {<maxdepth>}

```

For **enumitem** lists, new lists must have the start and end actions assigned to the new environment. Renewed lists already have their actions assigned, and thus need no changes.

```

3 \let\LWR@orignewlist\newlist
4
5 \renewcommand*{\newlist}[3]{%
6 \LWR@orignewlist{#1}{#2}{#3}%
7 \AtBeginEnvironment{#1}{\csuse{LWR@#2start}}%
8 \AtEndEnvironment{#1}{\csuse{LWR@#2end}}%
9 }

```

---

```
10 \end{warpHTML}
```

---

File 68 **lwarp-epigraph.sty**

§ 157 Package **epigraph**

*(Emulates or patches code by PETER WILSON.)*

Pkg epigraph **epigraph** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{epigraph}

2 \DeclareDocumentCommand{\qitem}{m m}
3 {
4 \begin{BlockClass}{qitem}
5 #1
6 \ifbool{FormatWP}
7 {\begin{BlockClass}[border-top:1px solid gray]{epigraphsource}}
8 {\begin{BlockClass}{epigraphsource}}
9 #2
10 \end{BlockClass}
11 \end{BlockClass}
12 }

13 \DeclareDocumentCommand{\epigraph}{m m}
14 {
15 \begin{LWR@BlockClassWP}{\LWR@origmbox{text-align:right}}{}{epigraph}
16 \qitem{#1}{#2}
17 \end{LWR@BlockClassWP}
18 }
19
20 \DeclareDocumentEnvironment{epigraphs}{}
21 {\LWR@BlockClassWP{\LWR@origmbox{text-align:right}}{}{epigraph}}
22 {\endLWR@BlockClassWP}
```

Use CSS to format epigraphs.

The following are null commands for source compatibility:

```
23 \newenvironment*{flushepinormal}{}{}

24 \@ifclassloaded{memoir}{
25 \setlength{\epigraphwidth}{.5\linewidth}
26 \renewcommand{\textflush}{flushepinormal}
27 \renewcommand{\epigraphhead}[2][0]{#2}
```

---

```

28 \renewcommand{\dropchapter}[1]{}
29 \renewcommand*\undodrop{}
30 }{% not memoir
31 \newlength{\epigraphwidth}
32 \setlength{\epigraphwidth}{.5\linewidth}
33 \newcommand{\textflush}{flushleft}
34 \newcommand{\epigraphflush}{flushright}
35 \newcommand{\sourceflush}{flushright}
36 \newcommand*\epigraphsize{\small}
37 \newlength{\epigraphrule}
38 \newlength{\beforeepigraphskip}
39 \newlength{\afterepigraphskip}
40 \newcommand{\epigraphhead}[2][0]{#2}
41 \newcommand{\dropchapter}[1]{}
42 \newcommand*\undodrop{}
43 }{% not memoir
44
45 \let\cleartoevenpage\relax% also in nextpage
46 \newcommand{\cleartoevenpage}[1][{}]{

```

---

File 69 **lwarp-epstopdf.sty**

§ 158 Package **epstopdf**

Pkg epstopdf **epstopdf** is ignored.

Filename should be used without a suffix so that SVG, PNG, or JPG versions of the file will be used for HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{epstopdf}
2 \providecommand*\epstopdfsetup[1]{}
3 \providecommand*\epstopdfcall[1]{}
4 \providecommand*\epstopdfDeclareGraphicsRule[4]{}

```

---

File 70 **lwarp-epstopdf-base.sty**

§ 159 Package **epstopdf-base**

Pkg epstopdf-base **epstopdf-base** is ignored.

Filename should be used without a suffix so that SVG, PNG, or JPG versions of the file will be used for HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{epstopdf-base}[2016/05/15]

2 \providecommand*\epstopdfsetup}[1]{
3 \providecommand*\epstopdfcall}[1]{
4 \providecommand*\epstopdfDeclareGraphicsRule}[4]{

```

---

File 71 **lwarp-eso-pic.sty**

§ 160 Package **eso-pic**

*(Emulates or patches code by ROLF NIEPRASCHK.)*

Pkg **eso-pic** **eso-pic** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{eso-pic}

2 \newcommand*\LenToUnit{}
3 \newcommand{\AtPageUpperLeft}[1]{
4 \newcommand{\AtPageLowerLeft}[1]{
5 \newcommand{\AtPageCenter}[1]{
6 \newcommand{\AtStockLowerLeft}[1]{
7 \newcommand{\AtStockUpperLeft}[1]{
8 \newcommand{\AtStockCenter}[1]{
9 \newcommand{\AtTextUpperLeft}[1]{
10 \newcommand{\AtTextLowerLeft}[1]{
11 \newcommand{\AtTextCenter}[1]{
12 \NewDocumentCommand{\AddToShipoutPictureBG}{s +m}{

13 \newcommand{\AddToShipoutPicture}{\AddToShipoutPictureBG}
14 \NewDocumentCommand{\AddToShipoutPictureFG}{s +m}{
15 \newcommand*\ClearShipoutPictureBG{}
16 \newcommand*\ClearShipoutPicture{}
17 \newcommand*\ClearShipoutPictureFG{}
18 \newcommand{\gridSetup}[6][]{

```

---

File 72 **lwarp-everypage.sty**

§ 161 Package **everypage**

*(Emulates or patches code by SERGIO CALLEGARI.)*

Pkg **everypage** **everypage** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{everypage}

```

---

```
2 \newcommand*\AddEverypageHook}[1]{}
3 \newcommand*\AddThispageHook}[1]{}

```

---

File 73 **lwarp-everyshi.sty**

§ 162 Package **everyshi**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg everyshi Emulated.

**for HTML output:** Discard all options for **lwarp-everyshi**:

```
1 \LWR@ProvidesPackageDrop{everyshi}

2 \newcommand*\EveryShipout}[1]{}
3 \newcommand*\AtNextShipout}[1]{}

```

---

File 74 **lwarp-extramarks.sty**

§ 163 Package **extramarks**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg extramarks **extramarks** is emulated.

**for HTML output:** Discard all options for **lwarp-extramarks**:

```
1 \LWR@ProvidesPackageDrop{extramarks}

2 \newcommand*\extramarks}[2]{}
3 \newcommand*\firstleftxmark{}
4 \newcommand*\lastleftxmark{}
5 \newcommand*\firstrightxmark{}
6 \newcommand*\lastrightxmark{}
7 \newcommand*\firstxmark{}
8 \newcommand*\lastxmark{}
9 \newcommand*\topxmark{}
10 \newcommand*\topleftxmark{}
11 \newcommand*\firstleftmark{}
12 \newcommand*\lastrightmark{}

```

---

File 75 **lwarp-fancybox.sty**

§ 164 Package **fancybox**

(Emulates or patches code by TIMOTHY VAN ZANDT.)

Pkg fancybox **fancybox** is supported with some patches.

**framed equation example** **fancybox**'s documentation has an example `FramedEqn` environment which combines `math`, `\Sbox`, a `minipage`, and an `\fbox`. This combination requires that the entire environment be enclosed inside a `lateximage`, which is done by adding `\lateximage` at the very start of `FramedEqn`'s beginning code, and `\endlateximage` at the very end of the ending code. Unfortunately, the `HTML alt` attribute is not used here.

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

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

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

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

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

```

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

```

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

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

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

⚠ **sectioning or displaymath**

```

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

```

and likewise for equations or display math.

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

```
1 \LWR@ProvidesPackagePass{fancybox}
```

After the preamble is loaded, after any patches to `Verbatim`:

```
2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching fancybox.}

```

`\VerbatimFootnotes` Patched to use the new version.

```
4 \def\VerbatimFootnotes{%
5 \let\@footnotetext\V@footnotetext%
6 \let\LWR@footnotetext\V@footnotetext% lwarp
7 }

```

`\V@footnotetext` Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@footnotetext`.

```
8 \def\V@footnotetext{%
9 \LWR@traceinfo{V@footnotetext}%
10 \global\setbox\LWR@footnotes=\vbox\bgroup%

```

Add to any current footnotes:

```
11 \unvbox\LWR@footnotes%
```

Remember the footnote number for \ref:

```
12 \protected@edef\@currentlabel{%
13 \csname p@footnote\endcsname\@thefnmark%
14 }% @currentlabel
```

Use HTML superscripts in the footnote even inside a lateximage:

```
15 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```
16 \ifthenelse{%
17 \boolean{LWR@doingstartpars} \AND%
18 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
19 }%
20 {}%
21 {\LWR@htmltagc{\LWR@tagregularparagraph}}%
```

Append the footnote to the list:

```
22 \@makefntext{}%
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 #1%
64 \endLWR@figcaption%
65 }
```

`Btrivlist` is enclosed in an HTML block. This is a tabular, and does not use `\item`.

```
\trivlist {</c/r>} [<t/c/b>]

66 \RenewDocumentEnvironment{Btrivlist}{m o}
67 {%
68 \begin{BlockClass}{Btrivlist}%
69 \tabular{#1}%
70 }
71 {%
72 \endtabular%
73 \end{BlockClass}%
74 }
```

`Btrivlist` is also neutralized when used inside a span:

```
75 \AtBeginEnvironment{LWR@nestspan}{%
```

```
76 \RenewDocumentEnvironment{Btrivlist}{m o}{-}{-}%
77 }
```

**lwarp's** handling of `\item` is patched to accept **fancybox's** optional arguments:

```
78 \let\LWRFB@origitemizeitem\LWR@itemizeitem
79 \let\LWRFB@origdescitem\LWR@descitem
80
81 \RenewDocumentCommand{\LWR@itemizeitem}{d()o}{-}%
82 \IfValueTF{#2}{-}%
83 \LWRFB@origitemizeitem[#2]%
84 }{-}%
85 \LWRFB@origitemizeitem%
86 }{-}%
87 }
88
89 \RenewDocumentCommand{\LWR@descitem}{d()o}{-}%
90 \IfValueTF{#2}{-}%
91 \LWRFB@origdescitem[#2]~%
92 }{-}%
93 \LWRFB@origdescitem%
94 }{-}%
95 }
96 \RenewDocumentCommand{\LWR@nestspanitem}{d()}{-}%
97 \if@newlist\else{\LWR@htmltagc{br /}}\fi%
98 \LWR@origitem%
99 }
```

The various boxed lists become regular lists:

```
100 \renewenvironment{Bitemize}[1][\begin{itemize}]{\end{itemize}}
101 \renewenvironment{Benumerate}[1][\begin{enumerate}]{\end{enumerate}}
102 \renewenvironment{Bdescription}[1][\begin{description}]{\end{description}}
```

`\boxput` simply prints one then the other argument, side-by-side instead of above and behind:

```
103 \RenewDocumentCommand{\boxput}{s d() m m}{-}%
104 \IfBooleanTF{#1}{#3\quad#4}{#4\quad#3}%
105 }
```

Neutralized commands:

```
106 \RenewDocumentCommand{\fancyput}{s d() m}{-}%
107 \RenewDocumentCommand{\thisfancyput}{s d() m}{-}%
108
```

```

109 \RenewDocumentCommand{\fancy page}{m m}{}
110 \RenewDocumentCommand{\thisfancy page}{m m}{}
111
112 \def\LandScape#1{}
113 \def\endLandScape{}
114 \def\@Landscape#1#2#3{}
115 \def\endLandscape{}

```

Low-level patches for UseVerbatim and friends:

```

116 \let\LWRFB@UseVerbatim\UseVerbatim
117 \renewcommand*\UseVerbatim}[1]{%
118 \LWR@atbeginverbatim{3.5}{Verbatim}%
119 \LWRFB@UseVerbatim{#1}%
120 \LWR@afterendverbatim%
121 }
122
123 \let\LWRFB@LUseVerbatim\LUseVerbatim
124
125 \renewcommand*\LUseVerbatim}[1]{%
126 \LWR@atbeginverbatim{3.5}{LVerbatim}%
127 \noindent%
128 \LWRFB@LUseVerbatim{#1}%
129 \LWR@afterendverbatim%
130 }
131
132 \def\@BUseVerbatim[#1]#2{%
133 \LWR@atbeginverbatim{3.5}{BVerbatim}%
134 \LWRFB@UseVerbatim{#2}%
135 \LWR@afterendverbatim%
136 }

```

---

File 76 `lwarp-fancyheadings.sty`

§ 165 Package **fancyheadings**

Pkg fancyheadings **fancyheadings** is superseded by **fancyhdr**.

**for HTML output:** `1 \LWR@loadnever{fancyheadings}{fancyhdr}`

---

File 77 `lwarp-fancyhdr.sty`

§ 166 Package **fancyhdr**

*(Emulates or patches code by PIET VAN OOSTRUM.)*

Pkg fancyhdr **fancyhdr** is nullified.

**for HTML output:** Discard all options for `lwarp-fancyhdr`:

```

1 \LWR@ProvidesPackageDrop{fancyhdr}

2 \newcommand*{\fancyhead}[2] [] {}
3 \newcommand*{\fancyfoot}[2] [] {}
4 \newcommand*{\fancyhf}[2] [] {}
5 \newcommand*{\fancypagestyle}[2] {}
6 \newcommand*{\lhead}[2] [] {}
7 \newcommand*{\chead}[2] [] {}
8 \newcommand*{\rhead}[2] [] {}
9 \newcommand*{\lfoot}[2] [] {}
10 \newcommand*{\cfoot}[2] [] {}
11 \newcommand*{\rfoot}[2] [] {}
12 \newcommand*{\headrulewidth}{}
13 \newcommand*{\footrulewidth}{}
14 \newcommand*{\fancyheadoffset}[2] [] {}
15 \newcommand*{\fancyfootoffset}[2] [] {}
16 \newcommand*{\fancyhfoffset}[2] [] {}
17 \newcommand*{\iffloatpage}[2] {#2}
18 \newcommand*{\ifftopfloat}[2] {#2}
19 \newcommand*{\iffbotfloat}[2] {#2}

```

---

File 78 `lwarp-fancyref.sty`

§ 167 Package **fancyref**

Pkg fancyref **fancyref** is emulated.

**for HTML output:** `1 \LWR@ProvidesPackagePass{fancyref}`

To remove the `margin` option, if `\fancyrefhook` is anything other than the `paren` option, then force it to the default instead. (Comparing to the `margin` option was not possible since `lwarp` has revised the meaning of `\mbox` so the comparison failed.)

```

2 \newcommand*\LWRfref@parenfancyrefhook}[1]{(#1)}
3
4 \ifdefstrequal{\fancyrefhook}{\LWRfref@parenfancyrefhook}
5 {}{
6 \renewcommand*\fancyrefhook}[1]{#1}%
7 }

```

Modified to ignore the page number and `varioref`.

```

8 \renewcommand*\@f@ref}[4]{%
9 \ifundefined{#1r@#2@#3}{%
10 \PackageError{fancyref}{%
11 \backslashchar#1ref\space format ‘#2’
12 undefined\MessageBreak
13 for label type ‘#3’}%
14 }{%
15 The format ‘#2’ was not defined for the label type
16 ‘#3’\MessageBreak
17 and the \backslashchar#1ref\space command. Perhaps
18 you have only misspelled its name.\MessageBreak
19 Otherwise you will have to define it with
20 \protect\new#1reformat\MessageBreak
21 prior to using it.%
22 }%
23 }{%
24 \fancyrefhook{%
25 \@nameuse{#1r@#2@#3}%
26 {\ref{#3\fancyrefargdelim#4}}%
27 {\pageref{#3\fancyrefargdelim#4}}% original
28 {\@fancyref@page@ref{#3\fancyrefargdelim#4}}% original
29 }% lwarp
30 }% lwarp
31 }%
32 }%
33 }%

```

---

File 79 `lwarp-fancyvrb.sty`

§ 168 Package **fancyvrb**

*(Emulates or patches code by TIMOTHY VAN ZANDT.)*

Pkg `fancyvrb` **fancyvrb** is supported with some patches.

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

△ sectioning or displaymath

```

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

```

and likewise for equations or display math.

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

```

1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{fancyvrb}

```

Initial default patch for fancyvrb:

```
4 \fvset{frame=none}%
```

After the preamble is loaded, after any patches to Verbatim:

```

5 \AfterEndPreamble{
6 \LWR@traceinfo{Patching fancyvrb.}

```

`\VerbatimFootnotes` Patched to use the new version.

```

7 \def\VerbatimFootnotes{%
8 \let\@footnotetext\V@footnotetext%
9 \let\footnote\V@footnote%
10 \let\LWR@footnotetext\V@footnotetext% lwarp
11 }

```

`\V@@footnotetext` Patches in a subset of `lwarp`'s `\LWR@footnotetext` to the `fancyvrb` version of `\V@@footnotetext`.

```

12 \def\V@@footnotetext{%
13 \LWR@traceinfo{V@footnotetext}%
14 \global\setbox\LWR@footnotes=\vbox\bgroup%

```

Add to any current footnotes:

```
15 \unvbox\LWR@footnotes%
```

Remember the footnote number for `\ref`:

```

16 \protected@edef\@currentlabel{%
17 \csname p@footnote\endcsname\@thefnmark%
18 }% @currentlabel

```

Use HTML superscripts in the footnote even inside a `lateximage`:

```
19 \renewrobustcmd{\textsuperscript}[1]{\LWR@htmlspan{sup}{##1}}%
```

Use paragraph tags if in a tabular data cell or a lateximage:

```

20 \ifthenelse{%
21 \boolean{LWR@doingstartpars} \AND%
22 \cnttest{\value{LWR@lateximagedepth}}{=}{0}%
23 }%
24 {}%
25 {\LWR@htmltagc{\LWR@tagregularparagraph}}%

```

Append the footnote to the list:

```

26 \@makefntext{}%

27 \bgroup%
28 \aftergroup{\V@@@footnotetext}%
29 \ignorespaces%
30 }%

31 \preto\FVB@Verbatim{\LWR@forcenewpage}
32 \preto\FVB@LVerbatim{\LWR@forcenewpage}
33 % \preto\FVB@BVerbatim{\LWR@forcenewpage}% Fails, so done below.

```

Simplified to remove PDF formatting:

```

34 \def\FV@BeginListFrame@Single{%
35 \FV@SingleFrameLine{\z@}%
36 }
37
38 \def\FV@EndListFrame@Single{%
39 \FV@SingleFrameLine{\@ne}%
40 }
41
42 \def\FV@BeginListFrame@Lines{%
43 \FV@SingleFrameLine{\z@}%
44 }
45
46 \def\FV@EndListFrame@Lines{%
47 \FV@SingleFrameLine{\@ne}%
48 }
49
50 \renewcommand*{\FV@SingleFrameSep}{}

```

Adds HTML formatting:

```

51 \def\FV@BUseVerbatim#1{%
52 \LWR@atbeginverbatim[\LWR@FVstyle]{.5}{verbatim}%
53 \FV@BVerbatimBegin#1\FV@BVerbatimEnd%
54 \LWR@afterendverbatim%
55 }

```

`\LWR@FVstyle` Holds the style of the verbatim.

```
56 \newcommand*\LWR@FVstyle{-}
```

The following patches to Verbatim are executed at the start and end of the environment, depending on the choice of frame. Original code is from the **fancyvrb** package.

```
57 \newcommand*\LWR@fvstartnone}{%
58 \LWR@traceinfo{fvstartnone}%
59 % \hbox to\z@{
60 \LWR@atbeginverbatim[\LWR@FVstyle]{.5}{verbatim}%
61 % }%
62 }
63
64 \newcommand*\LWR@fvendnone}{%
65 \LWR@traceinfo{fvendnone}%
66 % \hbox to\z@{
67 \LWR@afterendverbatim%
68 % }%
69 }
70
71 \newcommand*\LWR@fvstartsingle}{%
72 \LWR@traceinfo{fvstartsingle}%
73 \LWR@fvstartnone%
74 \FV@BeginListFrame@Single%
75 }
76
77 \newcommand*\LWR@fvendsingle}{%
78 \LWR@traceinfo{fvendsingle}%
79 \FV@EndListFrame@Single%
80 \LWR@fvendnone%
81 }
82
83 \newcommand*\LWR@fvstartline}{%
84 \LWR@traceinfo{fvstartline}%
85 \LWR@fvstartnone%
86 % \setlength{\LWR@templengthone}{\baselineskip}%
87 \FV@BeginListFrame@Lines%
88 % \setlength{\baselineskip}{\LWR@templengthone}%
89 % \setlength{\baselineskip}{5pt}%
90 }
91
92 \newcommand*\LWR@fvendline}{%
93 \LWR@traceinfo{fvendline}%
94 \FV@EndListFrame@Lines%
95 \LWR@fvendnone%
96 }
```

The following patches select the start/left/right/end behaviors depending on frame. Original code is from the **fancyvrb** package.

```

97 \newcommand*\LWR@FVfindbordercolor{%
98 \FancyVerbRuleColor%
99 \LWR@findcurrenttextcolor%
100 \color{black}%
101 }
102
103 % border width of \FV@FrameRule
104 \newcommand*\LWR@FVborderstyle}[1]{%
105 padding#1: \strip@pt\dimexpr \FV@FrameSep\relax\relax pt ; %
106 \LWR@FVfindbordercolor %
107 border#1: \strip@pt\dimexpr \FV@FrameRule\relax\relax pt %
108 solid \LWR@origpound\LWR@tempcolor ; %
109 }
110
111 \def\FV@Frame@none{%
112 \renewcommand*\LWR@FVstyle{\LWR@currenttextcolorstyle}%
113 \let\FV@BeginListFrame\LWR@fvstartnone%
114 \let\FV@LeftListFrame\relax%
115 \let\FV@RightListFrame\relax%
116 \let\FV@endListFrame\LWR@fvendnone}
117
118 \FV@Frame@none% default values
119
120 \def\FV@Frame@single{%
121 \renewcommand*\LWR@FVstyle{\LWR@currenttextcolorstyle\LWR@FVborderstyle{}}%
122 \let\FV@BeginListFrame\LWR@fvstartsingle%
123 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
124 \let\FV@RightListFrame\FV@RightListFrame@Single%
125 \let\FV@endListFrame\LWR@fvendsingle}
126
127 \def\FV@Frame@lines{%
128 \renewcommand*\LWR@FVstyle{%
129 \LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}\LWR@FVborderstyle{-bottom}%
130 }%
131 \let\FV@BeginListFrame\LWR@fvstartline%
132 \let\FV@LeftListFrame\relax%
133 \let\FV@RightListFrame\relax%
134 \let\FV@endListFrame\LWR@fvendline}
135
136 \def\FV@Frame@topline{%
137 \renewcommand*\LWR@FVstyle{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-top}}%
138 \let\FV@BeginListFrame\LWR@fvstartline%
139 \let\FV@LeftListFrame\relax%
140 \let\FV@RightListFrame\relax%
141 \let\FV@endListFrame\LWR@fvendnone}
142

```

```

143 \def\FV@Frame@bottomline{%
144 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-bottom}}%
145 \let\FV@BeginListFrame\LWR@fvstartnone%
146 \let\FV@LeftListFrame\relax%
147 \let\FV@RightListFrame\relax%
148 \let\FV@EndListFrame\LWR@fvendline}
149
150 \def\FV@Frame@leftline{%
151 \renewcommand*{\LWR@FVstyle}{\LWR@currenttextcolorstyle\LWR@FVborderstyle{-left}}%
152 % To define the \FV@FrameFillLine macro (from \FV@BeginListFrame)
153 \ifx\FancyVerbFillColor\relax%
154 \let\FV@FrameFillLine\relax%
155 \else%
156 \@tempdima\FV@FrameRule\relax%
157 \multiply\@tempdima-\tw@%
158 \edef\FV@FrameFillLine{%
159 {\noexpand\FancyVerbFillColor{\vrule\@width\number\@tempdima sp}%
160 \kern-\number\@tempdima sp}}%
161 \fi%
162 \let\FV@BeginListFrame\LWR@fvstartnone%
163 \let\FV@LeftListFrame\FV@LeftListFrame@Single%
164 \let\FV@RightListFrame\relax%
165 \let\FV@EndListFrame\LWR@fvendnone}

```

Adds the optional label to the top and bottom edges. Original code is from the `fancyvrb` package.

```

166 \def\FV@SingleFrameLine#1{%
167 % \hbox to\z@{%
168 % \kern\leftmargin
169 \ifnum#1=\z@\relax
170 \let\FV@Label\FV@LabelBegin
171 \else
172 \let\FV@Label\FV@LabelEnd
173 \fi
174 \ifx\FV@Label\relax
175 % \FancyVerbRuleColor{\vrule \@width\linewidth \@height\FV@FrameRule}%
176 \else
177 \ifnum#1=\z@
178 % \setbox\z@\hbox{\strut\enspace\FV@LabelBegin\enspace\strut}%
179 \ifx\FV@LabelPositionTopLine\relax
180 \else
181 \LWR@FVfindbordercolor
182 \LWR@htmltagc{%
183 div class="fancyvrblabel" % extra space
184 style="color: \LWR@origpound\LWR@tempcolor"%
185 }
186 \LWR@origtextrm{\FV@LabelBegin}% \textrm preserves emdash
187 \LWR@htmltagc{/div}

```

```

188 \fi
189 \else
190 % \setbox\z@\hbox{\strut\enspace\FV@LabelEnd\enspace\strut}%
191 \ifx\FV@LabelPositionBottomLine\relax
192 \else
193 \LWR@FVfindbordercolor
194
195 \LWR@htmltagc{%
196 div class="fancyvrblabel" % extra space
197 style="color: \LWR@origpound\LWR@tempcolor"%
198 }
199 \LWR@origtextrm{\FV@LabelEnd}
200 \LWR@htmltagc{/div}
201 \fi
202 \fi
203 \fi
204 % \hss
205 % }
206 }

```

Processes each line, adding optional line numbers. Original code is from the **fancyvrb** package.

```

207 \def\FV@ListProcessLine#1{%
208 \hbox to \hsize{%
209 % \kern\leftmargin
210 \hbox to \VerbatimHTMLWidth {%
211 \ifcvoid\FV@LeftListNumber}{-}{\kern 2.5em}%
212 \FV@LeftListNumber%
213 % \FV@LeftListFrame
214 \FancyVerbFormatLine{#1}%
215 \hss%
216 % \FV@RightListFrame
217 \FV@RightListNumber%
218 }%
219 \hss% required to avoid underfull hboxes
220 }
221 }

```

Env BVerbatim

```

222 \AtBeginEnvironment{BVerbatim}
223 {%
224 \LWR@forcenewpage% instead of \preto
225 \LWR@atbeginverbatim{0}{bverbatim}%
226 }
227
228 \AfterEndEnvironment{BVerbatim}
229 {%

```

```

230 \leavevmode\par\LWR@origvspace{-\baselineskip}%
231 \LWR@afterendverbatim%
232 }

```

End of the modifications to make at the end of the preamble:

```
233 } % \AfterEndPreamble
```

---

File 80 **lwarp-figcaps.sty**

§ 169 Package **figcaps**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg **figcaps** Emulated.

**for HTML output:** Discard all options for **lwarp-figcaps:**

```

1 \LWR@ProvidesPackageDrop{figcaps}

2 \newcommand*{\figcaption}{}
3 \newcommand*{\figcaptionoff}{}
4 \newcommand*{\printfigures}{}
5 \newcommand*{\figmarkon}{}
6 \newcommand*{\figmarkoff}{}
7 \def\figurecaptionname{Figure Captions}
8 \def\tablepagenamex{Tables}
9 \def\figurepagenamex{Figures}

```

---

File 81 **lwarp-figsize.sty**

§ 170 Package **figsize**

*(Emulates or patches code by ANTHONY A. TANBAKUCHI.)*

Pkg **figsize** **figsize** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{figsize}

Emulates a virtual 6×9 inch textsize.

```

2 \newlength{\figwidth}
3 \newlength{\figheight}

```

---

```

4
5 \newcommand{\SetFigLayout}[3][0]{%
6 \setlength{\figheight}{8in}%
7 \setlength{\figheight}{\figheight / #2}%
8 %
9 \setlength{\figwidth}{5.5in}%
10 \setlength{\figwidth}{\figwidth / #3}%
11 }

```

---

File 82 `lwarp-fix2col.sty`

§ 171 Package **fix2col**

Pkg `fix2col` **fix2col** is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{fix2col}`

---

File 83 `lwarp-fixme.sty`

§ 172 Package **fixme**

*(Emulates or patches code by DIDIER VERNA.)*

Pkg `fixme` **fixme** is patched for use by **lwarp**.

 **external layouts** External layouts (`\fxloadlayouts`) are not supported.

User control is provided for setting the HTML styling of the “faces”. The defaults are as follows, and may be changed in the preamble after **fixme** is loaded:

```

\def\FXFaceInlineHTMLStyle{font-weight:bold}
\def\FXFaceEnvHTMLStyle{font-weight:bold}
\def\FXFaceSignatureHTMLStyle{font-style:italic}
\def\FXFaceTargetHTMLStyle{font-style:italic}

```

**for HTML output:** `1 \LWR@ProvidesPackagePass{fixme}`

Restore **lwarp**’s version of `\@wrindex`, ignoring the **fixme** package’s target option:

```
2 \let\@wrindex\LWR@wrindex
```

Float-related macros required by **lwarp**:

```

3 \newcommand{\ext@fixme}{lox}
4
5 \renewcommand{\l@fixme}[2]{\hypertocfloat{1}{fixme}{lox}{#1}{#2}}

```

Other modifications:

```

6 \def\FXFaceInlineHTMLStyle{font-weight:bold}
7
8 \renewcommand*\FXLayoutInline[3]{ %
9 \InlineClass[\FXFaceInlineHTMLStyle]{fixmeinline}%
10 {\@fxttextstd{#1}{#2}{#3}}%
11 }
12
13 \def\FXFaceEnvHTMLStyle{font-weight:bold}
14
15 \renewcommand*\FXEnvLayoutPlainBegin[2]{%
16 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
17 \ignorespaces#2 \fxnotename{#1}: \ignorespaces}
18
19 \renewcommand*\FXEnvLayoutPlainEnd[2]{\endBlockClass}
20
21 \renewcommand*\FXEnvLayoutSignatureBegin[2]{%
22 \BlockClass[\FXFaceEnvHTMLStyle]{fixmebold}
23 \fxnotename{#1}: \ignorespaces}
24
25 \renewcommand*\FXEnvLayoutSignatureEnd[2]{\@fxsignature{#2}\endBlockClass}
26
27 \def\FXFaceSignatureHTMLStyle{font-style:italic}
28
29 \DeclareRobustCommand*\@fxsignature[1]{%
30 \ifthenelse{\equal{#1}{}}%
31 {}%
32 { -- {\InlineClass[\FXFaceSignatureHTMLStyle]{fixmesignature}{#1}}}%
33 }
34
35
36 \def\FXFaceTargetHTMLStyle{font-style:italic}
37
38 \renewcommand\FXTargetLayoutPlain[2]{%
39 \InlineClass[\FXFaceTargetHTMLStyle]{fixmetarget}{#2}%
40 }

```

---

File 84 **lwarp-fixmetodonotes.sty**

§ 173

Package

**fixmetodonotes**

*(Emulates or patches code by GIOELE BARABUCCI.)*

Pkg `fixmetodonotes` **fixmetodonotes** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{fixmetodonotes}

2 \renewcommand{\NOTES@addtolist}[2]{%
3 \refstepcounter{NOTES@note}%
4 % \phantomsection% REMOVED
5 \addcontentsline{notes}{NOTES@note}{%
6 \protect\numberline{\theNOTES@note}{\#1}: {\#2}}%
7 }%
8 }
9
10 \renewcommand{\NOTES@marker}[2]{\fbox{%
11 \textcolor{\#2}{% WAS \color
12 \textbf{\#1}}%
13 }}
14
15 \renewcommand{\NOTES@colorline}[2]{%
16 \bgroup%
17 \ULon{\LWR@backgroundcolor{\#1}{\#2}}%
18 }
```

---

File 85 **lwarp-flafter.sty**

§ 174 Package **flafter**

Pkg `flafter` **flafter** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{flafter}
2 \providecommand\fl@trace[1]{}
```

---

File 86 **lwarp-float.sty**

§ 175 Package **float and \newfloat**

*(Emulates or patches code by ANSELM LINGNAU.)*

Pkg `float` **float** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{float}[2016/03/04]
```

See section [68.2](#) for the `\listof` command.

`\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.

```
2 \NewDocumentCommand{\newfloat}{m m m o}{%
3 \IfValueTF{#4}{%
4 {\DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}}%
5 {\DeclareFloatingEnvironment[fileext=#3]{#1}}%
```

`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.

```
6 \cslet{listof#1s}\relax%
7 \cslet{listof#1es}\relax%
8 }
```

`\floatname`  $\langle type \rangle \langle name \rangle$

Sets the text name of the float, such as “Figure”.

```
9 \NewDocumentCommand{\floatname}{m +m}{%
10 \SetupFloatingEnvironment{#1}{name=#2}%
11 }
```

`\floatplacement`  $\langle type \rangle \langle placement \rangle$

Float placement is ignored.

```
12 \newcommand*{\floatplacement}[2]{%
13 \SetupFloatingEnvironment{#1}{placement=#2}%
14 }
```

`\floatstyle`  $\langle style \rangle$

Float styles are ignored.

```
15 \newcommand{\floatstyle}[1]{%
16 }
```

`\restylefloat`  $* \langle style \rangle$

Float styles are ignored.

```
17 \NewDocumentCommand{\restylefloat}{s m}{%
18 }
```

File 87 `lwarp-floatflt.sty`

§ 176 Package **floatflt**

*(Emulates or patches code by MATS DAHLGREN.)*

Pkg floatflt Emulated.

for HTML output: Discard all options for **lwarp-floatflt**:

```
1 \LWR@ProvidesPackageDrop{floatflt}
```

Env [ $\langle \rangle$ ] offset  $\langle \textit{type} \rangle$   $\langle \textit{width} \rangle$  Borrowed from the **lwarp** version of **keyfloat**:

```
2 \NewDocumentEnvironment{KFLTfloatflt@marginfloat}{0{-1.2ex} m m}
3 {%
4 \setlength{\LWR@templengthone}{#3}%
5 \LWR@BlockClassWP{%
6 float:right; %
7 width:\LWR@printlength{\LWR@templengthone}; % extra space
8 margin:10pt%
9 }{%
10 width:\LWR@printlength{\LWR@templengthone}%
11 }%
12 {marginblock}%
13 \captionsetup{type=#2}%
14 }
15 {%
16 \endLWR@BlockClassWP%
17 }
```

Env floatingfigure [ $\langle \textit{placement} \rangle$ ]  $\langle \textit{width} \rangle$

```
18 \DeclareDocumentEnvironment{floatingfigure}{o m}
19 {\begin{KFLTfloatflt@marginfloat}{figure}{#2}}
20 {\end{KFLTfloatflt@marginfloat}}
```

Env floatingtable [ $\langle \textit{placement} \rangle$ ]

```
21 \DeclareDocumentEnvironment{floatingtable}{o}
22 {\begin{KFLTfloatflt@marginfloat}{table}{1.5in}}
23 {\end{KFLTfloatflt@marginfloat}}
```

---

File 88 **lwarp-floatpag.sty**

§ 177 Package **floatpag**

*(Emulates or patches code by VYTAS STATULEVIČIUS AND SIGITAS TOLUŠIS.)*

Pkg floatpag Emulated.

**for HTML output:** Discard all options for **lwarp-floatpag**:

```
1 \LWR@ProvidesPackageDrop{floatpag}
2 \newcommand*{\floatpagestyle}[1]{
3 \newcommand*{\rotfloatpagestyle}[1]{
4 \newcommand*{\thisfloatpagestyle}[1]{
```

---

File 89 **lwarp-floatrow.sty**

§ 178 Package **floatrow**

*(Emulates or patches code by OLGA LAPKO.)*

Pkg floatrow **floatrow** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{floatrow}

⚠ **misplaced alignment tab character &** Use `\StartDefiningTabulars` and `\EndDefiningTabulars` before and after defining macros using `\ttabbox` with a tabular inside. See section 9.9.

⚠ **subfig package** When combined with the **subfig** package, while inside a `subfloatrow` `\ffigbox` and `\ttabbox` must have the caption in the first of the two of the mandatory arguments.

⚠ **\FBwidth, \FBheight** The emulation of **floatrow** does not support `\FBwidth` or `\FBheight`. These values are pre-set to `.3\linewidth` and `2in`. Possible solutions include:

- Use fixed lengths. **lwarp** will scale the HTML lengths appropriately.
- Use `warpprint` and `warpHTML` environments to select appropriate values for each case.
- Inside a `warpHTML` environment, manually change `\FBwidth` or `\FBheight` before the `\ffigbox` or `\ttabbox`. Use `\FBwidth` or `\FBheight` normally af-

terwards; it will be used as expected in print output, and will use your custom-selected value in HTML output. This custom value will be used repeatedly, until it is manually changed to a new value.

After everything has loaded, remember whether **subcaption** was loaded. If not, it is assumed that **subfig** is used instead:

```

2 \newbool{LWR@subcaptionloaded}
3
4 \AtBeginDocument{
5 \ifpackageloaded{subcaption}
6 {\booltrue{LWR@subcaptionloaded}}
7 {\boolfalse{LWR@subcaptionloaded}}
8 }

```

```

\floatbox [1 preamble] [2 captype] [3 width] [4 height] [5 vert pos] [6 caption]
[7 object]

```

Only parameters for captype, width, caption, and object are used.

LWR@insubfloatrow is true if inside a subfloatrow environment.

There are two actions, depending on the use of **subcaption** or **subfig**.

```

9 \NewDocumentCommand{\floatbox}{o m o o o +m +m}{%
10 \ifbool{LWR@subcaptionloaded}%
11 {% subcaption

```

For **subcaption**:

```

12 \ifbool{LWR@insubfloatrow}%
13 {% subcaption in a subfloatrow

```

subfigure and subtable environments take width as an argument.

```

14 \IfValueTF{#3}%
15 {\@nameuse{sub#2}{#3}}%
16 {\@nameuse{sub#2}{\linewidth}}%
17 }% subcaption in a subfloatrow
18 {% subcaption not in subfloatrow

```

figure and table environments do not take a width argument.

```

19 \@nameuse{#2}%
20 }% subcaption not in subfloatrow
21 #6
22
23 #7

```

End the environments:

```

24 \ifbool{LWR@insubfloatrow}%
25 {\@nameuse{endsub#2}}%

```

```

26 {\@nameuse{end#2}}%
27 }% subcaption
28 {% assume subfig

```

For **subfig**:

```

29 \ifbool{LWR@insubfloatrow}%
30 {% subfig in a subfloatrow

```

`\subfloat` is a macro, not an environment.

Package **subfig**'s `\subfloat` command takes an optional argument which is the caption, but `\floatbox` argument #6 contains commands to create the caption and label, not the caption itself. Thus, `\caption` is temporarily disabled to return its own argument without braces.

```

31 \begingroup
32 \let\caption\@firstofone
33 \subfloat[#6]{#7}
34 \endgroup
35 }% subfig in a subfloatrow
36 {% subfig package, but not a subfig

```

figure and table are environments:

```

37 \@nameuse{#2}
38 #6
39
40 #7
41 \@nameuse{end#2}
42 }% subfig package, but not a subfig
43 }% assume subfig
44 }

```

Not used:

```

45 \newcommand*{\nocapbeside}{}
46 \newcommand*{\capbeside}{}
47 \newcommand*{\captop}{}
48 \newlength{\FBwidth}
49 \setlength{\FBwidth}{.3\linewidth}
50 \newlength{\FBheight}
51 \setlength{\FBheight}{2in}
52 \newcommand*{\useFCwidth}{}
53 \newcommand{\floatsetup}[2] [] {}
54 \newcommand{\thisfloatsetup}[1] {}
55 \newcommand{\clearfloatsetup}[1] {}
56 \newcommand*{\killfloatstyle}{}

```

`\newfloatcommand`  $\langle 1 \text{ command} \rangle$   $\langle 2 \text{ captype} \rangle$  [ $\langle 3 \text{ preamble} \rangle$ ] [ $\langle 4 \text{ default width} \rangle$ ]

Preamble and default width are ignored.

```

57 \NewDocumentCommand{\newfloatcommand}{m m o}{%
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}{%
63 \@namedef{#1}{%
64 \floatbox{#2}
65 }
66 }

```

`\ffigbox`     $[\langle width \rangle]$   $[\langle height \rangle]$   $[\langle vposn \rangle]$   $\langle caption \text{ commands} \rangle$   $\langle contents \rangle$

```

67 \newfloatcommand{ffigbox}{figure}[\nocapbeside] []

```

`\ttabbox`     $[\langle width \rangle]$   $[\langle height \rangle]$   $[\langle vposn \rangle]$   $\langle caption \text{ commands} \rangle$   $\langle contents \rangle$

```

68 \newfloatcommand{ttabbox}{table}[\capttop] [\FBwidth]

```

`\fcapside`     $[\langle width \rangle]$   $[\langle height \rangle]$   $[\langle vposn \rangle]$   $\langle caption \text{ commands} \rangle$   $\langle contents \rangle$

```

69 \newfloatcommand{fcapside}{figure}[\capbeside] []

```

Env `floatrow`     $[\langle numfloats \rangle]$

The row of floats is placed into a `<div>` of class `floatrow`.

```

70 \newenvironment*{floatrow}[1][2]
71 {
72 \LWR@forcenewpage
73 \BlockClass{floatrow}

```

While inside the `floatrow`, divide the `\linewidth` by the number of floats.

```

74 \booltrue{LWR@infloatrow}
75 \setlength{\linewidth}{6in/#1}
76 }
77 {
78 \boolfalse{LWR@infloatrow}
79 \endBlockClass
80 }

```

Keys for `\DeclareNewFloatType`:

```

81 \newcommand*{\LWR@frowkeyplacement}{ }

```

```

82 \newcommand*\LWR@frowkeyname{}
83 \newcommand*\LWR@frowkeyfileext{}
84 \newcommand*\LWR@frowkeywithin{}
85 \newcommand*\LWR@frowkeycapstyle{}
86
87 \define@key{frowkeys}{placement}{}%
88 \define@key{frowkeys}{name}{\renewcommand{\LWR@frowkeyname}{#1}}%
89 \define@key{frowkeys}{fileext}{\renewcommand{\LWR@frowkeyfileext}{#1}}%
90 \define@key{frowkeys}{within}{\renewcommand{\LWR@frowkeywithin}{#1}}%
91 \define@key{frowkeys}{relatedcapstyle}{}%

```

`\DeclareNewFloatType` *{<type>}* *{<options>}*

Use `\listof{type}{Title}` to print a list of the floats.

```
92 \newcommand*\DeclareNewFloatType}[2]{}%
```

Reset key values:

```

93 \renewcommand*\LWR@frowkeyplacement{}%
94 \renewcommand*\LWR@frowkeyname{}%
95 \renewcommand*\LWR@frowkeyfileext{}%
96 \renewcommand*\LWR@frowkeywithin{}%
97 \renewcommand*\LWR@frowkeycapstyle{}%

```

Read new key values:

```

98 \LWR@traceinfo{about to setkeys frowkeys}%
99 \setkeys{frowkeys}{#2}%
100 \LWR@traceinfo{finished setkeys frowkeys}%

```

Create a new float with optional [within]:

```

101 \ifthenelse{\equal{\LWR@frowkeywithin}{}}%
102 {%
103 \LWR@traceinfo{about to newfloat #1 \LWR@frowkeyplacement\ %
104 \LWR@frowkeyfileext}%
105 \newfloat{#1}{\LWR@frowkeyplacement}{\LWR@frowkeyfileext}%
106 }%
107 {%
108 \LWR@traceinfo{about to newfloat #1\ \LWR@frowkeyplacement\ %
109 \LWR@frowkeyfileext\ \LWR@frowkeywithin}%
110 \newfloat{#1}{\LWR@frowkeyplacement}%
111 {\LWR@frowkeyfileext}[\LWR@frowkeywithin]%
112 \LWR@traceinfo{finished newfloat #1}%
113 }%

```

Rename the float if a name was given:

```

114 \ifthenelse{\equal{\LWR@frowkeyname}{}}%
115 {}%
116 {\floatname{#1}{\LWR@frowkeyname}}%
117 }

```

Not used:

```

118 \newcommand{\buildFBBBOX}[2]{}
119 \newcommand*\CenterFloatBoxes{}
120 \newcommand*\TopFloatBoxes{}
121 \newcommand*\BottomFloatBoxes{}
122 \newcommand*\PlainFloatBoxes{}
123
124 \newcommand{\capsubrowsettings}{}
125
126 \NewDocumentCommand{\RawFloats}{o o}{}

```

`\RawCaption`     $\langle text \rangle$

To be used inside a minipage or parbox.

```

127 \newcommand{\RawCaption}[1]{#1}

```

`\floatfoot`     $\langle text \rangle$

Places additional text inside a float, inside a CSS `<div>` of class `floatfoot`.

```

128 \NewDocumentCommand{\floatfoot}{s +m}{%
129 \begin{BlockClass}{floatfoot}
130 #2
131 \end{BlockClass}
132 }

```

Used to compute `\linewidth`.

```

133 \newbool{LWR@insubfloatrow}
134 \boolfalse{LWR@insubfloatrow}

```

Env    `subfloatrow`     $[\langle num\_floats \rangle]$

```

135 \newenvironment*{subfloatrow}[1][2]
136 {

```

The row of floats is placed into a `<div>` of class `floatrow`:

```

137 \LWR@forcenewpage
138 \BlockClass{floatrow}

```

While inside the `floatrow`, `LWR@insubfloatrow` is set true, which tells `\floatbox` to use `\subfigure` or `\subtable`.

```

139 \begingroup
140 \booltrue{LWR@insubfloatrow}
141 }
142 {
143 \endgroup

```

---

```

144 \endBlockClass
145 \boolfalse{LWR@infloatrow}
146 }

```

---

File 90 **lwarp-fltrace.sty**

§ 179 Package **fltrace**

Pkg fltrace **fltrace** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{fltrace}

```

2 \def\tracefloats{}
3 \def\tracefloatsoff{}
4 \def\tracefloatvals{}

```

---

File 91 **lwarp-flushend.sty**

§ 180 Package **flushend**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg flushend Emulated.

**for HTML output:** Discard all options for **lwarp-flushend**:

```

1 \LWR@ProvidesPackageDrop{flushend}
2 % \end{macrocode}
3 %
4 % \begin{macrocode}
5 \newcommand*{\flushend}{}
6 \newcommand*{\raggedend}{}
7 \newcommand*{\flushcolsend}{}
8 \newcommand*{\raggedcolsend}{}
9 \newcommand*{\atColsBreak}[1]{}
10 \newcommand*{\atColsEnd}[1]{}
11 \newcommand*{\showcolsendrule}{}

```

---

File 92 **lwarp-fncychap.sty**

§ 181 Package **fncychap**

*(Emulates or patches code by ULF A. LINDGREN.)*

Pkg `fncychap` **fncychap** is emulated.

for HTML output: Discard all options for **lwarp-fncychap**:

```

1 \LWR@ProvidesPackageDrop{fncychap}

2 \def\mghrulefill#1{}
3 \def\ChNameLowerCase{}
4 \def\ChNameUpperCase{}
5 \def\ChNameAsIs{}
6 \def\ChTitleLowerCase{}
7 \def\ChTitleUpperCase{}
8 \def\ChTitleAsIs{}
9 \newcommand{\ChRuleWidth}[1]{}
10 \newcommand{\ChNameVar}[1]{}
11 \newcommand{\ChNumVar}[1]{}
12 \newcommand{\ChTitleVar}[1]{}
13 \newcommand{\TheAlphaChapter}{}
14 \newcommand{\DOCH}{}
15 \newcommand{\DOTI}[1]{}
16 \newcommand{\DOTIS}[1]{}
17 \newlength{\mylen}
18 \newlength{\myhi}
19 \newlength{\px}
20 \newlength{\py}
21 \newlength{\ppy}
22 \newlength{\pxx}
23 \newlength{\RW}
24 \newcommand{\FmN}[1]{#1}
25 \newcommand{\FmTi}[1]{#1}

```

---

File 93 **lwarp-fnlineno.sty**

§ 182 Package **fnlineno**

Pkg `fnlineno` **fnlineno** is ignored.

for HTML output: `\LWR@ProvidesPackageDrop{fnlineno}`

---

File 94 **lwarp-fnpos.sty**

§ 183 Package **fnpos**

*(Emulates or patches code by HIROSHI NAKASHIMA.)*

Pkg fnpos **fnpos** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{fnpos}

2 \newcommand*{\makeFNbottom}{}
3 \newcommand*{\makeFNmid}{}
4 \newcommand*{\makeFNbelow}{}
5 \newcommand*{\makeFNabove}{}

```

---

File 95 **lwarp-fontenc.sty**

§ 184 Package **fontenc**

Pkg fontenc If using pdf<sub>La</sub>T<sub>E</sub>X, **lwarp** used to require **fontspec** be loaded before **lwarp**, but now **lwarp** itself loads `\fontspec` with T1 encoding, which **lwarp** requires. **fontspec** is now allowed to be loaded with another encoding after **lwarp**.

**lwarp-fontenc** is no longer necessary, but is still provided to overwrite older versions.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{fontenc}

```

---

File 96 **lwarp-fontspec.sty**

§ 185 Package **fontspec**

Pkg fontspec Error if **fontspec** is loaded after **lwarp**.

Discard all options for **lwarp-fontspec**:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{fontspec}

2 \LWR@loadbefore{fontspec}

```

---

File 97 **lwarp-footmisc.sty**

§ 186 Package **footmisc**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg footmisc **footmisc** is emulated.

**lwarp** incidentally happens to emulate the `stable` option.

```
1 \LWR@ProvidesPackageDrop{footmisc}
```

Some nullified commands:

```
2 \newcommand{\footnotelayout}{}
3 \newcommand{\setfnsymbol}[1]{}
4 \NewDocumentCommand{\DefineFNsymbols}{s m o m}{}
5
6 \newdimen\footnotemargin
7 \footnotemargin1.8em\relax
8
9 \newcommand*\hangfootparskip{0.5\baselineskip}
10 \newcommand*\hangfootparindent{0em}%
11
12 \let\pagefootnoterule\footnoterule
13 \let\mpfootnoterule\footnoterule
14 \def\splitfootnoterule{\kern-3\p@ \hrule \kern2.6\p@}
15
16 \providecommand*\multiplefootnotemarker}{3sp}
17 \providecommand*\multfootsep}{,}
```

Using **cleveref**:

```
18 \providecommand*\footref}[1]{\labelcref{#1}}
```

The following work as-is:

```
19 \newcommand\mpfootnotemark{%
20 \@ifnextchar [%
21 \@xmpfootnotemark%
22 {%
23 \stepcounter\@mpfn%
24 \protected@xdef\@thefnmark{\thempfn}%
25 \@footnotemark%
26 }%
27 }
28 \def\@xmpfootnotemark[#1]{%
29 \begingroup%
30 \csname c@\@mpfn\endcsname #1\relax%
31 \unrestored@protected@xdef\@thefnmark{\thempfn}%
32 \endgroup%
33 \@footnotemark%
34 }
```

File 98 **lwarp-footnote.sty**

§ 187 Package **footnote**

*(Emulates or patches code by MARK WOODING.)*

Pkg footnote **footnote** is used with minor patches.

for HTML output: `1 \LWR@ProvidesPackagePass{footnote}`

Removed print-version formatting:

```

2 \def\fn@startnote{%
3 \@parboxrestore%
4 \protected@edef\@currentlabel{\csname p@\@mpfn\endcsname\@thefnmark}%
5 \color@begingroup% *** conflicts with lwarp
6 }
7
8 \let\fn@endnote\color@endgroup% *** conflicts with lwarp
9 \def\fn@endnote{%
10 \LWR@htmltagc{/\LWR@tagregularparagraph}%
11 \LWR@orignewline%
12 }

```

Removed print-version formatting:

```

13 \def\fn@startfntext{%
14 \setbox\z@\vbox\bgroup%
15 \fn@startnote%
16 \fn@prefntext%
17 \ignorespaces%
18 }

```

Removed print-version formatting, added closing paragraph tag:

```

19 \def\fn@endfntext{%
20 \LWR@htmltagc{/\LWR@tagregularparagraph}%
21 \LWR@orignewline%
22 \fn@postfntext%
23 \egroup%
24 \begingroup%
25 \let\@makefntext\@empty%
26 \let\@finalstrut\@gobble%
27 \LetLtxMacro\rule\@gobbletwo% *8* also the optional argument?
28 \@footnotetext{\unvbox\z@}%

```

```
29 \endgroup%
30 }
```

These have been redefined, so re-\let them again:

```
31 \let\endfootnote\fn@endfntext
32 \let\endfootnotetext\endfootnote
```

---

File 99 **lwarp-footnotehyper.sty**

§ 188 Package **footnotehyper**

Pkg footnotehyper **footnotehyper** is a **hyperref**-safe version of **footnote**. For **lwarp**, **footnotehyper** is emulated.

**for HTML output:** Discard all options for **lwarp-footnotehyper**:

```
1 \RequirePackage{footnote}
2 \LWR@ProvidesPackageDrop{footnotehyper}
```

---

File 100 **lwarp-footnpag.sty**

§ 189 Package **footnpag**

Pkg footnpag **footnpag** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{footnpag}

---

File 101 **lwarp-framed.sty**

§ 190 Package **framed**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg framed **framed** is supported and patched by **lwarp**.

**for HTML output:** Accept all options for **lwarp-framed**:

```
1 \LWR@ProvidesPackagePass{framed}
2 \RequirePackage{xcolor}% for \convertcolorspec
```

```
3
4 \renewenvironment{framed}{%
5 \LWR@forcenewpage
6 \BlockClass{framed}%
7 }
8 {\endBlockClass}
9
10 \renewenvironment{oframed}{%
11 \LWR@forcenewpage
12 \BlockClass{framed}%
13 }
14 {\endBlockClass}
15
16
17 \renewenvironment{shaded}{%
18 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
19 \LWR@forcenewpage
20 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
21 }
22 {\endBlockClass}
23
24 \renewenvironment{shaded*}{%
25 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
26 \LWR@forcenewpage
27 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{shaded}%
28 }
29 {\endBlockClass}
30
31
32 \renewenvironment{leftbar}{%
33 \LWR@forcenewpage
34 \BlockClass{framedleftbar}
35 \def\FrameCommand{}%
36 \MakeFramed {}
37 }%
38 {\endMakeFramed\endBlockClass}
39
40
41 \renewenvironment{snugshade}{%
42 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
43 \LWR@forcenewpage
44 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
45 }
46 {\endBlockClass}
47
48 \renewenvironment{snugshade*}{%
49 \convertcolorspec{named}{shadecolor}{HTML}\LWR@tempcolor%
50 \LWR@forcenewpage
51 \BlockClass[background: \LWR@origpound\LWR@tempcolor]{snugframed}%
52 }
```

```

53 {\endBlockClass}
54
55 \let\oframed\framed
56 \let\endoframed\endframed
57
58
59 \RenewEnviron{titled-frame}[1]{%
60 \CustomFBox{#1}{}{Opt}{Opt}{Opt}{Opt}{\BODY}
61 }

\CustomFBox {<toptitle>} {<bottitle>} {<thicknessstop>} {<bottom>} {<left>} {<right>}
{<text contents>}

62 \renewcommand{\CustomFBox}[7]{%
63 \convertcolorspec{named}{TFFrameColor}{HTML}\LWR@tempcolor%
64 \LWR@forcenewpage
65 \begin{BlockClass}[border: 3px solid \LWR@origpound\LWR@tempcolor]{framed}%
66 \ifthenelse{\isempty{#1}}{}{% 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 {\langle frame cmd no split \rangle} {\langle frame cmd split \rangle}

95 \renewcommand*\fb@put@frame}[2]{%
96 \relax%
97 \@tempboxa%
98 }

```

---

File 102 **lwarp-ftnright.sty**

§ 191 Package **ftnright**

Pkg ftnright **ftnright** is ignored.

**for HTML output:** Discard all options for **lwarp-ftnright**:

```
1 \LWR@ProvidesPackageDrop{ftnright}
```

---

File 103 **lwarp-fullpage.sty**

§ 192 Package **fullpage**

Pkg fullpage **fullpage** is ignored.

**for HTML output:** Discard all options for **lwarp-fullpage**:

```
1 \LWR@ProvidesPackageDrop{fullpage}
```

---

File 104 **lwarp-fullwidth.sty**

§ 193 Package **fullwidth**

*(Emulates or patches code by MARCO DANIEL.)*

Pkg fullwidth **fullwidth** is emulated.

A minipage is used, of no HTML width.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{fullwidth}

2 \newenvironment*{fullwidth}[1][1]{}{}
3 \minipagefullwidth%
4 \minipage{\linewidth}%
5 }
6 {}
7 \endminipage%
8 }
```

---

File 105 **lwarp-fwlw.sty**

§ 194 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 106 **lwarp-geometry.sty**

§ 195 Package **geometry**

*(Emulates or patches code by HIDEO UMEKI.)*

Pkg geometry **geometry** is preloaded by **lwarp**, but must be nullified as seen by the user's source code.

**for HTML output:** Discard all options for **lwarp-geometry**:

```

1 \LWR@ProvidesPackageDrop{geometry}

2 \renewcommand*{\geometry}[1]{}
3 \renewcommand*{\newgeometry}[1]{}
4 \renewcommand*{\restoregeometry}{}
5 \renewcommand*{\savegeometry}[1]{}
6 \renewcommand*{\loadgeometry}[1]{}

```

---

File 107 `lwarp-glossaries.sty`

§ 196 Package **glossaries**

*(Emulates or patches code by NICOLA L.C. TALBOT.)*

Pkg `glossaries` **xindy** is required for **glossaries**.

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

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.

#### 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
```

Opt `IndexLanguage` The **lwarp** package takes an option `IndexLanguage=english` to set the language used by **xindy**. This is passed to **xindy** using its `-L` option, and is used for both index and glossary generation.

Opt `lwarpmk printglossary` **lwarpmk** has the commands `lwarpmk printglossary` and `lwarpmk htmlglossary`  
 Opt `lwarpmk htmlglossary` to process the glossaries created by **glossaries** using **xindy**.

**for HTML output:**

```
1 \PassOptionsToPackage{xindy}{glossaries}
2 \LWR@ProvidesPackagePass{glossaries}
```

```
3 \setupglossaries{nonumberlist}
4 \setglossarystyle{index}
```

Patched to fix TOC pointing to the previous page:

```
5 \renewcommand*{\@p@glossarysection}[2]{%
6 \glsclearpage
7 \phantomsection
8 \ifdefempty\@glossarysecstar
9 {%
10 \csname\@glossarysec\endcsname{#2}%
11 }%
12 {%
```

In the original, the TOC entry was made before the section, thus linking to the phantomsection in the printed version, but for HTML this caused the link to point to the page before the glossaries. Here, the TOC entry is made after the section is created:

```
13 \csname\@glossarysec\endcsname*{#2}%
14 \@gls@toc{#1}{\@glossarysec}% Moved after the previous line.
15 }%
16 \@@glossaryseclabel
17 }
```

---

File 108 **lwarp-graphics.sty**

§ 197 Package **graphics**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg graphics **graphics** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackagePass{graphics}

§ 197.1 **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 \appto\LWR@restoreorigformatting{%
8 \DeclareGraphicsExtensions{.pdf,.PDF,.gif,.GIF,.png,.PNG,.jpg,.JPG,.jpeg,.JPEG}%
9 }
```

## § 197.2 Length conversions and graphics options



whitespace

A scaled image in  $\TeX$  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.

```
10 \newlength{\LWR@igwidth}
11 \newlength{\LWR@igheight}
12 \newcommand*\LWR@igwidthstyle{}
13 \newcommand*\LWR@igheightstyle{}
14 \newcommand*\LWR@igorigin{}
15 \newcommand*\LWR@igangle{}
16 \newcommand*\LWR@igxscale{1}
17 \newcommand*\LWR@igyscale{1}
18 \newcommand*\LWR@igclass{inlineimage}
```

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:

```
19 \define@key{igraph}{width}{%
20 \setlength{\LWR@igwidth}{#1}%
21 \ifthenelse{\lengthtest{\LWR@igwidth > 0pt}}{%
22 {%
```

Default to use the converted fixed length given:

```
23 \renewcommand*\LWR@igwidthstyle{width:\LWR@printlength{\LWR@igwidth}}%
```

If ex or em dimensions were given, use those instead:

```
24 \IfEndWith{#1}{ex}%
25 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes ex
26 {}% not ex
27 \IfEndWith{#1}{em}%
28 {\renewcommand*\LWR@igwidthstyle{width:#1}}% yes em
29 {}% not em
```

```

30 \IfEndWith{#1}{\}%
31 {\renewcommand*\LWR@igwidthstyle}{width:#1}}% yes percent
32 {}% not percent
33 \IfEndWith{#1}{px}%
34 {\renewcommand*\LWR@igwidthstyle}{width:#1}}% yes px
35 {}% not px
36 }{}% end of length > Opt
37 }

```

If an optional height was given, set an HTML style:

```

38 \define@key{igraph}{height}{%
39 \setlength{\LWR@igheight}{#1}%
40 \ifthenelse{\lengthtest{\LWR@igheight > Opt}}%
41 {%

```

Default to use the converted fixed length given:

```

42 \renewcommand*\LWR@igheightstyle}{%
43 height:\LWR@printlength{\LWR@igheight} % extra space
44 }%

```

If ex or em dimensions were given, use those instead:

```

45 \IfEndWith{#1}{ex}%
46 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes ex
47 {}% not ex
48 \IfEndWith{#1}{em}%
49 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes em
50 {}% not em
51 \IfEndWith{#1}{\}%
52 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes percent
53 {}% not percent
54 \IfEndWith{#1}{px}%
55 {\renewcommand*\LWR@igheightstyle}{height:#1}}% yes px
56 {}% not px
57 }{}% end of length > Opt
58 }

```

Handle origin key:

```

59 \define@key{igraph}{origin}[c]{%
60 \renewcommand*\LWR@igorigin}{#1}%
61 }

```

Handle angle key:

```

62 \define@key{igraph}{angle}{\renewcommand*\LWR@igangle}{#1}}

```

Handle class key:

```
63 \define@key{igraph}{class}{\renewcommand*\LWR@igclass}{#1}}
64
```

It appears that **graphicx** does not have separate keys for `xscale` and `yscale`. `scale` adjusts both at the same time.

```
65 \define@key{igraph}{scale}{%
66 \renewcommand*\LWR@igxscale}{#1}%
67 \renewcommand*\LWR@igyyscale}{#1}}
```

Numerous ignored keys:

```
68 \define@key{igraph}{bb}{}
69 \define@key{igraph}{bbllx}{}
70 \define@key{igraph}{bbllx}{}
71 \define@key{igraph}{bburx}{}
72 \define@key{igraph}{bbury}{}
73 \define@key{igraph}{natwidth}{}
74 \define@key{igraph}{natheight}{}
75 \define@key{igraph}{ hiresbb}[true]{}
76 \define@key{igraph}{viewport}{}
77 \define@key{igraph}{trim}{}
78 \define@key{igraph}{totalheight}{}
79 \define@key{igraph}{keepaspectratio}[true]{}
80 \define@key{igraph}{clip}[true]{}
81 \define@key{igraph}{draft}[true]{}
82 \define@key{igraph}{type}{}
83 \define@key{igraph}{ext}{}
84 \define@key{igraph}{read}{}
85 \define@key{igraph}{command}{}

```

New in v1.1a:

```
86 \define@key{igraph}{quite}{}
87 \define@key{igraph}{page}{}
88 \define@key{igraph}{pagebox}{}
89 \define@key{igraph}{interpolate}[true]{}

```

New in v1.1b:

```
90 \define@key{igraph}{decodearray}{}

```

### § 197.3 **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.

```
91 \newcommand*\LWR@rotstyle}[2]{%
92 #1transform:rotate(-#2deg);
93 }
```

`\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.

```
94 \newcommand*\LWR@scalestyle}[3]{%
95 #1transform:scale(#2,#3);
96 }
```

### § 197.4 **\includegraphics**

Bool `LWR@infloatrow` Used to compute `\linewidth`.

```
97 \newbool{LWR@infloatrow}
98 \boolfalse{LWR@infloatrow}
```

`\LWR@opacity` For HTML, used only for `\includegraphics`.

`\LWR@opacity` may be set by the **transparent** package.

```
99 \def\LWR@opacity{1}
```

`\LWR@imagesizebox` Used to determine the actual image size if needed.

```
100 \newsavebox{\LWR@imagesizebox}
```

`\Gin@setfile` Sets the parsed filename.

```
101 \let\LWR@origGin@setfile\Gin@setfile
```

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`.

```
102 \AtBeginDocument{
103 \define@key{Gin}{class}{}
104 }
```

```
\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.

```
105 \NewDocumentCommand{\LWR@includegraphicsb}{s o o m}
106 {%
107 \LWR@traceinfo{\LWR@includegraphicsb #4}%
```

Start the image tag on a new line, allow PDF output word wrap:

```
108 \LWR@origtilde \LWR@orignewline%
```

Temporarily compute `\linewidth`, `\textwidth`, `\textheight` arguments with a 6x9 inch size until the next `\endgroup`.

```
109 \begingroup%
110 \ifthenelse{\cinttest{\value{LWR@minipagedepth}}{=}{0}}%
111 {%
112 \ifbool{LWR@infloatrow}%
113 {}
114 {% not in a minipage or a floatrow:
115 \setlength{\linewidth}{6in}%
116 \setlength{\textwidth}{6in}%
117 \setlength{\textheight}{9in}%
118 }%
119 }{}%
```

```
120 \begingroup%
121 \renewcommand*{\Gin@setfile}[3]{%
122 \LWR@traceinfo{Gin@setfile ##3}%
123 \xdef\LWR@parsedfilename{##3}%
124 }%
125 \Gin@include@graphics{\detokenize\expandafter{#4}}%
126 \endgroup%
127 \filename@parse{\LWR@parsedfilename}%
```

```
128 \LWR@traceinfo{\LWR@parsedfilename is \LWR@parsedfilename}%
129 % \LWR@sanitize{\LWR@parsedfilename}%
```

For correct em sizing during the width and height conversions:

```
130 \large%
```

Reset some defaults, possibly will be changed below if options were given:

```
131 \setlength{\LWR@igwidth}{0pt}%
132 \setlength{\LWR@igheight}{0pt}%
133 \renewcommand*\LWR@igwidthstyle{}%
134 \renewcommand*\LWR@igheightstyle{}%
135 \renewcommand*\LWR@igorigin{}%
136 \renewcommand*\LWR@igangle{}%
137 \renewcommand*\LWR@igxscale{1}%
138 \renewcommand*\LWR@igyyscale{1}%
139 \renewcommand*\LWR@igclass{\inlineimage}%
```

If #3 is empty, only one optional argument was given, thus **graphicx** syntax:

```
140 \IfValueF{#3}{%
141 \IfValueTF{#2}%
142 {\setkeys{igraph}{#2}}%
143 {\setkeys{igraph}{}}%
144 }%
```

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:

```
145 \ifbool{FormatWP}{%
146 \begingroup%
147 \DeclareGraphicsExtensions{.pdf, .PDF, .gif, .GIF, .png, .PNG, .jpg, .JPG, .jpeg, .JPEG}%
148 \define@key{Gin}{angle}{}%
149 \IfBooleanTF{#1}%
150 {% starred
151 \IfValueTF{#3}%
152 {%
153 \global\setbox{\LWR@imagesizebox}{\LWR@originincludegraphics* [#2] [#3] {#4}}%
154 }%
155 {%
156 \IfValueTF{#2}%
157 {%
158 \global\setbox{\LWR@imagesizebox}{\LWR@originincludegraphics* [#2] {#4}}%
159 }%
160 \global\setbox{\LWR@imagesizebox}{\LWR@originincludegraphics* {#4}}%
161 }%
162 }%
163 }% starred
```

```

164 {% not starred
165 \IfValueTF{#3}%
166 {%
167 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2][#3]{#4}}%
168 }%
169 {%
170 \IfValueTF{#2}%
171 {%
172 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics[#2]{#4}}%
173 }{%
174 \global\sbox{\LWR@imagesizebox}{\LWR@originincludegraphics{#4}}%
175 }%
176 }%
177 }% not starred
178 \endgroup%
179 \settowidth{\LWR@igwidth}{\usebox{\LWR@imagesizebox}}%
180 \global\renewcommand*{\LWR@igwidthstyle}{width:\LWR@printlength{\LWR@igwidth}}%
181 \settoheight{\LWR@igheight}{\usebox{\LWR@imagesizebox}}%
182 \global\renewcommand*{\LWR@igheightstyle}{height:\LWR@printlength{\LWR@igheight}}%
183 }{}%

```

Create the HTML reference with the graphicspath, filename, extension, alt tag, style, and class.

The `\LWR@origtilde` adds space between tags in case this is being done inside a `\savebox` where `\newline` has no effect.

```

184 \LWR@traceinfo{\LWR@includegraphicsb: about to create href}%
185 \href{\LWR@parsedfilename}%
186 {% start of href
187 \LWR@traceinfo{\LWR@includegraphicsb: about to LWR@htmltag}%
188 \LWR@htmltag{% start of image tags
189 img src="%
190 \begingroup\@sanitize\LWR@parsedfilename\endgroup%
191 " \LWR@orignewline%

```

Only include a style tag if a width, height, angle, or scale was given:

```

192 \ifthenelse{
193 \NOT\equal{\LWR@igwidthstyle}{} \OR
194 \NOT\equal{\LWR@igheightstyle}{} \OR
195 \NOT\equal{\LWR@igorigin}{} \OR
196 \NOT\equal{\LWR@igangle}{} \OR
197 \NOT\equal{\LWR@igxscale}{1} \OR
198 \NOT\equal{\LWR@igyscale}{1}
199 }%
200 {\LWR@origtilde{} style="%
201 \ifthenelse{\NOT\equal{\LWR@igwidthstyle}{}%
202 {\LWR@igwidthstyle;}{}%

```

```

203 \ifthenelse{\NOT\equal{\LWR@igheightstyle}{}}%
204 {\LWR@igheightstyle;}{}%
205 \ifthenelse{\NOT\equal{\LWR@igorigin}{}}%
206 {\LWR@origtilde{}} transform-origin: \LWR@originnames{\LWR@igorigin}; \LWR@orignewline}{}%
207 \ifthenelse{\NOT\equal{\LWR@igangle}{}}%
208 {%
209 \LWR@rotstyle{-ms-}{\LWR@igangle} % extra space
210 \LWR@rotstyle{-webkit-}{\LWR@igangle} % extra space
211 \LWR@rotstyle-}{\LWR@igangle %
212 }{}%
213 \ifthenelse{\NOT\equal{\LWR@igxscale}{1}\OR%
214 \NOT\equal{\LWR@igyscale}{1}}%
215 {\LWR@scalestyle{-ms-}{\LWR@igxscale}{\LWR@igyscale} % extra space
216 \LWR@scalestyle{-webkit-}{\LWR@igxscale}{\LWR@igyscale} % extra space
217 \LWR@scalestyle-}{\LWR@igxscale}{\LWR@igyscale}} % extra space
218 %
219 \ifthenelse{\NOT\equal{\LWR@opacity}{1}}%
220 {opacity:\LWR@opacity; }%
221 {}%
222 %
223 " \LWR@orignewline}{}%

```

Set the class:

```

224 \LWR@origtilde{} class="\LWR@igclass" \LWR@orignewline%
225 }% end of image tags
226 }% end of href

```

Return to original page size and font size:

```

227 \endgroup
228 \LWR@traceinfo{\LWR@includegraphicsb done}%
229 }

```

`\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.

```

230 \AtBeginDocument{
231
232 \LWR@traceinfo{Patching includegraphics.}
233
234 \LetLtxMacro\LWR@originincludegraphics\includegraphics
235
236 \renewcommand*\includegraphics}
237 {%

```

This graphic should trigger an HTML paragraph even if alone, so ensure that are doing paragraph handling:

```
238 \LWR@traceinfo{includegraphics}%
239 \LWR@ensuredoingapar%
240 \LWR@includegraphicsb%
241 }% includegraphics
242 }% AtBeginDocument
```

### § 197.5 Boxes

`\LWR@rotboxorigin` Holds the origin key letters.

```
243 \newcommand*\LWR@rotboxorigin{-}
```

`\LWR@originname`  $\{\langle letter \rangle\}$

Given one  $\LaTeX$  origin key value, translate into an HTML origin word:

```
244 \newcommand*\LWR@originname[1]{%
245 \ifthenelse{equal{#1}{t}}{top}{}%
246 \ifthenelse{equal{#1}{b}}{bottom}{}%
247 \ifthenelse{equal{#1}{c}}{center}{}%
248 \ifthenelse{equal{#1}{l}}{left}{}%
249 \ifthenelse{equal{#1}{r}}{right}{}%
250 }
```

`\LWR@originnames`  $\{\langle letters \rangle\}$

Given one- or two-letter  $\LaTeX$  origin key values, translate into HTML origin words:

```
251 \newcommand*\LWR@originnames[1]{%
252 \StrChar{#1}{1}[\LWR@strresult]%
253 \LWR@originname{\LWR@strresult}
254 \StrChar{#1}{2}[\LWR@strresult]%
255 \LWR@originname{\LWR@strresult}
256 }
```

Handle the origin key for `\rotatebox`:

```
257 \define@key{krotbox}{origin}{%
258 \renewcommand*\LWR@rotboxorigin{#1}%
259 }
```

These keys are ignored:

```

260 \define@key{krotbox}{x}{}
261 \define@key{krotbox}{y}{}
262 \define@key{krotbox}{units}{}

```

`\rotatebox` [*keyval list*] {*angle*} {*text*}

```

263 \LetLtxMacro\LWR@origrotatebox\rotatebox
264
265 \AtBeginDocument{
266 \RenewDocumentCommand{\rotatebox}{O{} m +m}{%

```

Reset the origin to “none-given”:

```
267 \renewcommand*{\LWR@rotboxorigin}{}

```

Process the optional keys, which may set `\LWR@rotateboxorigin`:

```
268 \setkeys{krotbox}{#1}%

```

Select inline-block so that HTML will transform this span:

```
269 \LWR@htmltagc{span style="display: inline-block; %

```

If an origin was given, translate and print the origin information:

```

270 \ifthenelse{\NOT\equal{\LWR@rotboxorigin}{} }{%
271 {transform-origin: \LWR@originnames{\LWR@rotboxorigin};\LWR@origtilde}{}%

```

Print the rotation information:

```

272 \LWR@rotstyle{-ms-}{#2} % extra space
273 \LWR@rotstyle{-webkit-}{#2} % extra space
274 \LWR@rotstyle{}{#2} % extra space
275 "}\LWR@orignewline%

```

Print the text to be rotated:

```

276 \begin{LWR@nestspan}%
277 #3%

```

Close the span:

```

278 \LWR@htmltagc{/span}%
279 \end{LWR@nestspan}%
280 }
281 }% AtBeginDocument

```

`\scalebox`  $\langle h-scale \rangle$   $\langle v-scale \rangle$   $\langle text \rangle$

```
282 \LetLtxMacro\LWR@origscalebox\scalebox
283
284 \AtBeginDocument{
285 \RenewDocumentCommand{\scalebox}{m o m}{%
```

Select inline-block so that HTML will transform this span:

```
286 \LWR@htmltagc{span style="display: inline-block; %
```

Print the scaling information:

```
287 \LWR@scalestyle{-ms-}{#1}{\IfNoValueTF{#2}{#1}{#2}} % extra space
288 \LWR@scalestyle{-webkit-}{#1}{\IfNoValueTF{#2}{#1}{#2}} % extra space
289 \LWR@scalestyle{}{#1}{\IfNoValueTF{#2}{#1}{#2}} % extra space
290 "%
```

Print the text to be scaled:

```
291 \begin{LWR@nestspan}%
292 #3%
```

Close the span:

```
293 \LWR@htmltagc{/span}%
294 \end{LWR@nestspan}%
295 }
296 }% AtBeginDocument
```

`\reflectbox`  $\langle text \rangle$

```
297 \let\LWR@origreflectbox\reflectbox
298
299 \AtBeginDocument{
300 \renewcommand{\reflectbox}[1]{\scalebox{-1}[1]{#1}}
301 }
```

`\resizebox`  $\langle h-length \rangle$   $\langle v-length \rangle$   $\langle text \rangle$

Simply prints its text argument.

```
302 \LetLtxMacro\LWR@origresizebox\resizebox
303
304 \AtBeginDocument{
305 \renewcommand{\resizebox}[3]{#3}
306 }
```

---

File 109 `lwarp-graphicx.sty`

§ 198 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}`

---

File 110 `lwarp-grffile.sty`

§ 199 Package **grffile**

Pkg `grffile` **grffile** is supported as-is. File types known to the browser are displayed, and unknown file types are given a link. Each PDF image for print mode should be accompanied by an SVG, PNG, or JPG version for HTML.

 **matching PDF and SVG**

**lwarp-grffile** now exists as a placeholder since **grffile** used to be emulated by **lwarp**, and thus older versions of **lwarp-grffile** may exist and should be overwritten by this newer version.

**for HTML output:** `1 \LWR@ProvidesPackagePass{grffile}`

---

File 111 `lwarp-grid.sty`

§ 200 Package **grid**

Pkg `grid` **grid** is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{grid}`

`2 \newenvironment*{gridenv}{}{}`

File 112 **lwarp-hang.sty**

§ 201 Package **hang**

*(Emulates or patches code by ANDREAS NOLDA.)*

Pkg hang **hang** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{hang}

2 \newlength{\hangingindent}
3 \setlength{\hangingindent}{1em}
4 \newlength{\hangingleftmargin}
5 \setlength{\hangingleftmargin}{0em}
6
7 \newcommand*\LWR@findhangingleftmargin{%
8 \setlength{\LWR@templengthone}{\hangingleftmargin}%
9 \addtolength{\LWR@templengthone}{\hangingindent}%
10 }
11
12 \newenvironment{hangingpar}
13 {
14 \LWR@findhangingleftmargin%
15 \BlockClass [%
16 \LWR@origmbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
17 \LWR@origmbox{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@origmbox{list-style-type:none;} % extra space
30 \LWR@origmbox{%
31 margin-left:\LWR@printlength{\LWR@templengthone}%
32 } ; % extra space
33 \LWR@origmbox{%
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@origmbox{margin-left:\LWR@printlength{\LWR@templengthone}} ; %
55 \LWR@origmbox{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 113 **lwarp-hanging.sty**

§ 202 Package **hanging**

Pkg hanging **hanging** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hanging}

```

2 \@ifclassloaded{memoir}{
3 \let\hangpara\relax
4 \let\hangparas\relax
5 \let\endhangparas\relax
6 \let\hangpunct\relax
7 \let\endhangpunct\relax
8 }{}

```

```

\hangpara {<indent>} {<afternum>}
Use hangparas instead.
9 \newcommand*{\hangpara}[2]{

Env hangparas {<indent>} {<afternum>}
10 \newenvironment*{hangparas}[2]
11 {%
12 \BlockClass[%
13 \LWR@origmbox{margin-left:\LWR@printlength{#1}} ; %
14 \LWR@origmbox{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 114 **lwarp-hypcap.sty**

§ 203 Package **hypcap**

Pkg hypcap **hypcap** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{hypcap}

```

2 \newcommand*{\capstart}{}
3 \newcommand*{\hypcapspace}{}
4 \newcommand*{\hypcapredef}[1]{}
5 \newcommand*{\capstartfalse}{}
6 \newcommand*{\capstarttrue}{}

```

---

File 115 `lwarp-hypdestopt.sty`

§ 204 Package **hypdestopt**

Pkg `hypdestopt` **hypdestopt** is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{hypdestopt}`

---

File 116 `lwarp-hypernat.sty`

§ 205 Package **hypernat**

Pkg `hypernat` **hypernat** is ignored.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{hypernat}`

---

File 117 `lwarp-hyperref.sty`

§ 206 Package **hyperref**

*(Emulates or patches code by SEBASTIAN RAHTZ, HEIKO OBERDIEK.)*

Pkg `hyperref` **hyperref** is emulated.

**for HTML output:**

```

1% \LWR@ProvidesPackageDrop{hyperref}
2\typeout{Using the lwarp html version of package 'hyperref', discarding options.}
3\typeout{ Are not using ProvidesPackage, so that other packages}
4\typeout{ do not attempt to patch lwarp's version of 'hyperref'.}
5% \ProvidesPackage{lwarp-#1-#2}
6\DeclareOption*{}
7\ProcessOptions\relax

8\newcommand*{\hypersetup}[1]{}
9\newcommand*{\hyperbaseurl}[1]{}

```

`\hyperimage` `{\langle URL \rangle} {\langle alt text \rangle}`

Insert an image with alt text:

```

10 \NewDocumentCommand{\LWR@hyperimageb}{m +m}{%
11 \LWR@ensuredoingapar%
12 \def\LWR@templink{#1}%
13 \@onelevel@sanitize\LWR@templink%
14 \LWR@htmltag{img src="\LWR@templink" alt="#2" class="hyperimage"}%
15 \LWR@ensuredoingapar%
16 \endgroup%
17 }
18
19 \newrobustcmd*{\hyperimage}{%
20 \begingroup%
21 \catcode'\#=12
22 \catcode'\%=12
23 \catcode'\&=12
24 \catcode'\~=12
25 \catcode'_ =12
26 \LWR@hyperimageb%
27 }
28

```

`\hyperdef`  $\langle 1: category \rangle \langle 2: name \rangle \langle 3: text \rangle$

Creates an HTML anchor to `category.name` with the given text.

```

29 \NewDocumentCommand{\LWR@hyperdefb}{m m +m}{%
30 \LWR@ensuredoingapar%
31 \LWR@sublabel{#1.#2}%
32 #3%
33 \endgroup%
34 }
35
36 \newcommand*{\hyperdef}{%
37 \begingroup%
38 \catcode'\#=12
39 \catcode'\%=12
40 \catcode'\&=12
41 \catcode'\~=12
42 \catcode'_ =12
43 \LWR@hyperdefb%
44 }
45

```

`\LWR@hyperrefb`  $\langle 1: URL \rangle \langle 2: category \rangle \langle 3: name \rangle \langle 4: text \rangle$

Creates an HTML link to `URL#category.name` with the given text.

```

46 % \NewDocumentCommand{\LWR@hyperrefb}{m m m +m}{%
47 \NewDocumentCommand{\LWR@hyperrefbb}{m m m +m}{%
48 \def\LWR@templink{#1}%
49 \@onelevel@sanitize\LWR@templink%

```

```

50 \def\LWR@templinktwo{#2}%
51 \@onelevel@sanitize\LWR@templinktwo%
52 \def\LWR@templinkthree{#3}%
53 \@onelevel@sanitize\LWR@templinkthree%
54 \LWR@htmltag{a href="\LWR@templink\LWR@hashmark%
55 \LWR@templinktwo.\LWR@templinkthree"%
56 }%
57 #4%
58 \LWR@htmltag{/a}%
59 \endgroup%
60 }
61
62 \newrobustcmd*{\LWR@hyperrefb}{%
63 \begingroup%
64 \catcode'\#=12
65 \catcode'\%=12
66 \catcode'\&=12
67 \catcode'\~=12
68 \catcode'_ =12
69 \LWR@hyperrefbb%
70 }

```

`\LWR@hyperrefc` [*label*] {*text*}

Creates text as an HTML link to the  $\LaTeX$  label.

```

71 \NewDocumentCommand{\LWR@hyperrefcb}{0{label} +m}{
72 \LWR@startref{#1}%
73 #2%
74 \LWR@htmltag{/a}%
75 \endgroup%
76 }
77
78 \newcommand*{\LWR@hyperrefc}{%
79 \begingroup%
80 \catcode'\#=12
81 \catcode'\%=12
82 \catcode'\&=12
83 \catcode'\~=12
84 \catcode'_ =12
85 \LWR@hyperrefcb%
86 }

```

`\hyperref` {*1: URL*} {*2: category*} {*3: name*} {*4: text*} — or —  
 [*1: label*] {*2: text*}

```

87 \DeclareRobustCommand*\hyperref}{%
88 \LWR@ensuredoingapar%
89 \@ifnextchar[\LWR@hyperrefc\LWR@hyperrefb%
90 }

```

`\hypertarget` `{<name>} {<text>}`

Creates an anchor to name with the given text.

```

91 \NewDocumentCommand{\LWR@hypertargetb}{m +m}{%
92 \label{#1}%
93 #2%
94 \endgroup%
95 }
96
97 \newcommand*{\hypertarget}{%
98 \begingroup%
99 \catcode'\#=12
100 \catcode'\%=12
101 \catcode'\&=12
102 \catcode'\~=12
103 \catcode'_ =12
104 \LWR@hypertargetb%
105 }

```

`\hyperlink` `{<name>} {<text>}`

Creates a link to the anchor created by `hypertarget`, with the given link text.

Declared because also defined by **memoir**.

```

106 \DeclareDocumentCommand{\LWR@hyperlinkb}{m +m}{%
107 \hyperref[#1]{#2}%
108 \endgroup%
109 }
110
111 \newcommand*{\hyperlink}{%
112 \begingroup%
113 \catcode'\#=12
114 \catcode'\%=12
115 \catcode'\&=12
116 \catcode'\~=12
117 \catcode'_ =12
118 \LWR@hyperlinkb%
119 }

```

`\autoref` `* {<label>}`

For HTML, `\cleveref` is used instead.

```

120 \NewDocumentCommand{\autoref}{s m}{%
121 \IfBooleanTF{#1}{\ref{#2}}{\cref{#2}}%
122 }

```

`\autopageref` `{<label>}`

For HTML, `\cleveref` is used instead.

```
123 \NewDocumentCommand{\autopageref}{s m}{%
124 \IfBooleanTF{#1}{\cpageref{#2}}{\cref{#2}}}%
125 }
```

`\pdfstringdef`  $\{\langle macroname \rangle\}$   $\{\langle T\_{E}Xstring \rangle\}$

```
126 \newcommand{\pdfstringdef}[2] {}
```

`\pdfbookmark`  $[\langle level \rangle]$   $\{\langle text \rangle\}$   $\{\langle name \rangle\}$

```
127 \newcommand{\pdfbookmark}[3] [] {}
```

`\currentpdfbookmark`  $\{\langle text \rangle\}$   $\{\langle name \rangle\}$

```
128 \newcommand{\currentpdfbookmark}[2] {}
```

`\subpdfbookmark`  $\{\langle text \rangle\}$   $\{\langle name \rangle\}$

```
129 \newcommand{\subpdfbookmark}[2] {}
```

`\belowpdfbookmark`  $\{\langle text \rangle\}$   $\{\langle name \rangle\}$

```
130 \newcommand{\belowpdfbookmark}[2] {}
```

`\texorpdfstring`  $\{\langle T\_{E}Xstring \rangle\}$   $\{\langle PDFstring \rangle\}$

```
131 \newcommand{\texorpdfstring}[2] {#1}
```

`\hypercalcbp`  $\{\langle dimen \rangle\}$  From **hyperref**.

```
132 \def\hypercalcbp#1{%
133 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
134 }%
```

`\Acrobatmenu`  $\{\langle menuoption \rangle\}$   $\{\langle text \rangle\}$

```
135 \newcommand{\Acrobatmenu}[2] {}
```

`\TextField`  $[\langle parameters \rangle]$   $\{\langle label \rangle\}$

```
136 \DeclareRobustCommand{\TextField}[2] [] {}
```

`\CheckBox`  $[\langle parameters \rangle]$   $\{\langle label \rangle\}$

```
137 \DeclareRobustCommand{\CheckBox}[2] [] {}
```

---

`\ChoiceMenu` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   $\{\langle choices \rangle\}$   
138 `\DeclareRobustCommand{\ChoiceMenu}[3] [] {}`

`\PushButton` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
139 `\DeclareRobustCommand{\PushButton}[2] [] {}`

`\Submit` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
140 `\DeclareRobustCommand{\Submit}[2] [] {}`

`\Reset` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
141 `\DeclareRobustCommand{\Reset}[2] [] {}`

`\Gauge` [ $\langle parameters \rangle$ ]  $\{\langle label \rangle\}$   
142 `\DeclareRobustCommand{\Gauge}[2] [] {}`

`\LayoutTextField`  $\{\langle label \rangle\}$   $\{\langle field \rangle\}$   
143 `\newcommand*\LayoutTextField[2] {}`

`\LayoutChoiceField`  $\{\langle label \rangle\}$   $\{\langle field \rangle\}$   
144 `\newcommand*\LayoutChoiceField[2] {}`

`\LayoutCheckField`  $\{\langle label \rangle\}$   $\{\langle field \rangle\}$   
145 `\newcommand*\LayoutCheckField[2] {}`

`\MakeRadioField`  $\{\langle width \rangle\}$   $\{\langle height \rangle\}$   
146 `\newcommand*\MakeRadioField[2] {}`

`\MakeCheckField`  $\{\langle width \rangle\}$   $\{\langle height \rangle\}$   
147 `\newcommand*\MakeCheckField[2] {}`

`\MakeTextField`  $\{\langle width \rangle\}$   $\{\langle height \rangle\}$   
148 `\newcommand*\MakeTextField[2] {}`

```
\MakeChoiceField {<width>} {<height>}
149 \newcommand*{\MakeChoiceField}[2] {}
```

```
\MakeFieldButton {<text>}
150 \newcommand{\MakeFieldButton}[1] {}
```

---

File 118 **lwarp-hyperxmp.sty**

§ 207 Package **hyperxmp**

Pkg hyperxmp Emulated.

**for HTML output:** Discard all options for **lwarp-hyperxmp**:

```
1 \LWR@ProvidesPackageDrop{hyperxmp}
```

---

File 119 **lwarp-hyphenat.sty**

§ 208 Package **hyphenat**

Pkg hyphenat **hyphenat** is emulated during HTML output, while the print-mode version is used inside a `lateximage`.

**for HTML output:** 1 \LWR@ProvidesPackagePass{hyphenat}

```
2 \LetLtxMacro\LWRHYNAT@origtextnhtt\textnhtt
3 \LetLtxMacro\LWRHYNAT@orignhttfamily\nhttfamily
4 \LetLtxMacro\LWRHYNAT@orignohyphens\nohyphens
5 \LetLtxMacro\LWRHYNAT@origbshyp\bshyp
6 \LetLtxMacro\LWRHYNAT@origfshyp\fshyp
7 \LetLtxMacro\LWRHYNAT@origdothyp\dothyp
8 \LetLtxMacro\LWRHYNAT@origcolohyp\colohyp
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{\colonhyp}{:}
21 \renewrobustcmd{\hyp}{-}
22
23 \appto\LWR@restoreorigformatting{%
24 \LetLtxMacro\textnhtt\LWRHYNAT@origtextnhtt%
25 \LetLtxMacro\nhttfamily\LWRHYNAT@originhttfamily%
26 \LetLtxMacro\nohyphens\LWRHYNAT@originohyphens%
27 \LetLtxMacro\bshyp\LWRHYNAT@origbshyp%
28 \LetLtxMacro\fshyp\LWRHYNAT@origfshyp%
29 \LetLtxMacro\dothyp\LWRHYNAT@origdothyp%
30 \LetLtxMacro\colonhyp\LWRHYNAT@origcolonhyp%
31 \LetLtxMacro\hyp\LWRHYNAT@orighyp%
32 }

```

---

File 120 **lwarp-idxlayout.sty**

§ 209 Package **idxlayout**

*(Emulates or patches code by THOMAS TITZ.)*

Pkg idxlayout Emulated.

**for HTML output:** Discard all options for **lwarp-idxlayout**:

```

1 \LWR@ProvidesPackageDrop{idxlayout}

2 \newcommand{\LWR@indexprenote}{}
3
4 \renewcommand*\{printindex}
5 {
6 \LWR@startpars
7
8 \LWR@indexprenote
9
10 \LWR@origprintindex
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 121 **lwarp-ifoddpag.e.sty**

§ 210 Package **ifoddpag.e**

*(Emulates or patches code by MARTIN SCHARRER.)*

Pkg ifoddpag.e **ifoddpag.e** is emulated.

**for HTML output:** Discard all options for **lwarp-ifoddpag.e**:

```
1 \LWR@ProvidesPackageDrop{ifoddpag.e}
2 \newif\ifoddpag.e
3
4 \newif\ifoddpag.eoroneside
5
6 \DeclareRobustCommand{\checkoddpag.e}{\oddpag.e>true\oddpag.eoroneside>true}
7
8 \def\oddpag.e@pag.e{1}
9
10 \def\@ifoddpag.e{%
11 \expandafter\@firstoftwo
12 }
13
14 \def\@ifoddpag.eoroneside{%
15 \expandafter\@firstoftwo
16 }
```

---

File 122 **lwarp-indentfirst.sty**

§ 211 Package **indentfirst**

Pkg indentfirst **indentfirst** is ignored.

Discard all options for **lwarp-indentfirst**:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{indentfirst}

---

File 123 `lwarp-inputenc.sty`

§ 212 Package **inputenc**

Pkg `inputenc` Error if `inputenc` is loaded after `lwarp`.

Discard all options for `lwarp-inputenc`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{inputenc}
2 \LWR@loadbefore{inputenc}
```

---

File 124 `lwarp-keyfloat.sty`

§ 213 Package **keyfloat**

*(Emulates or patches code by BRIAN DUNN.)*

Pkg `keyfloat` **keyfloat** is supported with minor adjustments.

 **keywrap** If placing a `\keyfig[H]` inside a `keywrap`, use an absolute width for `\keyfig`, instead of `lw`-proportional widths. (The `[H]` option forces the use of a `minipage`, which internally adjusts for a virtual 6-inch wide `minipage`, which then corrupts the `lw` option.)

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{keyfloat}
```

After **keyfloat** has loaded:

```
2 \AtBeginDocument{
3 \RenewDocumentCommand{\KFLT@onefigureimage}{}
4 {%
5 \LWR@traceinfo{KFLT@onefigureimage}%
6 % \begin{lrbox}{\KFLT@envbox}%
7 \ifthenelse{\NOT\equal{\KFLT@lw}{}}{%
8 {\includegraphics%
9 [scale=\KFLT@s,width=\KFLT@imagewidth]{\KFLT@i}}%
10 {% not linewidth
11 \ifthenelse{\dimtest{\KFLT@w}{>}{Opt}}%
12 {% width is given
13 \ifthenelse{\dimtest{\KFLT@h}{>}{Opt}}%
```

---

```

14 {% w and h
15 \includegraphics%
16 [scale=\KFLT@s,%
17 width=\KFLT@imagewidth,height=\KFLT@h]{\KFLT@i}%
18 }% w and h
19 {% only w
20 \includegraphics%
21 [scale=\KFLT@s,width=\KFLT@imagewidth]{\KFLT@i}%
22 }% only w
23 }% width is given
24 {% width is not given
25 \ifthenelse{\dimtest{\KFLT@h}{>}{0pt}}%
26 {\includegraphics%
27 [scale=\KFLT@s,height=\KFLT@h]{\KFLT@i}}%
28 {\includegraphics%
29 [scale=\KFLT@s]{\KFLT@i}}%
30 }% width is not given
31 }% not linewidth
32 % \end{lrbox}%
33 % \unskip%
34 % \KFLT@findenvboxwidth%
35 % \begin{turn}{\KFLT@r}%
36 % \KFLT@frame{\usebox{\KFLT@envbox}}%
37 % \unskip%
38 % \end{turn}%
39 \LWR@traceinfo{KFLT@onefigureimage: done}%
40 }

41 \RenewDocumentEnvironment{KFLT@boxinner}{-}
42 {%
43 \LWR@traceinfo{KFLT@boxinner}%
44 \LWR@stoppars%
45 }
46 {
47 \LWR@startpars%
48 \LWR@traceinfo{KFLT@boxinner: done}%
49 }

50 \DeclareDocumentEnvironment{KFLT@marginfloat}{0{-1.2ex} m}
51 {%
52 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{-}{marginblock}%
53 \captionsetup{type=#2}%
54 }
55 {%
56 \endLWR@BlockClassWP%
57 }

58 \DeclareDocumentEnvironment{marginfigure}{-o}
59 {\begin{KFLT@marginfloat}{figure}}

```

---

```

60 {\end{KFLT@marginfloat}}
61
62 \DeclareDocumentEnvironment{margintable}{o}
63 {\begin{KFLT@marginfloat}{table}}
64 {\end{KFLT@marginfloat}}

65 \DeclareDocumentEnvironment{keywrap}{m +m}
66 {%
67 \LWR@ensuredoingapar%
68 \setlength{\LWR@templengthone}{#1}%
69 \begin{LWR@BlockClassWP}{%
70 float:right; width:\LWR@printlength{\LWR@templengthone}; % extra space
71 margin:10pt%
72 }%
73 {%
74 width:\LWR@printlength{\LWR@templengthone}%
75 }%
76 {marginblock}%
77 \setlength{\linewidth}{.95\LWR@templengthone}%
78 #2%
79 \end{LWR@BlockClassWP}%
80 }
81 {%
82 }

83 }% AtBeginDocument

```

---

File 125 **lwarp-layout.sty**

§ 214 Package **layout**

*(Emulates or patches code by KENT MCPHERSON, JOHANNES BRAAMS, HIDEO UMEKI.)*

Pkg layout **layout** is emulated.

**for HTML output:** Discard all options for **lwarp-layout**:

```

1 \LWR@ProvidesPackageDrop{layout}

2 \NewDocumentCommand{\layout}{s}{-}

```

File 126 **lwarp-letterspace.sty**

§ 215 Package **letterspace**

*(Emulates or patches code by R SCHLICHT.)*

Pkg letterspace **letterspace** is a subset of microtype, which is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

**for HTML output:** Discard all options for **lwarp-letterspace**:

```
1 \LWR@ProvidesPackageDrop{letterspace}
2 \newcommand*\lsstyle{}
3 \newcommand\textls[2] [] {}
4 \def\textls#1#{}
5 \newcommand*\lslig[1]{#1}
```

File 127 **lwarp-lettrine.sty**

§ 216 Package **lettrine**

*(Emulates or patches code by DANIEL FLIPO.)*

Pkg lettrine Emulated.

**for HTML output:** Discard all options for **lwarp-lettrine**:

```
1 \LWR@ProvidesPackageDrop{lettrine}
```

The initial letter is in a `<span>` of class `lettrine`, and the following text is in a `<span>` of class `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 128 **lwarp-lineno.sty**

§ 217 Package **lineno**

*(Emulates or patches code by STEPHAN I. BÖTTCHER.)*

Pkg `lineno` **lineno** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{lineno}

2 \newcommand*\resetlinenumber[1][\@ne]{
3
4 \def\linenumbers{%
5 \@ifnextchar[{\resetlinenumber}%]
6 {\@ifstar{\resetlinenumber}{}}%
7 }
8
9 \newcommand*\nolinenumbers{}
10
11 \@namedef{linenumbers*}{\par\linenumbers*}
12 \@namedef{runninglinenumbers*}{\par\runninglinenumbers*}
13
14 \def\endlinenumbers{\par}
15 \let\endrunninglinenumbers\endlinenumbers
16 \let\endpagewiselinenumbers\endlinenumbers
17 \expandafter\let\csname endlinenumbers*\endcsname\endlinenumbers
18 \expandafter\let\csname endrunninglinenumbers*\endcsname\endlinenumbers
19 \let\endnolinenumbers\endlinenumbers
20

```

```
21 \def\pagewiselinenumbers{\linenumbers\setpagewiselinenumbers}
22
23 \def\runninglinenumbers{\setrunninglinenumbers\linenumbers}
24
25 \def\setpagewiselinenumbers{}
26
27 \def\setrunninglinenumbers{}
28
29 \def\linenomath{}%
30 \@namedef{linenomath*}{}%
31 \def\endlinenomath{}
32 \expandafter\let\csname endlinenomath*\endcsname\endlinenomath
33
34 \let\line\label\label
35
36 \def\switchlinenumbers{\@ifstar{}{}}
37 \def\setmakelinenumbers#1{\@ifstar{}{}}
38
39 \def\leftlinenumbers{\@ifstar{}{}}
40 \def\rightlinenumbers{\@ifstar{}{}}
41
42 \newcounter{linenumber}
43 \newcount\c@pagewiselinenumber
44 \let\c@runninglinenumber\c@linenumber
45
46 \def\runningpagewiselinenumbers{}
47 \def\realpagewiselinenumbers{}
48
49
50 \NewDocumentCommand\modulolinenumbers{s o}{}
51
52 \chardef\c@linenumbermodulo=5
53 \modulolinenumbers[1]
54
55 \newcommand*\firstlinenumber[1]{}
56
57 \newcommand\internallinenumbers{}
58 \let\endinternallinenumbers\endlinenumbers
59 \@namedef{internallinenumbers*}{\internallinenumbers*}
60 \expandafter\let\csname endinternallinenumbers*\endcsname\endlinenumbers
61
62 \newcommand*\linenoplaceholder[1]{% redefine per language
63 (line number reference for \detokenize\expandafter{#1})
64 }
65
66 \newcommand*\lineref[2][]{\linenoplaceholder{#2}}
67 \newcommand*\linerefp[2][]{\linenoplaceholder{#2}}
68 \newcommand*\linerefr[2][]{\linenoplaceholder{#2}}
69
70 \newcommand\quotelinenumbers
```

```
71 {\@ifstar\linenumbers{\@ifnextchar[\linenumbers{\linenumbers*}}}
72
73 \newdimen\linenumbersep
74 \newdimen\linenumberwidth
75 \newdimen\quotelinenumbersep
76
77 \quotelinenumbersep=\linenumbersep
78 \let\quotelinenumberfont\linenumberfont
79
80 \def\linenumberfont{\normalfont\tiny\sfamily}
81
82
83 \linenumberwidth=10pt
84 \linenumbersep=10pt
85
86 \def\thelinenumber{
87
88 \def\LineNumber{
89 \def\makeLineNumber{
90 \def\makeLineNumberLeft{
91 \def\makeLineNumberRight{
92 \def\makeLineNumberOdd{
93 \def\makeLineNumberEven{
94 \def\makeLineNumberRunning{
95
96
97 \newenvironment{numquote} {\quote}{\endquote}
98 \newenvironment{numquotation} {\quotation}{\endquotation}
99 \newenvironment{numquote*} {\quote}{\endquote}
100 \newenvironment{numquotation*}{\quotation}{\endquotation}
101
102 \newdimen\bframerule
103 \bframerule=\fboxrule
104
105 \newdimen\bframesep
106 \bframesep=\fboxsep
107
108 \newenvironment{bframe}
109 {%
110 \LWR@forceminwidth{\bframerule}%
111 \BlockClass [
112 border:\LWR@printlength{\LWR@atleastonept} solid black ; %
113 padding:\LWR@printlength{\bframesep}%
114]{bframe}
115 }
116 {\endBlockClass}
```

---

File 129 **lwarp-lips.sty**

§ 218 Package **lips**

*(Emulates or patches code by MATT SWIFT.)*

Pkg lips **lips** is emulated.

```

1 % \LWR@ProvidesPackageDrop{lips}
2 \PackageInfo{lwarp}{Using the lwarp version of package 'lips'.}%
3 \ProvidesPackage{lwarp-lips}
4
5 \NewDocumentCommand{\Lips}{}{\textellipsis}
6
7 \NewDocumentCommand{\BracketedLips}{}{[\textellipsis]}
8
9 \let\lips\Lips
10 \let\olips\lips
11
12 \DeclareOption*{}
13 \DeclareOption{mla}{
14 \let\lips\BracketedLips
15 }
16 \ProcessOptions\relax
17
18 \newcommand \LPNobreakList {}

```

---

File 130 **lwarp-listings.sty**

§ 219 Package **listings**

*(Emulates or patches code by CARSTEN HEINZ, BROOKS MOSES, JOBST HOFFMANN.)*

Pkg listings **listings** is supported with some limitations. Text formatting is not yet supported.

**for HTML output:**

```

1 \begin{warpHTML}

2 \LWR@ProvidesPackagePass{listings}

```

Force flexible columns:

```

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}{l@l}{#1}{#2}}

```

`\lst@Init`    `{\backslash-processing}`    Done at the start of a listing.

```
10 \renewcommand{\lst@Init}[1]{%
```

First, perform the **listings** initialization:

```

11 \LWR@traceinfo{\lst@Init}%
12 \renewcommand*{\@capttype}{\lstlisting}%
13 \let\lst@aboveskip\z@\let\lst@belowskip\z@%
14 \gdef\lst@boxpos{t}%
15 \let\lst@frame\@empty
16 \let\lst@frametshape\@empty
17 \let\lst@framershape\@empty
18 \let\lst@framebshape\@empty
19 \let\lst@framefshape\@empty
20 \lstframe@\lst@frametshape\relax%
21 \lst@multicols\@empty%
22 \LWR@origlst@Init{#1}\relax%
23 \LWR@traceinfo{finished origlst@Init}%
24 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the `<pre>`, then reenable line numbers.

```

25 \LWR@traceinfo{About to create verbatim.}%
26 \let\lsthk@EveryPar\relax%
27 \LWR@forcenewpage
28 \LWR@atbeginverbatim{2.5}{\programlisting}%
29
30 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
31 \else%

```

Inline, so open a `<span>`:

```

32 \ifbool{LWR@verbtags}{\LWR@htmltag{span class="inlineprogramlisting"}}{}%
33 \fi%
34 }

```

`\lst@DeInit`    Done at the end of a listing.

```

35 \renewcommand*{\lst@DeInit}{%
36 \lst@ifdisplaystyle%

```

Creating a display.

Disable line numbers, produce the `</pre>`, then reenables line numbers:

```
37 \let\lsthk@EveryPar\relax%
38
39 \LWR@afterendverbatim%
40 \let\lsthk@EveryPar\LWR@origlsthkEveryPar%
41 \else%
```

Inline, so create the closing `</span>`:

```
42 \ifbool{LWR@verbtags}{\noindent\LWR@htmltag{/span}}{}%
43 \fi%
```

Final listings deinit:

```
44 \LWR@origlst@DeInit%
45 }
```

```
\lst@MakeCaption {}
```

This is called BOTH at the top and at the bottom of each listing.

Patched for **lwarp**.

```
46 \def\lst@MakeCaption#1{%
47 \LWR@traceinfo{MAKING CAPTION at #1}%
48 \lst@ifdisplaystyle
49 \LWR@traceinfo{making a listings display caption}%
50 \ifx #1%
51 \ifx\lst@@caption\@empty\expandafter\lst@HRefStepCounter \else
52 \expandafter\refstepcounter
53 \fi {lstlisting}%
54 \LWR@traceinfo{About to assign label: !\lst@label!}%
55% \ifx\lst@label\@empty\else
56% \label{\lst@label}\fi
57 \LWR@traceinfo{Finished assigning the label.}%
58 \let\lst@arg\lst@intname \lst@ReplaceIn\lst@arg\lst@filenamerpl
59 \global\let\lst@name\lst@arg \global\let\lstname\lst@name
60 \lst@ifnolol\else
61 \ifx\lst@@caption\@empty
62 \ifx\lst@caption\@empty
63 \ifx\lst@intname\@empty \else \def\lst@temp{ }%
64 \ifx\lst@intname\lst@temp \else
```

This code places a contents entry for a non-float. This would have to be modified for **lwarp**:

```
65 \LWR@traceinfo{addcontents lst@name: -\lst@name-}%
66% \addcontentsline{lol}{lstlisting}{\lst@name}
67 \fi\fi
68 \fi
69 \else
```

This would have to be modified for **lwarp**:

```

70 \LWR@traceinfo{addcontents lst@caption: -\lst@caption-}%
71 \addcontentsline{lol}{lstlisting}%
72 {\protect\numberline{\thelstlisting}}%
73 {\protect\ignorespaces \lst@caption \protect\relax}}%
74 \fi
75 \fi
76 \fi
77 \ifx\lst@caption\@empty\else
78 \LWR@traceinfo{lst@caption not empty-}%
79 \lst@ifsubstring #1\lst@captionpos
80 {\begingroup
81 \LWR@traceinfo{at the selected position}}%

```

These space and box commands are not needed for HTML output:

```

82 % \let\@vskip\vskip
83 % \def\vskip{\afterassignment\lst@vskip \@tempskipa}%
84 % \def\lst@vskip{\nobreak\@vskip\@tempskipa\nobreak}%
85 % \par\@parboxrestore\normalsize\normalfont % \noindent (AS)
86 % \ifx #1t\allowbreak \fi
87 \ifx\lst@title\@empty

```

New **lwarp** code to create a caption:

```

88 \lst@makecaption\fnum@lstlisting{\ignorespaces \lst@caption}
89 \else

```

New **lwarp** code to create a title:

```

90 % \lst@maketitle\lst@title % (AS)
91 \LWR@traceinfo{Making title: \lst@title}%
92 \begin{BlockClass}{lstlistingtitle}% lwarp
93 \lst@maketitle\lst@title% lwarp
94 \end{BlockClass}% lwarp
95 \fi
96 \LWR@traceinfo{About to assign label: !\lst@label!}%
97 \ifx\lst@label\@empty\else
98 \leavevmode% gets rid of bad space factor error
99 \GetTitleStringExpand{\lst@caption}%
100 \edef\LWR@lntemp{\GetTitleStringResult}%
101 \edef\@currentlabelname{\detokenize\expandafter{\LWR@lntemp}}%
102 \label{\lst@label}\fi
103 \LWR@traceinfo{Finished assigning the label.}%

```

Not needed for **lwarp**:

```

104 % \ifx #1b\allowbreak \fi
105 \endgroup}{}%
106 \fi
107 \LWR@traceinfo{end of making a listings display caption}%
108 \else
109 \LWR@traceinfo{INLINE}%

```

```

110 \fi
111 \LWR@traceinfo{DONE WITH CAPTION at #1}%
112 }

```

Patched to keep left line numbers outside of the left margin, and place right line numbers in a field `\VerbatimHTMLWidth` wide.

```

113 \lst@Key{numbers}{none}{%
114 \let\lst@PlaceNumber\@empty
115 \lstKV@SwitchCases{#1}%
116 {none&\%
117 left&\def\lst@PlaceNumber{%
118 % \llap{
119 \LWR@orignormalfont%
120 \lst@numberstyle{\thelstnumber}\kern\lst@numbersep%
121 % }
122 }
123 \%
124 right&\def\lst@PlaceNumber{\rlap{\LWR@orignormalfont
125 \kern\VerbatimHTMLWidth \kern\lst@numbersep
126 \lst@numberstyle{\thelstnumber}}}%
127 }{\PackageError{Listings}{Numbers #1 unknown}\@ehc}}

128 \end{warpHTML}

```

---

File 131 `lwarp-longtable.sty`

§ 220 Package **longtable**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg `longtable` **longtable** is emulated.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{longtable}`



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

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

instead of

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

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

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

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

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

or place it inside `\warpingprintonly`.

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

See:

<http://tex.stackexchange.com/questions/43006/why-is-input-not-expandable>

Env `longtable` \* [*horizontalment*] {*colspec*} Emulates the `longtable` environment.

Per the **caption** package, the starred version steps the counter per caption. The unstarred version steps the counter once at the beginning, but not at each caption.

Options [c], [l], and [r] are thrown away.

```
2 \newenvironment{longtable*}[2][{}]{%
3 \LWR@floatbegin{table}%
4 \setcaptiontype{\LTcaption}%
5 \caption@setoptions{longtable}%
6 \caption@setoptions{@longtable}%
7 \caption@LT@setup%
8 \booltrue{LWR@starredlongtable}%
9 \let\captionlistentry\LWR@LTcaptionlistentry%
10 \LWR@tabular{#2}
11 }
12 {\endLWR@tabular\LWR@floatend}
13
14 \newenvironment{longtable}[2][{}]{%
15 \LWR@floatbegin{table}%
16 \setcaptiontype{\LTcaption}%
17 \caption@setoptions{longtable}%
18 \caption@setoptions{@longtable}%
19 \caption@LT@setup%
20 \refstepcounter{\LTcaption}%
21 \let\captionlistentry\LWR@LTcaptionlistentry%
22 \LWR@tabular{#2}
23 }
24 {\endLWR@tabular\LWR@floatend}
25
```

Provided for compatibility, but ignored:

```
26 \newcounter{LTchunksize}
27 \def\endhead{\LWR@tabularendoffline}% throws away options //[dim] and /**
28 \def\endfirsthead{\LWR@tabularendoffline}
```

---

```

29 \def\endfoot{\LWR@tabularendofline}
30 \def\endlastfoot{\LWR@tabularendofline}
31 \newcommand\tabularnewline{\LWR@tabularendofline}
32 \newcommand{\setlongtables}{}% Obsolete command, does nothing.
33 \newlength{\LTleft}
34 \newlength{\LTright}
35 \newlength{\LTpre}
36 \newlength{\LTpost}
37 \newlength{\LTcapwidth}

38 \LetLtxMacro\LWR@origkill\kill
39 \renewcommand*{\kill}{\LWR@tabularendofline}
40 \appto\LWR@restoreorigformatting{%
41 \LetLtxMacro\kill\LWR@origkill%
42 }

```

---

File 132 **lwarp-lscape.sty**

§ 221 Package **lscape**

*(Emulates or patches code by D. P. CARLISLE.)*

Pkg `lscape` **lscape** is emulated.

**for HTML output:** Discard all options for **lwarp-lscape**.

```

1 \LWR@ProvidesPackageDrop{lscape}

2 \newenvironment*{landscape}{}{}

```

---

File 133 **lwarp-ltcaption.sty**

§ 222 Package **ltcaption**

*(Emulates or patches code by AXEL SOMMERFELDT.)*

Pkg `ltcaption` **ltcaption** is emulated.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{ltcaption}`

`\LTcapttype` is already defined by **lwarp**.

`longtable*` is already defined by **lwarp-longtable**.

---

```

2 \newlength{\LTcapskip}
3 \newlength{\LTcapleft}
4 \newlength{\LTcapright}
5 \newcommand*{\LTcapmarginfalse}{}

```

---

File 134 **lwarp-ltxgrid.sty**

§ 223 Package **ltxgrid**

Pkg ltxgrid **ltxgrid** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{ltxgrid}

2 \newcommand*{\onecolumngrid}{}
3 \newcommand*{\twocolumngrid}{}
4 \newcommand*{\removestuff}{}
5 \newcommand*{\addstuff}[2]{}
6 \newcommand*{\replacestuff}[2]{}

```

---

File 135 **lwarp-ltxtable.sty**

§ 224 Package **ltxtable**

Pkg ltxtable **ltxtable** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{ltxtable}

```

\LTxtable {\langle width\rangle} {\langle file\rangle}

2 \newcommand*{\LTxtable}[2]{%
3 \input{#2}%
4 }

```

---

File 136 **lwarp-luacolor.sty**

§ 225 Package **luacolor**

Pkg luacolor **luacolor** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{luacolor}

---

```
2 \newcommand{\luacolorProcessBox}[1]{}
```

---

File 137 **lwarp-luatodonotes.sty**

§ 226 Package **luatodonotes**

*(Emulates or patches code by FABIAN LIPP.)*

Pkg luatodonotes **luatodonotes** is emulated.

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

**for HTML output:** 1 \LWR@ProvidesPackagePass{luatodonotes}

Nullify options:

```
2 \@todonotes@additionalMarginEnabledfalse

3 \if@todonotes@disabled
4 \else
5
6 \newcommand{\ext@todo}{tdo}
7
8 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{\todo}{ldo}{#1}{#2}}

9 \let\LWRTODONOTES@orig@todototoc\todototoc
10
11 \renewcommand*\{\todototoc}{%
12 \phantomsection%
13 \LWRTODONOTES@orig@todototoc%
14 }
15
16
17 \renewcommand{\@todonotes@drawMarginNoteWithLine}{%
18 \fcolorbox
19 {\@todonotes@currentbordercolor}
20 {\@todonotes@currentbackgroundcolor}
21 {\arabic{\@todonotes@numberoftodonotes}}
22 \marginpar{\@todonotes@drawMarginNote}
23 }
24
25 \renewcommand{\@todonotes@drawInlineNote}{%
26 \fcolorboxBlock%
27 {\@todonotes@currentbordercolor}%
```

```

28 {\@todonotes@currentbackgroundcolor}%
29 {%
30 \if@todonotes@authorgiven%
31 {\@todonotes@author:\,}%
32 \fi%
33 \@todonotes@text%
34 }%
35 }
36
37 \newcommand{\@todonotes@drawMarginNote}{%
38 \if@todonotes@authorgiven%
39 \@todonotes@author\par%
40 \fi%
41 \arabic{@todonotes@numberoftodonotes}: %
42 \fcolorbox%
43 {\@todonotes@currentbordercolor}%
44 {\@todonotes@currentbackgroundcolor}%
45 {%
46 \@todonotes@sizecommand%
47 \@todonotes@text %
48 }%
49 }%
50
51 \renewcommand{\missingfigure}[2][]{%
52 \setkeys{todonotes}{#1}%
53 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
54 \fcolorboxBlock%
55 {\@todonotes@currentbordercolor}%
56 {\@todonotes@currentfigcolor}%
57 {%
58 \setlength{\fboxrule}{4pt}%
59 \fcolorbox{red}{white}{Missing figure} \quad #2%
60 }
61 }
62
63 \LetLtxMacro\LWRTODONOTES@orig@todocommon\@todocommon
64
65 \RenewDocumentCommand{\@todocommon}{m m}{%
66 \begingroup%
67 \renewcommand*\phantomsection{}%
68 \LWRTODONOTES@orig@todocommon{#1}{#2}%
69 \endgroup%
70 }
71
72 \renewcommand{\@todoarea}[3][]{%
73 \@todonotes@areaselectedtrue%
74 \@todocommon{#1}{#2}%
75 \todonotes@textmark@highlight{#3}%
76 \zref@label{\@todonotes@arabic{@todonotes@numberoftodonotes}@end}%
77 }%

```

---

```

78
79
80 \DeclareDocumentCommand{\todonotes@textmark@highlight}{m}{%
81 \InlineClass[background:\LWR@origpound{}B3FFB3]{highlight}{#1}%
82 }
83
84 \fi% \if@todonotes@disabled

```

---

File 138 **lwarp-marginfit.sty**

§ 227 Package **marginfit**

Pkg marginfit marginfit is ignored.

**for HTML output:** Discard all options for **lwarp-marginfit**:

```
1 \LWR@ProvidesPackageDrop{marginfit}
```

---

File 139 **lwarp-marginfix.sty**

§ 228 Package **marginfix**

*(Emulates or patches code by STEPHEN HICKS.)*

Pkg marginfix Emulated.

**for HTML output:** Discard all options for **lwarp-marginfix**:

```

1 \LWR@ProvidesPackageDrop{marginfix}

2 \newcommand*{\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 140 **lwarp-marginnote.sty**

§ 229 Package **marginnote**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg marginnote Emulated.

**for HTML output:** Discard all options for **lwarp-marginnote**:

```

1 \LWR@ProvidesPackageDrop{marginnote}

2 \NewDocumentCommand{\marginnote}{o +m o}{\marginpar{#2}}
3 \newcommand*{\marginnoteleftadjust}{}
4 \newcommand*{\marginnoterightadjust}{}
5 \newcommand*{\marginnotetextwidth}{}
6 \let\marginnotetextwidth\textwidth
7 \newcommand*{\marginnotevadjust}{}
8 \newcommand*{\marginfont}{}
9 \newcommand*{\raggedleftmarginnote}{}
10 \newcommand*{\raggedrightmarginnote}{}

```

---

File 141 **lwarp-mcaption.sty**

§ 230 Package **mcaption**

*(Emulates or patches code by STEPHAN HENNIG.)*

Pkg mcaption **mcaption** is nullified.

**for HTML output:** Discard all options for **lwarp-mcaption**:

```

1 \LWR@ProvidesPackageDrop{mcaption}

2 \newenvironment{margincap}{}{}
3 \newcommand*{\margincapalign}{}
4 \newlength{\margincapsep}

```

---

File 142 `lwarp-mdframed.sty`

§ 231 Package **mdframed**

*(Emulates or patches code by MARCO DANIEL, ELKE SCHUBERT.)*

Pkg mdframed **mdframed** is loaded with options forced to `framemethod=none`.

§ 231.1 **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.

**footnotes** Footnotes are currently placed at the bottom of the HTML page.

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

**CSS classes** Environments created or encapsulated by **mdframed** are enclosed in a `<div>` of class `md<environmentname>`, or `mdframed` otherwise.

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

Pre-existing hooks are used to patch extra functions before and after the frames.

## § 231.2 Package loading

for HTML output:

```
1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackageDrop{mdframed}
```

**amsthm** must be loaded before **mdframed**

```
4 \LWR@origRequirePackage{amsthm}
```

Do not require Tikz or pstricks:

```
5 \LWR@origRequirePackage[framemethod=none]{mdframed}
```

## § 231.3 Patches

Patch to remove PDF formatting and add HTML tags:

```
6 \AtBeginDocument{
7 \def\mdf@trivlist#1{%
8 \edef\mdf@temp{%
9 \topsep=\the\topsep\relax%
10 \partopsep=\the\partopsep\relax%
11 \parsep=\the\parsep\relax%
12 }%
13 \setlength{\topsep}{#1}%
14 \topskip\z@%
15 \partopsep\z@%
16 \parsep\z@%
17 \@nmbbrlistfalse%
18 \@trivlist%
19 \labelwidth\z@%
20 \leftmargin\z@%
21 \itemindent\z@%
22 \let\@itemlabel\@empty%
23 \def\makelabel##1{##1}%
24 \item\relax\mdf@temp\relax%
25 }
26
27 \renewcommand*\endmdf@trivlist}{%
28 \LWR@traceinfo{endmdf@trivlist}%
29 \endtrivlist%
30 \LWR@listend%
31 }
32 }% AtBeginDocument
```

### § 231.4 Initial setup

To handle CSS and paragraphs, patch code at start and end of environment and contents. `\LWR@origraggedright` helps avoid hyphenation.

```

33 \mdfsetup{
34 startcode={\LWR@mdframedstart\LWR@origraggedright},
35 endcode={\LWR@mdframedend},
36 startinnercode={\LWR@startpars\LWR@origraggedright},
37 endinnercode={\LWR@stoppars},
38 }

```

### § 231.5 Color and length HTML conversion

`\LWR@mdfprintcolor`    `{\langlemdfcolorkey\rangle}`

Given the **mdframed** key, print the color.

```

39 \newcommand*{\LWR@mdfprintcolor}[1]{%
40 \convertcolorspec{named}{\csuse{mdf@#1}}{HTML}\LWR@tempcolor%
41 \LWR@origpound\LWR@tempcolor
42 }

```

`\LWR@mdfprintlength`    `{\langlemdflengthkey\rangle}`

Given the **mdframed** key, print the length.

```

43 \newcommand*{\LWR@mdfprintlength}[1]{%
44 \LWR@printlength{\csuse{mdf@#1@length}}
45 }

```

### § 231.6 Environment encapsulation

`\LWR@mdframedstart`    Actions before an mdframe starts.

Encapsulate a frame inside a `<div>` of the desired class.

```

46 \newcommand*{\LWR@mdframedstart}{%
47 \LWR@traceinfo{\LWR@mdframedstart start}%

```

Turn off paragraph handling during the generation of the encapsulating tags:

```

48 \LWR@stoppars%

```

Open a `<div>` and with custom class and custom style:

```

49 \LWR@htmltagc{div class="\LWR@mdthisenv" \LWR@orignewline
50 style=" \LWR@orignewline

```

Convert and print the background color:

```

51 background: \LWR@mdfprintcolor{backgroundcolor} ; \LWR@orignewline

```

Convert and print the border color and width:

```
52 border: \LWR@mdfprintlength{linewidth} solid
53 \LWR@mdfprintcolor{linecolor} ; \LWR@orignewline
```

Convert and print the border radius:

```
54 border-radius: \LWR@mdfprintlength{roundcorner} ; \LWR@orignewline
```

Convert and print the shadow:

```
55 \ifbool{mdf@shadow}{%
56 box-shadow:
57 \LWR@mdfprintlength{shadowsize}
58 \LWR@mdfprintlength{shadowsize}
59 \LWR@mdfprintlength{shadowsize}
60 \LWR@mdfprintcolor{shadowcolor} ;
61 }
62 {box-shadow: none ;}
63 \LWR@orignewline

64 "}
65 % \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:

```
66 \LetLtxMacro{\hspace}{\LWR@origspace}%
67 \LetLtxMacro\rule\LWR@origrule%
68 \LetLtxMacro\makebox\LWR@origmakebox%
69 \LWR@startpars%
70 \LWR@traceinfo{LWR@mdframedstart done}%
71 }
```

`\LWR@mdframedend` Actions after an mdframe ends.

After closing the `<div>`, globally restore to the default environment type:

```
72 \newcommand*{\LWR@mdframedend}{
73 \LWR@traceinfo{LWR@mdframedend start}%
```

Close the custom `<div>`:

```
74 \LWR@htmldivclassend{\LWR@mdthisenv}
```

Reset future custom class to the default:

```
75 \gdef\LWR@mdthisenv{mdframed}
```

Resume paragraph handling:

```
76 \LWR@startpars%
77 \LWR@traceinfo{LWR@mdframedend done}%
78 }
```

§ 231.7 **Mdframed environment**

```

79 \renewenvironment{mdframed}[1][1][1]{%
80 \color@begingroup%
81 \mdfsetup{userdefinedwidth=\linewidth,#1}%
82 \mdf@startcode%
83 \mdf@preenvsetting%
84 \ifdefempty{\mdf@firstframetitle}{}%
85 {\let\mdf@frametitlesave\mdf@frametitle%
86 \let\mdf@frametitle\mdf@firstframetitle%
87 }%
88 \ifvmode\nointerlineskip\fi%
89 \ifdefempty{\mdf@frametitle}{}%
90 {\mdfframedtitleenv{\mdf@frametitle}%
91 \mdf@@frametitle@use%
92 }%
93 \mdf@trivlist{\mdf@skipabove@length}%%
94 \mdf@settings%
95 \mdf@lrbox{\mdf@splitbox@one}%
96 \mdf@startinnercode%
97 }%
98 {%
99 \mdf@@ignorelastdescenders%
100 \par%
101 \unskip\ifvmode\nointerlineskip\hrule \@height\z@ \@width\hsize\fi%
102 \ifmdf@footnoteinside%
103 \def\mdf@reserveda{%
104 \mdf@footnoteoutput%
105 \mdf@endinnercode%
106 \endmdf@lrbox%
107 \ifdefempty{\mdf@frametitle}{}%
108 {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
109 \detected@mdf@put@frame
110 }%
111 \else%
112 \def\mdf@reserveda{%
113 \mdf@endinnercode%
114 \endmdf@lrbox%
115 \ifdefempty{\mdf@frametitle}{}%
116 {\mdfframedtitleenv{\mdf@frametitle}\mdf@@frametitle@use}%
117 \detected@mdf@put@frame%
118 \mdf@footnoteoutput%
119 }%
120 \fi%
121 \mdf@reserveda%
122 \aftergroup\endmdf@trivlist%
123 \color@endgroup%
124 \mdf@endcode%
125 }

```

```
\mdf@footnoteoutput
```

```
126 \renewrobustcmd*\mdf@footnoteoutput{%
127 \LWR@printpendingmpfootnotes%
128 }
```

## § 231.8 Titles and subtitles

```
\mdfframedtitleenv {<title>}
```

Encapsulation of the original which places the title inside a `<span>` of class `mdfframedtitle`:

```
129 \LetLtxMacro\LWR@origmdfframedtitleenv\mdfframedtitleenv
130
131 \newlength{\LWR@titleroundcorner}
132
133 \renewrobustcmd\mdfframedtitleenv[1]{%
134 \LWR@traceinfo{LWR@mdfframedtitleenv start}%
135 % \LWR@origmdfframedtitleenv%
```

Open a `<span>` with a custom class and custom style:

```
136 \LWR@htmltagc{span class="mdfframedtitle" \LWR@orignewline
137 style=" \LWR@orignewline
```

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 }{}%
```

The title's top border radius is adjusted for the line width:

```
148 border-radius:
149 \setlength{\LWR@titleroundcorner}
150 {\maxof{\mdf@roundcorner@length-\mdf@linewidth@length}{Opt}}
151 \LWR@printlength{\LWR@titleroundcorner}
152 \LWR@printlength{\LWR@titleroundcorner}
153 Opt Opt
154 \LWR@orignewline
```

Finish the custom style and the opening span tag:

```
155 " \LWR@orignewline
156 }% span
```

Restrict paragraph tags inside a span:

```
157 \begin{LWR@nestspan}%
```

Print the title inside the span:

```
158 #1%
```

Close the span and unnest the paragraph tag restriction:

```
159 \LWR@htmltagc{/span}%
```

```
160 \end{LWR@nestspan}%
```

```
161 % }
```

```
162 \LWR@traceinfo{LWR@mdframedtitleenv end}%
```

```
163 }
```

```
\LWR@mdfsubtitlecommon {<sub -or- subsub>} [<options>] {<title>}
```

Common code for \LWR@mdfsubtitle and \LWR@mdfsubsubtitle.

Encapsulate the subtitle inside a <span> of class mdframedsubtitle:

```
164 \NewDocumentCommand{\LWR@mdfsubtitlecommon}{m o m}
```

```
165 {% the following empty line is required
```

```
166
```

```
167 \LWR@traceinfo{LWR@mdframedsubtitlecommon start}%
```

Special handling for mdframed: Subtitles have \pars around them, so temporarily disable them here.

```
168 \let\par\LWR@origpar%
```

Open a <span> with a custom class and custom style:

```
169 \LWR@htmltagc{span class="mdframed#1title"
```

```
170 style=" \LWR@orignewline
```

Convert and print the background color:

```
171 background:
```

```
172 \LWR@mdfprintcolor{#1titlebackgroundcolor}
```

```
173 ; \LWR@orignewline
```

Convert and print the above line:

```
174 \ifbool{mdf@#1titleaboveline}{%
```

```
175 border-top:
```

```
176 \LWR@mdfprintlength{#1titleabovelinewidth}
```

```
177 solid
```

```
178 \LWR@mdfprintcolor{#1titleabovelinecolor}
```

```
179 ; \LWR@orignewline
```

```
180 }{}}%
```

Convert and print the below line:

```
181 \ifbool{mdf@#1titlebelowline}{%
```

```
182 border-bottom:
```

```

183 \LWR@mdfprintlength{#1titlebelowlinewidth}
184 solid
185 \LWR@mdfprintcolor{#1titlebelowlinecolor}
186 ; \LWR@orignewline
187 }{}%

```

Finish the custom style and the opening span tag:

```
188 "% span
```

Restrict paragraph tags inside a span:

```
189 \begin{LWR@nestspan}%

```

Perform the original subtitle action:

```

190 \IfNoValueTF{#2}
191 {\csuse{LWR@origmdf#1title}{#3}}%
192 {\csuse{LWR@origmdf#1title}[#2]{#3}}%

```

Close the span and unnest the paragraph tag restriction:

```

193 \LWR@htmltagc{/span}% the following empty line is required
194 \end{LWR@nestspan}% must follow the /span or an extra <p> appears
195
196 \LWR@traceinfo{LWR@mdframedsubtitlecommon end}%
197 }

```

```

\LWR@mdfsubtitle [⟨options⟩] {⟨title⟩}

198 \newcommand*{\LWR@mdfsubtitle}{%
199 \LWR@mdfsubtitlecommon{sub}%
200 }
201 \let\mdfsubtitle\LWR@mdfsubtitle

```

```

\LWR@mdfsubsubtitle [⟨options⟩] {⟨title⟩}

202 \newcommand*{\LWR@mdfsubsubtitle}{%
203 \LWR@mdfsubtitlecommon{subsub}%
204 }
205 \let\mdfsubsubtitle\LWR@mdfsubsubtitle

```

### § 231.9 New environments

`\LWR@mdthisenv` Stores the environment of the frame about to be created:

```
206 \newcommand*{\LWR@mdthisenv}{mdframed}
```

`\newmdenv` [⟨options⟩] {⟨env-name⟩}

Modified from the original to remember the environment.

```

207 \renewrobustcmd*\newmdenv[2][]{%
208 \newenvironment{#2}%

```

```

209 {%
210 \mdfsetup{#1}%
211 \renewcommand*{\LWR@mdthisenv}{md#2}%
212 \begin{mdframed}%
213 }
214 {\end{mdframed}}%
215 }

```

`\surroundwithmdframed` [*options*] {*environment*}

Modified from the original to remember the environment.

```

216 \renewrobustcmd*{\surroundwithmdframed}[2] [] {%
217 \BeforeBeginEnvironment{#2}{%
218 \renewcommand*{\LWR@mdthisenv}{md#2}%
219 \begin{mdframed}[#1]}%
220 \AfterEndEnvironment{#2}{\end{mdframed}}%
221 }

```

`\mdtheorem` [*mdframed-options*] {*envname*} [*numberedlike*] {*caption*} [*within*]

Modified from the original to remember the environment.

```

222 \DeclareDocumentCommand{\mdtheorem}{ 0{ } m o m o }%
223 {\ifcsdef{#2}%
224 {\mdf@PackageWarning{Environment #2 already exists\MessageBreak}}%
225 {%
226 \IfNoValueTF {#3}%
227 {%#3 not given -- number relationship
228 \IfNoValueTF {#5}%
229 {%#3+#5 not given
230 \@definecounter{#2}%
231 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
232 \newenvironment{#2}[1] [] {%
233 \refstepcounter{#2}%
234 \ifstrempy{##1}%
235 {\let\@temptitle\relax}%
236 {%
237 \def\@temptitle{\mdf@theoremseparator%
238 \mdf@theoremspace%
239 \mdf@theoremtitlefont%
240 ##1}%
241 \mdf@thm@caption{#2}{-#4}{\csname the#2\endcsname}{##1}}%
242 }%
243 \begin{mdframed}[#1,frametitle={\strut#4 \csname the#2\endcsname%
244 \@temptitle}]]%
245 {\end{mdframed}}%
246 \newenvironment{#2*}[1] [] {%
247 \ifstrempy{##1}{\let\@temptitle\relax}{\def\@temptitle{: \ ##1}}%
248 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%

```

```

249 {\end{mdframed}}}%
250 }%
251 {%#5 given -- reset counter
252 \@definecounter{#2}\@newctr{#2}[#5]%
253 \expandafter\xdef\csname the#2\endcsname{\@thmcounter{#2}}%
254 \expandafter\xdef\csname the#2\endcsname{%
255 \expandafter\noexpand\csname the#5\endcsname \@thmcountersep%
256 \@thmcounter{#2}}%
257 \newenvironment{#2}[1] []{%
258 \refstepcounter{#2}%
259 \ifstrempy{##1}%
260 {\let\@temptitle\relax}%
261 {%
262 \def\@temptitle{\mdf@theoremseparator%
263 \mdf@theoremspace%
264 \mdf@theoremtitlefont%
265 ##1}%
266 \mdf@thm@caption{#2}{#{4}}{\csname the#2\endcsname}{##1}}%
267 }
268 \begin{mdframed}[#1,frametitle={\strut#4 \csname the#2\endcsname%
269 \@temptitle}]]%
270 {\end{mdframed}}}%
271 \newenvironment{#2*}[1] []{%
272 \ifstrempy{##1}%
273 {\let\@temptitle\relax}%
274 {%
275 \def\@temptitle{\mdf@theoremseparator%
276 \mdf@theoremspace%
277 \mdf@theoremtitlefont%
278 ##1}%
279 \mdf@thm@caption{#2}{#{4}}{\csname the#2\endcsname}{##1}}%
280 }%
281 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}]]%
282 {\end{mdframed}}}%
283 }%
284 }%
285 {%#3 given -- number relationship
286 \global\@namedef{the#2}{\@nameuse{the#3}}%
287 \newenvironment{#2}[1] []{%
288 \refstepcounter{#3}%
289 \ifstrempy{##1}%
290 {\let\@temptitle\relax}%
291 {%
292 \def\@temptitle{\mdf@theoremseparator%
293 \mdf@theoremspace%
294 \mdf@theoremtitlefont%
295 ##1}%
296 \mdf@thm@caption{#2}{#{4}}{\csname the#2\endcsname}{##1}}%
297 }
298 \begin{mdframed}[#1,frametitle={\strut#4 \csname the#2\endcsname%

```

```

299 \@temptitle}}}%
300 {\end{mdframed}}}%
301 \newenvironment{#2*}[1] []{%
302 \ifstrepty{##1}{\let\@temptitle\relax}{\def\@temptitle{\ #1}}}%
303 \begin{mdframed}[#1,frametitle={\strut#4\@temptitle}}}%
304 {\end{mdframed}}}%
305 }%
306 \BeforeBeginEnvironment{#2}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
307 \BeforeBeginEnvironment{#2*}{\renewcommand*\LWR@mdthisenv}{md#2}}% lwarp
308 }%
309 }

```

`\newmdtheoremenv` [*mdframed-options*] {*envname*} [*numberedlike*] {*caption*} [*within*]

Modified from the original to remember the environment.

```

310 \DeclareDocumentCommand\newmdtheoremenv{0}{m o m o }{%
311 \ifboolexpr{ test {\IfNoValueTF {#3}} and test {\IfNoValueTF {#5}} }%
312 {\newtheorem{#2}{#4}}%
313 {%
314 \IfValueT{#3}{\newtheorem{#2}{#3}{#4}}%
315 \IfValueT{#5}{\newtheorem{#2}{#4}{#5}}%
316 }%
317 \BeforeBeginEnvironment{#2}{%
318 \renewcommand*\LWR@mdthisenv}{md#2}}%
319 \begin{mdframed}[#1]}%
320 \AfterEndEnvironment{#2}{%
321 \end{mdframed}}%
322 }

```

---

File 143 **lwarp-memhfixc.sty**

§ 232 Package **memhfixc**

Pkg memhfixc **memhfixc** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{memhfixc}

---

File 144 **lwarp-metalogo.sty**

§ 233 Package **metalogo**

*(Emulates or patches code by ANDREW GILBERT MOSCHOU.)*

Pkg metalogo **metalogo** is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{metalogo}

2 \newcommand\setlogokern[2]{}
3 \newcommand\setlogodrop[2][XeTeX]{}
4 \newcommand\setLaTeXa[1]{}
5 \newcommand\setLaTeXee[1]{}
6 \newcommand\seteverylogo[1]{}
7 \newcommand\everylogo[1]{}

```

File 145 **lwarp-mhchem.sty**

§ 234 Package **mhchem**

(Emulates or patches code by MARTIN HENSEL.)

Pkg mhchem **mhchem** is patched for use by **lwarp**.

**mhchem** expressions are converted to svg math. Inline expressions use hashed filenames to allow reuse, and assume that any **mhchem** options are global.

 **MATHJAX and mhchem** The MATHJAX **mhchem** extension is not yet used. If MATHJAX is used for math in the rest of the document, **lwarp** converts standalone **mhchem** expressions into svg math images, but expressions inside math must be placed between `\displaymathother` and `\displaymathnormal`:

```

\displaymathother
\[\ce{ ... } \] ... $ \ce { ... } $
\displaymathnormal

```

 **nested math** When producing HTML output, **lwarp** does not support the use of nested dollar signs in **mhchem** expressions.

For some examples from the **mhchem** manual, change as follows:

|                                            |       |
|--------------------------------------------|-------|
| <code>\$\ce{NaOH(aq,\$\infty)}\$</code>    | % old |
| <code>\$\ce{NaOH(aq,\infty)}\$</code>      | % new |
| <code>\$\ce{Fe(CN)_{\frac{6}{2}}}\$</code> | % old |
| <code>\$\ce{Fe(CN)_{\frac{6}{2}}}\$</code> | % new |
| <code>\$\ce{NO_{x}}\$</code>               | % old |
| <code>\$\ce{NO_x}\$</code>                 | % new |
| <code>\$\ce{NO_{x}}\$</code>               | % old |
| <code>\$\ce{NO_{x}}\$</code>               | % new |

```

|
| $\ce{\mathit{cis}}[PtCl2(NH3)2]}$ % old
| $\ce{\mathit{cis}}[PtCl2(NH3)2]}$ % new

```

for HTML output: 1 \LWR@ProvidesPackagePass{mhchem}

The original definition of `\ce`:

```
2 \LetLtxMacro\LWR@mhchem@origce\ce
```

The new definition, called from the new `\ce` after math shift is set. The starred `lateximage` uses a hashed filename for the svg image. The alt tag is set to the **mhchem** expression.

```

3 \newcommand{\LWR@mhchem@HTML@ce}[1]{%
4 \begin{lateximage}*\textbackslash{\LWR@HTMLsanitize{#1}\}%
5 \LWR@mhchem@origce{#1}%
6 \end{lateximage}%
7 \endgroup%
8 \addtocounter{LWR@mhchem@cedepth}{-1}%
9 }

```

Only set math shift if outer depth:

```

10 \newcounter{LWR@mhchem@cedepth}
11 \setcounter{LWR@mhchem@cedepth}{0}

```

The new `\ce`. Sets math shift then continues.

```

12 \renewcommand{\ce}{%
13 \begingroup%
14 \ifnumequal{\value{LWR@mhchem@cedepth}}{0}{%
15 \catcode'\$=3% math shift
16 }{}%
17 \addtocounter{LWR@mhchem@cedepth}{1}%
18 \LWR@mhchem@HTML@ce%
19 }

```

The original definition of `\cesplit`:

```
20 \LetLtxMacro\LWR@mhchem@origcesplit\cesplit
```

The new definition, called from the new `\cesplit` after math shift is set. The starred `lateximage` uses a hashed filename for the svg image. The alt tag is set to the **mhchem** expression.

```
21 \newcommand*\LWR@mhchem@HTML@cesplit}[2]
```

```

22 {%
23 \begin{lateximage}*[\textbackslash}cesplit\{\LWR@HTMLsanitize{#2}\}]%
24 \LWR@mhchem@origcesplit{#1}{#2}%
25 \end{lateximage}%
26 \endgroup%
27 }

```

Only set math shift if outer depth:

```

28 \newcounter{LWR@mhchem@cesplitdepth}
29 \setcounter{LWR@mhchem@cesplitdepth}{0}

```

The new `\cesplit`. Sets math shift then continues.

```

30 \renewcommand{\cesplit}{%
31 \begingroup%
32 \ifnumequal{\value{LWR@mhchem@cesplitdepth}}{0}{%
33 \catcode'\$=3% math shift
34 }{}%
35 \addtocounter{LWR@mhchem@cesplitdepth}{1}%
36 \LWR@mhchem@HTML@cesplit%
37 }

```

Resore originals inside a lateximage:

```

38 \appto\LWR@restoreorigformatting{%
39 \LetLtxMacro\ce\LWR@mhchem@origce%
40 \LetLtxMacro\cesplit\LWR@mhchem@origcesplit%
41 }

```

---

File 146 **lwarp-microtype.sty**

§ 235 Package **microtype**

*(Emulates or patches code by R SCHLICHT.)*

Pkg microtype **microtype** is pre-loaded by **lwarp**. All user options and macros are ignored and disabled.

**for HTML output:** Discard all options for **lwarp-microtype**:

```

1 \LWR@ProvidesPackageDrop{microtype}

2 \DeclareDocumentCommand{\DeclareMicrotypeSet}{o m m}{}
3 \DeclareDocumentCommand{\UseMicrotypeSet}{o m}{}
4 \DeclareDocumentCommand{\DeclareMicrotypeSetDefault}{o m}{}

```

---

```

5 \DeclareDocumentCommand{\SetProtrusion}{o m m}{}
6 \DeclareDocumentCommand{\SetExpansion}{o m m}{}
7 \DeclareDocumentCommand{\SetTracking}{o m m}{}
8 \DeclareDocumentCommand{\SetExtraKerning}{o m m}{}
9 \DeclareDocumentCommand{\SetExtraSpacing}{o m m}{}
10 \DeclareDocumentCommand{\DisableLigatures}{o m}{}
11 \DeclareDocumentCommand{\DeclareCharacterInheritance}{o m m}{}
12 \DeclareDocumentCommand{\DeclareMicrotypeVariants}{m}{}
13 \DeclareDocumentCommand{\DeclareMicrotypeAlias}{m m}{}
14 \DeclareDocumentCommand{\LoadMicrotypeFile}{m}{}
15 \DeclareDocumentCommand{\DeclareMicrotypeBabelHook}{m m}{}
16 \DeclareDocumentCommand{\microtypesetup}{m}{}
17 \DeclareDocumentCommand{\microtypecontext}{m}{}
18 \DeclareDocumentCommand{\textmicrotypecontext}{m m}{#2}
19 \@ifpackageloaded{letterspace}{\let\MT@textls\relax}{%
20 \DeclareDocumentCommand{\lsstyle}{}{}
21 \DeclareDocumentCommand{\textls}{o +m}{}
22 \DeclareDocumentCommand{\slig}{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 147 `lwarp-midfloat.sty`

§ 236 Package **midfloat**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg midfloat **midfloat** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{midfloat}

2 \newenvironment{strip}[1] [] {}{}
3 \newskip\stripsep

```

---

File 148 `lwarp-midpage.sty`

§ 237 Package **midpage**

Pkg `midpage` **midpage** is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{midpage}`

2 `\newenvironment{midpage}`

3 `{\begin{BlockClass}[\LWR@origmbox{margin-top:6ex} ; \LWR@origmbox{margin-bottom:6ex}]{midpage}`

4 `{\end{BlockClass}}`

---

File 149 `lwarp-morefloats.sty`

§ 238 Package **morefloats**

Pkg `morefloats` **morefloats** is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{morefloats}`

---

File 150 `lwarp-moreverb.sty`

§ 239 Package **moreverb**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg `moreverb` **moreverb** is supported with some patches.

**for HTML output:** 1 `\begin{warpHTML}`

2 `\LWR@ProvidesPackagePass{moreverb}`

3 `\BeforeBeginEnvironment{verbatimtab}{%`

4 `\LWR@forcenewpage`

5 `\LWR@atbeginverbatim{3.5}{Verbatim}%`

6 `}`

7 `\AfterEndEnvironment{verbatimtab}{%`

8 `\LWR@afterendverbatim%`

9 `}`

```
10
11
12 \LetLtxMacro\LWRMV@orig@verbatiminput\@verbatiminput
13
14 \renewcommand{\@verbatiminput}[2][]{%
15 \LWR@forcenewpage
16 \LWR@atbeginverbatim{3.5}{Verbatim}%
17 \LWRMV@orig@verbatiminput[#1]{#2}%
18 \LWR@afterendverbatim%
19 }
20
21 \BeforeBeginEnvironment{listing}{%
22 \LWR@forcenewpage
23 \LWR@atbeginverbatim{3.5}{programlisting}%
24 }
25
26 \AfterEndEnvironment{listing}{%
27 % \unskip\LWR@origvspace*{-\baselineskip}%
28 \LWR@afterendverbatim%
29 }
30
31 \BeforeBeginEnvironment{listingcont}{%
32 \LWR@forcenewpage
33 \LWR@atbeginverbatim{3.5}{programlisting}%
34 }
35
36 \AfterEndEnvironment{listingcont}{%
37 % \unskip\LWR@origvspace*{-\baselineskip}%
38 \LWR@afterendverbatim%
39 }

40 \LetLtxMacro\LWRMV@@listinginput\@listinginput
41
42 \renewcommand{\@listinginput}[3][]{%
43 \LWR@forcenewpage
44 \LWR@atbeginverbatim{3.5}{programlisting}%
45 \LWRMV@@listinginput[#1]{#2}{#3}
46 \LWR@afterendverbatim%
47 }
48
49
50 \renewenvironment*{boxedverbatim}
51 {
52 \LWR@forcenewpage
53 \LWR@atbeginverbatim{3.5}{boxedverbatim}%
54 \verbatim%
55 }
56 {
57 \endverbatim%
```

---

```

58 \unskip%
59 \LWR@afterendverbatim%
60 }
61
62

63 \end{warpHTML}

```

---

File 151 `lwarp-morewrites.sty`

§ 240 Package **morewrites**

Pkg `morewrites` Error if **morewrites** is loaded after **lwarp**.

Discard all options for **lwarp-morewrites**:

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{morewrites}

2 \LWR@loadbefore{morewrites}

```

---

File 152 `lwarp-mparhack.sty`

§ 241 Package **mparhack**

Pkg `mparhack` Ignored.

**for HTML output:** Discard all options for **lwarp-mparhack**:

```

1 \LWR@ProvidesPackageDrop{mparhack}

```

---

File 153 `lwarp-multicol.sty`

§ 242 Package **multicol**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg `multicol` **multicol** is emulated.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{multicol}[2015/09/13]`

Multicols are converted into a 1–3 column display, browser-supported.

The optional multicols heading is placed inside a <div> of class multicolsheading.

The content is placed inside a <div> of class multicols.

```
2 \begin{warpHTML}
```

```
Env multicols *{\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}}}
```

When done with the environment, close the <div>:

```
8 {\endBlockClass}
```

Emulated null functions which are not used in HTML:

```
9 \newcommand*{\columnbreak}{}
10 \newcommand*{\RLmulticolcolumns}{}
11 \newcommand*{\LRmulticolcolumns}{}
12
13 \newlength{\premulticols}
14 \newlength{\postmulticols}
15 \newlength{\multicolsep}
16 \newlength{\multicolbaselineskip}
17 \newlength{\multicoltolerance}
18 \newlength{\multicolpretolerance}
19 \newcommand*{\columnseprulecolor}{\normalcolor}
20 \newcounter{columnbadness}
21 \newcounter{finalcolumnbadness}
22 \newcounter{collectmore}
23 \newcounter{unbalance}
24 \newlength{\multicolovershoot}
25 \newlength{\multicolundershoot}

26 \end{warpHTML}
```

---

File 154 **lwarp-multirow.sty**

§ 243 Package **multirow**

(Emulates or patches code by PIET VAN OOSTRUM, ØYSTEIN BACHE, JERRY LEICHTER.)

Pkg multirow **multirow** is emulated during HTML output, and used as-is while inside a lateximage.

In a lateximage, the original print-mode versions are temporarily restored by `\LWR@restoreorigformatting`.

See section 65.19 for the print-mode versions.

**for HTML output:** 1 `\LWR@ProvidesPackagePass{multirow}`

Remember the print-mode version:

2 `\LetLtxMacro\LWR@origmultirow\multirow`

`\LWR@multirowborder` Set to left or right to create a thick border for the cell, for use by **bigdelim**:

3 `\newcommand{\LWR@multirowborder}{}`

§ 243.1 **Multirow**

`\multirow` [*vpos*] {*numrows*} [*bigstruts*] {*width*} [*fixup*] {*text*}

4 `\RenewDocumentCommand{\multirow}{O{c} m o m o +m}%`  
 5 `{%`  
 6 `\LWR@traceinfo{*** multirow #1 #2 #4}%`  
 7 `\LWR@maybenewtablerow%`  
 8 `\LWR@tabularleftedge%`

Print the start of a new table data cell:

9 `\LWR@htmltag{td rowspan="#2" %`

The vertical alignment, if given:

10 `\IfValueT{#1}{%`  
 11 `\ifstrequal{#1}{b}{style="\LWR@origmbox{vertical-align:bottom}" }{}%`  
 12 `\ifstrequal{#1}{t}{style="\LWR@origmbox{vertical-align:top}" }{}%`  
 13 `}%`

The left/right border, if given:

```
14 \ifdefvoid{\LWR@multirowborder}{-}{%
15 style="\LWR@origmbox{border-\LWR@multirowborder:} 2px dotted black ; %
16 \LWR@origmbox{padding-\LWR@multirowborder:} 2px" %
17 }%
```

A class adds the column spec and the rule:

```
18 class="td%
```

Append this column's spec:

```
19 \StrChar{\LWR@tablecolspec}{\arabic{\LWR@tablecolindex}}%
```

If this column has a cmidrule, add “rule” to the end of the HTML class tag. Also add the vertical bar class.

```
20 \LWR@addcmidruletrim%
21 \LWR@addleftmostbartag%
22 \LWR@printbartag{\arabic{\LWR@tablecolindex}}%
23 "%
```

```
24 \LWR@tdstartstyles%
25 \LWR@addcmidrulewidth%
26 \LWR@addtabularrulecolors%
27 \LWR@tdendstyles%
28 }%
```

The column's < spec:

```
29 \LWR@getexpararray{\LWR@colbeforesexp}{\arabic{\LWR@tablecolindex}}%
```

While printing the text, redefine \ to generate a new line

```
30 \begingroup\LetLtxMacro{\}{\LWR@endoffline}\#6\endgroup%
31 \LWR@stoppars%
32 \global\boolfalse{\LWR@intabularmetadata}%
33 \renewcommand{\LWR@multirowborder}{-}{%
34 \LWR@traceinfo{*** multirow done}%
35 }%
```

### § 243.2 Combined multicolumn and multirow

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

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

The two arguments for `\multicolumn` come first, followed by the five arguments for `\multirow`, many of which are optional, followed by the contents.

- ⚠ **skipped cells** As per `\multirow`, skipped cells to the right of the `\multicolumnrow` statement are not included in the source code on the same line. On the following lines, `\mcolrowcell` must be used for each cell of each column and each row to be skipped:
- ⚠ **empty cells**

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

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

```
\multicolumnrow {<1:cols>}{<2:halign>} [<3:vpos>] {<4:numrows>} [<5:bigstruts>] {<6:width>} [<7:fixup>]
{<8:text>}
```

```
36 \NewDocumentCommand{\multicolumnrow}{m m O{} m O{} m O{} +m}{%
```

Figure out how many extra HTML columns to add for @ and ! columns:

```
37 \LWR@tabularhtmlcolumns{\arabic{LWR@tablecolindex}}{#1}
```

Create the multicolumn/multirow tag:

```
38 \begingroup%
39 \LetLtxMacro{\}\{LWR@endofline}%
40 \LWR@domulticolumn[#3][#4]{#1}{\arabic{LWR@tabhtmlcoltotal}}{#2}{#8}%
41 \endgroup%
```

Move to the next  $\LaTeX$  column:

```
42 \addtocounter{LWR@tablecolindex}{#1}%
43 \addtocounter{LWR@tablecolindex}{-1}%
```

Skip any trailing @ or ! columns for this cell:

```
44 \booltrue{LWR@skipatbang}%
45 }
```

---

```

46 \appto\LWR@restoreorigformatting{%
47 \LetLtxMacro\multirow\LWR@origmultirow%
48 \renewcommand{\multicolumnrow}{\LWR@origmulticolumnrow}%
49 }

```

---

File 155 **lwarp-multitoc.sty**

§ 244 Package **multitoc**

Pkg multitoc **multitoc** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{multitoc}

2 \newcommand{\multicolumntoc}{2}
3 \newcommand{\multicolumnlot}{2}
4 \newcommand{\multicolumnlof}{2}
5 \newcommand*{\immediateaddtocontents}[2]{

```

---

File 156 **lwarp-nameref.sty**

§ 245 Package **nameref**

Pkg nameref **nameref** is emulated by **lwarp**.

**for HTML output:** Discard all options for **lwarp-nameref**:

```

1 \typeout{Using the lwarp html version of package 'nameref', discarding options.}
2 \typeout{ Are not using ProvidesPackage, so that other packages}
3 \typeout{ do not attempt to patch lwarp's version of 'nameref'.}
4 \DeclareOption*{}
5 \ProcessOptions\relax

```

---

File 157 **lwarp-natbib.sty**

§ 246 Package **natbib**

*(Emulates or patches code by PATRICK W. DALY.)*

Pkg natbib **natbib** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{natbib}

```

Replace math  $<$  and  $>$  with `\textless` and `\textgreater`:

A macro to compare:

```
2 \newcommand{\LWRNB@NAT@open}{\textless}
```

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 158 `lwarp-needspace.sty`

§ 247 Package **needspace**

*(Emulates or patches code by PETER WILSON.)*

Pkg `needspace` **needspace** is not used during HTML conversion.

**for HTML output:** Discard all options for `lwarp-needspace`:

```
1 \LWR@ProvidesPackageDrop{needspace}
2
3 \DeclareDocumentCommand{\needspace}{m}{}
4 \DeclareDocumentCommand{\Needspace}{s m}{}

```

---

File 159 `lwarp-newclude.sty`

§ 248 Package **newclude**

Pkg `newclude` Error if `newclude` is loaded after `lwarp`.

Discard all options for `lwarp-newclude`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{newclude}
2 \LWR@loadbefore{newclude}
```

---

File 160 `lwarp-newunicodechar.sty`

§ 249 Package **newunicodechar**

Pkg `newunicodechar` Error if `newunicodechar` is loaded after `lwarp`.

Discard all options for `lwarp-newunicodechar`:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{newunicodechar}
2 \LWR@loadbefore{newunicodechar}
```

---

File 161 `lwarp-nextpage.sty`

§ 250 Package **nextpage**

*(Emulates or patches code by PETER WILSON.)*

Pkg `nextpage` **nextpage** is nullified.

**for HTML output:** Discard all options for `lwarp-nextpage`.

```
1 \LWR@ProvidesPackageDrop{nextpage}

2 \DeclareDocumentCommand{\cleartoevenpage}{o}{}
3 \DeclareDocumentCommand{\movetoevenpage}{o}{}
4 \DeclareDocumentCommand{\cleartooddpage}{o}{}
5 \DeclareDocumentCommand{\movetooddpage}{o}{}

```

File 162 **lwarp-nicefrac.sty**

§ 251 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}

**nicefrac** uses  $\TeX$  boxes, so `\@ensuredmath` must be restored temporarily:

```
2 \LetLtxMacro\LWR@origUnitsNiceFrac\@UnitsNiceFrac
3
4 \DeclareRobustCommand*\@UnitsNiceFrac}[3] [] {%
5 \begingroup%
6 \LetLtxMacro\@ensuredmath\LWR@origensuredmath%
7 \LWR@origUnitsNiceFrac[#1]{#2}{#3}%
8 \endgroup%
9 }
```

File 163 **lwarp-nonfloat.sty**

§ 252 Package **nonfloat**

*(Emulates or patches code by KAI RASCHER.)*

Pkg nonfloat **nonfloat** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nonfloat}

```
2 \LetLtxMacro\topcaption\caption
3 \newcommand{\figcaption}{\def\@capytype{figure}\caption}
4 \newcommand{\tabcaption}{\def\@capytype{table}\topcaption}
5 \newenvironment{narrow}[2]{}{}
```

---

File 164 **lwarp-nonumonpart.sty**

§ 253 Package **nonumonpart**

Pkg nonumonpart **nonumonpart** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nonumonpart}

---

File 165 **lwarp-nopageno.sty**

§ 254 Package **nopageno**

Pkg nopageno **nopageno** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nopageno}

---

File 166 **lwarp-nowidow.sty**

§ 255 Package **nowidow**

*(Emulates or patches code by RAPHAËL PINSON.)*

Pkg nowidow **nowidow** is not used during HTML conversion.

Discard all options for **lwarp-nowidow**:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{nowidow}

|                          |                                      |
|--------------------------|--------------------------------------|
| <code>\nowidow</code>    | <code>[\langle lines \rangle]</code> |
| <code>\setnowidow</code> | <code>[\langle lines \rangle]</code> |
|                          | 2 \newcommand*{\nowidow}[1] [] {}    |
|                          | 3 \newcommand*{\setnowidow}[1] [] {} |
| <code>\noclub</code>     | <code>[\langle lines \rangle]</code> |
| <code>\setnoclub</code>  | <code>[\langle lines \rangle]</code> |
|                          | 4 \newcommand*{\noclub}[1] [] {}     |
|                          | 5 \newcommand*{\setnoclub}[1] [] {}  |

---

File 167 `lwarp-ntheorem.sty`

§ 256 Package **ntheorem**

*(Emulates or patches code by WOLFGANG MAY, ANDREAS SCHEDLER.)*

Pkg ntheorem **ntheorem** is patched for use by **lwarp**.

---

Table 13: Ntheorem package — CSS styling of theorems and proofs

**Theorem:** `<div>` of class `theorembody<theoremstyle>`

**Theorem Header:** `<span>` of class `theoremheader<style>`

where `<theoremstyle>` is `plain`, `break`, etc.

---

### § 256.1 Limitations

△ **Font control** This conversion is not total. Font control is via CSS, and the custom  $\TeX$  font settings are ignored.

△ **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.

### § 256.2 Options

Options `amsthm` or `standard` choose which set of theorems and proofs to initialize.

△ **Disabled options** The options `thmmarks` and `amsmath` are disabled, since they heavily modify the underlying math code. Theorem marks are emulated. The AMS-math modifications are not done.

Option `thref` is disabled because **cleveref** functions are used instead. `\thref` is emulated.

Option `hyperref` is disabled because **lwarp** emulated **hyperref**.

**for HTML output:** Some disabled options:

```
1 \DeclareOption{thref}{-}
2
3
```

```

4 \newbool{LWR@theoremmarks}
5 \boolfalse{LWR@theoremmarks}
6
7 \DeclareOption{thmmarks}{
8 \booltrue{LWR@theoremmarks}
9 \newif\ifsetendmark\setendmarktrue
10 }
11
12
13 \newbool{LWR@theoremamsthm}
14 \boolfalse{LWR@theoremamsthm}
15
16 \DeclareOption{amsthm}{\booltrue{LWR@theoremamsthm}}
17
18
19 \DeclareOption{amsmath}{}
20 \DeclareOption{hyperref}{}
21
22 \LWR@ProvidesPackagePass{theorem}

```

### § 256.3 Remembering the theorem style

Storage for the style being used for new theorems.

```

23 \newcommand{\LWR@newtheoremstyle}{plain}

24 \AtBeginDocument{
25 \@ifpackageloaded{cleveref}{
26 \gdef\@thm#1#2#3{%
27 \if@thmmarks
28 \stepcounter{end\InTheoType ctr}%
29 \fi
30 \renewcommand{\InTheoType}{#1}%
31 \if@thmmarks
32 \stepcounter{curr#1ctr}%
33 \setcounter{end#1ctr}{0}%
34 \fi
35 \refstepcounter[#1]{#2}% <<< cleveref modification
36 \theorem@prework
37 \LWR@forcenewpage% lwarp
38 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
39 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
40 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
41 \ifthm@inframe
42 \thm@topsep\theoreminframepreskipamount
43 \thm@topsepadd\theoreminframepostskipamount
44 \else
45 \thm@topsep\theorempreskipamount
46 \thm@topsepadd\theorempostskipamount

```

```

47 \fi
48 \else% oldframeskips
49 \thm@topsep\theorempreskipamount
50 \thm@topsepadd \theorempostskipamount
51 \ifvmode\advance\thm@topsepadd\partopsep\fi
52 \fi
53 \@topsep\thm@topsep
54 \@topsepadd\thm@topsepadd
55 \advance\linewidth -\theorem@indent
56 \advance\linewidth -\theorem@rightindent
57 \advance\@totalleftmargin \theorem@indent
58 \parshape \@ne \@totalleftmargin \linewidth
59 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
60 }
61 }{% not @ifpackageloaded{cleveref}
62 \gdef\@thm#1#2#3{%
63 \if@thmmarks
64 \stepcounter{end\InTheoType ctr}%
65 \fi
66 \renewcommand{\InTheoType}{#1}%
67 \if@thmmarks
68 \stepcounter{curr#1ctr}%
69 \setcounter{end#1ctr}{0}%
70 \fi
71 \refstepcounter{#2}%
72 \theorem@prework
73 \LWR@forcenewpage% lwarp
74 \BlockClass{theorembody#1}%\LWR@thisthmstyle% lwarp
75 \trivlist % latex's \trivlist, calling latex's \@trivlist unchanged
76 \ifuse@newframeskips % cf. latex.ltx for topsepadd: \@trivlist
77 \ifthm@inframe
78 \thm@topsep\theoreminframepreskipamount
79 \thm@topsepadd\theoreminframepostskipamount
80 \else
81 \thm@topsep\theorempreskipamount
82 \thm@topsepadd\theorempostskipamount
83 \fi
84 \else% oldframeskips
85 \thm@topsep\theorempreskipamount
86 \thm@topsepadd \theorempostskipamount
87 \ifvmode\advance\thm@topsepadd\partopsep\fi
88 \fi
89 \@topsep\thm@topsep
90 \@topsepadd\thm@topsepadd
91 \advance\linewidth -\theorem@indent
92 \advance\linewidth -\theorem@rightindent
93 \advance\@totalleftmargin \theorem@indent
94 \parshape \@ne \@totalleftmargin \linewidth
95 \@ifnextchar[{\@ythm{#1}{#2}{#3}}{\@xthm{#1}{#2}{#3}}
96 }

```

```

97 }
98 }% AtBeginDocument

```

Patched to remember the style being used for new theorems:

```

99 \gdef\theoremstyle#1{%
100 \@ifundefined{th@#1}{\@warning
101 {Unknown theoremstyle '#1'. Using 'plain'}}%
102 \theoremstyle{plain}
103 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
104 }%
105 {
106 \theoremstyle{#1}
107 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
108 }
109 }

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

110
111 \gdef\@xnthm#1#2[#3]{%
112 \ifthm@tempif
113 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
114 \expandafter\@ifundefined{c@#1}%
115 {\@definecounter{#1}}{}%
116 \@newctr{#1}[#3]%
117 \expandafter\xdef\csname the#1\endcsname{%
118 \expandafter\noexpand\csname the#3\endcsname \@thmcountersep
119 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}}%
120 \expandafter\gdef\csname mkheader@#1\endcsname
121 {\csname setparms@#1\endcsname
122 \@thm{#1}{#1}{#2}
123 }%
124 \global\@namedef{end#1}{\@endtheorem}
125 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\csuse{LWR@thmstyle#1}}}% lwarp
126 \fi
127 }
128
129 \gdef\@ynthm#1#2{%
130 \ifthm@tempif
131 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
132 \expandafter\@ifundefined{c@#1}%
133 {\@definecounter{#1}}{}%
134 \expandafter\xdef\csname the#1\endcsname
135 {\noexpand\csname\the\theoremnumbering\endcsname{#1}}%
136 \expandafter\gdef\csname mkheader@#1\endcsname
137 {\csname setparms@#1\endcsname
138 \@thm{#1}{#1}{#2}

```

```

139 }%
140 \global\@namedef{end#1}{\@endtheorem}
141 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\csuse{LWR@thmstyle#1}}}% lwarp
142 \fi
143 }
144
145 \gdef\@othm#1[#2]#3{%
146 \@ifundefined{c@#2}{\@nocounterr{#2}}%
147 {\ifthm@tempif
148 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
149 \global\@namedef{the#1}{\@nameuse{the#2}}%
150 \expandafter\protected@xdef\csname num@addtheoremline#1\endcsname{%
151 \noexpand\@num@addtheoremline{#1}{#3}}%
152 \expandafter\protected@xdef\csname nonum@addtheoremline#1\endcsname{%
153 \noexpand\@nonum@addtheoremline{#1}{#3}}%
154 \theoremkeyword{#3}%
155 \expandafter\protected@xdef\csname #1Keyword\endcsname
156 {\the\theoremkeyword}%
157 \expandafter\gdef\csname mkheader@#1\endcsname
158 {\csname setparms@#1\endcsname
159 \@thm{#1}{#2}{#3}
160 }%
161 \global\@namedef{end#1}{\@endtheorem}
162 \AtBeginEnvironment{#1}{\edef\LWR@thmstyle{\csuse{LWR@thmstyle#1}}}% lwarp
163 \fi}
164 }

```

#### § 256.4 HTML cross-referencing

Mimics a float by incrementing the float counter and generating an HTML anchor. These are used for list-of-theorem cross-references.

```

165 \newcommand{\LWR@inctheorem}{%
166 \addtocounter{LWR@thisautoid}{1}%
167 \LWR@stoppars%
168 \LWR@htmltag{a id="\LWR@origmbox{autoid-\arabic{LWR@thisautoid}}"}\LWR@htmltag{/a}%
169 \LWR@startpars%
170 }

```

#### § 256.5 \newtheoremstyle

The following are patched for css.

These were in individual files thp.sty for plain, thmb.sty for margin break, etc. They are gathered together here.

Each theorem is encased in a BlockClass environment of class theorembody<style>.

Each header is encased in an `\InlineClass` of class `theoremheader<style>`.

```

171 \gdef\newtheoremstyle#1#2#3{%
172 \expandafter\@ifundefined{th@#1}%
173 {\expandafter\gdef\csname th@#1\endcsname{%
174 \def\@begintheorem####1####2{%
175 \LWR@intheorem% lwarp
176 #2}%
177 \def\@opargbegintheorem####1####2####3{%
178 \LWR@intheorem% lwarp
179 #3}%
180 }%
181 }%
182 {\PackageError{\basename}{Theorem style #1 already defined}\@eha}
183 }

```

## § 256.6 Standard styles

```

184 \renewtheoremstyle{plain}%
185 {\item[
186 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
187 {\item[
188 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]}
189
190 \renewtheoremstyle{break}%
191 {\item[
192 \InlineClass{theoremheaderbreak}{##1\ ##2\theorem@separator}\newline
193]}%
194 {\item[
195 \InlineClass{theoremheaderbreak}%
196 {##1\ ##2\ (##3)\theorem@separator}\newline
197]}
198
199 \renewtheoremstyle{change}%
200 {\item[
201 \InlineClass{theoremheaderchange}{##2\ ##1\theorem@separator}]}%
202 {\item[
203 \InlineClass{theoremheaderchange}{##2\ ##1\ (##3)\theorem@separator}]}
204
205 \renewtheoremstyle{changebreak}%
206 {\item[
207 \InlineClass{theoremheaderchangebreak}%
208 {##2\ ##1\theorem@separator}\newline
209]}%
210 {\item[
211 \InlineClass{theoremheaderchangebreak}%
212 {##2\ ##1\ (##3)\theorem@separator}\newline
213]}
214

```

```

215 \renewtheoremstyle{margin}%
216 {\item[
217 \InlineClass{theoremheadermargin}{##2 \quad ##1\theoremseparator}
218]}%
219 {\item[
220 \InlineClass{theoremheadermargin}{##2 \quad ##1\ (##3)\theoremseparator}
221]}
222
223 \renewtheoremstyle{marginbreak}%
224 {\item[
225 \InlineClass{theoremheadermarginbreak}%
226 {##2 \quad ##1\theoremseparator}\newline
227]}%
228 {\item[
229 \InlineClass{theoremheadermarginbreak}%
230 {##2 \quad ##1\ (##3)\theoremseparator}\newline
231]}
232
233 \renewtheoremstyle{nonumberplain}%
234 {\item[
235 \InlineClass{theoremheaderplain}{##1\theoremseparator}]}%
236 {\item[
237 \InlineClass{theoremheaderplain}{##1\ (##3)\theoremseparator}]}
238
239 \renewtheoremstyle{nonumberbreak}%
240 {\item[
241 \InlineClass{theoremheaderbreak}{##1\theoremseparator}\newline
242]}%
243 {\item[
244 \InlineClass{theoremheaderbreak}{##1\ (##3)\theoremseparator}\newline
245]}
246
247 \renewtheoremstyle{empty}%
248 {\item[]}%
249 {\item[
250 \InlineClass{theoremheaderplain}{##3}]}
251
252 \renewtheoremstyle{emptybreak}%
253 {\item[]}%
254 {\item[
255 \InlineClass{theoremheaderplain}{##3} \ \newline}

```

### § 256.7 Additional objects

The following manually adjust the css for the standard configuration objects which are not a purely plain style:

```

256 \ifbool{LWR@theoremamsthm}{-}{%

```

Upright text via CSS:

```

257 \newtheoremstyle{plainupright}%
258 {\item[
259 \InlineClass{theoremheaderplain}{##1\ ##2\theorem@separator}]}%
260 {\item[
261 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3)\theorem@separator}]}

```

Upright text and small caps header via CSS:

```

262 \newtheoremstyle{nonumberplainuprightsc}%
263 {\item[
264 \InlineClass{theoremheadersc}{##1\theorem@separator}]}%
265 {\item[
266 \InlineClass{theoremheadersc}{##1\ (##3)\theorem@separator}]}
267 }% not amsthm

```

## § 256.8 Renewed standard configuration

The following standard configuration is renewed using the new css:

```

268 \ifbool{LWR@theoremamsthm}{-}{%
269 \ifx\thm@usestd\@undefined
270 \else
271 \theoremnumbering{arabic}
272 \theoremstyle{plain}
273 \RequirePackage{latexsym}
274 \theoremsymbol{\Box}
275 \theorembodyfont{\itshape}
276 \theoremheaderfont{\normalfont\bfseries}
277 \theoremseparator{}
278 \renewtheorem{Theorem}{Theorem}
279 \renewtheorem{theorem}{Theorem}
280 \renewtheorem{Satz}{Satz}
281 \renewtheorem{satz}{Satz}
282 \renewtheorem{Proposition}{Proposition}
283 \renewtheorem{proposition}{Proposition}
284 \renewtheorem{Lemma}{Lemma}
285 \renewtheorem{lemma}{Lemma}
286 \renewtheorem{Korollar}{Korollar}
287 \renewtheorem{korollar}{Korollar}
288 \renewtheorem{Corollary}{Corollary}
289 \renewtheorem{corollary}{Corollary}
290
291 \theoremstyle{plainupright}
292 \theorembodyfont{\upshape}
293 \theoremsymbol{\HTMLUnicode{25A1}}% UTF-8 white box
294 \renewtheorem{Example}{Example}

```

```

295 \renewtheorem{example}{Example}
296 \renewtheorem{Beispiel}{Beispiel}
297 \renewtheorem{beispiel}{Beispiel}
298 \renewtheorem{Bemerkung}{Bemerkung}
299 \renewtheorem{bemerkung}{Bemerkung}
300 \renewtheorem{Anmerkung}{Anmerkung}
301 \renewtheorem{anmerkung}{Anmerkung}
302 \renewtheorem{Remark}{Remark}
303 \renewtheorem{remark}{Remark}
304 \renewtheorem{Definition}{Definition}
305 \renewtheorem{definition}{Definition}
306
307 \theoremstyle{nonumberplainuprightsc}
308 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
309 \renewtheorem{Proof}{Proof}
310 \renewtheorem{proof}{Proof}
311 \renewtheorem{Beweis}{Beweis}
312 \renewtheorem{beweis}{Beweis}
313 \qedsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
314
315 \theoremsymbol{}
316 \fi
317 }% not amsthm

```

## § 256.9 amsthm option

Only if the amsthm option was given:

```

318 \ifbool{LWR@theoremamsthm}{
319
320 \gdef\th@plain{%
321 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
322 \def\@begintheorem##1##2{%
323 \LWR@intheorem% lwarp
324 \item[
325 \InlineClass{theoremheaderplain}{##1\ ##2.}
326]}%
327 \def\@opargbegintheorem##1##2##3{%
328 \LWR@intheorem% lwarp
329 \item[
330 \InlineClass{theoremheaderplain}{##1\ ##2\ (##3).}
331]}}
332
333 \gdef\th@nonumberplain{%
334 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
335 \def\@begintheorem##1##2{%
336 \LWR@intheorem% lwarp
337 \item[
338 \InlineClass{theoremheaderplain}{##1.}

```

```

339]}%
340 \def\@opargbegintheorem##1##2##3{%
341 \LWR@intheorem% lwarp
342 \item[
343 \InlineClass{theoremheaderplain}{##1\ (##3).}
344]}]
345
346 \gdef\th@definition{%
347 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
348 \def\@begintheorem##1##2{%
349 \LWR@intheorem% lwarp
350 \item[
351 \InlineClass{theoremheaderdefinition}{##1\ ##2.}
352]}%
353 \def\@opargbegintheorem##1##2##3{%
354 \LWR@intheorem% lwarp
355 \item[
356 \InlineClass{theoremheaderdefinition}{##1\ ##2\ (##3).}
357]}]
358
359 \gdef\th@nonumberdefinition{%
360 \def\theorem@headerfont{\normalfont\bfseries}\normalfont%
361 \def\@begintheorem##1##2{%
362 \LWR@intheorem% lwarp
363 \item[
364 \InlineClass{theoremheaderdefinition}{##1.}
365]}%
366 \def\@opargbegintheorem##1##2##3{%
367 \LWR@intheorem% lwarp
368 \item[
369 \InlineClass{theoremheaderdefinition}{##1\ (##3).}
370]}]
371
372 \gdef\th@remark{%
373 \def\theorem@headerfont{\itshape}\normalfont%
374 \def\@begintheorem##1##2{%
375 \LWR@intheorem% lwarp
376 \item[
377 \InlineClass{theoremheaderremark}{##1\ ##2.}
378]}%
379 \def\@opargbegintheorem##1##2##3{%
380 \LWR@intheorem% lwarp
381 \item[
382 \InlineClass{theoremheaderremark}{##1\ ##2\ (##3).}
383]}]
384
385 \gdef\th@nonumberremark{%
386 \def\theorem@headerfont{\itshape}\normalfont%
387 \def\@begintheorem##1##2{%
388 \LWR@intheorem% lwarp

```

```

389 \item[
390 \InlineClass{theoremheaderremark}{##1.}
391]}%
392 \def\@opargbegintheorem##1##2##3{%
393 \LWR@intheorem% lwarp
394 \item[
395 \InlineClass{theoremheaderremark}{##1\ (##3).}
396]}}
397
398 \gdef\th@proof{%
399 \def\theorem@headerfont{\normalfont\bfseries}\itshape%
400 \def\@begintheorem##1##2{%
401 \LWR@intheorem% lwarp
402 \item[
403 \InlineClass{theoremheaderproof}{##1.}
404]}%
405 \def\@opargbegintheorem##1##2##3{%
406 \LWR@intheorem% lwarp
407 \item[
408 \InlineClass{theoremheaderproof}{##1\ (##3).}
409]}}
410
411
412
413 \newcounter{proof}%
414 \if@thmmarks
415 \newcounter{currproofctr}%
416 \newcounter{endproofctr}%
417 \fi
418
419 \gdef\proofSymbol{\openbox}
420
421 \newcommand{\proofname}{Proof}
422
423 \newenvironment{proof}[1][\proofname]{
424 \th@proof
425 \def\theorem@headerfont{\itshape}%
426 \normalfont
427 \theoremsymbol{\HTMLUnicode{220E}}% UTF-8 end-of-proof
428 \@thm{proof}{proof}{#1}
429 }%
430 {\@endtheorem}
431
432 }{}% amsthm option

```

## § 256.10 **Ending a theorem**

Patched for CSS:

```

433 \let\LWR@origendtheorem\endtheorem
434 \renewcommand{\@endtheorem}{%
435 \ifbool{LWR@theoremmarks}{%
436 \ifsetendmark%
437 \InlineClass{theoremendmark}{\csname\InTheoType Symbol\endcsname}%
438 \setendmarkfalse%
439 \fi%
440 }{}%
441 \LWR@origendtheorem% also does \@endtrivlist
442 \ifbool{LWR@theoremmarks}{\global\setendmarktrue}{}%
443 \endBlockClass%
444 }

```

## § 256.11 **\NoEndMark**

```

445 \gdef\NoEndMark{\global\setendmarkfalse}

```

## § 256.12 **List-of**

Redefined to reuse the float mechanism to add list-of-theorem links:

```

\thm@thmline {<1: printed type>} {<2: #>} {<3: optional>} {<4: page>}

```

```

446 \renewcommand{\thm@thmline@noname}[4]{%
447 \hypertocfloat{1}{theorem}{thm}{#2 #3}{}%
448 }
449
450 \renewcommand{\thm@thmline@name}[4]{%
451 \hypertocfloat{1}{theorem}{thm}{#1 #2 #3}{}%
452 }

```

This was redefined by **ntheorem** when loaded, so it is now redefined for **lwarp**:

```

453 \def\thm@thmline{\thm@thmline@name}

```

Patch for CSS:

```

454 \def\listtheorems#1{
455 \LWR@htmlclass{nav}{lothm}%
456 \begingroup
457 \c@tocdepth=-2%
458 \def\thm@list{#1}\thm@processlist
459 \endgroup
460 \LWR@htmlclassend{nav}{lothm}%
461 }

```

### § 256.13 Symbols

Proof QED symbol:

```
462 \newcommand{\qed}{\quad\the\qedsymbol}
463
464 \AtBeginDocument{
465 \def\openbox{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
466 \def\blacksquare{\text{\HTMLUnicode{220E}}}% UTF-8 end-of-proof
467 \def\Box{\text{\HTMLUnicode{25A1}}}% UTF-8 white box
468 }
```

### § 256.14 Cross-referencing

`\thref {<label>}`

```
469 \newcommand*{\thref}[1]{\cref{#1}}
```

---

### File 168 lwarp-overpic.sty

## § 257 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 [77.2](#) for the print-mode version of `\overpicfontsize` and `\overpicfontskip`.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{overpic}
2 \newcommand*{\overpicfontsize}{12}
3 \newcommand*{\overpicfontskip}{14}
4
5 \BeforeBeginEnvironment{overpic}{%
6 \begin{lateximage}%
7 \fontsize{\overpicfontsize}{\overpicfontskip}%
8 \selectfont%
9 }
10
11 \AfterEndEnvironment{overpic}{\end{lateximage}}
12
13 \BeforeBeginEnvironment{Overpic}{%
```

---

```

14 \begin{lateximage}%
15 \fontsize{\overpicfontsize}{\overpicfontskip}%
16 \selectfont%
17 }
18
19 \AfterEndEnvironment{Overpic}{\end{lateximage}}

```

---

File 169 **lwarp-pagegrid.sty**

§ 258 Package **pagegrid**

Pkg pagegrid **pagegrid** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagegrid}
2 \newcommand*{\pagegridsetup}[1]{ }

```

---

File 170 **lwarp-pagenote.sty**

§ 259 Package **pagenote**

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

**for HTML output:**

```

1 \DeclareOption{page}{}
2 \LWR@ProvidesPackagePass{pagenote}

```

---

File 171 **lwarp-pagesel.sty**

§ 260 Package **pagesel**

Pkg pagesel **pagesel** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{pagesel}

```

---

File 172 **lwarp-paralist.sty**

§ 261 Package **paralist**

*(Emulates or patches code by BERND SCHANDL.)*

Pkg paralist **paralist** is supported with minor changes.

for HTML output: 1 \LWR@ProvidesPackagePass{paralist}

The compact environments are identical to the regular ones:

```
2 \AtBeginEnvironment{compactitem}{\LWR@itemizestart}
3 \AtBeginEnvironment{compactenum}{\LWR@enumeratestart}
4 \AtBeginEnvironment{compactdesc}{\LWR@descriptionstart}
5 \AtEndEnvironment{compactitem}{\LWR@listend}
6 \AtEndEnvironment{compactenum}{\LWR@listend}
7 \AtEndEnvironment{compactdesc}{\LWR@listend}
```

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 173 **lwarp-parskip.sty**

§ 262 Package **parskip**

Pkg parskip **parskip** is ignored.

for HTML output: Discard all options for **lwarp-parskip**.

```
1 \LWR@ProvidesPackageDrop{parskip}
```

---

File 174 **lwarp-pbox.sty**

§ 263 Package **pbox**

*(Emulates or patches code by SIMON LAW.)*

Pkg pbox **pbox** is emulated.

for HTML output: 1 \LWR@ProvidesPackageDrop{pbox}

```
2 \NewDocumentCommand{\pbox}{0{t} o 0{t} m +m}{%
```

---

```

3 \booltrue{LWR@minipagefullwidth}%
4 \parbox[#1] [#2] [#3] {#4} {#5}%
5 }
6
7 \newcommand{\settominwidth}[3] [\columnwidth] {%
8 \settowidth{#2}{#3}%
9 }
10
11 \newcommand{\widthofpbox}[1] {%
12 \widthof{#1}%
13 }

```

---

File 175 **lwarp-pdfscape.sty**

§ 264 Package **pdfscape**

Pkg pdfscape **pdfscape** is ignored.

**for HTML output:** Discard all options for **lwarp-pdfscape**:

```
1 \LWR@ProvidesPackageDrop{pdfscape}
```

---

File 176 **lwarp-pdfrender.sty**

§ 265 Package **pdfrender**

Pkg pdfrender **pdfrender** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pdfrender}

```
2 \newcommand*{\pdfrender}[1] {}
3 \newcommand{\textpdfrender}[2] {#2}
```

---

File 177 **lwarp-pdfsync.sty**

§ 266 Package **pdfsync**

*(Emulates or patches code by J. LAURENS.)*

Pkg pdfsync Emulated.

**for HTML output:** Discard all options for **lwarp-pdftsync**:

```
1 \LWR@ProvidesPackageDrop{pdftsync}
2 \newcommand*{\pdftsync}{}
3 \newcommand*{\pdftsyncstart}{}
4 \newcommand*{\pdftsyncstop}{}

```

---

File 178 **lwarp-pfnote.sty**

§ 267 Package **pfnote**

Pkg pfnote **pfnote** is emulated.

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

**for HTML output:** 1 \LWR@ProvidesPackageDrop{pfnote}

---

File 179 **lwarp-phfqit.sty**

§ 268 Package **phfqit**

*(Emulates or patches code by PHILIPPE FAIST.)*

Pkg phfqit **phfqit** is patched for use by **lwarp**.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{phfqit}
2 \LetLtxMacro\LWR@origbitstring\bitstring
3
4 \renewcommand\bitstring[1]{%
5 \InlineClass[%
6 text-decoration: overline underline ;
7]{bitstring}{#1}%
8 % \phfqit@bitstring{#1}%
9 }
10
11 \appto\LWR@restoreorigformatting{%
12 \LetLtxMacro\bitstring\LWR@origbitstring%
13 }

```

---

File 180 **lwarp-placeins.sty**

§ 269 Package **placeins**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg placeins **placeins** is not used during HTML conversion.

Discard all options for **lwarp-placeins**:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{placeins}
2 \newcommand*{\FloatBarrier}{}

```

---

File 181 **lwarp-prelim2e.sty**

§ 270 Package **prelim2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg prelim2e Emulated.

**for HTML output:** Discard all options for **lwarp-prelim2e**:

```
1 \LWR@ProvidesPackageDrop{prelim2e}
2 \newcommand{\PrelimText}{}
3 \newcommand{\PrelimTextStyle}{}
4 \newcommand{\PrelimWords}{}

```

---

File 182 **lwarp-prettyref.sty**

§ 271 Package **prettyref**

*(Emulates or patches code by KEVIN S. RULAND.)*

Pkg prettyref **prettyref** is patched for use by **lwarp**.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{prettyref}

```

---

```
2 \newreformat{fig}{Figure \ref{#1}}
3 \newreformat{tab}{Table \ref{#1}}
```

---

File 183 **lwarp-preview.sty**

§ 272 Package **preview**

Pkg preview **preview** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{preview}

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 184 **lwarp-quotchap.sty**

§ 273 Package **quotchap**

*(Emulates or patches code by KARSTEN TINNEFELD, JAN KLEVER.)*

Pkg quotchap **quotchap** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{quotchap}

2 \newcommand{\@quotchap}{}
3 \newlength{\LWR@quotchapwidth}
4
5 \let\@printcites\relax
6
7 \newcommand*{\@iprintcites}{%
```

Place the quotes inside a <div> of class quotchap, of the maximum selected width:

```
8 \begin{BlockClass}[max-width: \LWR@printlength{\LWR@quotchapwidth}]{quotchap}
9 %\begin{minipage}{\LWR@quotchapwidth}
10 \@quotchap
11 %\end{minipage}
12 \end{BlockClass}
```

Deactivate the quote printing:

```
13 \global\let\@printcites\relax
14 }
15
16 \NewEnviron{savequote}[1][\linewidth]{%
```

Remember the width, adjusted for HTML, and make the length assignment global, per:

<https://tex.stackexchange.com/questions/300823/why-is-setlength-ineffective-inside-a-tabular-environment>

```
17 \setlength{\LWR@quotchapwidth}{#1*2}%
18 \global\LWR@quotchapwidth=\LWR@quotchapwidth%
```

Remember the body, and activate the quote printing:

```
19 \global\let\@quotchap\BODY
20 \global\let\@printcites\@iprintcites%
21 }
```

The quotation author is placed inside a <div> of class qauthor:

```
22 \newcommand{\qauthor}[1]{\begin{BlockClass}{qauthor}{#1}\end{BlockClass}}
```

\qsetcnfont is ignored:

```
23 \newcommand{\qsetcnfont}[1]{}
```

---

File 185 **lwarp-ragged2e.sty**

§ 274 Package **ragged2e**

*(Emulates or patches code by MARTIN SCHRÖDER.)*

Pkg ragged2e **ragged2e** is not used during HTML conversion.

Discard all options for **lwarp-ragged2e**:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{ragged2e}

2 \newcommand*\Centering{\centering}
3 \newcommand*\RaggedLeft{\raggedleft}
4 \newcommand*\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 186 **lwarp-realscripts.sty**

§ 275 Package **realscripts**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg realscripts **realscripts** is emulated. See `lwarp.css` for the `<span>` of class `supsubscript`.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{realscripts}

2 \let\realsuperscript\textsuperscript
3 \let\realsubscript\textsubscript
4
5 \let\fakesuperscript\textsuperscript
6 \let\fakesubscript\textsubscript
7
8 \newlength{\subsupersep}
9
10 \newcommand*{\LWR@realscriptsalign}{}
11
12 \newcommand*{\LWR@setrealscriptsalign}[1]{%
13 \renewcommand*{\LWR@realscriptsalign}{}%
14 \ifthenelse{\equal{#1}{c}}{\renewcommand{\LWR@realscriptsalign}{\LWR@origmbox{text-align:center}}
15 \ifthenelse{\equal{#1}{r}}{\renewcommand{\LWR@realscriptsalign}{\LWR@origmbox{text-align:right}}
16 }
17
18 \DeclareDocumentCommand \textsubsuperscript {s 0{1} mm} {%
19 \LWR@setrealscriptsalign{#2}%
20 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%

```

---

```

21 #4\textsubscript{#3}%
22 }%
23 }
24
25 \DeclareDocumentCommand \textsupersubscript {s O{1} mm} {%
26 \LWR@setrealscriptsalign{#2}%
27 \InlineClass[\LWR@realscriptsalign]{supsubscript}{%
28 \textsubscript{#4}#3%
29 }%
30 }

```

---

File 187 **lwarp-reysize.sty**

§ 276 Package **reysize**

*(Emulates or patches code by DONALD ARSENEAU, BERNIE COSELL, MATT SWIFT.)*

Pkg **reysize** **reysize** is patched for use by **lwarp**.

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

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

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

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

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{reysize}

2 \let\LWR@origreysize\reysize
3 \LetLtxMacro\LWR@origlarger\larger
4 \LetLtxMacro\LWR@origsmaller\smaller
5 \let\LWR@relscale\relscale
6 \LetLtxMacro\LWR@origtextlarger\textlarger
7 \LetLtxMacro\LWR@origtextsmaller\textsmaller
8 \let\LWR@textscale\textscale
9
10 \appto\LWR@restoreorigformatting{%
11 \let\reysize\LWR@origreysize%
12 \LetLtxMacro\larger\LWR@origlarger%
13 \LetLtxMacro\smaller\LWR@origsmaller%
14 \let\relscale\LWR@relscale%
15 \LetLtxMacro\textlarger\LWR@origtextlarger%
16 \LetLtxMacro\textsmaller\LWR@origtextsmaller%

```

---

```

17 \let\textscale\LWR@textscale%
18 }
19
20 \newcounter{LWR@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 }

```

---

File 188 **lwarp-resizegather.sty**

§ 277 Package **resizegather**

Pkg `resizegather` **resizegather** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{resizegather}

2 \newcommand*\resizegathersetup}[1]{%

```

---

File 189 **lwarp-romanbar.sty**

§ 278 Package **romanbar**

*(Emulates or patches code by H.-MARTIN MÜNCH.)*

Pkg `romanbar` **romanbar** is patched for use by **lwarp**.

An inline class with an overline and underline is used.

---

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{romanbar}

2 \DeclareRobustCommand{\Roman@bar}[1]{% #1 is in Roman, i.e. MMXII
3 \InlineClass[%
4 text-decoration: overline underline ;
5]{romanbar}{#1}%
6 }
```

---

File 190 **lwarp-romanbarpagenumber.sty**

§ 279 Package **romanbarpagenumber**

Pkg romanbarpagenumber **romanbarpagenumber** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{romanbarpagenumber}
```

---

File 191 **lwarp-rotating.sty**

§ 280 Package **rotating**

*(Emulates or patches code by ROBIN FAIRBAIRNS, SEBASTIAN RAHTZ, LEONOR BARROCA.)*

Pkg rotating **rotating** is emulated.

All rotations are ignored in HTML output.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{rotating}

2 \LetLtxMacro\sidewaystable\table
3 \let\endsidewaystable\endtable
4
5 \LetLtxMacro\sidewaysfigure\figure
6 \let\endsidewaysfigure\endfigure
7
8 \newenvironment*{sideways}{}{}
9 \newenvironment*{turn}[1]{}{}
10 \newenvironment*{rotate}[1]{}{}
11 \NewDocumentCommand{\turnbox}{m +m}{#2}
12 \let\rotcaption\caption
13 \let\@makerotcaption\@makecaption
```

---

File 192 **lwarp-rotfloat.sty**

§ 281 Package **rotfloat**

(Emulates or patches code by AXEL SOMMERFELDT.)

Pkg rotfloat **rotfloat** is emulated.

for HTML output:

```

1 \LWR@ProvidesPackageDrop{rotfloat}
2
3 \RequirePackage{float}

```

`\newfloat`  $\langle 1: type \rangle \langle 2: placement \rangle \langle 3: ext \rangle [\langle 4: within \rangle]$

Emulates the `\newfloat` command from the **float** package. Sideways floats are `\let` to the same as regular floats.

“placement” is ignored.

```

4 \RenewDocumentCommand{\newfloat}{m m m o}{%
5 \IfValueTF{#4}{%
6 {%
7 \DeclareFloatingEnvironment[fileext=#3,within=#4]{#1}%
8 }%
9 {%
10 \DeclareFloatingEnvironment[fileext=#3]{#1}%

11 \DeclareFloatingEnvironment[fileext=#3]{sideways#1}%
12 }%
13 \csletcs{sideways#1}{#1}%
14 \csletcs{endsideways#1}{end#1}%

```

**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.

```

15 \cslet{listof#1s}\relax%
16 \cslet{listof#1es}\relax%
17 }

```

---

File 193 **lwarp-savetrees.sty**

§ 282 Package **savetrees**

Pkg savetrees Emulated.

**for HTML output:** Discard all options for **lwarp-savetrees**:

```
1 \LWR@ProvidesPackageDrop{savetrees}
```

---

File 194 **lwarp-scalefnt.sty**

§ 283 Package **scalefnt**

*(Emulates or patches code by D. CARLISLE.)*

Pkg scalefnt **scalefnt** is ignored.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{scalefnt}
2 \DeclareRobustCommand\scalefont[1]{}

```

---

File 195 **lwarp-schemata.sty**

§ 284 Package **schemata**

*(Emulates or patches code by CHARLES P. SCHAUM.)*

Pkg schemata **schemata** is patched for use by **lwarp**.

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{schemata}
2 \LetLtxMacro\LWR@schemata@origschema\schemata
3 \LetLtxMacro\LWR@schemata@origSchema\Schema
4
5 \renewcommand{\schemata}[3][open]{%
6 \begin{lateximage}%
7 \LWR@orignormalsize
8 \LWR@schemata@origschema[#1]{#2}{#3}%
9 \end{lateximage}%

```

```

10 }
11
12 \renewcommand{\Schema}[5][open]{%
13 \begin{lateximage}%
14 \LWR@orignormalsize
15 \LWR@schemata@origSchema[#1]{#2}{#3}{#4}{#5}%
16 \end{lateximage}%
17 }

```

---

File 196 **lwarp-scrextend.sty**

§ 285 Package **scrextend**

Pkg **scrextend** **scrextend** is emulated.

This package may be loaded standalone, but is also loaded automatically if **koma-script** classes are in use. `\DeclareDocumentCommand` is used to overwrite the **koma-script** definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{scrextend}

2 \DeclareDocumentCommand{\setkomafont}{m m}{}
3 \DeclareDocumentCommand{\addkomafont}{m m}{}
4 \DeclareDocumentCommand{\usekomafont}{m}{}
5
6 \DeclareDocumentCommand{\usefontofkomafont}{m}{}
7 \DeclareDocumentCommand{\useencodingofkomafont}{m}{}
8 \DeclareDocumentCommand{\usesizeofkomafont}{m}{}
9 \DeclareDocumentCommand{\usefamilyofkomafont}{m}{}
10 \DeclareDocumentCommand{\useseriesofkomafont}{m}{}
11 \DeclareDocumentCommand{\useshapeofkomafont}{m}{}
12
13 \AtBeginDocument{
14 \let\LWR@maketitle\maketitle
15 \DeclareDocumentCommand{\maketitle}{o}{\LWR@maketitle}
16 }
17
18 \DeclareDocumentCommand{\extratitle}{m}{}
19 \DeclareDocumentCommand{\titlehead}{m}{}
20 \DeclareDocumentCommand{\subject}{m}{}
21 \DeclareDocumentCommand{\publishers}{m}{\published{#1}}
22 \DeclareDocumentCommand{\uppertitleback}{m}{}
23 \DeclareDocumentCommand{\lowertitleback}{m}{}
24 \DeclareDocumentCommand{\dedication}{m}{}
25
26 \DeclareDocumentCommand{\ifthispageodd}{m m}{#1}
27

```

```

28 \DeclareDocumentCommand{\titlepagestyle}{-}{-}
29
30 \DeclareDocumentCommand{\cleardoublepageusingstyle}{m}{-}
31 \DeclareDocumentCommand{\cleardoubleemptypage}{-}{-}
32 \DeclareDocumentCommand{\cleardoubleplainpage}{-}{-}
33 \DeclareDocumentCommand{\cleardoublestandardpage}{-}{-}
34 \DeclareDocumentCommand{\cleardoubleoddpaper}{-}{-}
35 \DeclareDocumentCommand{\cleardoubleoddpaperusingstyle}{m}{-}
36 \DeclareDocumentCommand{\cleardoubleoddpaperemptypage}{-}{-}
37 \DeclareDocumentCommand{\cleardoubleoddpaperplainpage}{-}{-}
38 \DeclareDocumentCommand{\cleardoubleoddpaperstandardpage}{-}{-}
39 \DeclareDocumentCommand{\cleardoubleevenpage}{-}{-}
40 \DeclareDocumentCommand{\cleardoubleevenpageusingstyle}{m}{-}
41 \DeclareDocumentCommand{\cleardoubleevenemptypage}{-}{-}
42 \DeclareDocumentCommand{\cleardoubleevenplainpage}{-}{-}
43 \DeclareDocumentCommand{\cleardoubleevenstandardpage}{-}{-}
44
45 \DeclareDocumentCommand{\multiplefootnoteseparator}{-}{-%
46 \begingroup\let\thefootnotemark\multfootsep\@makefnmark\endgroup
47 }
48
49 \DeclareDocumentCommand{\multfootsep}{-}{,}
50
51 \DeclareDocumentCommand{\footref}{m}{-%
52 \begingroup
53 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
54 \endgroup
55 \@footnotemark
56 }
57
58 \DeclareDocumentCommand{\deffootnote}{o m m}{-}
59 \DeclareDocumentCommand{\deffootnotemark}{m}{-}
60 \DeclareDocumentCommand{\setfootnoterule}{o m}{-}
61 \DeclareDocumentCommand{\raggedfootnote}{-}{-}
62
63 \DeclareDocumentCommand{\dictum}{o m}{
64 \begin{LWR@BlockClassWP}{\LWR@origmbox{text-align:right}}{-}{dictum}
65 #2
66 \IfValueT{#1}
67 {
68 \ifbool{FormatWP}
69 {\begin{BlockClass}[\LWR@origmbox{border-top:} 1px solid gray]{dictumauthor}}
70 {\begin{BlockClass}{dictumauthor}}
71 \dictumauthorformat{#1}
72 \end{BlockClass}
73 }
74 \end{LWR@BlockClassWP}
75 }
76
77 \DeclareDocumentCommand{\dictumwidth}{-}{-}

```

```

78 \DeclareDocumentCommand{\dictumauthorformat}{m}{(#1)}
79 \DeclareDocumentCommand{\dictumrule}{}{}
80 \DeclareDocumentCommand{\raggeddictum}{}{}
81 \DeclareDocumentCommand{\raggeddictumtext}{}{}
82 \DeclareDocumentCommand{\raggeddictumauthor}{}{}
83
84 \DeclareDocumentEnvironment{labeling}{o m}
85 {%
86 \def\sc@septext{#1}%
87 \list{}{}%
88 \let\makelabel\labelinglabel%
89 }
90 {
91 \endlist
92 }
93
94 \DeclareDocumentCommand{\labelinglabel}{m}{%
95 #1 \quad \sc@septext%
96 }
97
98 \let\addmargin\relax
99 \let\endaddmargin\relax
100 \cslet{addmargin*}{\relax}
101 \cslet{endaddmargin*}{\relax}
102
103 \NewDocumentEnvironment{addmargin}{s O{} m}
104 {
105 \setlength{\LWR@templengthtwo}{#3}
106 \ifblank{#2}
107 {
108 \begin{BlockClass}[
109 \LWR@origmbox{margin-left:\LWR@printlength{\LWR@templengthtwo}} ;
110 \LWR@origmbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
111]{addmargin}
112 }
113 {
114 \setlength{\LWR@templengthone}{#2}
115 \begin{BlockClass}[
116 \LWR@origmbox{margin-left:\LWR@printlength{\LWR@templengthone}} ;
117 \LWR@origmbox{margin-right:\LWR@printlength{\LWR@templengthtwo}}
118]{addmargin}
119 }
120 }
121 {\end{BlockClass}}

```

Ref to create a starred environment:

<https://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment>

```

122
123 \ExplSyntaxOn
124 \cs_new:cpn {addmargin*} {\addmargin*}
125 \cs_new_eq:cN {endaddmargin*} \endaddmargin
126 \ExplSyntaxOff
127
128 \DeclareDocumentCommand{\marginline}{m}{\marginpar{#1}}

```

---

File 197 **lwarp-scrhack.sty**

§ 286 Package **scrhack**

Pkg scrhack **scrhack** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{scrhack}

---

File 198 **lwarp-sclayer.sty**

§ 287 Package **sclayer**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer **sclayer** is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sclayer}

```

2 \newcommand*{\DeclareSectionNumberDepth}[2]{}
3 \newcommand*{\DeclareLayer}[2] [] {}
4 \newcommand*{\DeclareNewLayer}[2] [] {}
5 \newcommand*{\ProvideLayer}[2] [] {}
6 \newcommand*{\RedeclareLayer}[2] [] {}
7 \newcommand*{\ModifyLayer}[2] [] {}
8 \newcommand*{\layerhalign}{}
9 \newcommand*{\layer valign}{}
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 \DeclareDocumentCommand\GenericMarkFormat}{}{}
58 \newcommand*\@mkleft}[1]{}
59 \newcommand*\@mkright}[1]{}
60 \newcommand*\@mkdouble}[1]{}
61 \newcommand*\@mkboth}[2]{}
62 \newcommand*\sclayerInitInterface}[1] [] {}
63 \newcommand*\sclayerAddToInterface}[3] [] {}
64 \newcommand*\sclayerAddCsToInterface}[3] [] {}
65 \newcommand*\sclayerOnAutoRemoveInterface}[2] [] {}
```

---

File 199 **lwarp-sclayer-notecolumn.sty**

§ 288 Package **sclayer-notecolumn**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-notecolumn **sclayer-notecolumn** is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{sclayer-notecolumn}

2 \newcommand*{\DeclareNoteColumn}[2] [] {}
3 \newcommand*{\DeclareNewNoteColumn}[2] [] {}
4 \newcommand*{\ProvideNoteColumn}[2] [] {}
5 \newcommand*{\RedeclareNoteColumn}[2] [] {}
6 \NewDocumentCommand{\makenote}{s o m}{\marginpar{#3}}
7 \newcommand*{\syncwithnotecolumn}[1] [] {}
8 \newcommand*{\syncwithnotecolumns}[1] [] {}
9 \newcommand*{\clearnotecolumn}[1] [] {}
10 \newcommand*{\clearnotecolumns}[1] [] {}

```

---

File 200 **lwarp-sclayer-scrpage.sty**

§ 289 Package **sclayer-scrpage**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg sclayer-scrpage **sclayer-scrpage** is emulated.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{sclayer-scrpage}

2 \@ifundefined{footheight}{\newlength{footheight}}{}
3 \NewDocumentCommand{\lehead}{s o m}{}
4 \NewDocumentCommand{\cehead}{s o m}{}
5 \NewDocumentCommand{\rehead}{s o m}{}
6 \NewDocumentCommand{\lohead}{s o m}{}
7 \NewDocumentCommand{\cohead}{s o m}{}
8 \NewDocumentCommand{\rohead}{s o m}{}
9 \NewDocumentCommand{\lefoot}{s o m}{}
10 \NewDocumentCommand{\cefoot}{s o m}{}

```

---

```

11 \NewDocumentCommand{\refoot}{s o m}{}
12 \NewDocumentCommand{\lofoot}{s o m}{}
13 \NewDocumentCommand{\cofoot}{s o m}{}
14 \NewDocumentCommand{\rofoot}{s o m}{}
15 \NewDocumentCommand{\ohead}{s o m}{}
16 \NewDocumentCommand{\chead}{s o m}{}
17 \NewDocumentCommand{\ihead}{s o m}{}
18 \NewDocumentCommand{\ofoot}{s o m}{}
19 \NewDocumentCommand{\cfoot}{s o m}{}
20 \NewDocumentCommand{\ifoot}{s o m}{}
21 \DeclareDocumentCommand{\automark}{s o m}{}
22 \DeclareDocumentCommand{\manualmark}{}{}
23 \DeclareDocumentCommand{\MakeMarkcase}{m}{#1}
24 \DeclareDocumentCommand{\GenericMarkFormat}{}{}
25 \newcommand*{\defpairofpagestyles}[3] [] {}
26 \newcommand*{\newpairofpagestyles}[3] [] {}
27 \newcommand*{\renewpairofpagestyles}[3] [] {}
28 \newcommand*{\providepairofpagestyles}[3] [] {}
29 \newcommand*{\clearmainofpairofpagestyles}
30 \newcommand*{\clearplainofpairofpagestyles}
31 \newcommand*{\clearpairofpagestyles}
32 \NewDocumentCommand{\deftriplepagestyle}{m o o m m m m m m}{}
33 \NewDocumentCommand{\newtriplepagestyle}{m o o m m m m m m}{}
34 \NewDocumentCommand{\renewtriplepagestyle}{m o o m m m m m m}{}
35 \NewDocumentCommand{\providetruplepagestyle}{m o o m m m m m m}{}
36 \newcommand*{\defpagestyle}[3] {}
37 \newcommand*{\newpagestyle}[3] {}
38 \newcommand*{\providepagestyle}[3] {}
39 \newcommand*{\renewpagestyle}[3] {}

```

---

File 201 **lwarp-section.sty**

§ 290 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\hdsi{\huge}\else
4 \def\chsize{\huge}\def\hdsi{\Huge}
5 \fi
6 \let\ttsi\LARGE
7 \let\ausi\large
8 \let\dasizelarge

```

---

```

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 202 **lwarp-sectionbreak.sty**

§ 291 Package **sectionbreak**

*(Emulates or patches code by MICHAL HOFTICH.)*

Pkg sectionbreak **sectionbreak** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{sectionbreak}
2 \renewcommand\asterism{\HTMLUnicode{2042}}
3
4 \renewcommand\pre@sectionbreak{}
5 \renewcommand\post@sectionbreak{}
6
7 \renewcommand\print@sectionbreak[1]{%
8 \begin{center}
9 #1
10 \end{center}
11 }
12

```

---

File 203 **lwarp-sectsty.sty**

§ 292 Package **sectsty**

*(Emulates or patches code by ROWLAND McDONNELL.)*

Pkg sectsty **sectsty** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{sectsty}

```

2 \newcommand*{\partfont} [1] {}
3 \newcommand*{\partnumberfont} [1] {}
4 \newcommand*{\parttitlefont} [1] {}
5 \newcommand*{\chapterfont} [1] {}
6 \newcommand*{\chapternumberfont} [1] {}
7 \newcommand*{\chaptertitlefont} [1] {}
8 \newcommand*{\sectionfont} [1] {}
9 \newcommand*{\subsectionfont} [1] {}
10 \newcommand*{\subsubsectionfont} [1] {}
11 \newcommand*{\paragraphfont} [1] {}
12 \newcommand*{\subparagraphfont} [1] {}
13 \newcommand*{\minisecfont} [1] {}
14 \newcommand*{\allsectionsfont}[1] {}
15 \newcommand{\nohang}{}

```

\sectionrule is only to be used in \*font commands, thus it is ignored.

```

16 \newcommand*{\sectionrule}[5]{}
17
18 \def\ulemheading#1#2{}

```

---

File 204 **lwarp-setspace.sty**

§ 293 Package **setspace**

*(Emulates or patches code by ROBIN FAIRBAIRNS.)*

Pkg setspace **setspace** is not used during HTML conversion.

Discard all options for **lwarp-setspace**:

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{setSPACE}
2
3 \newcommand*{\setstretch}[1]{}
4 \newcommand*{\SetSingleSpace}[1]{}
5 \newcommand*{\singleSpacing}{}
6 \newcommand*{\onehalfSpacing}{}
7 \newcommand*{\doubleSpacing}{}
8
9 \newenvironment*{singleSpace}
10 {
11 \LWR@forcenewpage
12 \BlockClass{singleSpace}
13 }
14 {\endBlockClass}
15
16 \newenvironment*{singleSpace*}
17 {
18 \LWR@forcenewpage
19 \BlockClass{singleSpace}
20 }
21 {\endBlockClass}
22
23 \newenvironment*{spacing}[1]{
24
25 }{
26
27 }
28
29 \newenvironment*{onehalfSpace}
30 {
31 \LWR@forcenewpage
32 \BlockClass{onehalfSpace}
33 }
34 {\endBlockClass}
35
36 \newenvironment*{doubleSpace}
37 {
38 \LWR@forcenewpage
39 \BlockClass{doubleSpace}
40 }
41 {\endBlockClass}
```

---

File 205 **lwarp-shadow.sty**

§ 294 Package **shadow**

*(Emulates or patches code by MAURO ORLANDINI.)*

Pkg shadow **shadow** is emulated.

**for HTML output:** Discard all options for **lwarp-shadow**:

```
1 \LWR@ProvidesPackageDrop{shadow}

2 \newdimen\sboxsep
3 \newdimen\sboxrule
4 \newdimen\sdim
5
6 \newcommand{\shabox}[1]{%
7 \InlineClass{shabox}{#1}%
8 }
```

---

File 206 **lwarp-showidx.sty**

§ 295 Package **showidx**

Pkg showidx **showidx** is ignored.

**for HTML output:** Discard all options for **lwarp-showidx**:

```
1 \LWR@ProvidesPackageDrop{showidx}
```

---

File 207 **lwarp-showkeys.sty**

§ 296 Package **showkeys**

*(Emulates or patches code by DAVID CARLISLE, MORTEN HØGHOLM.)*

Pkg showkeys **showkeys** is ignored.

**for HTML output:** Discard all options for **lwarp-showkeys**:

```
1 \LWR@ProvidesPackageDrop{showkeys}

2 \NewDocumentCommand{\showkeys}{s}{}
```

---

File 208 **lwarp-sidecap.sty**

§ 297 Package **sidecap**

*(Emulates or patches code by ROLF NIEPRASCHK, HUBERT GÄSSLEIN.)*

Pkg `sidecap` **sidecap** is emulated.

for HTML output: Discard all options for **lwarp-sidecap**.

```
1 \LWR@ProvidesPackageDrop{sidecap}
```

See:

<http://tex.stackexchange.com/questions/45401/use-the-s-star-argument-with-newdocumentenvironment> regarding the creation of starred environments with **xparse**.

```
2 \NewDocumentEnvironment{SCtable}{soo}
3 {\IfValueTF{#3}{\table[#3]}\table}}
4 {\endtable}
5
6 \ExplSyntaxOn
7 \cs_new:cpn {SCtable*} {\SCtable*}
8 \cs_new_eq:cN {endSCtable*} \endSCtable
9 \ExplSyntaxOff
10
11
12 \NewDocumentEnvironment{SCfigure}{soo}
13 {\IfValueTF{#3}{\figure[#3]}\figure}}
14 {\endfigure}
15
16 \ExplSyntaxOn
17 \cs_new:cpn {SCfigure*} {\SCfigure*}
18 \cs_new_eq:cN {endSCfigure*} \endSCfigure
19 \ExplSyntaxOff
20
21
22 \newenvironment*{wide}{}{}
```

---

File 209 **lwarp-sidenotes.sty**

§ 298 Package **sidenotes**

*(Emulates or patches code by ANDY THOMAS, OLIVER SCHEBAUM.)*

Pkg `sidenotes` Patched for **lwarp**.

for HTML output: Load the original package:

```
1 \LWR@ProvidesPackagePass{sidenotes}
```

The following patch **sidenotes** for use with **lwarp**:

```

\sidecaption * [<entry>] [<offset>] {<text>}

2 \RenewDocumentCommand \sidecaption {s o o +m}
3 {
4 \LWR@stoppars
5 \begingroup
6 \captionsetup{style=sidecaption}
7 \IfBooleanTF{#1}
8 { % starred
9 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
10 \caption*{#4}
11 \end{BlockClass}
12 }
13 { % unstarred
14 \IfNoValueOrEmptyTF{#2}
15 {\def\@sidenotes@sidecaption@tof{#4}}
16 {\def\@sidenotes@sidecaption@tof{#2}}
17 \begin{BlockClass}[border:none ; box-shadow:none]{marginblock}
18 \caption[\@sidenotes@sidecaption@tof]{#4}
19 \end{BlockClass}
20 }
21 \endgroup
22 \LWR@startpars
23 }

```

Borrowed from the **lwarp** version of **keyfloat**:

```

24 \NewDocumentEnvironment{KFLT@sidenotes@marginfloat}{0{-1.2ex} m}
25 {% start
26 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{-}{marginblock}%
27 \captionsetup{type=#2}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33 \RenewDocumentEnvironment{marginfigure}{o}
34 {\begin{KFLT@sidenotes@marginfloat}{figure}}
35 {\end{KFLT@sidenotes@marginfloat}}
36
37 \RenewDocumentEnvironment{margintable}{o}
38 {\begin{KFLT@sidenotes@marginfloat}{table}}
39 {\end{KFLT@sidenotes@marginfloat}}

```

The following were changed by **sidenotes**, and now are reset back to their **lwarp**-supported originals:

Restoring the definition from the  $\LaTeX 2_{\epsilon}$  `article.cls` source:

```

40 \renewenvironment{figure*}

```

```

41 {\@dblfloat{figure}}
42 {\end@dblfloat}
43
44 \renewenvironment{table*}
45 {\@dblfloat{table}}
46 {\end@dblfloat}

```

---

File 210 **lwarp-siunitx.sty**

§ 299 Package **siunitx**

*(Emulates or patches code by JOSEPH WRIGHT.)*

Pkg siunitx **siunitx** is patched for use by **lwarp**.

**fractions** Due to **pdftolatex** limitations, fraction output is replaced by symbol output for per-mode and quotient-mode.

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

**NOTE:** As of this writing, the **siunitx** extension for **MATHJAX** is not currently hosted at any public CDN, thus **siunitx** is not usable with **MATHJAX** unless a local copy of this extension is created first.

**for HTML output:**

```

1 \RequirePackage{xcolor}% for \convertcolorspec
2
3 \LWR@ProvidesPackagePass{siunitx}

4 \AtBeginDocument{% in case textcomp was not loaded
5 \DeclareSIUnit\bohr{\textit{a}\textsubscript{0}}
6 \DeclareSIUnit\clight{\textit{c}\textsubscript{0}}
7 \DeclareSIUnit\elementarycharge{\textit{e}}
8 \DeclareSIUnit\electronmass{\textit{m}\textsubscript{e}}
9 \DeclareSIUnit\hartree{\textit{E}\textsubscript{h}}
10 \DeclareSIUnit\planckbar{\LWR@siunitx@textplanckbar}
11 }% AtBeginDocument

```

`\@ensuredmath` is not supported inside an `\hbox`, so it must temporarily be restored to its original. Similar for `\mbox`. SVG math is created explicitly when necessary, using `\LWR@subsingledollar`.

```

12
13 \ExplSyntaxOn
14 %

```

Modified to set set HTML \textcolor if not black:

```

15 \cs_undefine:N __siunitx_print_aux:
16 \cs_new_protected:Npn __siunitx_print_aux:
17 {
18 \text
19 {
20 __siunitx_ensure_ltr:n
21 {
22 \color@begingroup
23 __siunitx_print_color:
24 __siunitx_font_shape:
25 __siunitx_font_weight:
26 \use:c
27 {
28 @@_ \l__siunitx_print_type_tl _
29 text \l__siunitx_font_family_tl :
30 }
31 \bool_if:NTF \l__siunitx_font_math_mode_bool
32 { __siunitx_print_math: }
33 {
34 \LWR@findcurrenttextcolor% lwarp
35 \ifdefstring{\LWR@tempcolor}{000000}% lwarp
36 {__siunitx_print_text:}% lwarp
37 {% lwarp
38 \LWR@textcurrentcolor{% lwarp
39 __siunitx_print_text:
40 }% lwarp
41 }% lwarp
42 }
43 \color@endgroup
44 }
45 }
46 }
47
48
49 \cs_undefine:N __siunitx_set_math_fam:n
50 \cs_new_protected:Npn __siunitx_set_math_fam:n #1 {
51 \int_new:c { c__siunitx_math #1 _int }
52 \group_begin:% lwarp
53 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
54 \LetLtxMacro\mbox\LWR@origmbox% 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@origmbox% lwarp
73 \bool_if:NTF \l__siunitx_number_parse_bool
74 {
75 \tl_clear:N \l__siunitx_number_out_tl
76 \bool_set_false:N \l__siunitx_number_compound_bool
77 __siunitx_number_output_parse:n {#1}
78 }
79 {
80 __siunitx_unit_output_pre_print:

```

For parse-numbers=false:

```

81% __siunitx_print:nn { number } { \ensuremath {#1} }
82 \LWR@subsingledollar{% lwarp
83 \textbackslash(\LWR@HTMLsanitize{#1} \textbackslash)% lwarp
84 }{siunitx}{%
85 __siunitx_print:nn { number } {%
86 \LWR@origensuredmath{#1}%
87 }%
88 }% lwarp

89 __siunitx_unit_output_print:
90 }
91 \group_end:% lwarp
92 }
93 %

```

For quotients, the fraction code is replaced by the symbol code:

```

94 \cs_undefine:N __siunitx_number_output_quotient_fraction:
95 \cs_new_protected:Npn __siunitx_number_output_quotient_fraction: {
96 \bool_set_true:N \l__siunitx_number_compound_bool
97 __siunitx_number_output_quotient_aux_i:
98 \tl_set_eq:NN \l__siunitx_number_out_tl
99 \l__siunitx_number_numerator_tl
100 \tl_put_right:NV \l__siunitx_number_out_tl \l__siunitx_output_quotient_tl
101 \tl_put_right:NV \l__siunitx_number_out_tl
102 \l__siunitx_number_denominator_tl
103 __siunitx_number_output_single_aux:
104 }

```

For units, the fraction code is replaced by the symbol code:

```

105 \cs_undefine:N __siunitx_unit_format_fraction_fraction:
106 \cs_new_protected:Npn __siunitx_unit_format_fraction_fraction: {
107 __siunitx_unit_format_fraction_symbol_aux:
108 \int_compare:nNnT { \l__siunitx_unit_denominator_int } > { 1 }
109 {
110 \bool_if:NT \l__siunitx_unit_denominator_bracket_bool
111 {
112 \tl_put_left:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_open_tl
113 \tl_put_right:NV \l__siunitx_unit_denominator_tl \l__siunitx_bracket_close_tl
114 }
115 }
116 \tl_set_eq:NN \l__siunitx_unit_tl \l__siunitx_unit_numerator_tl
117 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_per_symbol_tl
118 \tl_put_right:NV \l__siunitx_unit_tl \l__siunitx_unit_denominator_tl
119 }

120 \cs_undefine:N __siunitx_angle_print_astronomy_aux:
121 \cs_new_protected:Npn __siunitx_angle_print_astronomy_aux: {
122 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-integer }
123 \l__siunitx_tmpa_tl
124 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
125 \ifnumcomp{\value{LWR@lateximagedepth}}{>}{0}{0}% lwarp
126 {% lateximage
127 \hbox_set:Nn \l__siunitx_angle_marker_box
128 {
129 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }
130 }
131 \hbox_set:Nn \l__siunitx_angle_unit_box
132 {
133 __siunitx_print:nV { unit } \l__siunitx_unit_tl
134 \skip_horizontal:n { -\scriptspace }
135 }
136 __siunitx_angle_print_astronomy_aux:n { marker }
137 __siunitx_angle_print_astronomy_aux:n { unit }
138 \hbox_set:Nn \l__siunitx_angle_marker_box
139 {
140 \box_use:N \l__siunitx_angle_marker_box
141 \box_use:N \l__siunitx_angle_unit_box
142 }
143 \dim_compare:nNnTF
144 { \l__siunitx_angle_marker_dim } > { \l__siunitx_angle_unit_dim }
145 { __siunitx_angle_print_astronomy_marker: }
146 { __siunitx_angle_print_astronomy_unit: }
147 }% lateximage
148 {% not a lateximage
149 __siunitx_print:nV { unit } \l__siunitx_unit_tl
150 __siunitx_print:nn { number } { { \l__siunitx_output_decimal_tl } }

```

```

151 }% not a lateximage
152 \prop_get:NnNT \l__siunitx_number_out_prop { mantissa-decimal }
153 \l__siunitx_tmpa_tl
154 { __siunitx_print:nV { number } \l__siunitx_tmpa_tl }
155 }

156 \RenewDocumentCommand \num { o m } {
157 \leavevmode
158 \group_begin:% lwarp
159 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
160 \LetLtxMacro\mbox\LWR@origmbox% lwarp
161 \bool_set_false:N \l__siunitx_font_set_bool
162 \IfNoValueF {#1}
163 { \keys_set:nn { siunitx } {#1} }
164 __siunitx_number_output:n {#2}
165 \group_end:% lwarp
166 }
167
168 \RenewDocumentCommand \numrange { o m m } {
169 \leavevmode
170 \group_begin:% lwarp
171 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
172 \LetLtxMacro\mbox\LWR@origmbox% lwarp
173 \bool_set_false:N \l__siunitx_font_set_bool
174 \IfNoValueF {#1}
175 { \keys_set:nn { siunitx } {#1} }
176 __siunitx_range_numbers:nn {#2} {#3}
177 \group_end:% lwarp
178 }
179
180 \RenewDocumentCommand \ang { o > { \SplitArgument { 2 } { ; } } m } {
181 \group_begin:% lwarp
182 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
183 \LetLtxMacro\mbox\LWR@origmbox% lwarp
184 \IfNoValueF {#1}
185 { \keys_set:nn { siunitx } {#1} }
186 __siunitx_angle_output:nnn #2
187 \group_end:% lwarp
188 }
189
190 \RenewDocumentCommand \si { o m } {
191 \leavevmode
192 \group_begin:% lwarp
193 \LetLtxMacro\@ensuredmath\LWR@origensuredmath% lwarp
194 \LetLtxMacro\mbox\LWR@origmbox% lwarp
195 \bool_set_false:N \l__siunitx_font_set_bool
196 \IfNoValueTF {#1}
197 { __siunitx_unit_output:nn {#2} { } }
198 {

```

---

```

199 \keys_set:nn { siunitx } {#1}
200 _siunitx_unit_output:nn {#2} {#1}
201 }
202 \group_end:% lwarp
203 }
204
205
206 \RenewDocumentCommand{\SIrange}{o m m m}
207 {%
208 \leavevmode
209 \group_begin:% lwarp
210 \LetLtxMacro\ensuredmath\LWR@origensuredmath% lwarp
211 \LetLtxMacro\mbox\LWR@origmbox% lwarp
212 \bool_set_false:N \l_siunitx_font_set_bool
213 \IfNoValueTF {#1}
214 { _siunitx_range_unit:nnnn {#4} { } {#2} {#3} }
215 {
216 \keys_set:nn { siunitx } {#1}
217 _siunitx_range_unit:nnnn {#4} {#1} {#2} {#3}
218 }
219 \group_end:% lwarp
220 }
221
222 \ExplSyntaxOff

```

---

File 211 **lwarp-soul.sty**

§ 300 Package **soul**

*(Emulates or patches code by MELCHIOR FRANZ.)*

Pkg soul Emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{soul}[2003/11/17]
2 \RequirePackage{xcolor}% for \convertcolorspec

```

Storage for the colors to use:

```

3 \newcommand*\LWR@soululcolor{}
4
5 \newcommand*\LWR@soulstcolor{}
6
7 % \definecolor{LWR@soulhlcolordefault}{HTML}{F8E800}
8 % \newcommand*\LWR@soulhlcolor{LWR@soulhlcolordefault}
9 \newcommand*\LWR@soulhlcolor{}

```

`\so` `{<text>}`

Basic markup with css:

```
10 \newcommand{\so}[1]{%
11 \LWR@HTMLtextstyle{letter-spacing:.2ex}{letterspacing}{#1}%
12 }
```

`\caps` `{<text>}`

```
13 \newcommand{\caps}[1]{%
14 \LWR@HTMLtextstyle%
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 {\LWR@HTMLtextstyle{#5}{#3}{#1}}%
21 {%
22 \convertcolorspec{named}{\csuse{#2}}{HTML}\LWR@tempcolor%
23 \LWR@htmlspanclass[#5;#4:\LWR@origpound\LWR@tempcolor]{#3}{#1}%
24 }%
25 }
```

```
26 \newcommand{\ul}[1]{%
27 \LWR@soulcolor{#1}{\LWR@soululcolor}{uline}{text-decoration-color}%
28 {text-decoration:underline;text-decoration-skip;}%
29 }
30
```

```
31 \newcommand{\st}[1]{
32 \LWR@soulcolor{#1}{\LWR@soulstcolor}{sout}{text-decoration-color}%
33 {text-decoration:line-through}%
34 }
35
```

```
36 \newcommand{\hl}[1]{
37 \LWR@soulcolor{#1}{\LWR@soulhlcolor}{highlight}{background-color}%
38 {background:\LWR@origpound{ }F8E800}
39 }
```

Nullified:

```
40 \newcommand*{\soulaccent}[1]{}
41 \newcommand*{\soulregister}[2]{}
42 \newcommand*{\sloppyword}[1]{#1}
43 \newcommand*{\sodef}[5]{\DeclareRobustCommand*#1[1]{\so{#1}}}
```

```

44 \newcommand*\resetso{}
45 \newcommand*\capsdef}[5]{}
46 \newcommand*\capsreset{}
47 \newcommand*\capssave}[1]{}
48 \newcommand*\capsselect}[1]{}
49 \newcommand*\setul}[2]{}
50 \newcommand*\resetul{}
51 \newcommand*\setuldepth}[1]{}
52 \newcommand*\setuloverlap}[1]{}

```

Set colors:

```

53 \newcommand*\setulcolor}[1]{\renewcommand{\LWR@soululcolor}{#1}}
54 \newcommand*\setstcolor}[1]{\renewcommand{\LWR@soulstcolor}{#1}}
55 \newcommand*\sethlcolor}[1]{\renewcommand{\LWR@soulhlcolor}{#1}}

```

Long versions of the user-level macros:

```

56 \let\textso\so
57 \let\textul\ul
58 \let\texthl\hl
59 \let\textcaps\caps

```

---

File 212 **lwarp-soulpos.sty**

§ 301 Package **soulpos**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg soulpos **soulpos** is emulated.

**for HTML output:**

```

1 \RequirePackage{soul}
2 \RequirePackage{soulutf8}
3 \LWR@ProvidesPackageDrop{soulpos}

4 \NewDocumentCommand{\ulposdef}{m o m}{}
5
6 \newdimen\ulwidth
7
8 \newcommand\ifulstarttype[1]{%
9 \expandafter\@secondoftwo%
10 }
11
12 \newcommand\ifulendtype[1]{%
13 \expandafter\@secondoftwo%
14 }

```

---

```

15
16 \newcommand{\ulstarttype}{0}
17 \newcommand{\ulendtype}{0}
18 \newcommand\ulpostolerance{0}%

```

---

File 213 **lwarp-soulutf8.sty**

§ 302 Package **soulutf8**

Pkg soulutf8 **soulutf8** is emulated.

**lwarp's** HTML output naturally supports UTF-8 encoding.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{soulutf8}

---

File 214 **lwarp-stabular.sty**

§ 303 Package **stabular**

*(Emulates or patches code by SIGITAS TOLUŠIS.)*

Pkg stabular **stabular** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{stabular}

Env stabular [*vpos*] {*colspec*}

```

2 \newenvironment{stabular}[2][c]
3 {
4 \begin{tabular}[#1]{#2}
5 \renewcommand{\noalign}[1]{
6 }
7 {\end{tabular}}

```

Env stabular {*width*} [*vpos*] {*colspec*}

```

8 \NewDocumentEnvironment{stabular*}{m o m}
9 {
10 \begin{tabular}[#2]{#3}
11 \renewcommand{\noalign}[1]{
12 }
13 {\end{tabular}}

```

---

File 215 **lwarp-stfloats.sty**

§ 304 Package **stfloats**

Pkg stfloats **stfloats** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{stfloats}

2 \newcommand*{\fnbelowfloat}{}
3 \newcommand*{\fnunderfloat}{}
4 \newcommand*{\setbaselinefloat}{}
5 \newcommand*{\setbaselinefixed}{}

```

---

File 216 **lwarp-subfig.sty**

§ 305 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.

**horizontal spacing** In the document source, use `\hfill` and `\hspace*` between subfigures to spread them apart horizontally. The use of other forms of whitespace may cause paragraph tags to be generated, resulting in subfigures appearing on the following lines instead of all on a single line.

**for HTML output:** Accept all options for **lwarp-subfig**:

```

1 \LWR@ProvidesPackagePass{subfig}

```

`\sf@@@subfloat`  $\{ \langle 1 \text{ type} \rangle \} [ \langle 2 \text{ lof entry} \rangle ] [ \langle 3 \text{ caption} \rangle ] \{ \langle 4 \text{ contents} \rangle \}$

The outer minipage allows side-by-side subfloats with `\hfill` between.

```

2 \long\def\sf@@@subfloat#1[#2] [#3] #4{%
3 \begin{minipage}{\linewidth}% lwarp

4 \IfValueTF{#2}{%
5 \LWR@setlatestname{#2}%
6 }{%

```

```

7 \IfValueTF{#3}{%
8 \LWR@setlatestname{#3}%
9 }{}%
10}%
11 \LWR@stoppars% lwarp
12 \@ifundefined{FBsc@max}{}%
13 {\FB@readaux{\let\FBsuboheight\relax}}%
14 \@tempcnta=\@ne
15 \if@minipage
16 \@tempcnta=\z@
17 \else\ifdim \lastskip=\z@ \else
18 \@tempcnta=\tw@
19 \fi\fi
20 \ifmaincaptiontop
21 \sf@top=\sf@nearskip
22 \sf@bottom=\sf@farskip
23 \else
24 \sf@top=\sf@farskip
25 \sf@bottom=\sf@nearskip
26 \fi
27 \leavevmode

28% \setbox\@tempboxa \hbox{#4}%
29% \@tempdima=\wd\@tempboxa
30% \@ifundefined{FBsc@max}{}%
31% {\global\advance\Xhsize-\wd\@tempboxa
32% \dimen@=\ht\@tempboxa
33% \advance\dimen@\dp\@tempboxa
34% \ifdim\dimen@>\FBso@max
35% \global\FBso@max\dimen@
36% \fi}%

```

Do not use boxes, which interfere with lateximages:

```

37% \vtop%
38 \bgroup
39% \vbox%
40 \bgroup
41 \ifcase\@tempcnta
42 \@minipagefalse
43 \or
44% \vskip\sf@top
45 \or
46 \ifdim \lastskip=\z@ \else
47% \@tempskipb\sf@top\relax\@xaddvskip
48 \fi
49 \fi
50 \sf@ifpositiontop{%
51 \ifx \@empty#3\relax \else
52 \sf@subcaption{#1}{#2}{#3}%

```

```

53% \vskip\sf@capskip
54% \vskip\sf@captopadj
55% \fi\egroup
56% \hrule widthOpt heightOpt depthOpt
57% \LWR@startpars% lwarp
58% \box\@tempboxa
59% #4
60% \LWR@stoppars% lwarp
61% }{%
62% \LWR@startpars% lwarp
63% \@ifundefined{FBsc@max}%
64% {
65% \box\@tempboxa
66% #4
67% }%
68% {\ifx\FBsuboheight\relax
69% \box\@tempboxa
70% #4
71% \else
72% \vbox to \FBsuboheight{\FBafil\box\@tempboxa\FBbfil}%
73% #4
74% \fi}%
75% \LWR@stoppars% lwarp
76% \egroup
77% \ifx \@empty#3\relax \else
78% \vskip\sf@capskip
79% \hrule widthOpt heightOpt depthOpt
80% \sf@subcaption{#1}{#2}{#3}%
81% \fi
82% }%
83% \vskip\sf@bottom
84% \egroup
85% \@ifundefined{FBsc@max}{%
86% {\addtocounter{FRobj}{-1}%
87% \ifnum\c@FRobj=0\else
88% \subfloatrowsep
89% \fi}%
90% \ifmaincaptiontop\else
91% \global\advance\@nameuse{c@\@capttype}\m@ne
92% \fi
93% \end{minipage}% lwarp
94% \LWR@startpars% lwarp
95% \endgroup\ignorespaces%
96% }%

```

\sf@subcaption {<1 type>} {<2 lof entry>} {<3 caption>}

```

97 \long\def\sf@subcaption#1#2#3{%
98 \LWR@stoppars% lwarp

```

```

99 \ifx \relax#2\relax \else
100 \bgroup
101 \let\label=\@gobble
102 \let\protect=\string
103 \def\@subcaplabel{%
104 \caption@lstfmt{\@nameuse{p@#1}}{\@nameuse{the#1}}}%
105 \sf@updatecaptionlist{#1}{#2}{\the\value{\@capttype}}{\the\value{#1}}%
106 \egroup
107 \fi
108 \bgroup
109 \ifx \relax#3\relax
110 \let\captionlabelsep=\relax
111 \fi
112 % \setbox0\vbox{%
113 % \hb@xt@\the\@tempdima{%
114 %
115 % \hss
116 % \parbox[t]{\the\@tempdima}{%
117 % \caption@make
118 % {\@nameuse{sub\@capttype name}}%
119 % {\@nameuse{thesub\@capttype}}%
120 % {#3}
121 % }%
122 % \hss
123 % }
124 % }%
125 \@ifundefined{FBsc@max}%
126 % {\box0}%
127 % {
128 % \parbox[t]{\the\@tempdima}{%
129 \LWR@traceinfo{sfsubcap B1}% lwarp
130 \LWR@figcaption% lwarp
131 \caption@make
132 {\@nameuse{sub\@capttype name}}%
133 {\@nameuse{thesub\@capttype}}%
134 {#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(% %){\sf@sub@label}
177 {\sf@sub@label}
178 {\sf@sub@label(Sub\@capttype\space
179 \@ifundefined{thechapter}{-}{\@nameuse{thechapter}\space}%
180 \@nameuse{p@sub\@capttype}%
181 \@nameuse{thesub\@capttype}.)}}

```

Patches for `\subref`.

`\sf@subref` `{<label>}`

The unstarred version uses a `\ref` link whose printed text comes from the `sub@<label>`:

```

182 \renewcommand{\sf@subref}[1]{%
183 \LWR@subnewref{#1}{sub@#1}%
184 }

```

`\sf@@subref` `{<label>}`

The starred version uses the printed sub@<label> which is stored as if it were a page number:

```
185 \renewcommand{\sf@subref}[1]{\LWR@origpageref{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 217 **lwarp-subfigure.sty**

§ 306 Package **subfigure**

Pkg subfigure **subfigure** is emulated by **subfig**.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{subfigure}
2 \RequirePackage{subfig}

3 \LetLtxMacro\subfigure\subfloat
4 \LetLtxMacro\subtable\subfloat
5 \LetLtxMacro\Subref\subref
6 \@ifundefined{figuretopcaptrue}{\newif\iffiguretopcap}{\}
7 \newif\ifsubfiguretopcap
8 \newif\ifsubcaphang
9 \newif\ifsubcapcenter
10 \newif\ifsubcapcenterlast
11 \newif\ifsubcapnooneline
12 \newif\ifsubcapraggedright
13 \newskip\subfigtopskip
14 \newskip\subfigcapskip
```

```

15 \newdimen\subfigcaptopadj
16 \newskip\subfigbottomskip
17 \newdimen\subfigcapmargin
18 \newskip\subfiglabelskip
19 \newcommand*{\subcapsize}{%
20 \newcommand*{\subcaplabelfont}{%
21 \newcommand*{\subcapfont}{%

```

---

File 218 **lwarp-supertabular.sty**

§ 307 Package **supertabular**

(Emulates or patches code by JOHANNES BRAAMS, THEO JURRIENS.)

Pkg supertabular **supertabular** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{supertabular}

⚠ **misplaced alignment alignment tab character &** For `\tablefirsthead`, etc., enclose them as follows:

```

\StartDefiningTabulars
\tablefirsthead
...
\EndDefiningTabulars

```

See section 9.9.

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

```

2 \newcommand{\LWRST@firsthead}{%
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRST@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{%
9 \newcommand{\tabletail}[1]{%
10
11 \newcommand{\LWRST@lasttail}{%
12
13 \newcommand{\tablelasttail}[1]{%
14 \long\gdef\LWRST@lasttail{#1}%
15 }
16
17 \newcommand{\tablecaption}[2][1]{%
18 \long\gdef\LWRST@caption{\caption[#1]{#2}}%
19 }

```

---

```

20
21 \let\topcaption\tablecaption
22 \let\bottomcaption\tablecaption
23

24 \newcommand*{\LWRST@caption}{}
25
26 \newcommand*{\shrinkheight}[1]{}
27
28 \NewDocumentEnvironment{supertabular}{s o m}
29 {%
30 \LWR@traceinfo{supertabular}%
31 \table%
32 \LWRST@caption%
33 \begin{tabular}{#3}%
34 \TabularMacro\ifdefvoid{\LWRST@firsthead}%
35 {\LWR@getmynexttoken}%
36 {\expandafter\LWR@getmynexttoken\LWRST@firsthead}%
37 }%
38 {%
39 \ifdefvoid{\LWRST@lasttail}%
40 {}%
41 {%
42 \TabularMacro\ResumeTabular%
43 \LWRST@lasttail%
44 }%
45 \end{tabular}%
46 \endtable%
47 \LWR@traceinfo{supertabular done}%
48 }
49
50 \NewDocumentEnvironment{mpsupertabular}{s o m}
51 {\minipage{\linewidth}\supertabular{#3}}
52 {\endsupertabular\endminipage}

```

---

File 219 **lwarp-syntonly.sty**

§ 308 Package **syntonly**

*(Emulates or patches code by FRANK MITTELBACH, RAINER SCHÖPF.)*

Pkg syntonly Emulated.

**for HTML output:** Discard all options for **lwarp-syntonly**:

```
1 \LWR@ProvidesPackageDrop{syntonly}
```

---

```

2 \newif\ifsyntax@
3 \syntax@false
4
5 \newcommand*\syntaxonly{}
6
7 \@onlypreamble\syntaxonly

```

---

File 220 **lwarp-tables.sty**

§ 309 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 221 **lwarp-tabularx.sty**

§ 310 Package **tabularx**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg tabularx **tabularx** is emulated by **lwarp**.

**for HTML output:** Discard all options for **lwarp-tabularx**:

```

1 \LWR@ProvidesPackageDrop{tabularx}

2 \DeclareDocumentEnvironment{tabularx}{m o m}
3 {\tabular{#3}}
4 {\endtabular}
5
6 \DeclareDocumentEnvironment{tabularx*}{m o m}
7 {\tabular{#3}}
8 {\endtabular}

```

File 222 **lwarp-tabulary.sty**

§ 311 Package **tabulary**

*(Emulates or patches code by DAVID CARLISLE.)*

Pkg `tabulary` **tabulary** is emulated by **lwarp**.

**for HTML output:** Discard all options for **lwarp-tabulary**.

Column types L, C, R, and J are emulated by **lwarp** core code.

```

1 \LWR@ProvidesPackageDrop{tabulary}

2 \NewDocumentEnvironment{tabulary}{m o m}
3 {\tabular{#3}}
4 {\endtabular}
5
6 \NewDocumentEnvironment{tabulary*}{m o m}
7 {\tabular{#3}}
8 {\endtabular}
9
10 \newdimen\tymin
11 \newdimen\tymax
12 \def\tyformat{}
```

File 223 **lwarp-textarea.sty**

§ 312 Package **textarea**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg `textarea` **textarea** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textarea}

2 \newcommand\StartFromTextArea{}
3 \newcommand\StartFromHeaderArea{}
4 \newcommand*\RestoreTextArea{}
5 \newcommand*\ExpandTextArea[1][*]{}
6 \let\NCC@restoretextarea\@empty
```

File 224 `lwarp-textcomp.sty`

§ 313 Package **textcomp**

(Emulates or patches code by FRANK MITTELBACH, ROBIN FAIRBAIRNS, WERNER LEMBERG.)

Pkg `textcomp` **textcomp** is patched for use by **lwarp**.

§ 313.1 **Limitations**

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

 **missing symbols** Many **textcomp** symbols are not supported by many fonts. Try using more complete fonts in the CSS, but expect to see gaps in coverage.

§ 313.2 **Package loading**

**for HTML output:** `1 \LWR@ProvidesPackagePass{textcomp}`

§ 313.3 **Remembering original defintions**

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

```

2 \let\LWR@origtextdegree\textdegree
3 \let\LWR@origtextcelsius\textcelsius
4 \let\LWR@origtextohm\textohm
5 \let\LWR@origtextmu\textmu
6 \let\LWR@origtextlquill\textlquill
7 \let\LWR@origtextrquill\textrquill
8 \let\LWR@origtextcircledP\textcircledP
9 \let\LWR@origtexttwelveudash\texttwelveudash
10 \let\LWR@origtextthreequartersemdash\textthreequartersemdash
11 \let\LWR@origtextmho\textmho
12 \let\LWR@origtextnaira\textnaira
13 \let\LWR@origtextpeso\textpeso
14 \let\LWR@origtextrecipe\textrecipe
15 \let\LWR@origtextinterrobangdown\textinterrobangdown
16 \let\LWR@origtextpertenthousand\textpertenthousand
17 \let\LWR@origtextbaht\textbaht
18 \let\LWR@origtextdiscount\textdiscount
19 \let\LWR@origtextservicemark\textservicemark
20 \LetLtxMacro\LWR@origcapitalcedilla\capitalcedilla
21 \LetLtxMacro\LWR@origcapitalogonek\capitalogonek
22 \LetLtxMacro\LWR@origcapitalgrave\capitalgrave

```

```

23 \LetLtxMacro\LWR@origcapitalacute\capitalacute
24 \LetLtxMacro\LWR@origcapitalcircumflex\capitalcircumflex
25 \LetLtxMacro\LWR@origcapitaltilde\capitaltilde
26 \LetLtxMacro\LWR@origcapitaldieresis\capitaldieresis
27 \LetLtxMacro\LWR@origcapitalhungarumlaut\capitalhungarumlaut
28 \LetLtxMacro\LWR@origcapitalring\capitalring
29 \LetLtxMacro\LWR@origcapitalcaron\capitalcaron
30 \LetLtxMacro\LWR@origcapitalbreve\capitalbreve
31 \LetLtxMacro\LWR@origcapitalmacron\capitalmacron
32 \LetLtxMacro\LWR@origcapitaldotaccent\capitaldotaccent
33 \LetLtxMacro\LWR@origtextcircled\textcircled

```

### § 313.4 HTML symbols

For HTML, use HTML entities or direct Unicode, depending on the engine.

`\AtBeginDocument` improves support for Lua $\TeX$  and Xe $\TeX$ .

#### § 313.4.1 pdf $\TeX$ symbols

```

34 \AtBeginDocument{
35 \ifPDFTeX
36 \renewcommand*\textdegree{\HTMLentity{deg}}
37 \renewcommand*\textcelsius{\HTMLunicode{2103}}
38 \renewcommand*\textohm{\HTMLunicode{2126}}
39 \renewcommand*\textmu{\HTMLunicode{00B5}}
40 \renewcommand*\textlquill{\HTMLunicode{2045}}
41 \renewcommand*\textrquill{\HTMLunicode{2046}}
42 \renewcommand*\textcircledP{\HTMLunicode{2117}}
43 \renewcommand*\texttwelveudash{\HTMLunicode{2014}}% emdash
44 \renewcommand*\textthrequartersemdash{\HTMLunicode{2014}}% emdash
45 \renewcommand*\textmho{\HTMLunicode{2127}}
46 \renewcommand*\textnaira{\HTMLunicode{20A6}}
47 \renewcommand*\textpeso{\HTMLunicode{20B1}}
48 \renewcommand*\textrecipe{\HTMLunicode{211E}}
49 \renewcommand*\textinterrobangdown{\HTMLunicode{2E18}}
50 \renewcommand*\textpertenthousand{\HTMLunicode{2031}}
51 \renewcommand*\textbaht{\HTMLunicode{0E3F}}
52 \renewcommand*\textdiscount{\}%
53 \renewcommand*\textservicemark{\HTMLunicode{2120}}
54 \else

```

#### § 313.4.2 Xe $\TeX$ and Lua $\TeX$ symbols

NOTE: Some of the following do not print well in the listing. Consult the .dtx or .sty file for the actual characters.

```

55 \renewcommand*\textdegree}{°}
56 \renewcommand*\textcelsius}{°C}
57 \renewcommand*\textohm}{Ω}
58 \renewcommand*\textmu}{μ}
59 \renewcommand*\textlquill}{{}
60 \renewcommand*\textrquill}{>}
61 \renewcommand*\textcircledP}{Ⓟ}
62 \renewcommand*\texttwelveudash}{--}% emdash
63 \renewcommand*\textthreequartersemdash}{--}% emdash
64 \renewcommand*\textmho}{Ω}
65 \renewcommand*\textnaira}{₦}
66 \renewcommand*\textpeso}{₱}
67 \renewcommand*\textrecipe}{℞}
68 \renewcommand*\textinterrobangdown}{‡}
69 \renewcommand*\textpertenthousand}{‰}
70 \renewcommand*\textbaht}{฿}
71 \renewcommand*\textdiscount}{\%}
72 \renewcommand*\textservicemark}{℠}
73 \fi

```

### § 313.5 HTML dicritics

For HTML, Unicode diacritical marks are used:

```

74 \renewcommand*\capitalcedilla}[1]{#1\HTMLUnicode{0327}}
75 \renewcommand*\capitalogonek}[1]{#1\HTMLUnicode{0328}}
76 \renewcommand*\capitalgrave}[1]{#1\HTMLUnicode{0300}}
77 \renewcommand*\capitalacute}[1]{#1\HTMLUnicode{0301}}
78 \renewcommand*\capitalcircumflex}[1]{#1\HTMLUnicode{0302}}
79 \renewcommand*\capitaltilde}[1]{#1\HTMLUnicode{0303}}
80 \renewcommand*\capitaldieresis}[1]{#1\HTMLUnicode{0308}}
81 \renewcommand*\capitalhungarumlaut}[1]{#1\HTMLUnicode{30B}}
82 \renewcommand*\capitalring}[1]{#1\HTMLUnicode{30A}}
83 \renewcommand*\capitalcaron}[1]{#1\HTMLUnicode{30C}}
84 \renewcommand*\capitalbreve}[1]{#1\HTMLUnicode{306}}
85 \renewcommand*\capitalmacron}[1]{#1\HTMLUnicode{304}}
86 \renewcommand*\capitaldotaccent}[1]{#1\HTMLUnicode{307}}

```

`\textcircled` becomes a span with a rounded border:

```

87 \renewcommand*\textcircled}[1]{%
88 \InlineClass[border: 1px solid \LWR@currenttextcolor]{textcircled}{#1}%
89 }
90 }% AtBeginDocument

```

### § 313.6 Inside a lateximage

When a lateximage is begun:

```

91 \appto\LWR@restoreorigformatting{%
92 \let\textdegree\LWR@origtextdegree%
93 \let\textcelsius\LWR@origtextcelsius%
94 \let\textohm\LWR@origtextohm%
95 \let\textmu\LWR@origtextmu%
96 \let\textlquill\LWR@origtextlquill%
97 \let\textrquill\LWR@origtextrquill%
98 \let\textcircledP\LWR@origtextcircledP%
99 \let\texttwelveudash\LWR@origtexttwelveudash%
100 \let\textthreequartersemdash\LWR@origtextthreequartersemdash%
101 \let\textmho\LWR@origtextmho%
102 \let\textnaira\LWR@origtextnaira%
103 \let\textpeso\LWR@origtextpeso%
104 \let\textrecipe\LWR@origtextrecipe%
105 \let\textinterrobangdown\LWR@origtextinterrobangdown%
106 \let\textpertenthousand\LWR@origtextpertenthousand%
107 \let\textbaht\LWR@origtextbaht%
108 \let\textdiscount\LWR@origtextdiscount%
109 \let\textservicemark\LWR@origtextservicemark%
110 \LetLtxMacro\capitalcedilla\LWR@origcapitalcedilla%
111 \LetLtxMacro\capitalogonek\LWR@origcapitalogonek%
112 \LetLtxMacro\capitalgrave\LWR@origcapitalgrave%
113 \LetLtxMacro\capitalacute\LWR@origcapitalacute%
114 \LetLtxMacro\capitalcircumflex\LWR@origcapitalcircumflex%
115 \LetLtxMacro\capitaltilde\LWR@origcapitaltilde%
116 \LetLtxMacro\capitaldieresis\LWR@origcapitaldieresis%
117 \LetLtxMacro\capitalhungarumlaut\LWR@origcapitalhungarumlaut%
118 \LetLtxMacro\capitalring\LWR@origcapitalring%
119 \LetLtxMacro\capitalcaron\LWR@origcapitalcaron%
120 \LetLtxMacro\capitalbreve\LWR@origcapitalbreve%
121 \LetLtxMacro\capitalmacron\LWR@origcapitalmacron%
122 \LetLtxMacro\capitaldotaccent\LWR@origcapitaldotaccent%
123 \LetLtxMacro\textcircled\LWR@origtextcircled%
124 }

```

---

File 225 **lwarp-textfit.sty**

§ 314 Package **textfit**

Pkg textfit **textfit** is emulated.

Text is placed into a `<span>` of class `textfit`. Sizes are approximated, and also limited by browser min/max font-size settings.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textfit}

2 \newsavebox{\LWR@textfitbox}
3
4 \newcommand*\LWR@textfitscale}[2]{%
5 \setlength{\LWR@templengthone}{#1}%
6 \setlength{\LWR@templengthone}{%
7 lem*\ratio{\LWR@templengthone}{\LWR@templengthtwo}%
8 }%
9 \InlineClass[font-size:\LWR@printlength{\LWR@templengthone}]{textfit}{#2}%
10 }
11
12 \newcommand*\scaletowidth}[2]{%
13 \sbox{\LWR@textfitbox}{#2}%
14 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
15 \LWR@textfitscale{#1}{#2}%
16 }
17
18 \newcommand*\scaletoheight}[2]{%
19 \sbox{\LWR@textfitbox}{#2}%
20 \settoheight{\LWR@templengthtwo}{\usebox{\LWR@textfitbox}}%
21 \LWR@textfitscale{#1}{#2}%
22 }

```

---

File 226 **lwarp-textpos.sty**

§ 315 Package **textpos**

*(Emulates or patches code by NORMAN GRAY.)*

Pkg **textpos** **textpos** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{textpos}

2 \NewDocumentEnvironment{textblock}{m r()}{}{}
3 \NewDocumentEnvironment{textblock*}{m o r()}{}{}
4 \newcommand*\TPGrid}[3][[]]{}
5 \NewDocumentCommand{\TPMargin}{s o}{}
6 \newcommand*\textblockcolour}[1]{}
7 \newcommand*\textblockrulecolour}[1]{}
8 \newcommand*\textblockcolor}[1]{}
9 \newcommand*\textblockrulecolor}[1]{}
10 \newcommand*\tekstblokkulur}[1]{}
11 \newcommand*\tekstblokrulekulur}[1]{}
12 \newlength{\TPHorizModule}
13 \newlength{\TPVertModule}
14 \newlength{\TPboxrulesize}

```

---

```

15 \newcommand{\textblocklabel}[1]{}
16 \newcommand*{\showtextsize}{}
17 \newcommand{\textblockorigin}[2]{}

```

---

File 227 **lwarp-theorem.sty**

§ 316 Package **theorem**

*(Emulates or patches code by FRANK MITTELBACH.)*

Pkg theorem **theorem** is patched for use by **lwarp**.

---

Table 14: 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}`

### § 316.1 Remembering the theorem style

Storage for the style being used for new theorems:

```
2 \newcommand{\LWR@newtheoremstyle}{plain}
```

Patched to remember the style being used for new theorems:

```

3 \gdef\theoremstyle#1{%
4 \@ifundefined{th@#1}{\@warning
5 {Unknown theoremstyle ‘#1’. Using ‘plain’}%
6 \theorem@style{plain}%
7 \renewcommand{\LWR@newtheoremstyle}{plain}% lwarp
8 }%
9 {%
10 \theorem@style{#1}%
11 \renewcommand{\LWR@newtheoremstyle}{#1}% lwarp
12 }%
13 \begingroup
14 \csname th@the\theorem@style \endcsname
15 \endgroup}

```

Patched to remember the style for this theorem type, and set it later when the environment is started.

```

16 \gdef\xnthm#1#2[#3]{%
17 \expandafter\@ifdefinable\csname #1\endcsname
18 {%
19 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
20 \@definecounter{#1}\@newctr{#1}[#3]%
21 \expandafter\xdef\csname the#1\endcsname
22 {\expandafter \noexpand \csname the#3\endcsname
23 \thmcountersep \@thmcounter{#1}}%
24 \def\@tempa{\global\@namedef{#1}}%
25 \expandafter \@tempa \expandafter{%
26 \csname th@the \theorem@style
27 \expandafter \endcsname \the \theorem@bodyfont
28 \@thm{#1}{#2}}%
29 \global \expandafter \let \csname end#1\endcsname \@endtheorem
30 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\csuse{LWR@thmstyle#1}}}% lwarp
31 }}
32
33 \gdef\ynthm#1#2{%
34 \expandafter\@ifdefinable\csname #1\endcsname
35 {
36 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
37 \@definecounter{#1}%
38 \expandafter\xdef\csname the#1\endcsname{\@thmcounter{#1}}%
39 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
40 \expandafter{\csname th@the \theorem@style \expandafter
41 \endcsname \the\theorem@bodyfont \@thm{#1}{#2}}%
42 \global \expandafter \let \csname end#1\endcsname \@endtheorem
43 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\csuse{LWR@thmstyle#1}}}% lwarp
44 }}
45
46 \gdef\othm#1[#2]#3{%
47 \expandafter\ifx\csname c@#2\endcsname\relax
48 \@nocounterr{#2}%
49 \else
50 \expandafter\@ifdefinable\csname #1\endcsname
51 {
52 \csedef{LWR@thmstyle#1}{\LWR@newtheoremstyle}% lwarp
53 \expandafter \xdef \csname the#1\endcsname
54 {\expandafter \noexpand \csname the#2\endcsname}%
55 \def\@tempa{\global\@namedef{#1}}\expandafter \@tempa
56 \expandafter{\csname th@the \theorem@style \expandafter
57 \endcsname \the\theorem@bodyfont \@thm{#2}{#3}}%
58 \global \expandafter \let \csname end#1\endcsname \@endtheorem
59 \AtBeginEnvironment{#1}{\edef\LWR@thisthmstyle{\csuse{LWR@thmstyle#1}}}% lwarp
60 }%
61 \fi}

```

## § 316.2 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 228 **lwarp-threeparttable.sty**

§ 317 Package **threeparttable**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg **threeparttable** **threeparttable** is emulated.

Table note are contained inside a CSS <div> of class `tnotes`. If **enumitem** is used, the note item labels are also individually highlighted with an additional CSS <span> of class `tnoteitemheader`, otherwise they are plain text.

**for HTML output:** `1 \LWR@ProvidesPackageDrop{threeparttable}`

`\LWR@printtablenote` `{\text}`

Prints the table note item header inside a CSS class of `tnoteitemheader`.

```
2 \newcommand{\LWR@printtablenote}[1]{\InlineClass{tnoteitemheader}{#1}}
```

Env **threeparttable** [*alignment*] To emulate **threeparttable**:

```
3 \newenvironment*{threeparttable}[1][b]{-}
```

Env **tablenotes** [*options*]

```

4 \newenvironment*{tablenotes}[1][
5 {%
6 \LWR@forcenewpage
7 \BlockClass{tnotes}%
8 \ltx@ifpackageloaded{enumitem}{%
9 \setlist[description]{format=\LWR@printtablenote}%
10 }{}%
11 \description%
12 }
13 {%
14 \enddescription%
15 \endBlockClass%

```

---

```
16 }
```

```
\tnote {<text>}
```

```
17 \newcommand{\tnote}[1]{\LWR@htmlspan{sup}{#1}}
```

---

File 229 **lwarp-tikz.sty**

§ 318 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}
```

**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 \newboolean{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 `tikzpicture` `tikzpicture` environment is enclosed inside a `\lateximage`. May be used as-is, and its contents will be converted to an image.

```
7 \LetLtxMacro\LWR@origtikzpicture\tikzpicture
```

```

8
9 \renewcommand*{\tikzpicture}[1] [] {%
10 \begin{lateximage}%
11 \ifbool{LWR@tikzbabel}% Test for Tikz version v3.0.0
12 {}%
13 {\catcode'\$=3}% dollar sign is math shift
14 \LWR@origtikzpicture[#1]%
15 }
16
17 \LetLtxMacro\LWR@origendtikzpicture\endtikzpicture
18
19 \renewcommand*{\endtikzpicture}{%
20 \LWR@origendtikzpicture%
21 \end{lateximage}%
22 }

```

---

File 230 **lwarp-titles.sty**

§ 319 Package **titles**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg **titles** **titles** is loaded and used by **lwarp** during HTML output. All user options and macros are ignored and disabled.

Discard all options for **lwarp-titles**:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titles}

\pagestyle and \thispagestyle are already disabled in the **lwarp** code.

\newpagestyle {<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}{}

---

`\setttitlemarks` \*  $\langle names \rangle$   
6 `\NewDocumentCommand{\setttitlemarks}{s m}{}`

`\headrule`  
7 `\newcommand*{\headrule}{}`

`\footrule`  
8 `\newcommand*{\footrule}{}`

`\setheadrule`  $\langle length \rangle$   
9 `\newcommand*{\setheadrule}[1]{}`

`\setfootrule`  $\langle length \rangle$   
10 `\newcommand*{\setfootrule}[1]{}`

`\makeheadrule`  
11 `\newcommand*{\makeheadrule}{}`

`\makefootrule`  
12 `\newcommand*{\makefootrule}{}`

`\setmarkboth`  $\langle code \rangle$   
13 `\newcommand{\setmarkboth}[1]{}`

`\widenhead`  
14 `\NewDocumentCommand{\widenhead}{s o o m m}{}`

`\bottitlemarks`  
15 `\newcommand*{\bottitlemarks}{}`

`\toptitlemarks`  
16 `\newcommand*{\toptitlemarks}{}`

`\firsttitlemarks`

---

```

17 \newcommand*{\firsttitlemarks}{}

\nexttitlemarks
18 \newcommand*{\nexttoptitlemarks}{}

\outertitlemarks
19 \newcommand*{\outertitlemarks}{}

\innertitlemarks
20 \newcommand*{\innertitlemarks}{}

\newtitlemark * {\langle name \rangle}
21 \NewDocumentCommand{\newtitlemark}{s m}{}

\pretitlemark * {\langle section \rangle} {\langle text \rangle}
22 \NewDocumentCommand{\pretitlemark}{s m m}{}

\ifsamemark {\langle group \rangle} {\langle command \rangle} {\langle true \rangle} {\langle false \rangle}
23 \newcommand{\ifsamemark}[4]{}

\setfloathead * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] { \langle . \rangle } { \langle . \rangle } { \langle . \rangle } { \langle extra \rangle } [\langle which \rangle]
24 \NewDocumentCommand{\setfloathead}{s o o m m m m m}{}

\setfloatfoot * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] { \langle . \rangle } { \langle . \rangle } { \langle . \rangle } { \langle extra \rangle } [\langle which \rangle]
25 \NewDocumentCommand{\setfloatfoot}{s o o m m m m m}{}

\nextfloathead * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] { \langle . \rangle } { \langle . \rangle } { \langle . \rangle } { \langle extra \rangle } [\langle which \rangle]
26 \NewDocumentCommand{\nextfloathead}{s o o m m m m m}{}

\nextfloatfoot * [\langle . \rangle] [\langle . \rangle] [\langle . \rangle] { \langle . \rangle } { \langle . \rangle } { \langle . \rangle } { \langle extra \rangle } [\langle which \rangle]
27 \NewDocumentCommand{\nextfloatfoot}{s o o m m m m m}{}

\newmarkset { \langle markset \rangle }
28 \newcommand{\newmarkset}[1]{}

```

---

```

\newextramark * {\<markset>} {\<macro-name>}
 29 \NewDocumentCommand{\newextramarkset}{s m m}{}

\botextramarks {\<markset>}
 30 \newcommand{\botextramarks}[1]{}

\topextramarks {\<markset>}
 31 \newcommand{\topextramarks}[1]{}

\firstextramarks {\<markset>}
 32 \newcommand{\firstextramarks}[1]{}

\nextextramarks {\<markset>}
 33 \newcommand{\nexttopextramarks}[1]{}

\outerextramarks {\<markset>}
 34 \newcommand{\outerextramarks}[1]{}

\innerextramarks {\<markset>}
 35 \newcommand{\innerextramarks}[1]{}

```

---

File 231 **lwarp-titleref.sty**

§ 320 Package **titleref**

Pkg titleref **titleref** is emulated.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{titleref}
 2
 3 \LetLtxMacro\titleref\nameref
 4
 5 \providecounter{LWR@currenttitle}
 6
 7 \newcommand*{\currenttitle}{%
 8 \addtocounter{LWR@currenttitle}{1}%
 9 \label{currenttitle\arabic{LWR@currenttitle}}%
 10 \nameref{currenttitle\arabic{LWR@currenttitle}}%
 11 }
 12

```

---

```
13 \newcommand*{\theTitleReference}[2]{}

```

---

File 232 **lwarp-titlesec.sty**

§ 321 Package **titlesec**

*(Emulates or patches code by JAVIER BEZOS.)*

Pkg titlesec **titlesec** is emulated. All user options and macros are ignored and disabled.

Discard all options for **lwarp-titlesec**:

**for HTML output:** 1 \LWR@ProvidesPackageDrop{titlesec}

```
\titlelabel {\langle label-format \rangle}
2 \newcommand*{\titlelabel}[1]{}

```

```
\titleformat* {\langle command \rangle} {\langle format \rangle}

```

```
\titleformat {\langle command \rangle} [\langle shape \rangle] {\langle format \rangle} {\langle label \rangle} {\langle sep \rangle} {\langle before \rangle} [\langle after \rangle]
3 \newcommand\titleformat{%
4 \@ifstar{\ttl@format@s}%
5 {\ttl@format@i}}
6 \newcommand{\ttl@format@s}[1]{}
7 \NewDocumentCommand{\ttl@format@i}{m o m m m o}{}

```

```
\chaptertitlename

```

```
8 \@ifundefined{@chapapp}{\let\@chapapp\chaptername}{}
9 \newcommand\chaptertitlename{\@chapapp}

```

```
\titlespacing * {\langle command \rangle} {\langle left \rangle} {\langle before \rangle} {\langle after \rangle} [\langle right \rangle]
10 \NewDocumentCommand{\titlespacing}{s m m m m o}{}

```

```
\filright

```

```
11 \newcommand*{\filright}{}

```

```
\filcenter

```

```
12 \newcommand*{\filcenter}{}

```

---

```

\filleft
13 \newcommand*\filleft{}

\fillast
14 \newcommand*\fillast{}

\filinner
15 \newcommand*\filinner{}

\filouter
16 \newcommand*\filouter{}

\wordsep
17 \newcommand\wordsep{\fontdimen\tw@\font \@plus
18 \fontdimen\thr@\font \@minus \fontdimen4\font}

\titeline * [align] {material}
19 \NewDocumentCommand{\titeline}{s o m}{}

\titlerule [height]
20 \providecommand\titlerule{\@ifstar{\ttl@row}{\ttl@rule}}
21 \newcommand*\ttl@rule[1] [] {}
22 \newcommand*\ttl@row[2] [] {}

\iftitlemeasuring {true} {false}
23 \newcommand{\iftitlemeasuring}[2]{#2}

\assignpagestyle {command} {pagestyle}
24 \newcommand{\assignpagestyle}[2]{#2}

\titleclass {name} [startlevel] {class} [cmd]
25 \NewDocumentCommand{\titleclass}{m o m o}

```



---

|                              |                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------|
| <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 234 **lwarp-titling.sty**

§ 323 Package **titling**

(Emulates or patches code by PETER WILSON.)

Pkg titling

package support

 load order

`\published` and `\subtitle`

**lwarp** supports the native  $\TeX$  titling commands, and also supports the packages **authblk** and **titling**. If both are used, **authblk** should be loaded before **titling**.

If using the **titling** package, additional titlepage fields for `\published` and `\subtitle` may be added by using `\AddSubtitlePublished` in the preamble. See section 59.8.

The various **titling** footnote restyling commands have no effect.

Pass all options to **lwarp-titling**:

for HTML output: `1 \LWR@ProvidesPackagePass{titling}`

`\@bsmtitleempty` Patch `\@bsmtitleempty`:

```
2 \let\LWR@orig@bsmtitleempty\@bsmtitleempty
3 \renewcommand*{\@bsmtitleempty}{%
4 \LWR@orig@bsmtitleempty%
5 }
```

`\keepthetitle` Patch `\keepthetitle`:

```
6 \let\LWR@origkeepthetitle\keepthetitle
7 \renewcommand*{\keepthetitle}{%
8 \LWR@orig@keepthetitle%
9 }
```

`\killtitle` Patch `\killtitle`:

```
10 \let\LWR@origkilltitle\killtitle
11 \renewcommand*{\killtitle}{%
12 \LWR@orig@killtitle%
13 }
```

Env `titlingpage`

```
14 \renewenvironment*{titlingpage}
15 {%
```

Start an HTML titlepage div:

```
16 \LWR@printpendingfootnotes
17 \begin{titlepage}
```

Prepare for a custom version of `\maketitle` inside the `titlingpage`:

```
18 \LWR@maketitlesetup
```

```

19 \let\maketitle\LWR@titlingmaketitle
20 }
21 {

```

At the end of the environment, end the HTML titlepage div:

```

22 \end{titlepage}
23 }

```

Patch the pre/post title/author/date to add HTML tags, then initialize:

```

24
25 \pretitle{}
26 \posttitle{}
27
28 \preauthor{}
29 \postauthor{}
30
31 \predate{}
32 \postdate{}

```

`\LWR@maketitlesetup` Patches `\thanks` macros.

```

33 \renewcommand*\LWR@maketitlesetup}{%

```

Redefine the footnote mark:

```

34 \def\@makefnmark{\@thefnmark}

```

```

\thefootnote ⇒ \nameuse{arabic}{footnote}, or
\thefootnote ⇒ \nameuse{fnsymbol}{footnote}

```

Redefine the footnote text:

```

35 \long\def\@makefntext##1{%

```

Make the footnote mark and some extra horizontal space for the tags:

```

36 \makethanksmark~%

```

```

\makethanksmark ⇒ \thanksfootmark ⇒ \tamark ⇒
\@thefnmark ⇒ \itshape a (or similar)

```

Print the text:

```

37 ##1%
38 }% \@makefntext
39 }

```

`\thanksfootmark`

```

40 \renewcommand{\thanksfootmark}{%
41 % \hb@xt@\thanksmarkwidth{\hfil\normalfont%
42 \thanksscript{%
43 \thanksfootpre \tamark \thanksfootpost%
44 }%
45 % }%
46 }

```

`\maketitle` HTML mode. Creates an HTML titlepage div and typesets the title, etc.

Code from the **titling** package is adapted, simplified, and modified for HTML output.

```

47 \renewcommand*\maketitle}{%

```

An HTML titlepage `<div>` is used for all classes.

```

48 \begin{titlepage}

```

Select which kind of footnote marks to use:

```

49 \@bsmarkseries

```

Set up special patches:

```

50 \LWR@maketitlesetup

```

Typeset the title, etc:

```

51 \@maketitle

```

Immediately generate any `\thanks` footnotes:

```

52 \@thanks

```

Close the HTML titlepage div:

```

53 \end{titlepage}

```

Reset the footnote counter:

```
54 \@bscontmark
55 }
```

`\@maketitle` Typesets the title, etc. Patched for HTML.

```
56 \DeclareDocumentCommand{\@maketitle}{-}{%
57 \maketitlehooka
58 {
59 \LWR@stoppars\LWR@htmltag{\LWR@tagtitle}
60 \@bsprefixtitle \@title \@bsprefixtitle
61 \LWR@htmltag{\LWR@tagtitleend}\LWR@startpars
62 }
63 \maketitlehookb
64 {
65 \begin{BlockClass}{author}
66 \renewcommand{\and}{
67 \end{BlockClass}
68 \begin{BlockClass}{oneauthor}
69 }
70 \begin{BlockClass}{oneauthor}
71 \@bsprefixauthor \@author \@bsprefixauthor
72 \end{BlockClass}
73 \end{BlockClass}
74 }
75 \maketitlehookc
76 {
77 \begin{BlockClass}{titledate}
78 \@bsprefixdate \@date \@bsprefixdate
79 \end{BlockClass}
80 }
81 \maketitlehookd
82 }
```

`\LWR@titlingmaketitle` `\maketitle` for use inside an HTML titlingpage environment.

```
83 \renewcommand*\LWR@titlingmaketitle}{%
```

Keep pending footnotes out of the title block:

```
84 \@thanks
```

Select which kind of footnote marks to use:

```
85 \@bsmarkseries
```

Set up special patches:

```
86 \LWR@maketitlesetup
```

Typeset the title, etc:

```
87 \@maketitle
```

Immediately generate any \thanks footnotes:

```
88 \@thanks
```

Reset the footnote counter:

```
89 \@bscontmark
90 }
```

```
\thanksmarkseries {<series>}
```

Sets the type of footnote marks used by \thanks, where type is ‘arabic’, ‘roman’, ‘fnsymbol’, etc.

```
91 \renewcommand{\thanksmarkseries}[1]{%
92 \def\@bsmarkseries{\renewcommand{\thefootnote}{\@nameuse{#1}{footnote}}}%
93 }
```

Set default titlepage thanks footnote marks. See section [59.7](#).

```
94 \@ifclassloaded{memoir}{
95 \thanksmarkseries{arabic}
96 }{% not memoir
97 \if@titlepage
98 \thanksmarkseries{arabic}
99 \else
100 \thanksmarkseries{fnsymbol}
101 \fi
102 }% not memoir
```

---

File 235 **lwarp-tocbasic.sty**

§ 324 Package **tocbasic**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg tocbasic **tocbasic** is patched for use by **lwarp**.

This package may be loaded standalone, but is also loaded automatically if **koma-script** classes are in use. \DeclareDocumentCommand is used to overwrite the **koma-script** definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{tocbasic}

2 \DeclareDocumentCommand{\usetocbasicnumberline}{o}{}
3 \DeclareDocumentCommand{\DeclareTOCStyleEntry}{o m m}{}
4 \DeclareDocumentCommand{\DeclareTOCEntryStyle}{m o m}{}
5 \DeclareDocumentCommand{\DefineTOCEntryOption}{m o m}{}
6 \DeclareDocumentCommand{\DefineTOCEntryBooleanOption}{m o m m m}{}
7 \DeclareDocumentCommand{\DefineTOCEntryCommandOption}{m o m m m}{}
8 \DeclareDocumentCommand{\DefineTOCEntryIfOption}{m o m m m}{}
9 \DeclareDocumentCommand{\DefineTOCEntryLengthOption}{m o m m m}{}
10 \DeclareDocumentCommand{\DefineTOCEntryNumberOption}{m o m m m}{}
11 \DeclareDocumentCommand{\CloneTOCEntryStyle}{m m}{}
12 \DeclareDocumentCommand{\TOCEntryStyleInitCode}{m m}{}
13 \DeclareDocumentCommand{\TOCEntryStyleStartInitCode}{m m}{}

```

---

File 236 **lwarp-tocbibind.sty**

§ 325 Package **tocbibind**

*(Emulates or patches code by PETER WILSON.)*

Pkg `tocbibind` **tocbibind** is patched for use by **lwarp**.

Opt `IndexLanguage` The **lwarp** package takes an option `IndexLanguage=english` to set the language used by **xindy**. This is passed to **xindy** using its `-L` option, and is used for both index and glossary generation.

 **tocloft & other packages** If using **tocloft** with **tocbibind**, **anonchap**, **fncychap**, or other packages which change chapter title formatting, load **tocloft** with its `titles` option, which tells **tocloft** to use standard  $\LaTeX$  commands to create the titles, allowing other packages to work with it.

**placement and toc options** An index may be placed inline with other HTML text, or on its own HTML page:

**Inline, with a manual TOC entry:**

A commonly-used method to introduce an index in a  $\LaTeX$  document:

```

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

```

**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

```

**Inline, with an automatic TOC entry:**

Pkg `tocbibind` 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

```

**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****for HTML output:**

```

1 \let\simplechapterdelim\relax
2
3 \LWR@ProvidesPackagePass{tocbibind}

4 \renewenvironment{theindex}%
5 {%
6 \if@bibchapter
7 \if@donumindex
8 \chapter{\indexname}
9 \else
10 \if@dotocind
11 \chapter*{\indexname}
12 \addcontentsline{toc}{chapter}{\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}{\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\protect\quad%
36 }%
37 }
38
39 \DeclareDocumentCommand{\restorechapter}{-}{%
40 \let\@chapcntformat\@secntformat%
41 }

```

---

File 237 **lwarp-tocloft.sty**

§ 326 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.

 **tocloft & other packages** 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  $\TeX$  commands to create the titles, allowing other packages to work with it.

Discard all options for **lwarp-tocloft**:

for HTML output: `1 \LWR@ProvidesPackageDrop{tocloft}`

---

|                                 |                                                     |
|---------------------------------|-----------------------------------------------------|
| <code>\tocloftpagestyle</code>  | <code>{\style}</code>                               |
|                                 | 2 <code>\newcommand{\tocloftpagestyle}[1]{}</code>  |
| <code>\cftmarktoc</code>        |                                                     |
|                                 | 3 <code>\newcommand*\cftmarktoc{}</code>            |
| <code>\cfttoctitlefont</code>   |                                                     |
|                                 | 4 <code>\newcommand*\cfttoctitlefont{}</code>       |
| <code>\cftaftertoctitle</code>  |                                                     |
|                                 | 5 <code>\newcommand*\cftaftertoctitle{}</code>      |
|                                 | 6 <code>\newlength{\cftbeforetoctitleskip}</code>   |
|                                 | 7 <code>\newlength{\cftaftertoctitleskip}</code>    |
| <code>\cftmarklof</code>        |                                                     |
|                                 | 8 <code>\newcommand*\cftmarklof{}</code>            |
| <code>\cftlofttitlefont</code>  |                                                     |
|                                 | 9 <code>\newcommand*\cftlofttitlefont{}</code>      |
| <code>\cftafterlofttitle</code> |                                                     |
|                                 | 10 <code>\newcommand*\cftafterlofttitle{}</code>    |
|                                 | 11 <code>\newlength{\cftbeforelofttitleskip}</code> |
|                                 | 12 <code>\newlength{\cftafterlofttitleskip}</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 \newlength{\cftbeforelottitleskip}
17 \newlength{\cftafterlottitleskip}

\cftdot
18 \providecommand*\cftdot}{.}

\cftdotsep
19 \providecommand*\cftdotsep}{1}

\cftnodots
20 \providecommand*\cftnodots}{5000}

\cftdotfill {<sep>}
21 \providecommand{\cftdotfill}[1]{

\cftsetpnumwidth {<length>}
22 \DeclareDocumentCommand{\cftsetpnumwidth}{m}{

\cftsetrmarg {<length>}
23 \DeclareDocumentCommand{\cftsetrmarg}{m}{

\cftpnumalign {<alignment>}
24 \DeclareDocumentCommand{\cftpnumalign}{m}{

25 \LWR@providelength{\cftparskip}

```

The part-related items are also provided by **memoir**:

```

26 \LWR@providelength{\cftbeforepartskip}
27 \LWR@providelength{\cftpartincent}
28 \LWR@providelength{\cftpnumwidth}
29 \providecommand*\cftpfont}{
30 \providecommand*\cftpresnum}{
31 \providecommand*\cftpaftersnum}{
32 \providecommand*\cftpaftersnumb}{
33 \providecommand*\cftpleader}{
34 \providecommand*\cftpdotsep}{1}
35 \providecommand*\cftpfont}{
36 \providecommand*\cftpafterpnum}{

```

**memoir** uses the full name “chapter” instead of “chap”:

```

37 \LWR@providelength{\cftbeforechapskip}
38 \LWR@providelength{\cftchapindent}
39 \LWR@providelength{\cftchapnumwidth}
40 \newcommand*{\cftchapfont}{}
41 \newcommand*{\cftchappresnum}{}
42 \newcommand*{\cftchapaftersnum}{}
43 \newcommand*{\cftchapaftersnumb}{}
44 \newcommand*{\cftchapleader}{}
45 \newcommand*{\cftchapdotsep}{1}
46 \newcommand*{\cftchappagefont}{}
47 \newcommand*{\cftchapafterpnum}{}

```

The following do not appear in **memoir**:

```

48 \LWR@providelength{\cftbeforesecskip}
49 \LWR@providelength{\cftsecindent}
50 \LWR@providelength{\cftsecnumwidth}
51 \newcommand*{\cftsecfont}{}
52 \newcommand*{\cftsecpresnum}{}
53 \newcommand*{\cftsecaftersnum}{}
54 \newcommand*{\cftsecaftersnumb}{}
55 \newcommand*{\cftsecleader}{}
56 \newcommand*{\cftsecdotsep}{1}
57 \newcommand*{\cftsecpagefont}{}
58 \newcommand*{\cftsecafterpnum}{}

59 \LWR@providelength{\cftbeforesubsecskip}
60 \LWR@providelength{\cftsubsecindent}
61 \LWR@providelength{\cftsubsecnumwidth}
62 \newcommand*{\cftsubsecfont}{}
63 \newcommand*{\cftsubsecpresnum}{}
64 \newcommand*{\cftsubsecaftersnum}{}
65 \newcommand*{\cftsubsecaftersnumb}{}
66 \newcommand*{\cftsubsecleader}{}
67 \newcommand*{\cftsubsecdotsep}{1}
68 \newcommand*{\cftsubsecpagefont}{}
69 \newcommand*{\cftsubsecafterpnum}{}

70 \LWR@providelength{\cftbeforesubsubsecskip}
71 \LWR@providelength{\cftsubsubsecindent}
72 \LWR@providelength{\cftsubsubsecnumwidth}
73 \newcommand*{\cftsubsubsecfont}{}
74 \newcommand*{\cftsubsubsecpresnum}{}
75 \newcommand*{\cftsubsubsecaftersnum}{}
76 \newcommand*{\cftsubsubsecaftersnumb}{}
77 \newcommand*{\cftsubsubsecleader}{}
78 \newcommand*{\cftsubsubsecdotsep}{1}

```

```
79 \newcommand*\cftsubsubsecpagefont{}
80 \newcommand*\cftsubsubsecafterpnum{}

81 \LWR@providelength{\cftbeforeparaskip}
82 \LWR@providelength{\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{\pagenumberon}[1]{ }

\newlistentry [within] {counter} {ext} {level-1}

150 \DeclareDocumentCommand{\newlistentry}{o m m m}
151 { %
152 \LWR@traceinfo{newlistentry #2 #3 #4} %
153 \IfValueTF{#1} %
154 { %
155 \@ifundefined{c@#2}{ %
156 \newcounter{#2}[#1] %
157 \expandafter\edef\csname the#2\endcsname{ %
158 \expandafter\noexpand\csname the#1\endcsname.\noexpand\arabic{#2} %
159 } %
160 }{ } %
161 } %
162 { %
163 \@ifundefined{c@#2}{ %
164 \newcounter{#2} %

```

```

165 }{}%
166 }%
167 \@namedef{l@#2}##1##2{%
168 \hypertocfloat{1}{#2}{#3}{##1}{##2}%
169 \def\cftwhatismyname{#2}% from memoir
170 }%
171 \expandafter\newlength\csname cftbefore#2skip\endcsname%
172 \expandafter\newlength\csname cft#2indent\endcsname%
173 \expandafter\newlength\csname cft#2numwidth\endcsname%
174 \@namedef{cft#2font}{}%
175 \@namedef{cft#2presnum}{}%
176 \@namedef{cft#2aftersnum}{}%
177 \@namedef{cft#2aftersnumb}{}%
178 \@namedef{cft#2leader}{}%
179 \@namedef{cft#2dotsep}{1}%
180 \@namedef{cft#2pagefont}{}%
181 \@namedef{cft#2afterpnum}{}%
182 \@namedef{toclevel@#2}{#4}%
183 \@namedef{cft#2fillnum}##1{}%
184 \LWR@traceinfo{newlistentry done}%
185 }

```

`\newlistof` [*within*] {*type*} {*ext*} {*listofname*}

Emulated through the `\newfloat` mechanism.

```

186 \DeclareDocumentCommand{\newlistof}{o m m m}
187 {%
188 \IfValueTF{#1}
189 {\newlistentry[#1]{#2}{#3}{0}}
190 {\newlistentry{#2}{#3}{0}}
191 \@namedef{ext@#2}{#3}
192 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}
193 \setcounter{#3depth}{1}
194 \@namedef{cftmark#3}{}
195 \@namedef{listof#2}{\listof{#2}{#4}}
196 \@namedef{@cftmake#3title}{}
197 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
198 \expandafter\newlength\csname cftafter#3titleskip\endcsname
199 \@namedef{cft#3titlefont}{}
200 \@namedef{cftafter#3title}{}
201 \@namedef{cft#3prehook}{}
202 \@namedef{cft#3posthook}{}
203 }

```

`\cftchapterprecis` {*text*}

```

204 \newcommand{\cftchapterprecis}[1]{%
205 \cftchapterprecishere{#1}
206 \cftchapterprecistoc{#1}}

```

---

```

207 \newcommand{\cftchapterprecishere}[1]{%
208 \begin{quote}\textit{#1}\end{quote}}
209 \newcommand{\cftchapterprecistoc}[1]{
210 \addtocontents{toc}{%
211 {
212 \protect\begin{quote}#1\protect\end{quote}}
213 }
214 }
```

---

File 238 **lwarp-tocstyle.sty**

§ 327 Package **tocstyle**

Pkg tocstyle **tocstyle** is ignored.

 **Not fully tested!** [Please send bug reports!](#)

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{tocstyle}

2 \newcommand*\usetocstyle[2] [] {}
3 \newcommand*\deactivatetocstyle[1] [] {}
4 \newcommand*\reactivatetocstyle[1] [] {}
5 \NewDocumentCommand{\settocfeature}{o o m m}{}
6 \NewDocumentCommand{\settocstylefeature}{o m m}{}
7 \NewDocumentCommand{\newtocstyle}{o o m m}{}
8 \newcommand*\aliastoc[2] {}
9 \newcommand*\showtoc[2] [] {}
10 \newcommand{\iftochasdepth}[4] {}
```

---

File 239 **lwarp-todo.sty**

§ 328 Package **todo**

*(Emulates or patches code by FEDERICO GARCIA.)*

Pkg todo **todo** is patched for use by **lwarp**.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{todo}

2 \renewcommand\todoitem[2]{%
3 \refstepcounter{todo}%
4 \item[%
5 \HTMLUnicode{2610} \quad
6 \ref{todopage:\thetodo}
```

```

7] : {\todoformat\ifx#1\todomark\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\todomark\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 240 **lwarp-todonotes.sty**

§ 329 Package **todonotes**

*(Emulates or patches code by HENRIK SKOV MIDTIBY.)*

Pkg **todonotes** **todonotes** is emulated.

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

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{todonotes}

2 \if@todonotes@disabled

```

```

3 \else
4
5 \newcommand{\ext@todo}{tdo}
6
7 \renewcommand{\l@todo}[2]{\hypertocfloat{1}{\todo}{l@do}{#1}{#2}}

8 \let\LWRTODONOTES@orig@todototoc\todototoc
9
10 \renewcommand*{\todototoc}{%
11 \phantomsection%
12 \LWRTODONOTES@orig@todototoc%
13 }
14
15 \renewcommand{\@todonotes@drawMarginNoteWithLine}{
16 \fcolorbox
17 {\@todonotes@currentbordercolor}
18 {\@todonotes@currentbackgroundcolor}
19 {\arabic{\@todonotes@numberoftodonotes}}
20 \marginpar{\@todonotes@drawMarginNote}
21 }
22
23 \renewcommand{\@todonotes@drawInlineNote}{%
24 \fcolorboxBlock%
25 {\@todonotes@currentbordercolor}%
26 {\@todonotes@currentbackgroundcolor}%
27 {%
28 \if@todonotes@authorgiven%
29 {\@todonotes@author:\,%}
30 \fi%
31 \@todonotes@text%
32 }%
33 }
34
35 \renewcommand{\@todonotes@drawMarginNote}{%
36 \if@todonotes@authorgiven%
37 \@todonotes@author\par%
38 \fi%
39 \arabic{\@todonotes@numberoftodonotes}: %
40 \fcolorbox%
41 {\@todonotes@currentbordercolor}%
42 {\@todonotes@currentbackgroundcolor}%
43 {%
44 \@todonotes@sizecommand%
45 \@todonotes@text %
46 }%
47 }%
48
49 \renewcommand{\@todonotes@drawLineToRightMargin}{%}
50

```

---

```

51 \renewcommand{\@todonotes@drawLineToLeftMargin}{}
52
53 \renewcommand{\missingfigure}[2][]{%
54 \setkeys{todonotes}{#1}%
55 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: #2}%
56 \fcolorboxBlock%
57 {\@todonotes@currentbordercolor}%
58 {\@todonotes@currentfigcolor}%
59 {%
60 \setlength{\fboxrule}{4pt}%
61 \fcolorbox{red}{white}{Missing figure} \quad #2%
62 }
63 }
64
65 \LetLtxMacro\LWRTODONOTES@orig@todo\@todo
66
67 \RenewDocumentCommand{\@todo}{o m}{%
68 \begingroup%
69 \renewcommand*\phantomsection{}%
70 \IfValueTF{#1}{%
71 \LWRTODONOTES@orig@todo[#1]{#2}%
72 }{%
73 \LWRTODONOTES@orig@todo{#2}%
74 }
75 \endgroup%
76 }
77
78 \fi% \if@todonotes@disabled

```

---

File 241 **lwarp-transparent.sty**

§ 330 Package **transparent**

*(Emulates or patches code by HEIKO OBERDIEK.)*

Pkg transparent Emulated. `\texttransparent` works for inline objects. `\transparent` only works for `\includegraphics`.

 **Not Xe<sub>La</sub>TeX!** Note that **transparent** does not work with Xe<sub>La</sub>TeX.

**for HTML output:** Discard all options for **lwarp-transparent**:

```

1 \LWR@ProvidesPackageDrop{transparent}

2 \newcommand*\transparent}[1]{\edef\LWR@opacity{#1}}
3
4 \newcommand*\texttransparent}[2]{%

```

---

```

5 \begingroup%
6 \transparent{#1}%
7 \InlineClass[opacity: #1]{transparent}{#2}%
8 \endgroup%
9 }

```

---

File 242 **lwarp-trivfloat.sty**

§ 331 Package **trivfloat**

*(Emulates or patches code by JOSEPH WRIGHT.)*

Pkg trivfloat **trivfloat** is forced to use the built-in **lwarp** emulation for floats.

Discard all options for **lwarp-trivfloat**. This tells **trivfloat** not to use **floatrow** or **memoir**.

To create a new float type and change its name:

---

```

\trivfloat{example}
\renewcommand{\examplename}{Example Name}
\crefname{example}{example}{examples}
\Crefname{example}{Example}{Examples}

```

---

```

1 \LWR@ProvidesPackageDrop{trivfloat}
2 \LWR@origRequirePackage{trivfloat}

```

`\tfl@chapter@fix` Nullified at the beginning of the document. Is used by **trivfloat** to correct float chapter numbers, but is not needed for **lwarp**.

**for HTML output:** 3 `\begin{warpHTML}`

```

4 \AtBeginDocument{\DeclareDocumentCommand{\tfl@chapter@fix}{m m}{}}

```

```

5 \end{warpHTML}

```

### § 331.1 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 243 `lwarp-turnthepage.sty`

### § 332 Package **turnthepage**

Pkg `turnthepage` **turnthepage** is ignored.

**for HTML output:** 1 `\LWR@ProvidesPackageDrop{turnthepage}`

```
2\newcommand{\turnthepage}{}

```

---

File 244 `lwarp-typearea.sty`

### § 333 Package **typearea**

*(Emulates or patches code by MARKUS KOHM.)*

Pkg `typearea` **typearea** is emulated.

This package may be loaded standalone, but is also loaded automatically if **koma-script** classes are in use. `\DeclareDocumentCommand` is used to overwrite the **koma-script** definitions.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{typearea}

2 \DeclareDocumentCommand{\typearea}{o m}{}
3 \DeclareDocumentCommand{\recalctypearea}{}{}
4 \@ifundefined{footheight}{\newlength\footheight}{}
5 \DeclareDocumentCommand{\areaset}{o m m}{}
6 \DeclareDocumentCommand{\activateareas}{}{}
7 \DeclareDocumentCommand{\storeareas}{m}{}
8 \DeclareDocumentCommand{\BeforeRestoreareas}{s m}{}
9 \DeclareDocumentCommand{\AfterRestoreareas}{s m}{}
10 \DeclareDocumentCommand{\AfterCalculatingTypearea}{s m}{}
11 \DeclareDocumentCommand{\AfterSettingArea}{s m}{}

```

---

File 245 **lwarp-ulem.sty**

§ 334 Package **ulem**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg `ulem` Emulated.

**for HTML output:** Emulate the original package:

```

1 \ProvidesPackage{lwarp-ulem}

```

Original **lwarp** definitions:

```

2 \LetLtxMacro\LWR@ulemorigemph\emph
3 \LetLtxMacro\LWR@ulemorigtextbf\textbf

```

Basic markup commands, using CSS:

```

4 \NewDocumentCommand{\uline}{+m}{%
5 \LWR@HTMLtextstyle%
6 {text-decoration:underline;text-decoration-skip}%
7 {uline}{#1}%
8 }
9
10 \NewDocumentCommand{\uuline}{+m}{%
11 \LWR@HTMLtextstyle%
12 {%
13 text-decoration:underline;text-decoration-skip;%

```

```
14 text-decoration-style:double%
15 }%
16 {uuline}{#1}%
17 }
18
19 \NewDocumentCommand{\uwave}{+m}{%
20 \LWR@HTMLtextstyle%
21 {%
22 text-decoration:underline;text-decoration-skip;%
23 text-decoration-style:wavy%
24 }%
25 {uwave}{#1}%
26 }
27
28 \NewDocumentCommand{\sout}{+m}{%
29 \LWR@HTMLtextstyle%
30 {text-decoration:line-through}%
31 {sout}{#1}%
32 }
33
34 \NewDocumentCommand{\xout}{+m}{%
35 \LWR@HTMLtextstyle%
36 {text-decoration:line-through}%
37 {xout}{#1}%
38 }
39
40 \NewDocumentCommand{\dashuline}{+m}{%
41 \LWR@HTMLtextstyle%
42 {%
43 text-decoration:underline;%
44 text-decoration-skip;%
45 text-decoration-style:dashed%
46 }%
47 {dashuline}{#1}%
48 }
49
50 \NewDocumentCommand{\dotuline}{+m}{%
51 \LWR@HTMLtextstyle%
52 {%
53 text-decoration:underline;%
54 text-decoration-skip;%
55 text-decoration-style:dotted%
56 }%
57 {dotuline}{#1}%
58 }
```

Nullified parameters:

```
59 \NewDocumentCommand{\ULthickness}{-}{}
```

```
60 \newlength{\ULdepth}
```

Nullified/emulated macros:

```
61 \NewDocumentCommand{\markoverwith}{m}{-}
62 \NewDocumentCommand{\ULon}{+m}{\uline{#1}\egroup}
```

\useunder only works with \textbf, etc, but not \bfseries, etc.

```
63 \NewDocumentCommand{\useunder}{m m m}{%
64 \relax%
65 \ifx\relax#3\relax\else % argumentative command
66 \def#3{#1}\MakeRobust{#3}\fi
67 }
```

Triggered by package options, also available for the users:

```
68 \newcommand*{\normalem}{\LetLtxMacro\emph\LWR@ulemorigemph}
69 \newcommand*{\ULforem}{\LetLtxMacro\emph\uline}
70 \ULforem% default
```

Package options:

```
71 \DeclareOption{normalem}{\normalem}
72 \DeclareOption{ULforem}{\ULforem}
73 \DeclareOption{normalbf}{-}
74 \DeclareOption{UWforbf}{\useunder{\uwave}{\bf}{\textbf}}
75
76 \DeclareOption*{}
77 \ProcessOptions\relax% original LaTeX code
```

---

File 246 **lwarp-upref.sty**

§ 335 Package **upref**

Pkg upref Ignored.

**for HTML output:** Discard all options for **lwarp-upref**:

```
1 \LWR@ProvidesPackageDrop{upref}
```

File 247 **lwarp-url.sty**

§ 336 Package **url**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg url **url** is patched for use by **lwarp**.

**for HTML output:** 1 \LWR@ProvidesPackagePass{url}

**url** uses math mode to print its string inside a group, so the original meaning of math is restored first.

```

2 \LetLtxMacro\LWR@url@origUrl@FormatString\Url@FormatString
3
4 \renewcommand*{\Url@FormatString}{%
5 \InlineClass{verbatim}{%
6 \LWR@restoreorigformatting%
7 \LWR@url@origUrl@FormatString%
8 }%
9 }
```

File 248 **lwarp-verse.sty**

§ 337 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}
```

`\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 `\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.

Env `verse` The **verse** environment will be placed inside a HTML `<pre>`.

```

2 \AfterEndPreamble{
3 \LWR@traceinfo{Patching verse.}

```

At the beginning of the **verse** environment:

```

4 \AtBeginEnvironment{verse}
5 {%

```

Use the original list environment inside a `<pre>` to attempt to preserve formatting.

```

6 \LWR@restoreoriglists%

```

Pkg `verse` The **verse** or **memoir** packages can place stanza numbers to the left with their `\flagverse` command. Do not allow them to go into the left margin, which would cause **pdfcrop** to crop the entire page further to the left:

```

Len \leftskip
7 \ifdef{\vleftskip}{%
8 \setlength{\vleftskip}{\HTMLvleftskip}
9 \setlength{\leftmargin}{\HTMLleftmargin}
10 }{}
11 \LWR@forcenewpage
12 \LWR@atbeginverbatim{3.5}{verse}%
13 }

```

After the end of the verse environment, which places the <pre> tag at the regular left margin:

```
14 \AtEndEnvironment{verse}{
15 \LWR@afterendverbatim
16 }
```

Patch to place poemtitle inside an HTML <span> of class poemtitle:

```
17 \ifdef{\poemtitle}{
18 \DeclareDocumentCommand{\@vstypeptitle}{m}{%
19 \vspace{\beforepoemtitleskip}%
20 {\InlineClass{poemtitle}{\poemtitlefont #1}\par}%
21 \vspace{\afterpoemtitleskip}%
22 }
23 }{}
24
25 \LWR@traceinfo{Finished patching verse.}
26 }% AfterEndPreamble
```

---

File 249 **lwarp-vertbars.sty**

§ 338 Package **vertbars**

*(Emulates or patches code by PETER WILSON.)*

Pkg vertbars **vertbars** is emulated.

**for HTML output:**

```
1 \LWR@ProvidesPackageDrop{vertbars}

2 \newlength{\barwidth}
3 \setlength{\barwidth}{0.4pt}
4 \newlength{\barspace}
5 \setlength{\barspace}{1em}
6
7 \newenvironment{vertbar}{
8 \LWR@forcenewpage
9 \LWR@forceminwidth{\barwidth}
10 \begin{BlockClass}[%
11 border-left: \LWR@printlength{\LWR@atleastonept} solid black ; %
12 padding-left: \LWR@printlength{\barspace}%
13]{vertbar}
14 }{
15 \end{BlockClass}
16 }
```

---

File 250 **lwarp-vmargin.sty**

§ 339 Package **vmargin**

Pkg vmargin **vmargin** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{vmargin}

2 \newcommand*{\LWRVM@customsize}[2]{}
3 \newcommand*{\setpapersize}[2][\ifstrequal{#2}{custom}{\LWRVM@customsize}{}]}
4 \newcommand*{\setmargins}[8]{}
5 \newcommand*{\setmarginsrb}[8]{}
6 \newcommand*{\setmargnohf}[4]{}
7 \newcommand*{\setmargnohfrb}[4]{}
8 \newcommand*{\setmarg}[4]{}
9 \newcommand*{\setmargrb}[4]{}
10 \newlength{\PaperWidth}
11 \setlength{\PaperWidth}{8.5in}
12 \newlength{\PaperHeight}
13 \setlength{\PaperHeight}{11in}
14 \newif\ifLandscape

```

---

File 251 **lwarp-vwcol.sty**

§ 340 Package **vwcol**

*(Emulates or patches code by WILL ROBERTSON.)*

Pkg vwcol **vwcol** is patched for use with **lwarp**.

The width option is ignored. All vwcol environments adjust to 1–3 equal-width columns, depending on the width of the browser window.

The remaining options are supported, except for lines and maxrecursion.

**for HTML output:**

```

1 \LWR@ProvidesPackagePass{vwcol}

```

Factored from \vwcol. Each is given a style tag to append to the final style.

```

\LWR@vwcol@addrule {<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` `{\langle style tag \rangle}`

```

8 \newcommand*\LWR@vwcol@addgap}[1]{%
9 \appto{\LWR@vwcolstyle}{%
10 #1: %
11 \LWR@printlength{\vwcol@sep} ; %
12 }%
13 }

```

Env `vwcol` `{\langle key/values \rangle}`

Redefine the environment to add a HTML style. The style is built depending on the required options.

```
14 \renewenvironment*{vwcol}[1] [] {%
```

New paragraph, and process the options:

```
15 \par\noindent%
16 \vwcolsetup{#1}%
```

Begin with no style:

```
17 \newcommand*\LWR@vwcolstyle}{}
```

presep and postsep are created with HTML margins:

```
18 \if@vwcol@presep
19 \appto{\LWR@vwcolstyle}{margin-left: 1em ; padding-left: .5em ; }
20 \fi
21 \if@vwcol@postsep
22 \appto{\LWR@vwcolstyle}{margin-right: 1em ; padding-right: .5em ; }
23 \fi

```

sep becomes column-gap:

```
24 \ifdimgreater{\vwcol@sep}{1sp}{
25 \LWR@vwcol@addgap{column-gap}
26 \LWR@vwcol@addgap{-moz-column-gap}
27 \LWR@vwcol@addgap{-webkit-column-gap}
28 }{}

```

rule become column-rule, while prerule and postrule become HTML borders:

```
29 \convertcolorspec{named}{\vwcol@rulecol}{HTML}\LWR@vwcol@rulecolor%
30 \ifdimgreater{\vwcol@rule}{Opt}{
31 \ifdimless{\vwcol@rule}{1pt}{
32 \setlength{\vwcol@rule}{1pt}

```

```

33 }{}
34 \LWR@vwcol@addrule{column-rule}
35 \LWR@vwcol@addrule{-moz-column-rule}
36 \LWR@vwcol@addrule{-webkit-column-rule}
37 \if@vwcol@prerule\LWR@vwcol@addrule{border-left}\fi
38 \if@vwcol@postrule\LWR@vwcol@addrule{border-right}\fi
39 }{}

```

Each of the justify options becomes a `text-align`. Indentation is added where appropriate.

```

40 \ifdefequal{\vwcol@justify}{\RaggedRight}{
41 \appto{\LWR@vwcolstyle}{text-align: left ; }
42 \ifdimgreater{\vwcol@parindent}{Opt}{
43 \appto{\LWR@vwcolstyle}{%
44 text-indent: \LWR@printlength{\vwcol@parindent} ; %
45 }
46 }{}
47 }{}

48 \ifdefequal{\vwcol@justify}{\RaggedLeft}{
49 \appto{\LWR@vwcolstyle}{text-align: right ; }
50 }{}

51 \ifdefequal{\vwcol@justify}{\Centering}{
52 \appto{\LWR@vwcolstyle}{text-align: center ; }
53 }{}

54 \ifdefequal{\vwcol@justify}{\justifying}{
55 \appto{\LWR@vwcolstyle}{text-align: justify ; }
56 \ifdimgreater{\vwcol@parindent}{Opt}{
57 \appto{\LWR@vwcolstyle}{%
58 text-indent: \LWR@printlength{\vwcol@parindent} ; %
59 }
60 }{}
61 }{}

```

Create the `<div>` with the assembled style:

```

62 \BlockClass[\LWR@vwcolstyle]{multicols}
63 }

```

When the environment ends:

```

64 {
65 \endBlockClass
66 }

```

---

File 252 **lwarp-wallpaper.sty**

§ 341 Package **wallpaper**

*(Emulates or patches code by MICHAEL H.F. WILKINSON.)*

Pkg wallpaper **wallpaper** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{wallpaper}

2 \newcommand*\CenterWallPaper}[2]{}
3 \newcommand*\ThisCenterWallPaper}[2]{}
4 \newcommand*\TileWallPaper}[3]{}
5 \newcommand*\ThisTileWallPaper}[3]{}
6 \newcommand*\TileSquareWallPaper}[2]{}
7 \newcommand*\ThisTileSquareWallPaper}[2]{}
8 \newcommand*\ULCornerWallPaper}[2]{}
9 \newcommand*\ThisULCornerWallPaper}[2]{}
10 \newcommand*\LLCornerWallPaper}[2]{}
11 \newcommand*\ThisLLCornerWallPaper}[2]{}
12 \newcommand*\URCornerWallPaper}[2]{}
13 \newcommand*\ThisURCornerWallPaper}[2]{}
14 \newcommand*\LRCornerWallPaper}[2]{}
15 \newcommand*\ThisLRCornerWallPaper}[2]{}
16 \newcommand*\ClearWallPaper[1]{}
17 \newlength{\wpXoffset}
18 \newlength{\wpYoffset}

```

---

File 253 **lwarp-watermark.sty**

§ 342 Package **watermark**

*(Emulates or patches code by ALEXANDER I. ROZHENKO.)*

Pkg watermark **watermark** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{watermark}

2 \newcommand\watermark[1]{}
3 \newcommand\leftwatermark[1]{}
4 \newcommand\rightwatermark[1]{}
5 \newcommand\thiswatermark[1]{}
6 \newcommand\thispageheading[1]{}

```

File 254 **lwarp-wrapfig.sty**

§ 343 Package **wrapfig**

*(Emulates or patches code by DONALD ARSENEAU.)*

Pkg wrapfig **wrapfig** is emulated.

```

for HTML output: 1 \LWR@ProvidesPackageDrop{wrapfig}

2 \newcommand*{\LWR@wrapposition}{-}
3
4 \newcommand*{\LWR@subwrapfigure}[2]{%
5 \renewcommand*{\LWR@wrapposition}{-}%
6 \ifthenelse{%
7 \equal{#1}{r}\OR\equal{#1}{R}\OR%
8 \equal{#1}{o}\OR\equal{#1}{O}%
9 }%
10 {\renewcommand*{\LWR@wrapposition}{float:right}}%
11 {\renewcommand*{\LWR@wrapposition}{float:left}}%
12 \setlength{\LWR@templengthone}{#2}%
13 \LWR@BlockClassWP{%
14 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition; %
15 margin:10pt%
16 }%
17 {%
18 width:\LWR@printlength{\LWR@templengthone}; \LWR@wrapposition%
19 }%
20 {marginblock}%
21 }
22
23
24 \NewDocumentEnvironment{wrapfigure}{o m o m}
25 {%
26 \LWR@subwrapfigure{#2}{#4}%
27 \captionsetup{type=figure}%
28 }
29 {%
30 \endLWR@BlockClassWP%
31 }
32
33
34 \NewDocumentEnvironment{wraptable}{o m o m}
35 {%
36 \LWR@subwrapfigure{#2}{#4}%

```

```

37 \captionsetup{type=table}%
38 }
39 {%
40 \endLWR@BlockClassWP%
41 }
42
43
44 \NewDocumentEnvironment{wrapfloat}{m o m o m}
45 {%
46 \LWR@subwrapfigure{#3}{#5}%
47 \captionsetup{type=#1}%
48 }
49 {%
50 \endLWR@BlockClassWP%
51 }
52
53 \newlength{\wrapoverhang}

```

---

File 255 **lwarp-xcolor.sty**

§ 344 Package **xcolor**

*(Emulates or patches code by DR. UWE KERN.)*

Pkg xcolor **xcolor** is supported by lwarp.

§ 344.1 **Limitations**

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

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

**background: none** `\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.

### § 344.2 **Xcolor definitions: location and timing**

The **lwarp** core and its **lwarp-xcolor** package are tightly integrated to allow comparable results for print, HTML and print inside an HTML `lateximage`. This requires a number of definitions and redefinitions depending on whether each of **xcolor** and `lateximage` is being used, and whether print or HTML is being generated. Some of these actions are one-time when **xcolor** is loaded, and others are temporary as `lateximage` is used.

**When xcolor is loaded in print mode:** No special actions are taken at the time that **xcolor** is loaded in print mode, but see `\AtBeginDocument` below.

**When lwarp-xcolor is loaded in HTML mode:** **xcolor**'s original definitions are saved for later restoration. `\LWR@restoreorigformatting` is appended to restore these definitions for use inside a `lateximage`. New HTML-mode definitions are created for `\textcolor`, `\pagecolor`, `\nopagecolor`, `\colorbox`, `\colorboxBlock`, `\fcolorbox`, `\fcolorboxBlock`, and `fcolorminipage`.

`\AtBeginDocument` **in print or HTML mode:** See Section 78. 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 421.

`\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 805.

**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 806.

**HTML lateximage:** Remembers and reuses the print version.

`\colorboxBlock:`

**Print:** Becomes `\colorbox`.

**HTML:** Newly defined by `lwarp-xcolor` to use a `<div>`, page 806.

**HTML lateximage:** Remembers and reuses the print version `\colorbox`.

`\fcolorbox:`

**Print:** Modified to allow a background of none.

`\LWRprint@fcolorbox` at section 78

**HTML:** Redefined by `lwarp-xcolor`, page 806.

**HTML lateximage:** Remembers and reuses the print version.

`\fcolorboxBlock:`

**Print:** Becomes `\fcolorbox`. Section 78

**HTML:** Newly defined by `lwarp-xcolor` to use a `<div>`, page 807.

**HTML lateximage:** Remembers and reuses the print version `\fcolorbox`.

`fcolorminipage:`

**Print:** Newly defined in the `lwarp` core.

`LWRprint@fcolorminipage` at section 78

**HTML:** Newly defined by `lwarp-xcolor`, page 808.

**HTML lateximage:** Uses the print version.

`\boxframe:`

**Print:** Used as-is.

**HTML:** Redefined by `lwarp-xcolor`, page 808.

**HTML lateximage:** Remembers and reuses the print version.

### § 344.3 Package loading

**for HTML output:**

```
1 \LWR@ProvidesPackagePass{xcolor}
2 \begin{warpHTML}
```

### § 344.4 Remembering and restoring original definitions

Remember the following print-mode actions to be restored when inside a `lateximage` environment:

```
3 \LetLtxMacro\LWRprint@textcolor\textcolor
4 \LetLtxMacro\LWRprint@pagecolor\pagecolor
5 \LetLtxMacro\LWRprint@nopagecolor\nopagecolor
6 \LetLtxMacro\LWRprint@colorbox\colorbox
7 \LetLtxMacro\LWRprint@colorboxBlock\colorbox
```

New print-mode versions of the following are also defined:

```
8 \LetLtxMacro\LWRorigprint@fcolorbox\fcolorbox
9 \LetLtxMacro\LWRorigprint@fcolorboxBlock\fcolorbox
10 \LetLtxMacro\LWRorigprint@boxframe\boxframe
```

`\LWR@restoreorigformatting` Inside a `lateximage` the following gets restored to their print-mode actions:

```
11 \appto\LWR@restoreorigformatting{%
12 \LetLtxMacro\textcolor\LWRprint@textcolor%
13 \LetLtxMacro\pagecolor\LWRprint@pagecolor%
14 \LetLtxMacro\nopagecolor\LWRprint@nopagecolor%
15 \LetLtxMacro\colorbox\LWRprint@colorbox%
16 \LetLtxMacro\fcolorbox\LWRprint@fcolorbox%
17 \LetLtxMacro\boxframe\LWRorigprint@boxframe%
18 }
```

### § 344.5 HTML color style

Sets `\LWR@tempcolor` to the current color.

```
\LWR@findcurrenttextcolor
19 \renewcommand*{\LWR@findcurrenttextcolor}{%
20 \protect\colorlet{\LWR@current@color}{.}%
21 \protect\convertcolorspec{named}{\LWR@current@color}{HTML}\LWR@tempcolor%
22 }
```

Prints a color style for the current color.

```
\LWR@currenttextcolorstyle
23 \newcommand*{\LWR@currenttextcolorstyle}{%
24 \LWR@findcurrenttextcolor%
25 \ifdefstring{\LWR@tempcolor}{000000}%
26 {}%
```

```
27 {color: \LWR@origpound\LWR@tempcolor ; }%
28 }
```

`\LWR@textcurrentcolor`  $\langle text \rangle$  Like `\textcolor` but uses the current `\color` instead.

```
29 \DeclareDocumentCommand{\LWR@textcurrentcolor}{m}{%
30 \begingroup%
31 \LWR@FBcancel%
32 \LWR@findcurrenttextcolor%
33 \InlineClass[color:\LWR@origpound\LWR@tempcolor]{textcolor}{%
34 \renewcommand*{\LWR@currenttextcolor}{\LWR@origpound\LWR@tempcolor}%
35 #1%
36 }%
37 \endgroup%
38 }
```

`\LWR@colorstyle`  $\langle 2: model \rangle \langle 3: color \rangle$

For a color style, prints the color converted to HTML colors.

```
39 \NewDocumentCommand{\LWR@colorstyle}{m m}{%
40 \begingroup%
41 \LWR@FBcancel%
```

Use the `xcolor` package to convert to an HTML color space:

```
42 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
```

Print the converted color:

```
43 \LWR@origpound\LWR@tempcolor%
44 \endgroup%
45 }
```

`\LWR@backgroundcolor`  $[\langle model \rangle] \langle color \rangle \langle text \rangle$

Similar to `\textcolor`, but prints black text against a color background.

Converted into an HTML hex color span.

```
46 \NewDocumentCommand{\LWR@backgroundcolor}{0{named} m m}{%
47 \begingroup%
48 \LWR@FBcancel%
49 \InlineClass[background:\LWR@colorstyle{#1}{#2}]{backgroundcolor}{%
50 #3%
51 }%
52 \endgroup%
53 }
```

### § 344.6 HTML border

`\LWR@borderpadding`  $\{\langle colorstyle \rangle\} \{\langle color \rangle\}$  Prints the HTML attributes for a black border and padding.  
`\LWR@forceminwidth` must be used first in order to set the border width.

```
54 \newcommand*\LWR@borderpadding[2]{%
55 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@colorstyle{#1}{#2} ; %
56 padding:\LWR@printlength{\fboxsep}%
57 }
```

### § 344.7 High-level macros

`\textcolor`  $[\langle model \rangle] \{\langle color \rangle\} \{\langle text \rangle\}$

Converted into an HTML hex color span.

```
58 \RenewDocumentCommand{\textcolor}{o m m}{%
59 \begingroup%
```

Set the PDF color, to be picked up by SVG math if possible.

The print-mode `\color` command cannot accept the named option with color mixing, but it works with no option at all.

```
60 \IfValueTF{#1}{%
61 \color[#1]{#2}%
62 }{%
63 \color{#2}%
64 }%

65 \LWR@FBcancel%
66 \IfValueTF{#1}{%
67 \InlineClass[color:\LWR@colorstyle{#1}{#2}]{textcolor}{%
68 \renewcommand*\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
69 #3%
70 }%
71 }{%
72 \InlineClass[color:\LWR@colorstyle{named}{#2}]{textcolor}{%
73 \renewcommand*\LWR@currenttextcolor{\LWR@origpound\LWR@tempcolor}%
74 #3%
75 }%
76 }%
77 \endgroup%
78 }
```

`\pagecolor`  $[\langle model \rangle] \{\langle color \rangle\}$

Ignored. Use CSS instead.

```
79 \renewcommand*{\pagecolor}[2] [named] {}
```

`\nopagecolor` Ignored.

```
80 \renewcommand*{\nopagecolor}{}
```

`\colorbox` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<span>`.

```
81 \RenewDocumentCommand{\colorbox}{0{named} m +m}{%
82 \begingroup%
83 \LWR@FBcancel%
84 \InlineClass[%
85 background:\LWR@colorstyle{#1}{#2} ; %
86 padding:\LWR@printlength{\fboxsep}%
87]{\colorbox}{#3}%
88 \endgroup%
89 }
```

`\colorboxBlock` [*model*] {*color*} {*text*}

Converted into an HTML hex background color `<div>`.

```
90 \NewDocumentCommand{\colorboxBlock}{0{named} m +m}{%
91 \begingroup%
92 \LWR@FBcancel%
93 \begin{BlockClass}[%
94 background:\LWR@colorstyle{#1}{#2} ; %
95 padding:\LWR@printlength{\fboxsep}%
96]{\colorboxBlock}
97 #3
98 \end{BlockClass}%
99 \endgroup%
100 }
```

`\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.

```
101 \RenewDocumentCommand{\fcolorbox}{0{named} m 0{named} m +m}{%
102 \LWR@traceinfo{HTML fcolorbox #2 #4}%
```

```

103 \begingroup%
104 \LWR@FBcancel%
105 \LWR@forceminwidth{\fboxrule}%
106 \ifthenelse{\equal{#4}{none}}%
107 {% no background color
108 \InlineClass[%
109 \LWR@borderpadding{#1}{#2}%
110]{fcolorbox}{#5}%
111 }%
112 {% yes background color
113 \InlineClass[%
114 \LWR@borderpadding{#1}{#2} ; %
115 background:\LWR@colorstyle{#3}{#4}%
116]{fcolorbox}{#5}%
117 }%
118 \endgroup%
119 }

```

`\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.

```

120 \NewDocumentCommand{\fcolorboxBlock}{0{named} m 0{named} m +m}{%
121 \LWR@traceinfo{HTML fcolorboxBlock #2 #4}%
122 \begingroup%
123 \LWR@FBcancel%
124 \LWR@forceminwidth{\fboxrule}%
125 \ifthenelse{\equal{#4}{none}}%
126 {% no background color
127 \begin{BlockClass}[%
128 \LWR@borderpadding{#1}{#2}%
129]{fcolorboxBlock}
130 #5
131 \end{BlockClass}%
132 }%
133 {% yes background color
134 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
135 \begin{BlockClass}[%
136 background:\LWR@origpound\LWR@tempcolortwo\ ; %
137 \LWR@borderpadding{#1}{#2}%
138]{fcolorboxBlock}
139 #5
140 \end{BlockClass}%
141 }%
142 \endgroup%
143 \LWR@traceinfo{HTML fcolorboxBlock done}%
144 }

```

Creates a framed HTML <div> around its contents.

A print-output version is defined in the **lwarp** core: section 78

```

\LWR@subfcolorminipage {\framemodel} {\framecolor} {\background tag} {\height}
145 \NewDocumentCommand{\LWR@subfcolorminipage}{m m m m}{%
146 \begin{BlockClass}{%
147 #3%
148 \LWR@borderpadding{#1}{#2} ; %
149 \IfValueT{#4}{height:\LWR@printlength{\LWR@tempheight} ;}%
150 width:\LWR@printlength{\LWR@tempwidth}%
151 }{fcolorminipage}%
152 }

Env fcolorminipage [1:framemodel] {\2:framecolor} [3:boxmodel] {\4:boxcolor} [5:align] [6:height]
[7:inner-align] {\8:width}

153 \NewDocumentEnvironment{fcolorminipage}{0{named} m 0{named} m 0{c} o o m}
154 {%
155 \LWR@FBcancel%
156 \setlength{\LWR@tempwidth}{#8}%
157 \IfValueT{#6}{\setlength{\LWR@tempheight}{#6}}%
158 \LWR@forceminwidth{\fboxrule}%
159 \convertcolorspec{#1}{#2}{HTML}\LWR@tempcolor%
160 \ifthenelse{equal{#4}{none}}%
161 {\LWR@subfcolorminipage{#1}{#2}{#6}}%
162 {%
163 \convertcolorspec{#3}{#4}{HTML}\LWR@tempcolortwo%
164 \LWR@subfcolorminipage{#1}{#2}{background:\LWR@origpound\LWR@tempcolortwo\ ;}{#6}%
165 }%
166 }
167 {\end{BlockClass}}

```

`\boxframe` `{\width}` `{\height}` `{\depth}`

The depth is added to the height, but the box is not decended below by the depth.  
`\textcolor` is honored.

```

168 \renewcommand*\boxframe}[3]{%
169 {%
170 \setlength{\LWR@tempwidth}{#1}%
171 \setlength{\LWR@tempheight}{#2}%
172 \addtolength{\LWR@tempheight}{#3}%
173 \LWR@forceminwidth{\fboxrule}%
174 \InlineClass[%
175 display:inline-block ; %

```

```

176 border:\LWR@printlength{\LWR@atleastonept} solid \LWR@currenttextcolor{} ; %
177 width:\LWR@printlength{\LWR@tempwidth} ; %
178 height:\LWR@printlength{\LWR@tempheight}%
179]{boxframe}{}%
180 }%
181 }

```

### § 344.8 Row colors

```

\rowc@l@rs [cmds] {startrow} {odd color} {even color}

182 \newcommand*\LWR@xcolortempcolor{}
183
184 \def\rowc@l@rs[#1]#2#3#4%
185 {
186 \global\rownum=1
187 \global\@rowcolorstrue
188 \@ifxempty{#3}%
189 {\def\@oddrowcolor{\@norowcolor}}%
190 {%
191 \convertcolorspec{named}{#3}{HTML}\LWR@xcolortempcolor%
192 \edef\@oddrowcolor{%
193 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
194 }%
195 }%
196 \@ifxempty{#4}%
197 {\def\@evenrowcolor{\@norowcolor}}%
198 {%
199 \convertcolorspec{named}{#4}{HTML}\LWR@xcolortempcolor%
200 \edef\@evenrowcolor{%
201 \csdef{LWR@xcolorrowHTMLcolor}{\LWR@xcolortempcolor}%
202 }%
203 }%
204 \if@rowcmd
205 \def\@rowcolors
206 {%
207 % #1%
208 \if@rowcolors
209 % \noalign{%
210 \relax\ifnum\rownum<#2\@norowcolor\else
211 \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi\fi%
212 % }%
213 \fi%
214 }%
215 \else
216 \def\@rowcolors
217 {%
218 \if@rowcolors
219 \ifnum\rownum<#2%
220 % \noalign{%

```

```

221 \@norowcolor
222 % }
223 \else
224 % #1%
225 % \noalign{%
226 % \ifodd\rownum\@oddrowcolor\else\@evenrowcolor\fi%
227 % }%
228 \fi
229 \fi%
230 }%
231 \fi
232 \ignorespaces%
233 }

```

`\@norowcolor` Turns off color for this row.

```

234 \def\@norowcolor{%
235 \renewcommand{\LWR@xcolorrowHTMLcolor}{}}%
236 }

```

`\@rowc@lors` Executed at the end of each row.

```

237 \def\@rowc@lors{%
238 % \noalign{%
239 % \global\advance\rownum\@ne%
240 % }%
241 % \@rowcolors%
242 }

243 \end{warpHTML}

```

---

File 256 **lwarp-xfrac.sty**

§ 345 Package **xfrac**

*(Emulates or patches code by THE L<sup>A</sup>T<sub>E</sub>X3 PROJECT.)*

Pkg `xfrac` Supported by adding **xfrac** instances.

for HTML output: `1 \LWR@ProvidesPackagePass{xfrac}`

 font size

In the user's document preamble, **lwarp** should be loaded after font-related setup. During HTML conversion, this font is used by **lwarp** to generate its initial PDF output containing HTML tags, later to be converted by **pdftotext** to a plain text file. While the text may be in any font which **pdftotext** can read, the math is directly converted into SVG images using this same user-selected font. `xfrac` below is set for

the Latin Modern (lmr) font. If another font is used, it may be desirable to redefine `\xfracHTMLfontsize` with a different em size.

```
\sfrac [instance] {<num>} [<sep>] {<denom>}
```

A text-mode instance for the default font is provided below. The numerator and denominator formats are adjusted to encase everything in HTML tags. `\scalebox` is made null inside the numerator and denominator, since the HTML tags should not be scaled, and we do not want to introduce additional HTML tags for scaling.

In math mode, which will appear inside a `lateximage`, no adjustments are necessary.

**for HTML & PRINT:** `2 \begin{warpall}`

`\xfracHTMLfontsize` User-redefinable macro which controls the font size of the fraction.

```
3 \newcommand*\xfracHTMLfontsize{.6em}
```

```
4 \end{warpall}
```

**for HTML output:** `5 \begin{warpHTML}`

**font size** A span for a small font, used in the numerator and denominator:

```
6 \newcommand*\LWR@htmlsmallfontstart}{%
7 \LWR@htmltagc{span style="font-size:\xfracHTMLfontsize"}%
8 \LWR@nestspan%
9 %
10 }
11
12 \newcommand*\LWR@htmlsmallfontend}{%
13 \LWR@htmltagc{/span}%
14 \endLWR@nestspan%
15 }
```

`\scalebox` A nullified `\scalebox` command, to avoid introducing HTML scaling tags:

```
16 \NewDocumentCommand{\LWR@noscalebox}{m o m}{#3}
```

**instances** Instances of `xfrac` for various font choices:

Produce HTML tags for a small superscript numerator and a small (non-subscript) denominator.

Scaling is turned off so that `pdftotext` correctly reads the result.

```
17 \DeclareInstance{xfrac}{default}{text}{
18 numerator-format = {%
```

```

19 \begingroup%
20 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
21 \LWR@htmlsmallfontstart#1\,\LWR@htmlsmallfontend%
22 \endgroup%
23 },
24 denominator-format = {%
25 \begingroup%
26 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
27 \LWR@htmlsmallfontstart{\},#1\LWR@htmlsmallfontend%
28 \endgroup%
29 },

```

For **pdftotext**, do not scale the text:

```

30 scaling = false
31 }
32
33 \DeclareInstance{xfrac}{lmr}{text}{
34 numerator-format = {%
35 \begingroup%
36 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
37 \LWR@htmlsmallfontstart#1\,\LWR@htmlsmallfontend%
38 \endgroup%
39 },
40 denominator-format = {%
41 \begingroup%
42 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
43 \LWR@htmlsmallfontstart{\},#1\LWR@htmlsmallfontend%
44 \endgroup%
45 },

```

For **pdftotext**, do not scale the text:

```

46 scaling = false
47 }
48
49 \DeclareInstance{xfrac}{lmss}{text}{
50 numerator-format = {%
51 \begingroup%
52 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
53 \LWR@htmlsmallfontstart#1\,\LWR@htmlsmallfontend%
54 \endgroup%
55 },
56 denominator-format = {%
57 \begingroup%
58 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
59 \LWR@htmlsmallfontstart{\},#1\LWR@htmlsmallfontend%
60 \endgroup%
61 },

```

For **pdftotext**, do not scale the text:

```

62 scaling = false
63 }
64
65 \DeclareInstance{xfrac}{lmtt}{text}{
66 numerator-format = {%
67 \begingroup%
68 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
69 \LWR@htmlsmallfontstart#1\,\LWR@htmlsmallfontend%
70 \endgroup%
71 },
72 denominator-format = {%
73 \begingroup%
74 \LetLtxMacro{\scalebox}{\LWR@noscalebox}%
75 \LWR@htmlsmallfontstart{\,\#1\LWR@htmlsmallfontend%
76 \endgroup%
77 },

```

For **pdftotext**, do not scale the text:

```

78 scaling = false
79 }

80 \end{warpHTML}

```

---

File 257 **lwarp-xltxtra.sty**

§ 346 Package **xltxtra**

*(Emulates or patches code by WILL ROBERTSON, JONATHAN KEW.)*

Pkg xltxtra **xltxtra** is emulated.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{xltxtra}

2 \RequirePackage{realscripts}
3 \RequirePackage{metalogo}
4 \newcommand*\TeX@logo@spacing[6]{
5
6 \newcommand*\vfrac[2]{%
7 #1/\textsubscript{#2}%
8 }
9
10 \newcommand\namedglyph[1]{%

```

---

```

11 \@tempcnta=\XeTeXglyphindex "#1"\relax
12 \ifnum\@tempcnta>0
13 \XeTeXglyph\@tempcnta
14 \else
15 \xxt@namedglyph@fallback{#1}%
16 \fi}
17
18 \newcommand\xxt@namedglyph@fallback[1]{[#1]}
19
20 \DeclareDocumentCommand{\showhyphens}{m}{}
```

---

File 258 **lwarp-xmpincl.sty**

§ 347 Package **xmpincl**

*(Emulates or patches code by MAARTEN SNEEP.)*

Pkg xmpincl Emulated.

**for HTML output:** Discard all options for **lwarp-xmpincl**:

```

1 \LWR@ProvidesPackageDrop{xmpincl}
2 \newcommand*{\includemp}[1]{}
```

---

File 259 **lwarp-xtab.sty**

§ 348 Package **xtab**

*(Emulates or patches code by PETER WILSON.)*

Pkg xtab **xtab** is emulated.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xtab}

⚠ **misplaced alignment** For `\tablefirsthead`, etc., enclose them as follows:

```

\StartDefiningTabulars
\tablefirsthead
...
\EndDefiningTabulars
```

See section 9.9.

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

```
2 \newcommand{\LWRXT@firsthead}{}
3
4 \newcommand{\tablefirsthead}[1]{%
5 \long\gdef\LWRXT@firsthead{#1}%
6 }
7
8 \newcommand{\tablehead}[1]{}
9
10 \newcommand{\tablelasthead}[1]{}
11
12 \newcommand{\notablelasthead}{}
13
14 \newcommand{\tabletail}[1]{}
15
16 \newcommand{\LWRXT@lasttail}{}
17
18 \newcommand{\tablelasttail}[1]{%
19 \long\gdef\LWRXT@lasttail{#1}%
20 }
21
22 \newcommand{\tablecaption}[2][]{%
23 \long\gdef\LWRXT@caption{\caption[#1]{#2}}%
24 }
25
26 \let\topcaption\tablecaption
27 \let\bottomcaption\tablecaption
28
29 \newcommand*{\LWRXT@caption}{}
30
31 \newcommand*{\shrinkheight}[1]{}
32
33 \newcommand*{\xentrystretch}[1]{}
34
35 \NewDocumentEnvironment{xtabular}{s o m}
36 {%
37 \LWR@traceinfo{xtabular}%
38 \table%
39 \LWRXT@caption%
40 \begin{tabular}{#3}%
41 \TabularMacro\ifdefvoid{\LWRXT@firsthead}%
42 {\LWR@getmynexttoken}%
43 {\expandafter\LWR@getmynexttoken\LWRXT@firsthead}%
44 }%
45 {%
46 \ifdefvoid{\LWRXT@lasttail}%
47 {}%
48 {%
49 \TabularMacro\ResumeTabular%
```

---

```

50 \LWRXT@lasttail%
51 }%
52 \end{tabular}%
53 \endtable%
54 \LWR@traceinfo{xtabular done}%
55 }
56
57 \NewDocumentEnvironment{mpxtabular}{s o m}
58 {\minipage{\linewidth}\xtabular{#3}}
59 {\endxtabular\endminipage}

```

---

File 260 **lwarp-xurl.sty**

§ 349 Package **xurl**

Pkg xurl **xurl** is ignored.

**for HTML output:** 1 \LWR@ProvidesPackageDrop{xurl}

---

File 261 **lwarp-xy.sty**

§ 350 Package **xy**

*(Emulates or patches code by KRISTOFFER H. ROSE, ROSS MOORE.)*

Pkg xy **xy** is patched for use by **lwarp**.

 \xypolygon must be used inside the xy environment, or inside \xy ... \endxy.

**for HTML output:** 1 \LWR@ProvidesPackagePass{xy}

```

2 \AtBeginDocument{
3
4 \preto{\xy}{\begin{lateximage}[(xy)]}
5 \appto{\endxy}{\end{lateximage}}
6
7 \@ifundefined{xymatrix}{}{
8 \LetLtxMacro\LWR@origxymatrix\xymatrix
9
10 \renewcommand{\xymatrix}[1]{%
11 \begin{lateximage}[(xymatrix)]
12 \LWR@origxymatrix{#1}
13 \end{lateximage}
14 }

```

```

15 }
16
17 \@ifundefined{xygraph}{-}{
18 \LetLtxMacro\LWR@origxygraph\xygraph
19
20 \renewcommand{\xygraph}[1]{%
21 \begin{lateximage}[(xygraph)]
22 \LWR@origxygraph{#1}
23 \end{lateximage}
24 }
25 }
26
27 }

```

---

File 262 **lwarp-zwpagelayout.sty**

§ 351 Package **zwpagelayout**

*(Emulates or patches code by ZDENĚK WAGNER.)*

Pkg zwpagelayout **zwpagelayout** is ignored.

**for HTML output:**

```

1 \LWR@ProvidesPackageDrop{zwpagelayout}

2 \def\noBboxes{}
3 \@onlypreamble\noBboxes
4
5 \expandafter\ifx\csmame definecolor\endcsmame\relax \else
6 \definecolor{cmykblack}{cmyk}{0,0,0,1}
7 \definecolor{grblack}{gray}{0}
8% \ifzwpl@redefineblack
9% \definecolor{black}{cmyk}{0,0,0,1}\color{black}
10% \fi
11 \definecolor{cmykred}{cmyk}{0,1,1,0}
12 \definecolor{cmykgreen}{cmyk}{1,0,1,0}
13 \definecolor{cmykblue}{cmyk}{1,1,0,0}
14 \definecolor{rgbred}{rgb}{1,0,0}
15 \definecolor{rgbgreen}{rgb}{0,1,0}
16 \definecolor{rgbblue}{rgb}{0,0,1}
17% \ifzwpl@redefinetcmyk
18% \definecolor{red}{cmyk}{0,1,1,0}
19% \definecolor{green}{cmyk}{1,0,1,0}
20% \definecolor{blue}{cmyk}{1,1,0,0}
21% \fi
22 \fi
23
24 \let\OverprintXeTeXExtGState\relax

```

```

25
26 \DeclareRobustCommand\SetOverprint{\ignorespaces}
27 \DeclareRobustCommand\SetKnockout{\ignorespaces}
28 \DeclareRobustCommand\textoverprint[1]{\SetOverprint#1}}
29 \DeclareRobustCommand\textknockout[1]{\SetKnockout#1}}
30
31 \def\SetPDFminorversion#1{}
32 \@onlypreamble\SetPDFminorversion
33
34 \newcommand*\Vcorr{}
35
36 \DeclareRobustCommand\vb[1][]{}
37 \NewDocumentCommand{\NewOddPage}{* o}{}
38 \NewDocumentCommand{\NewEvenPage}{* o}{}
39 \def\SetOddPageMessage#\gdef\ZW@oddwarning}
40 \def\SetEvenPageMessage#\gdef\ZW@evenwarning}
41 \def\ZW@oddwarning{Empty page inserted}\let\ZW@evenwarning\ZW@oddwarning
42
43 \def\clap#1{#1}
44
45 \def\CropFlap{2in}
46 \def\CropSpine{1in}
47 \def\CropXSpine{1in}
48 \def\CropXtrim{.25in}
49 \def\CropYtrim{.25in}
50 \def\UserWidth{5in}
51 \def\UserLeftMargin{1in}
52 \def\UserRightMargin{1in}
53 \def\UserTopMargin{1in}
54 \def\UserBotMargin{1in}
55 \def\thePageNumber{\LWR@origpound\,\arabic{page}}
56 \ifXeTeX
57 \def\ifcaseZWdriver{\ifcase2}
58 \else
59 \def\ifcaseZWdriver{\ifcase1}
60 \fi
61 \DeclareRobustCommand\ZWifdriver[2]{}

```

---

File 263 **lwarp-patch-komascript.sty**

§ 352 Package **patch-komascript**

Pkg lwarp-patch-komascript Patches for **komascript** classes.

**lwarp** loads this package when **scrbook**, **scartcl**, or **scrreprt** classes are detected.

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

`\titlehead`, `\subject`, `\captionformat`, `\figureformat`, and `\tableformat` are not yet emulated.

 **Not fully tested!** [Please send bug reports!](#)

Some features have not yet been tested. Please contact the author with any bug reports.

**for HTML output:** `1 \ProvidesPackage{lwarp-patch-komascript}`

**typearea** is emulated.

`2 \RequirePackage{lwarp-typearea}`

**tocbasic** is emulated.

`3 \RequirePackage{lwarp-tocbasic}`

**scrextend** patches most of the new macros.

`4 \RequirePackage{lwarp-scrextend}`

The `\minisec` is placed inside a `<div>` of class `minisec`.

```
5 \renewcommand*{\minisec}[1]{
6 \begin{BlockClass}{minisec}
7 #1
8 \end{BlockClass}
9 }
```

The part and chapter preambles are placed as plain text just after each heading.

```
10 \@ifundefined{setpartpreamble}{}{
11 \RenewDocumentCommand{\setpartpreamble}{o o +m}{%
12 \renewcommand{\part@preamble}{#3}%
13 }
14 }
15
16 \@ifundefined{setchapterpreamble}{}{
17 \RenewDocumentCommand{\setchapterpreamble}{o o +m}{%
18 \renewcommand{\chapter@preamble}{#3}%
19 }
20 }
```

Simple captions are used in all cases.

---

```

21 \LetLtxMacro\captionbelow\caption
22 \LetLtxMacro\captionabove\caption
23
24 \LetLtxMacro\captionofbelow\captionof
25 \LetLtxMacro\captionofabove\captionof
26
27 \RenewDocumentEnvironment{captionbeside}{o m o o o s}
28 {}
29 {%
30 \IfValueTF{#1}%
31 {\caption[#1]{#2}}%
32 {\caption{#2}}%
33 }
34
35 \RenewDocumentEnvironment{captionofbeside}{m o m o o o s}
36 {}
37 {%
38 \IfValueTF{#2}%
39 {\captionof{#1}[#2]{#3}}%
40 {\captionof{#1}{#3}}%
41 }
42
43 \RenewDocumentCommand{\setcapindent}{s m}{}
44 \renewcommand*\setcaphanging{}
45 \renewcommand*\setcapwidth[2][{}]{
46 \renewcommand*\setcapdynwidth[2][{}]{
47 \RenewDocumentCommand{\setcapmargin}{s o m}{}

```

---

File 264 **lwarp-patch-memoir.sty**

§ 353 Package **patch-memoir**

*(Emulates or patches code by PETER WILSON.)*

Pkg lwarp-patch-memoir Patches for **memoir** class.

 **Not fully tested!** [Please send bug reports!](#)

**lwarp** loads this package when the **memoir** class is detected.

 **options clash** While emulating **memoir**, **lwarp** pre-loads a number of packages (section 353.1). This can cause an options clash when the user's document later loads the same packages with options. To fix this problem, specify the options before loading **lwarp**:

```

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

```

`\verbfootnote` is not supported.

`\newfootnoteseries`, etc. are not supported.

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

Poem numbering is not supported.

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

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

for HTML output: `1 \ProvidesPackage{lwarp-patch-memoir}`

### § 353.1 Packages

These are pre-loaded to provide emulation for many of **memoir**'s functions. **memoir** pretends that **abstract**, etc. are already loaded, via its “emulated” package mechanism, but **lwarp** is directly loading the “lwarp-” version of each, which happens to avoid **memoir**'s emulation system.

```

2 \RequirePackage{lwarp-abstract}% req'd
3 \RequirePackage{lwarp-array}% req'd
4 \RequirePackage{lwarp-booktabs}% req'd
5 % \RequirePackage{lwarp-ccaption}% to do
6 \RequirePackage{lwarp-changepage}% req'd
7 \RequirePackage{lwarp-crop}
8 \RequirePackage{lwarp-dcolumn}% req'd
9 \RequirePackage{lwarp-enumerate}% req'd
10 \RequirePackage{lwarp-epigraph}% req'd
11 \RequirePackage{lwarp-fancyvrb}% req'd
12 \RequirePackage{lwarp-footmisc}% req'd
13 \RequirePackage{lwarp-framed}% req'd
14 \RequirePackage{lwarp-hanging}% req'd
15 \DisemulatePackage{moreverb}
16 \RequirePackage{lwarp-moreverb}
17 \RequirePackage{lwarp-mparhack}

```

```

18 \RequirePackage{lwarp-needspace}% req'd
19 \RequirePackage{lwarp-nextpage}% req'd
20 \RequirePackage{lwarp-pagenote}% req'd
21 \RequirePackage{lwarp-parskip}
22 \RequirePackage{lwarp-setspace}% req'd
23 \RequirePackage{lwarp-showidx}
24 \RequirePackage{lwarp-subfigure}% red'q

```

**subfigure** is emulated via **subfig**, which pre-defines `subfigure` and `subtable`, but **memoir** does not, so they must be tested for here:

```

25 \LetLtxMacro\LWR@memorignewsfloat\newsfloat
26 \RenewDocumentCommand{\newsfloat}{0{} m}{%
27 \ifundefined{c@sub#2}{%
28 \LWR@memorignewsfloat[#1]{#2}%
29 }{}%
30 }
31
32 \RequirePackage{lwarp-tabularx}% req'd
33 \RequirePackage{lwarp-titling}% req'd
34 % \RequirePackage{lwarp-tocbibind}% not emulated by memoir
35 \RequirePackage{lwarp-tocloft}% req'd
36 \RequirePackage{lwarp-verse}% req'd

```

### § 353.2 Preliminary setup

Bypass the **memoir** package mechanism:

```

37 \LetLtxMacro\LWR@origlabel\@mem@old@label

```

Redefined to write the `LWR@autoindex` counter instead of page

```

38 \AtBeginDocument{
39 \def\@wrindexhyp#1||\{%
40 \addtocounter{LWR@autoindex}{1}%
41 \LWR@newlabel{LWRindex-\arabic{LWR@autoindex}}%
42 \ifshowindexmark\@showidx{#1}\fi
43 \protected@write\@auxout{%
44 {\string\@wrindexm@{\@idxfile}{#1}{\arabic{LWR@autoindex}}}%
45 \endgroup
46 \@esphack}%
47 }

```

**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.

```

48 \setstocksize{190in}{20in}
49 \setlrmarginsandblock{2in}{2in}{*}
50 \setulmarginsandblock{1in}{1in}{*}

```

## § 353.3 Laying out the page

```
51 \renewcommand*\stockavi}{
52 \renewcommand*\stockav}{
53 \renewcommand*\stockaiv}{
54 \renewcommand*\stockaiii}{
55 \renewcommand*\stockbvi}{
56 \renewcommand*\stockbv}{
57 \renewcommand*\stockbiv}{
58 \renewcommand*\stockbiii}{
59 % \renewcommand*\stockmetriccrownvo}{
60 \renewcommand*\stockmlargecrownvo}{
61 \renewcommand*\stockmdemyvo}{
62 \renewcommand*\stockmsmallroyalvo}{
63 \renewcommand*\pageavi}{
64 \renewcommand*\pageav}{
65 \renewcommand*\pageaiv}{
66 \renewcommand*\pageaiii}{
67 \renewcommand*\pagebvi}{
68 \renewcommand*\pagebv}{
69 \renewcommand*\pagebiv}{
70 \renewcommand*\pagebiii}{
71 % \renewcommand*\pagemetriccrownvo}{
72 \renewcommand*\pagemlargecrownvo}{
73 \renewcommand*\pagemdemyvo}{
74 \renewcommand*\pagemsmallroyalvo}{
75
76 \renewcommand*\stockdbill}{
77 \renewcommand*\stockstatement}{
78 \renewcommand*\stockexecutive}{
79 \renewcommand*\stockletter}{
80 \renewcommand*\stockold}{
81 \renewcommand*\stocklegal}{
82 \renewcommand*\stockledger}{
83 \renewcommand*\stockbroadsheet}{
84 \renewcommand*\pagedbill}{
85 \renewcommand*\pagestatement}{
86 \renewcommand*\pageexecutive}{
87 \renewcommand*\pageletter}{
88 \renewcommand*\pageold}{
89 \renewcommand*\pagelegal}{
90 \renewcommand*\pageledger}{
91 \renewcommand*\pagebroadsheet}{
92
93 \renewcommand*\stockpottvo}{
94 \renewcommand*\stockfoolscapvo}{
95 \renewcommand*\stockcrownvo}{
96 \renewcommand*\stockpostvo}{
97 \renewcommand*\stocklargecrownvo}{
98 \renewcommand*\stocklargepostvo}{
```

```
99 \renewcommand*{\stocksmalldemyvo}{}
100 \renewcommand*{\stockdemyvo}{}
101 \renewcommand*{\stockmediumvo}{}
102 \renewcommand*{\stocksmallroyalvo}{}
103 \renewcommand*{\stockroyalvo}{}
104 \renewcommand*{\stocksuperroyalvo}{}
105 \renewcommand*{\stockimperialvo}{}
106 \renewcommand*{\pagepottvo}{}
107 \renewcommand*{\pagefoolscapvo}{}
108 \renewcommand*{\pagecrownvo}{}
109 \renewcommand*{\pagepostvo}{}
110 \renewcommand*{\pagelargecrownvo}{}
111 \renewcommand*{\pagelargepostvo}{}
112 \renewcommand*{\pagesmalldemyvo}{}
113 \renewcommand*{\pagedemyvo}{}
114 \renewcommand*{\pagemediumvo}{}
115 \renewcommand*{\pagesmallroyalvo}{}
116 \renewcommand*{\pageroyalvo}{}
117 \renewcommand*{\pagesuperroyalvo}{}
118 \renewcommand*{\pageimperialvo}{}
119
120 \renewcommand*{\memfontfamily}{}
121 \renewcommand*{\memfontenc}{}
122 \renewcommand*{\memfontpack}{}
123
124 \renewcommand*{\anyptfilebase}{}
125 \renewcommand*{\anyptsizesize}{10}
126
127 \renewcommand*{\setstocksize}[2]{}
128 \renewcommand*{\settrimmedsize}[3]{}
129 \renewcommand*{\settrims}[2]{}
130
131 % \newlength{\lxvchars}
132 % \setlength{\lxvchars}{305pt}
133 % \newlength{\xlvchars}
134 % \setlength{\xlvchars}{190pt}
135 \renewcommand*{\setxlvchars}[1]{}
136 \renewcommand*{\setlxvchars}[1]{}
137
138 \renewcommand*{\settypeblocksize}[3]{}
139 \renewcommand*{\setlrmargins}[3]{}
140 \renewcommand*{\setlrmarginsandblock}[3]{}
141 \renewcommand*{\setbinding}[1]{}
142 \renewcommand*{\setulmargins}[3]{}
143 \renewcommand*{\setulmarginsandblock}[3]{}
144 \renewcommand*{\setcolsepandrul}[2]{}
145
146 \renewcommand*{\setheadfoot}[2]{}
147 \renewcommand*{\setheaderspaces}[3]{}
148 \renewcommand*{\setmarginnotes}[3]{}

```

```

149 \renewcommand*\setfootins}[2]{}
150 \renewcommand*\checkandfixthelayout}[1] [] {}
151 \renewcommand*\checkthelayout}[1] {}
152 \renewcommand*\fixthelayout{}
153 %
154 % \newlength{\stockheight}
155 % \newlength{\trimtop}
156 % \newlength{\trimedge}
157 % \newlength{\stockwidth}
158 % \newlength{\spinemargin}
159 % \newlength{\foremargin}
160 % \newlength{\uppermargin}
161 % \newlength{\headmargin}
162 %
163 \renewcommand*\typeoutlayout{}
164 \renewcommand*\typeoutstandardlayout{}
165 \renewcommand*\settypeoutlayoutunit}[1] {}
166 \renewcommand*\fixpdflayout{}
167 \renewcommand*\fixdvipslayout{}
168
169 \renewcommand*\medievalpage}[1] [] {}
170 \renewcommand*\isopage}[1] [] {}
171 \renewcommand*\semiisopage}[1] [] {}
172
173 \renewcommand\setpagebl}[3] {}
174 \renewcommand\setpageml}[3] {}
175 \renewcommand\setpagetl}[3] {}
176 \renewcommand\setpagetm}[3] {}
177 \renewcommand\setpagetr}[3] {}
178 \renewcommand\setpagemr}[3] {}
179 \renewcommand\setpagebr}[3] {}
180 \renewcommand\setpagebm}[3] {}
181 \renewcommand\setpagecc}[3] {}

```

### § 353.4 Text and fonts

```

182 \let\miniscule\tiny
183 \let\HUGE\Huge
184
185 \renewcommand*\abnormalparskip}[1] {}
186 \renewcommand*\nonzeroparskip{}
187 \renewcommand*\traditionalparskip{}
188
189 \let\onelineskip\baselineskip
190
191 \let\OnehalfSpacing\onehalfspacing
192 \let\DoubleSpacing\doublespacing
193 \renewcommand*\setPagenoteSpacing}[1] {}
194 \renewcommand*\setFloatSpacing}[1] {}

```

```

195 \let\SingleSpacing\singlespacing
196 \let\setSingleSpace\SetSinglespace
197 \let\SingleSpace\singlespace
198 \let\endSingleSpace\endsinglespace
199 \let\Spacing\spacing
200 \let\endSpacing\endspacing
201 \let\OnehalfSpace\onehalfspace
202 \let\endOnehalfSpace\endonehalfspace
203 \csletcs{OnehalfSpace*}{onehalfspace}
204 \csletcs{endOnehalfSpace*}{endonehalfspace}
205 \let\DoubleSpace\doublespace
206 \let\endDoubleSpace\enddoublespace
207 \csletcs{DoubleSpace*}{doublespace}
208 \csletcs{endDoubleSpace*}{enddoublespace}
209 \renewcommand*{\setDisplaystretch}[1]{
210 \renewcommand*{\memdskipstretch}{}
211 \renewcommand*{\noDisplaystretch}{}
212 \renewcommand*{\memdskips}{}
213
214 \renewcommand*{\midsloppy}{}
215 \renewenvironment*{midsloppy}{\par}{}{}
216
217 \renewcommand*{\sloppybottom}{}

```

### § 353.5 Titles

```

218 \csletcs{titlingpage*}{titlingpage}
219 \csletcs{endtitlingpage*}{endtitlingpage}
220 \let\andnext\and
221 \renewcommand*{\thanksmarkstyle}[1]{
222 \renewcommand{\thanksfootmark}{%
223 \thanksscript{\tmark}%
224 }
225
226 % \newlength{\thanksmarksep}

```

### § 353.6 Abstracts

```

227 \renewcommand*{\abstractcol}{}
228 \renewcommand*{\abstractintoc}{}
229 \renewcommand*{\abstractnum}{}
230 \renewcommand*{\abstractrunin}{}

```

### § 353.7 Document divisions

```

231
232 \def\@appage{%
233 \part*{\appendixpagename}
234 }

```

```
235 \renewcommand\mempreaddappagetotochook{}
236 \renewcommand\mempostaddappagetotochook{}
237
238 \def\@sappage{%
239 \part*\appendixpagename}
240 }
241
242 \csletcs{frontmatter*}{frontmatter}
243 \csletcs{mainmatter*}{mainmatter}
244 \renewcommand*\raggedbottomsection{}
245 \renewcommand*\normalbottomsection{}
246 \renewcommand*\bottomsectionskip{}
247 \renewcommand*\bottomsectionpenalty{}
248 \csletcs{appendixpage*}{appendixpage}
249 \renewcommand*\namedsubappendices{}
250 \renewcommand*\unnamedsubappendices{}
251 \renewcommand*\setsecnumdepth[1]{}% todo tocvsec2
252 \renewcommand*\maxsecnumdepth[1]{}% todo tocvsec2
253 \renewcommand*\beforebookskip{}
254 \renewcommand*\afterbookskip{}
255 \renewcommand*\beforepartskip{}
256 \renewcommand*\afterpartskip{}
257 \renewcommand*\midbookskip{}
258 \renewcommand*\midpartskip{}
259 \renewcommand*\printbookname{}
260 \renewcommand*\booknamefont{}
261 \renewcommand*\booknamenum{}
262 \renewcommand*\printbooknum{}
263 \renewcommand*\booknumfont{}
264 \renewcommand*\printpartname{}
265 \renewcommand*\partnamefont{}
266 \renewcommand*\partnamenum{}
267 \renewcommand*\printpartnum{}
268 \renewcommand*\partnumfont{}
269 \renewcommand*\printbooktitle[1]{}
270 \renewcommand*\booktitlefont{}
271 \renewcommand*\printparttitle[1]{}
272 \renewcommand*\parttitlefont{}
273 \renewcommand*\bookpageend{}
274 \renewcommand*\bookblankpage{}
275 \renewcommand*\nobookblankpage{}
276 \renewcommand*\partpageend{}
277 \renewcommand*\partblankpage{}
278 \renewcommand*\nopartblankpage{}
279 \RenewDocumentCommand{\newleadpage}{s o m m}{}% todo
280 \RenewDocumentCommand{\renewleadpage}{s o m m}{}% todo
281 \renewcommand*\leadpagetoclevel}{chapter}
282
283 \renewcommand*\openright{}
284 \renewcommand*\openleft{}

```

```
285 \renewcommand*{\openany}{}
286 \renewcommand*{\clearforchapter}{}
287 \renewcommand*{\memendofchapterhook}{}
288 \renewcommand*{\chapterheadstart}{}
289 % \newlength{\beforechapskip}
290 \renewcommand*{\afterchapternum}{}
291 % \newlength{\midchapskip}
292 \renewcommand*{\afterchaptertitle}{}
293 % \newlength{\afterchapskip}
294 \renewcommand*{\printchaptername}{}
295 \renewcommand*{\chapnamefont}{}
296 \renewcommand*{\chapternamenum}{}
297 \renewcommand*{\printchapternum}{}
298 \renewcommand*{\chapnumfont}{}
299 \renewcommand{\printchaptertitle}[1]{}
300 \renewcommand*{\chaptitelfont}{}
301 \renewcommand*{\printchapternonum}{}
302 \renewcommand*{\indentafterchapter}{}
303 \renewcommand*{\noindentafterchapter}{}
304 \renewcommand*{\insertchapterspace}{}
305
306 \renewcommand*{\chapterstyle}[1]{}
307 \renewcommand{\makechapterstyle}[2]{}
308 \renewcommand*{\chapindent}{}
309 \let\chapterprecis\cftchapterprecis
310 \let\chapterprecishere\cftchapterprecishere
311 \let\chapterprecistoc\cftchapterprecistoc
312 \renewcommand*{\precisfont}{}
313 \renewcommand*{\prechapterprecis}{}
314 \renewcommand*{\postchapterprecis}{}
315 \renewcommand{\precistocetext}[1]{}
316 \renewcommand*{\precistocfont}{}
317 \renewcommand*{\precistocformat}{}
318 % \newlength{\prechapterprecisshift}
319
320 \renewcommand*{\setbeforesecskip}[1]{}
321 \renewcommand*{\setaftersecskip}[1]{}
322 \renewcommand*{\setsecindent}[1]{}
323 \renewcommand*{\setsecheadstyle}[1]{}
324 \renewcommand*{\setbeforesubsecskip}[1]{}
325 \renewcommand*{\setaftersubsecskip}[1]{}
326 \renewcommand*{\setsubsecindent}[1]{}
327 \renewcommand*{\setsubsecheadstyle}[1]{}
328 \renewcommand*{\setbeforesubsubsecskip}[1]{}
329 \renewcommand*{\setaftersubsubsecskip}[1]{}
330 \renewcommand*{\setsubsubsecindent}[1]{}
331 \renewcommand*{\setsubsubsecheadstyle}[1]{}
332 \renewcommand*{\setbeforeparaskip}[1]{}
333 \renewcommand*{\setafterparaskip}[1]{}
334 \renewcommand*{\setparindent}[1]{}

```

```

335 \renewcommand*\setparaheadstyle}[1]{}
336 \renewcommand*\setbeforesubparaskip}[1]{}
337 \renewcommand*\setaftersubparaskip}[1]{}
338 \renewcommand*\setsubparaindent}[1]{}
339 \renewcommand*\setsubparaheadstyle}[1]{}
340 \renewcommand{\@hangfrom}[1]{#1}
341 \renewcommand{\sethangfrom}[1]{}
342 \renewcommand{\setsecnumformat}[1]{}
343
344 \renewcommand*\hangsecnum{}
345 \renewcommand*\defaultsecnum{}
346
347 \renewcommand*\sechook{}
348 \renewcommand{\setsechook}[1]{}
349 \renewcommand*\subsechook{}
350 \renewcommand{\setsubsechook}[1]{}
351 \renewcommand*\subsubsechook{}
352 \renewcommand{\setsubsubsechook}[1]{}
353 \renewcommand*\parahook{}
354 \renewcommand{\setparahook}[1]{}
355 \renewcommand*\subparahook{}
356 \renewcommand{\setsubparahook}[1]{}
357
358 \RenewDocumentCommand{\plainbreak}{s m}{\begin{center}~\end{center}}
359
360 \RenewDocumentCommand{\fancybreak}{s +m}{%
361 \begin{center}#2\end{center}%
362 }
363
364 \RenewDocumentCommand{\plainfancybreak}{s m m +m}{%
365 \begin{center}#4\end{center}%
366 }
367
368 \RenewDocumentCommand{\pfbreak}{s}{%
369 \begin{center}
370 \pfbreakdisplay
371 \end{center}
372 }
373
374 % \newlength{\pfbreakskip}
375 \renewcommand{\pfbreakdisplay}{*\quad*\quad*}
376
377 \renewcommand{\makeheadstyles}[2]{}
378 \renewcommand*\headstyles}[1]{}

```

### § 353.8 **Pagination and headers**

```

379 \renewcommand*\savepagenumber{}
380 \renewcommand*\restorepagenumber{}

```

```
381 \renewcommand*\uppercaseheads}{-}
382 \renewcommand*\nouppercaseheads}{-}
383
384 \renewcommand*\bookpagemark}[1]{-}
385 \renewcommand*\partmark}[1]{-}
386 \renewcommand*\bibmark}{-}
387 \renewcommand*\indexmark}{-}
388 \renewcommand*\glossarymark}{-}
389
390 \LWR@origpagestyle{empty}
391 \renewcommand*\ps@empty}{-}
392 \renewcommand*\makepagestyle}[1]{-}
393 \renewcommand*\emptyshook}{-}%
394 % \renewcommand*\empty@oddhead}{-}
395 % \renewcommand*\empty@oddfoot}{-}
396 % \renewcommand*\empty@evenhead}{-}
397 % \renewcommand*\empty@evenfoot}{-}
398 \renewcommand*\@oddhead}{-}
399 \renewcommand*\@oddfoot}{-}
400 \renewcommand*\@evenhead}{-}
401 \renewcommand*\@evenfoot}{-}
402 \renewcommand*\aliaspagestyle}[2]{-}
403 \renewcommand*\copypagestyle}[2]{-}
404
405 \renewcommand*\makeevenhead}[4]{-}
406 \renewcommand*\makeoddhead}[4]{-}
407 \renewcommand*\makeevenfoot}[4]{-}
408 \renewcommand*\makeoddfoot}[4]{-}
409 \renewcommand*\makerunningwidth}[3]{-}
410 % \newlength{\headwidth}
411 \renewcommand*\makeheadrule}[3]{-}
412 \renewcommand*\makefootrule}[3]{-}
413 \renewcommand*\makeheadfootruleprefix}[3]{-}
414 % \newlength{\normalrulethickness}
415 % \setlength{\normalrulethickness}{.4pt}
416 % \newlength{\footruleheight}
417 % \newlength{\footruleskip}
418 \renewcommand*\makeheadposition}[5]{-}
419 \renewcommand*\makepsmarks}[2]{-}
420 \renewcommand*\makeheadfootstrut}[3]{-}
421
422 \renewcommand*\createplainmark}[3]{-}
423 \renewcommand*\memUChad}[1]{-}
424 \renewcommand*\createmark}[5]{-}
425 \renewcommand*\clearplainmark}[1]{-}
426 \renewcommand*\clearmark}[1]{-}
427 \renewcommand*\addtopsmarks}[3]{-}
428 \renewcommand*\ifonlyfloats}[2]{#2}
429 \renewcommand*\mergepagefloatstyle}[3]{-}
430
```

```

431 \renewcommand*\framepichead{}
432 \renewcommand*\framepicfoot{}
433 \renewcommand*\framepichead{}
434 \renewcommand*\showheadfootlocoff{}
435 \renewcommand*\showtextblocklocoff{}

```

### § 353.9 Paragraphs and lists

```

436 \renewcommand\hangfrom[1]{#1}
437 \let\centerfloat\centering
438 \renewcommand*\raggedyright[1] [] {}
439 % \newlength\ragrparindent
440 \renewcommand\sourceatright[2] [] {\attribution{#2}}
441 \let\memorigdbs\LWR@endofline
442 \let\memorigpar\par
443 \let\atcentercr\LWR@endofline
444 \renewcommand*\flushleftright{}
445 \renewcommand*\linenottooshort[1] [] {}
446 \renewcommand*\russianpar{}
447 \renewcommand*\lastlinerulefill{}
448 \renewcommand*\lastlineparrule{}
449 \renewcommand*\justlastraggedleft{}
450 \renewcommand*\raggedrightthenleft{}
451 \renewcommand*\leftcenterright{}
452
453 \renewcommand\leftspringright[4]{%
454 \begin{minipage}{#1\linewidth}#3\end{minipage}\quad%
455 \begin{minipage}{#2\linewidth}\begin{flushright}#4\end{flushright}\end{minipage}%
456 }
457
458 \renewenvironment*{blockdescription}
459 {\LWR@descriptionstart\LWR@origdescription}
460 {\enddescription}
461 \renewcommand*\blockdescriptionlabel[1]{\textbf{#1}}
462 \renewenvironment*{labelled}[1]{\begin{description}}{\end{description}}
463 \renewenvironment*{flexlabelled}[6]{\begin{description}}{\end{description}}
464 \renewcommand*\tightlists{}
465 \renewcommand*\defaultlists{}
466 \RenewDocumentCommand{\firmlists}{s}{}
467 \renewcommand*\firmlist{}
468 \renewcommand*\tightlist{}
469 \renewcommand*\zerotrivseps{}
470 \renewcommand*\savetrivseps{}
471 \renewcommand*\restoretrivseps{}

```

### § 353.10 Contents lists

```

472 \csletcs{tableofcontents*}{tableofcontents}
473 \csletcs{listoffigures*}{listoffigures}

```

```

474 \csletcs{listoftables*}{listoftables}
475 \renewenvironment{KeepFromToc}{}{}
476 \renewcommand*{\onecoltocetc}{}
477 \renewcommand*{\twocoltocetc}{}
478 \renewcommand*{\ensureonecol}{}
479 \renewcommand*{\restorefromonecol}{}
480 \renewcommand*{\doccoltocetc}{}
481 \renewcommand*{\maxtocdepth}[1]{}% tocvsec2
482 \renewcommand*{\settocdepth}[1]{}% tocvsec2
483
484 \renewcommand{\totheadstart}{}
485 \renewcommand{\printtoctitle}[1]{}
486 \renewcommand{\tocmark}{}
487 \renewcommand{\aftertoctitle}{}
488 \renewcommand{\lofheadstart}{}
489 \renewcommand{\printloftitle}[1]{}
490 \renewcommand{\lofmark}{}
491 \renewcommand{\afterloftitle}{}
492 \renewcommand{\lotheadstart}{}
493 \renewcommand{\printlottitle}[1]{}
494 \renewcommand{\lotmark}{}
495 \renewcommand{\afterlottitle}{}
496
497 \renewcommand*{\setpnumwidth}[1]{}
498 \renewcommand*{\setrmarg}[1]{}
499 \renewcommand*{\cftbookbreak}{}
500 \renewcommand*{\cftpartbreak}{}
501 \renewcommand*{\cftchapterbreak}{}

502 % \newlength{\cftbeforebookskip}
503 % \newlength{\cftbookindent}
504 % \newlength{\cftbooknumwidth}
505 \renewcommand*{\cftbookfont}{}
506 \renewcommand*{\cftbookname}{}
507 \renewcommand*{\cftbookpresnum}{}
508 \renewcommand*{\cftbookaftersnum}{}
509 \renewcommand*{\cftbookaftersnumb}{}
510 \renewcommand*{\cftbookleader}{}
511 \renewcommand*{\cftbookdotsep}{1}
512 \renewcommand*{\cftbookpagefont}{}
513 \renewcommand*{\cftbookafterpnum}{}
514 \renewcommand*{\cftbookformatpnum}[1]{}
515 \renewcommand*{\cftbookformatpnumhook}[1]{}

```

Part is already defined by **tocloft**.

```

516 % \newlength{\cftbeforechapterskip}
517 % \newlength{\cftchapterindent}
518 % \newlength{\cftchapternumwidth}
519 \renewcommand*{\cftchapterfont}{}

```

```
520 \renewcommand*{\cftchaptername}{}
521 \renewcommand*{\cftchapterpresnum}{}
522 \renewcommand*{\cftchapteraftersnum}{}
523 \renewcommand*{\cftchapteraftersnumb}{}
524 \renewcommand*{\cftchapterleader}{}
525 \renewcommand*{\cftchapterdotsep}{1}
526 \renewcommand*{\cftchapterpagefont}{}
527 \renewcommand*{\cftchapterafterpnum}{}
528 \renewcommand*{\cftchapterformatpnum}[1]{}
529 \renewcommand*{\cftchapterformatpnumhook}[1]{}

530 % \newlength{\cftbeforesectionskip}
531 % \newlength{\cftsectionindent}
532 % \newlength{\cftsectionnumwidth}
533 \renewcommand*{\cftsectionfont}{}
534 \renewcommand*{\cftsectionname}{}
535 \renewcommand*{\cftsectionpresnum}{}
536 \renewcommand*{\cftsectionaftersnum}{}
537 \renewcommand*{\cftsectionaftersnumb}{}
538 \renewcommand*{\cftsectionleader}{}
539 \renewcommand*{\cftsectiondotsep}{1}
540 \renewcommand*{\cftsectionpagefont}{}
541 \renewcommand*{\cftsectionafterpnum}{}
542 \renewcommand*{\cftsectionformatpnum}[1]{}
543 \renewcommand*{\cftsectionformatpnumhook}[1]{}

544 % \newlength{\cftbeforesubsectionskip}
545 % \newlength{\cftsubsectionindent}
546 % \newlength{\cftsubsectionnumwidth}
547 \renewcommand*{\cftsubsectionfont}{}
548 \renewcommand*{\cftsubsectionname}{}
549 \renewcommand*{\cftsubsectionpresnum}{}
550 \renewcommand*{\cftsubsectionaftersnum}{}
551 \renewcommand*{\cftsubsectionaftersnumb}{}
552 \renewcommand*{\cftsubsectionleader}{}
553 \renewcommand*{\cftsubsectiondotsep}{1}
554 \renewcommand*{\cftsubsectionpagefont}{}
555 \renewcommand*{\cftsubsectionafterpnum}{}
556 \renewcommand*{\cftsubsectionformatpnum}[1]{}
557 \renewcommand*{\cftsubsectionformatpnumhook}[1]{}

558 % \newlength{\cftbeforesubsubsectionskip}
559 % \newlength{\cftsubsubsectionindent}
560 % \newlength{\cftsubsubsectionnumwidth}
561 \renewcommand*{\cftsubsubsectionfont}{}
562 \renewcommand*{\cftsubsubsectionname}{}
563 \renewcommand*{\cftsubsubsectionpresnum}{}
564 \renewcommand*{\cftsubsubsectionaftersnum}{}
565 \renewcommand*{\cftsubsubsectionaftersnumb}{}
566 \renewcommand*{\cftsubsubsectionleader}{}

```

```
567 \renewcommand*{\cftsubsubsectiondotsep}{1}
568 \renewcommand*{\cftsubsubsectionpagefont}{}
569 \renewcommand*{\cftsubsubsectionafterpnum}{}
570 \renewcommand*{\cftsubsubsectionformatpnum}[1]{}
571 \renewcommand*{\cftsubsubsectionformatpnumhook}[1]{}

572 % \newlength{\cftbeforeparagraphskip}
573 % \newlength{\cftparagraphindent}
574 % \newlength{\cftparagraphnumwidth}
575 \renewcommand*{\cftparagraphfont}{}
576 \renewcommand*{\cftparagraphname}{}
577 \renewcommand*{\cftparagraphpresnum}{}
578 \renewcommand*{\cftparagraphaftersnum}{}
579 \renewcommand*{\cftparagraphaftersnumb}{}
580 \renewcommand*{\cftparagraphleader}{}
581 \renewcommand*{\cftparagraphdotsep}{1}
582 \renewcommand*{\cftparagraphpagefont}{}
583 \renewcommand*{\cftparagraphafterpnum}{}
584 \renewcommand*{\cftparagraphformatpnum}[1]{}
585 \renewcommand*{\cftparagraphformatpnumhook}[1]{}

586 % \newlength{\cftbefore subparagraphskip}
587 % \newlength{\cftsubparagraphindent}
588 % \newlength{\cftsubparagraphnumwidth}
589 \renewcommand*{\cftsubparagraphfont}{}
590 \renewcommand*{\cftsubparagraphname}{}
591 \renewcommand*{\cftsubparagraphpresnum}{}
592 \renewcommand*{\cftsubparagraphaftersnum}{}
593 \renewcommand*{\cftsubparagraphaftersnumb}{}
594 \renewcommand*{\cftsubparagraphleader}{}
595 \renewcommand*{\cftsubparagraphdotsep}{1}
596 \renewcommand*{\cftsubparagraphpagefont}{}
597 \renewcommand*{\cftsubparagraphafterpnum}{}
598 \renewcommand*{\cftsubparagraphformatpnum}[1]{}
599 \renewcommand*{\cftsubparagraphformatpnumhook}[1]{}

600 % \newlength{\cftbefore figureskip}
601 % \newlength{\cftfigureindent}
602 % \newlength{\cftfigurenumwidth}
603 \renewcommand*{\cftfigurefont}{}
604 \renewcommand*{\cftfigurename}{}
605 \renewcommand*{\cftfigurepresnum}{}
606 \renewcommand*{\cftfigureaftersnum}{}
607 \renewcommand*{\cftfigureaftersnumb}{}
608 \renewcommand*{\cftfigureleader}{}
609 \renewcommand*{\cftfiguredotsep}{1}
610 \renewcommand*{\cftfigurepagefont}{}
611 \renewcommand*{\cftfigureafterpnum}{}
612 \renewcommand*{\cftfigureformatpnum}[1]{}
613 \renewcommand*{\cftfigureformatpnumhook}[1]{}

```

```
614 % \newlength{\cftbeforesubfigureskip}
615 % \newlength{\cftsubfigureindent}
616 % \newlength{\cftsubfigureenumwidth}
617 \newcommand*{\cftsubfigurefont}{}
618 \newcommand*{\cftsubfigurename}{}
619 \newcommand*{\cftsubfigurepresnum}{}
620 \newcommand*{\cftsubfigureaftersnum}{}
621 \newcommand*{\cftsubfigureaftersnumb}{}
622 \newcommand*{\cftsubfigureleader}{}
623 \newcommand*{\cftsubfiguredotsep}{1}
624 \newcommand*{\cftsubfigurepagefont}{}
625 \newcommand*{\cftsubfigureafterpnum}{}
626 \newcommand*{\cftsubfigureformatpnum}[1]{}
627 \newcommand*{\cftsubfigureformatpnumhook}[1]{}

628 % \newlength{\cftbeforetableskip}
629 % \newlength{\cfttableindent}
630 % \newlength{\cfttableenumwidth}
631 \renewcommand*{\cfttablefont}{}
632 \renewcommand*{\cfttablename}{}
633 \renewcommand*{\cfttablepresnum}{}
634 \renewcommand*{\cfttableaftersnum}{}
635 \renewcommand*{\cfttableaftersnumb}{}
636 \renewcommand*{\cfttableleader}{}
637 \renewcommand*{\cfttabledotsep}{1}
638 \renewcommand*{\cfttablepagefont}{}
639 \renewcommand*{\cfttableafterpnum}{}
640 \renewcommand*{\cfttableformatpnum}[1]{}
641 \renewcommand*{\cfttableformatpnumhook}[1]{}

642 % \newlength{\cftbeforesubtableskip}
643 % \newlength{\cftsubtableindent}
644 % \newlength{\cftsubtableenumwidth}
645 \newcommand*{\cftsubtablefont}{}
646 \newcommand*{\cftsubtablename}{}
647 \newcommand*{\cftsubtablepresnum}{}
648 \newcommand*{\cftsubtableaftersnum}{}
649 \newcommand*{\cftsubtableaftersnumb}{}
650 \newcommand*{\cftsubtableleader}{}
651 \newcommand*{\cftsubtabledotsep}{1}
652 \newcommand*{\cftsubtablepagefont}{}
653 \newcommand*{\cftsubtableafterpnum}{}
654 \newcommand*{\cftsubtableformatpnum}[1]{}
655 \newcommand*{\cftsubtableformatpnumhook}[1]{}

656 \renewcommand*{\booknumberline}[1]{}
657 \renewcommand*{\partnumberline}[1]{}
658 \renewcommand*{\chapternumberline}[1]{}
659 \renewcommand*{\numberlinehook}[1]{}
660 % \renewcommand*{\cftwhatismyname}{}%
```

```

661 \renewcommand*{\booknumberlinehook}[1]{}
662 \renewcommand*{\partnumberlinehook}[1]{}
663 \renewcommand*{\chapternumberlinehook}[1]{}
664 \renewcommand{\numberlinebox}[2]{}
665 \renewcommand{\booknumberlinebox}[2]{}
666 \renewcommand{\partnumberlinebox}[2]{}
667 \renewcommand{\chapternumberlinebox}[2]{}
668 %
669 % \newlength{\cftparfillskip}
670 \renewcommand*{\cftpagenumbersoff}[1]{}
671 \renewcommand*{\cftpagenumber}[1]{}
672 \renewcommand*{\cftlocalchange}[3]{}
673 \renewcommand*{\cftaddtitleline}[4]{}
674 \renewcommand*{\cftaddnumtitleline}[4]{}
675 \renewcommand{\cftinsertcode}[2]{}
676 \renewcommand{\cftinserthook}[2]{}
677 \renewcommand{\settocpreprocessor}[2]{}
678 \DeclareRobustCommand{\cftpagenumbersoff}[1]{}
679 \DeclareRobustCommand{\cftpagenumber}[1]{}

```

### § 353.11 Floats and captions

`\newfloat` [*⟨1: within⟩*] {*⟨2: type⟩*} {*⟨3: ext⟩*} {*⟨4: capname⟩*}

```

680 \RenewDocumentCommand{\newfloat}{o m m m}{%
681 \IfValueTF{#1}%
682 {\DeclareFloatingEnvironment[fileext=#3,within=#1,name={#4}]{#2}}%
683 {\DeclareFloatingEnvironment[fileext=#3,name={#4}]{#2}}%

```

**newfloat** package automatically creates the `\listof` command for new floats, but **float** does not, so remove `\listof` here in case it is manually created later.

```

684 \cslet{\listof#2s}\relax%
685 \cslet{\listof#2es}\relax%
686 }

```

`\newlistof` [*⟨within⟩*] {*⟨type⟩*} {*⟨ext⟩*} {*⟨listofname⟩*}

Emulated through the `\newfloat` mechanism. Note that **memoir** uses a different syntax than **tocloft** for the name.

```

687 \RenewDocumentCommand{\newlistof}{o m m m}
688 {%
689 \IfValueTF{#1}
690 {\newlistentry[#1]{#2}{#3}{0}}
691 {\newlistentry[#2]{#3}{0}}
692 \@namedef{ext@#2}{#3}%
693 \@ifundefined{c@#3depth}{\newcounter{#3depth}}{}%
694 \setcounter{#3depth}{1}%
695 \@namedef{#3mark}{}%
696 \@namedef{#2}{\listof{#2}{#4}}

```

```

697 \@namedef{@cftmake#3title}{-}
698 \@ifundefined{cftbefore#3titleskip}{
699 \expandafter\newlength\csname cftbefore#3titleskip\endcsname
700 \expandafter\newlength\csname cftafter#3titleskip\endcsname
701 }{-}
702 \@namedef{cft#3titlefont}{-}
703 \@namedef{cftafter#3title}{-}
704 \@namedef{cft#3prehook}{-}
705 \@namedef{cft#3posthook}{-}
706 }

707 \renewcommand{\setfloatadjustment}[2]{-}

```

#### Borrowed from the **lwarp** version of **keyfloat**:

```

708 \NewDocumentEnvironment{KFLTmemoir@marginfloat}{0{-1.2ex} m}
709 {% start
710 \LWR@BlockClassWP{float:right; width:2in; margin:10pt}{-}{marginblock}%
711 \captionsetup{type=#2}%
712 }
713 {%
714 \endLWR@BlockClassWP%
715 }
716
717 \DeclareDocumentEnvironment{marginfigure}{o}
718 {\begin{KFLTmemoir@marginfloat}{figure}}
719 {\end{KFLTmemoir@marginfloat}}
720
721 \DeclareDocumentEnvironment{margintable}{o}
722 {\begin{KFLTmemoir@marginfloat}{table}}
723 {\end{KFLTmemoir@marginfloat}}

724 \renewcommand{\setmarginfloatcaptionadjustment}[2]{-}
725 \renewcommand{\setmpjustification}[2]{-}
726 \renewcommand*{\mpjustification}{-}
727 \renewcommand*{\setfloatlocations}[2]{-}
728 \DeclareDocumentCommand{\suppressfloats}{o}{-}
729 \renewcommand*{\FloatBlock}{-}
730 \renewcommand*{\FloatBlockAllowAbove}{-}
731 \renewcommand*{\FloatBlockAllowBelow}{-}
732 \renewcommand*{\setFloatBlockFor}{-}
733 \renewcommand*{\captiondelim}[1]{\renewcommand*{\CaptionSeparator}{#1}}
734 \renewcommand*{\captionnamefont}[1]{-}
735 \renewcommand*{\captiontitlefont}[1]{-}
736 \renewcommand*{\captionstyle}[2][{}]{-}
737 \renewcommand*{\centerlastline}{-}
738 \renewcommand*{\hangcaption}{-}
739 \renewcommand*{\indentcaption}[1]{-}
740 \renewcommand*{\normalcaption}{-}

```

```

741 \renewcommand*\changecaptionwidth-{}
742 \DeclareDocumentCommand{captionwidth}{m}-{}
743 \renewcommand*\normalcaptionwidth-{}
744 \renewcommand{precaption}[1]-{}
745 \renewcommand{captiontitlefinal}[1]-{}
746 \renewcommand{postcaption}[1]-{}
747
748 \renewcommand{contcaption}[1]-{}
749 % \ContinuedFloat%
750 % \caption{#1}%
751 \begin{LWR@figcaption}% later becomes \caption*
752 \csuse{\@capttype name} \thechapter.\the\value{\@capttype}\CaptionSeparator #1
753 \end{LWR@figcaption}
754 }

```

The extra \\ here forces a <br> in HTML when \legend is used in a \marginpar.

```

755 \renewcommand{legend}[1]-{\begin{center}#1\\end{center}}
756
757 \renewcommand{namedlegend}[2] [] {
758 \begin{center}
759 \csuse{fleg\@capttype}\CaptionSeparator#2\\
760 \end{center}
761 \csuse{flegtoc\@capttype}-{#1}
762 }
763
764 \renewcommand{flegtable}{\tablename}
765 \renewcommand{flegfigure}{\figurename}
766 \renewcommand{flegtocfigure}{\tableofcontents}
767 \renewcommand{flegtocfigure}{\tableofcontents}
768
769 \renewcommand{newfixedcaption}[3] [\caption]-{}
770 \renewcommand{#2}-{\def\@capttype{#3}#1}
771 \renewcommand{renfixedcaption}[3] [\caption]-{}
772 \renewcommand{#2}-{\def\@capttype{#3}#1}
773 \renewcommand{providfixedcaption}[3] [\caption]-{}
774 \providecommand{#2}-{\def\@capttype{#3}#1}
775
776 \renewcommand{bitwonumcaption}[6] [] {-}
777 \ifblank{#2}-{\caption{#3}}{-\caption[2]{#3}}-{}
778 \addtocounter{\@capttype}-{-1}-{}
779 \begingroup%
780 \csdef{\@capttype name}-{#4}-{}
781 \ifblank{#5}-{\caption{#6}}{-\caption[5]{#6}}-{}
782 \endgroup%
783 \ifblank{#1}-{\label{#1}}-{}
784 }
785
786 \LetLtxMacro\bionenumcaption\bitwonumcaption% todo

```

```
787
788 \renewcommand{\bication}[5] [] {%
789 \ifblank{#2}{\caption{#3}}{\caption[#2]{#3}}%
790 \begin{LWR@figcaption}% later becomes \caption*
791 #4 \thechapter.\the\value{\@capttype}\CaptionSeparator #5
792 \end{LWR@figcaption}
793 \ifblank{#1}{\label{#1}}%
794 }
795
796 \renewcommand{\bicontcaption}[3] {%
797 \contcaption{#1}%
798 \begingroup%
799 \csdef{\@capttype name}{#2}%
800 \contcaption{#3}%
801 \endgroup%
802 }
803
804 \renewcommand{\midbication}[1] {}
805
806 \renewcommand{\subcaption}[2] [] {%
807 \ifblank{#1}{\subfloat[#2]{}{\subfloat[#1][#2]{}}}%
808 }
809
810 \RenewDocumentCommand{\subtop}{0{} 0{} m}{%
811 \subfloat[#1][#2]{#3}%
812 }
813
814 \RenewDocumentCommand{\subbottom}{0{} 0{} m}{%
815 \subfloat[#1][#2]{#3}%
816 }
817
818 \renewcommand{\contsubcaption}{\ContinuedFloat\subcaption}
819
820 \renewcommand{\contsubtop}{%
821 \ContinuedFloat\addtocounter{\@capttype}{1}%
822 \subtop}
823
824 \renewcommand{\contsubbottom}{%
825 \ContinuedFloat\addtocounter{\@capttype}{1}%
826 \subbottom}
827
828 \renewcommand{\subconcluded}{}
829
830 \LetLtxMacro\subcaptionref\subref
831
832 \renewcommand*\tightsubcaptions{}
833 \renewcommand*\loosesubcaptions{}
834
835 \renewcommand*\subcaptionsize[1] {}
836 \renewcommand*\subcaptionlabelfont[1] {}
```

---

```

837 \renewcommand*{\subcaptionfont}[1]{}
838 \renewcommand*{\subcaptionstyle}[1]{}
839
840 \renewcommand*{\hangsubcaption}{}
841 \renewcommand*{\shortsubcaption}{}
842 \renewcommand*{\normalsubcaption}{}
843
844 \RenewDocumentEnvironment{sidecaption}{o m o}
845 {}
846 {
847 \IfValueTF{#1}{\caption[#1]{#2}}{\caption{#2}}%
848 \IfValueT{#3}{\label{#3}}%
849 }
850
851 % \newlength{\sidecapwidth}
852 % \newlength{\sidecapsep}
853 \renewcommand*{\setsidecaps}[2]{}
854 \renewcommand*{\sidecapmargin}[1]{}
855 % \newif\ifscapmargleft
856 \scapmargleftfalse
857 \renewcommand*{\setsidecappos}[1]{}
858
859 \RenewDocumentEnvironment{sidecontcaption}{m o}
860 {}
861 {}
862 \ContinuedFloat%
863 \caption{#1}%

```

Without `\@capttype`, the section is referred to instead.

```

864 \IfValueT{#2}{\label[\@capttype]{#2}}%
865 }

```

`\sidenamedlegend` does not appear to use the TOC argument.

```

866 \renewenvironment{sidenamedlegend}[2] [] {
867 \begin{center}
868 \csuse{\@capttype name}\CaptionSeparator#2
869 \end{center}
870 }
871 {}
872
873 \renewenvironment{sidelegend}[1]
874 {\begin{center}
875 #1
876
877 }
878 {\end{center}}
879

```

```

880 \renewcommand*{\sidecapstyle}{}
881 \renewcommand*{\overridescapmargin}[1]{}
882 % \newlength{\sidecapraise}
883 \renewcommand*{\sidecapfloatwidth}{\linewidth}
884
885 \LetLtxMacro\ctabular\tabular
886 \LetLtxMacro\endctabular\endtabular
887
888 \renewcommand{\autorows}[5] [] {%
889 #5
890 }
891
892 \renewcommand{\autocol}[5] [] {%
893 #5
894 }

```

### § 353.12 Page notes

```

895 \renewcommand*{\feetabovelfloat}{}
896 \renewcommand*{\feetbelowfloat}{}
897 \renewcommand*{\feetatbottom}{}
898
899 \renewcommand*{\verbfootnote}[2] [] {
900 \PackageError{lwarp, memoir}
901 {Verbatim footnotes are not yet supported by lwarp.}
902 {This may be improved some day.}
903 }
904
905 \renewcommand*{\plainfootnotes}{}
906 \renewcommand*{\twocolumnfootnotes}{}
907 \renewcommand*{\threecolumnfootnotes}{}
908 \renewcommand*{\paragraphfootnotes}{}
909 \renewcommand*{\footfudgefiddle}{}
910
911 \renewcommand*{\newfootnoteseries}[1]{
912 \PackageError{lwarp, memoir}
913 {Memoir footnote series are not yet supported by lwarp.}
914 {This may be improved some day.}
915 }
916
917 \renewcommand*{\plainfootstyle}[1]{}
918 \renewcommand*{\twocolumnfootstyle}[1]{}
919 \renewcommand*{\threecolumnfootstyle}[1]{}
920 \renewcommand*{\paragraphfootstyle}[1]{}
921
922 \renewcommand*{\footfootmark}{}
923 \renewcommand*{\footmarkstyle}[1]{}
924
925 % \newlength{\footmarkwidth}

```

```
926 % \newlength{\footmarksep}
927 % \newlength{\footparindent}
928
929 \renewcommand*{\foottextfont}{}
930
931 \renewcommand*{\marginparmargin}[1]{}
932 \renewcommand*{\sideparmargin}[1]{}
933
934 \LetLtxMacro\sidepar\marginpar
935 \renewcommand*{\sideparfont}{}
936 \renewcommand*{\sideparform}{}
937 \LWR@providelength{\sideparvshift}
938
939 \renewcommand*{\parnopar}{}
940
941 \renewcommand{\sidebar}[1]{\begin{quote}#1\end{quote}}
942 \renewcommand*{\sidebarmargin}[1]{}
943 \renewcommand*{\sidebarfont}{}
944 \renewcommand*{\sidebarform}{}
945 % \newlength{\sidebarhsep}
946 % \newlength{\sidebarvsep}
947 % \newlength{\sidebarwidth}
948 % \newlength{\sidebartopsep}
949 \renewcommand{\setsidebarheight}[1]{}
950 \renewcommand*{\setsidebars}[6]{}
951 \renewcommand*{\footnotesatfoot}{}
952 \renewcommand*{\footnotesinmargin}{}
953
954 \LetLtxMacro\sidefootnote\footnote
955 \LetLtxMacro\sidefootnotemark\footnotemark
956 \LetLtxMacro\sidefootnotetext\footnotetext
957
958 \renewcommand*{\sidefootmargin}[1]{}
959 % \newlength{\sidefoothsep}
960 % \newlength{\sidefootvsep}
961 % \newlength{\sidefootwidth}
962 % \newlength{\sidefootadjust}
963 % \newlength{\sidefootheight}
964 \renewcommand*{\setsidefootheight}[1]{}
965 % \renewcommand*{\sidefootfont}{}% in docs but not in the package
966 \renewcommand*{\setsidefeet}[6]{}
967 \renewcommand*{\sidefootmarkstyle}[1]{}
968 \renewcommand*{\sidefoottextfont}{}
969 \renewcommand*{\sidefootform}{}
970
971 \renewcommand*{\continuousnotenums}{\pncontopttrue}% from pagenote
972 \renewcommand*{\notepageref}{}
973 \renewcommand*{\prenotetext}{}
974 \renewcommand*{\postnotetext}{}
975 \renewcommand*{\idtextinnotes}[1]{}

```

```

976 \renewcommand*\printpageinnotes}[1]{}
977 \renewcommand*\printpageinnoteshyperref}[1]{}
978 \renewcommand*\foottopagenote-{}
979 \renewcommand*\pagetofootnote-{}

```

### § 353.13 Decorative text

```

980 \renewcommand*\epigraphposition}[1]{}
981 \renewcommand*\epigraphtextposition}[1]{}
982 \renewcommand*\epigraphsourceposition}[1]{}
983 \renewcommand*\epigraphfontsize}[1]{}
984 \renewcommand*\epigraphforheader}[2] []{}
985 \renewcommand*\epigraphpicture-{}

```

### § 353.14 Poetry

```

986 \renewcommand*\vinphantom-{}
987 \renewcommand*\vleftofline}[1]{#1}
988 % \let\linenumberfrequency\poemlines
989 % \renewcommand*\linenumberfont}[1]{}
990
991 \DeclareDocumentCommand{\PoemTitle}{s o o m}{%
992 \IfValueTF{#2}%
993 {\poemtitle[#2]{#4}}%
994 {\poemtitle{#4}}%
995 }
996
997 \renewcommand*\NumberPoemTitle-{}
998 \renewcommand*\PlainPoemTitle-{}
999 \renewcommand*\poemtitlepstyle-{}
1000 \renewcommand*\poemtitlestarmark}[1]{}
1001 \renewcommand*\poemtitlestarpstyle-{}
1002 \renewcommand*\PoemTitleheadstart-{}
1003 \renewcommand*\printPoemTitlenonum-{}
1004 \renewcommand*\printPoemTitlenum-{}
1005 \renewcommand*\afterPoemTitlenum-{}
1006 \renewcommand*\printPoemTitletitle}[1]{}
1007 \renewcommand*\afterPoemTitle-{}
1008 \newlength{\midpoemtitleskip}
1009 \renewcommand*\PoemTitlenumfont-{}
1010 \renewcommand*\PoemTitlefont-{}

```

### § 353.15 Boxes, verbatims and files

```

1011 \renewenvironment{qframe}{\framed}{\endframed}
1012 \renewenvironment{qshade}{\shaded}{\endshaded}

```

Use the **comment** package:

```

1013 \renewcommand*\commentsoff}[1]{\includecomment{#1}}
1014 \renewcommand*\commentson}[1]{\excludecomment{#1}}
1015 \LetLtxMacro\renewcomment\commentson
1016
1017 \renewcommand*\setverbatimfont}[1]{}
1018 \renewcommand*\tabson}[1]{}
1019 \renewcommand*\tabsoff[1]{}
1020 \renewcommand*\wrappingon[1]{}
1021 \renewcommand*\wrappingoff[1]{}
1022 \renewcommand*\verbatimindent[1]{}
1023 \renewcommand*\verbatimbreakchar}[1]{}

1024 \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.

```

1025 \renewcommand*\bvbox[1]{}
1026 \renewcommand*\bvtopandtail[1]{}
1027 \renewcommand*\bvtopandtail[1]{}
1028 \renewcommand*\nobvbox[1]{}
1029 % \newlength\bvboxsep
1030 \renewcommand*\bvtoprulehook[1]{}
1031 \renewcommand*\bvtopmidhook[1]{}
1032 \renewcommand*\bvendrulehook[1]{}
1033 \renewcommand*\bvleftsidehook[1]{}
1034 \renewcommand*\bvrightsidehook[1]{}
1035 \renewcommand*\bvperpagetrue[1]{}
1036 \renewcommand*\bvperpagefalse[1]{}
1037 \renewcommand*\bvtopofpage[1]{}
1038 \renewcommand*\bvendofpage[1]{}
1039 \renewcommand*\linenumberfrequency}[1]{}
1040 \renewcommand*\resetbvlinenumber[1]{}
1041 \renewcommand*\setbvlinenums}[2]{}
1042 \renewcommand*\linenumberfont}[1]{}
1043 \renewcommand*\bvnumbersinside[1]{}
1044 \renewcommand*\bvnumbersoutside[1]{}

```

## § 353.16 Cross referencing

```

1045 \renewcommand*\fref}[1]{\cref{#1}}
1046 \renewcommand*\tref}[1]{\cref{#1}}
1047 \renewcommand*\pref}[1]{\cpageref{#1}}
1048 \renewcommand*\Aref}[1]{\cref{#1}}
1049 \renewcommand*\Bref}[1]{\cref{#1}}
1050 \renewcommand*\Pref}[1]{\cref{#1}}
1051 \renewcommand*\Sref}[1]{\cref{#1}}
1052 \renewcommand*\figurerefname[1]{Figure}
1053 \renewcommand*\tablerefname[1]{Table}

```

```

1054 \renewcommand*{\pagerefname}{page}
1055 \renewcommand*{\bookrefname}{Book~}
1056 \renewcommand*{\partrefname}{Part~}
1057 \renewcommand*{\chapterrefname}{Chapter~}
1058 \renewcommand*{\sectionrefname}{\S}
1059 \renewcommand*{\appendixrefname}{Appendix~}
1060 \LetLtxMacro\titleref\nameref
1061 \renewcommand*{\headnameref}{}
1062 \renewcommand*{\tocnameref}{}
1063
1064 \providecounter{LWR@currenttitle}
1065
1066 \renewcommand*{\currenttitle}{%
1067 \addtocounter{LWR@currenttitle}{1}%
1068 \label{currenttitle\arabic{LWR@currenttitle}}%
1069 \nameref{currenttitle\arabic{LWR@currenttitle}}%
1070 }
1071
1072 \renewcommand*{\theTitleReference}[2]{}
1073 \renewcommand*{\namerefon}{}
1074 \renewcommand*{\namerefoff}{}

```

### § 353.17 Back matter

```

1075 \DeclareDocumentCommand{\newblock}{}{}
1076 %
1077 \renewcommand*{\showindexmarks}{}
1078 \renewcommand*{\hideindexmarks}{}
1079
1080 \renewcommand*{\xindyindex}{}

```

### § 353.18 Miscellaneous

```

1081 \renewcommand*{\changemarks}{}
1082 \renewcommand*{\nochangemarks}{}
1083 \renewcommand*{\added}[1]{}
1084 \renewcommand*{\deleted}[1]{}
1085 \renewcommand*{\changed}[1]{}
1086
1087 \renewcommand*{\showtrimsoff}{}
1088 \renewcommand*{\showtrimson}{}
1089 \renewcommand*{\trimXmarks}{}
1090 \renewcommand*{\trimLmarks}{}
1091 \renewcommand*{\trimFrame}{}
1092 \renewcommand*{\trimNone}{}
1093 \renewcommand*{\trimmarkscolor}{}
1094 \renewcommand*{\trimmarks}{}
1095 \renewcommand*{\tmarktl}{}
1096 \renewcommand*{\tmarktr}{}

```

```
1097 \renewcommand*{\tmarkbr}{}
1098 \renewcommand*{\tmarkbl}{}
1099 \renewcommand*{\tmarktm}{}
1100 \renewcommand*{\tmarkmr}{}
1101 \renewcommand*{\tmarkbm}{}
1102 \renewcommand*{\tmarkml}{}
1103 \renewcommand*{\trimmark}{}
1104 \renewcommand*{\quarkmarks}{}
1105 \renewcommand*{\registrationColour}[1]{}
1106
1107 \renewcommand*{\leavespergathering}[1]{}
1108
1109 \renewcommand*{\noprelistbreak}{}
1110
1111 \renewcommand*{\cleartorecto}{}
1112 \renewcommand*{\cleartoverso}{}
1113
1114 \renewenvironment{vplace}[1][[]]{}{}
```

### § 353.19 Final patchwork

```
1115 \newlistof{tableofcontents}{toc}{\contentsname}
1116 \newlistof{listoffigures}{lof}{\listfigurename}
1117 \newlistof{listoftables}{lot}{\listtablename}
```

# Change History and Index

For the most recent changes and the start of the Index, see page 865.

## § 353 Change History

---

|       |                                                                |                                                                    |
|-------|----------------------------------------------------------------|--------------------------------------------------------------------|
| v0.10 | General: 2016/03/08 Initial version . . . 1                    | Docs: Table: Cross-referencing data structures. . . . . 391        |
| v0.11 | General: 2016/03/11 . . . . . 1                                | Docs: Table: Float data structures. 402                            |
|       | Added section: Operating-System portability. . . . . 153       | Docs: Trademarks section. . . . . 509                              |
|       | Added section: Selecting the operating system. . . . . 97      | Docs: Troubleshooting cross-references. . . . . 143                |
|       | Test Suite: MS-WINDOWS in README.txt . . . . . 1               | Test Suite: Assigned cleveref name for Test Float. . . . . 1       |
|       | Test Suite: limages and index in README.txt . . . . . 1        | Test Suite: Floatrow . . . . . 1                                   |
| v0.12 | \LWR@newhtmlfile: Bugfix: TOC with numbered files. . . . . 285 | v0.15                                                              |
|       | General: 2016/03/14 . . . . . 1                                | General: 2016/04/06 . . . . . 1                                    |
|       | Global: Uses \p@(type) in float captions. . . . . 1            | Added . . . . . 609                                                |
|       | Test Suite: Sub-figures . . . . . 1                            | Ampersand (&): Fixed handling when passed as an argument. . . 341  |
| v0.13 | \CaptionSeparator: Fix for newer babel package. . . . . 405    | Docs: Added warning icons for items needing special attention. 149 |
|       | \LWR@LwarpStart: \up and \fup . . 303                          | Docs: Clarify print/HTML output. 98                                |
|       | General: 2016/03/24 . . . . . 1                                | Docs: Moved the supported features table to the introduction. 57   |
|       | Fix dollar-redefined bug for newer package. . . . . 760        | Files: lwarp_formal.css added. . . . 1                             |
|       | Removed package: subfig . . . . . 1                            | Fix: steps counter . . . . . 609                                   |
|       | Test Suite: Ordinals, Subcaption . . 1                         | Fixed & handling. . . . . 607                                      |
| v0.14 | \LWR@htmlsectionfilename: Fix: Links to home page. . . . . 250 | Test Suite: test_suite_formal.css file added. . . . . 1            |
|       | General: 2016/03/31 . . . . . 1                                | v0.16                                                              |
|       | <b>floatrow</b> : Added. . . . . 604                           | General: 2016/04/11 . . . . . 1                                    |
|       | Docs: Commands for a successful HTML conversion. . . . . 102   | \titlingpage: Improved print-output spacing. . . . . 311           |
|       | Docs: Commands into a warpprint environment. . . . . 99        | <b>xfrac</b> : Adjusted for the use of any font: . . . . . 811     |
|       | Docs: Newclude limitations. . . . 129                          | Added XeLaTeX, LuaLaTeX support. . . . . 150                       |
|       |                                                                | Docs: Font and UTF-8 support. . . 87                               |
|       |                                                                | Docs: Moved location of \usepackage{lwarp}. . . . . 89             |
|       |                                                                | Docs: Text not converting. . . . . 143                             |
|       |                                                                | Fix: amsmath options clash . . . . 169                             |
|       |                                                                | Fix: newtxmath compatibility. . . 169                              |

|                                                                              |         |                                                             |               |
|------------------------------------------------------------------------------|---------|-------------------------------------------------------------|---------------|
| Lwarp no longer selects fonts.                                               | 87, 165 | Reorganize <code>\HomeHTMLFilename</code>                   |               |
| Removed package: suffix                                                      | 1       | logic.                                                      | 461           |
| Test Suite: Improved titlingpage.                                            | 311     | Surpress extra space.                                       | 461           |
| Test Suite: Lwarp no longer selects                                          |         | verse: Supports verse, memoir                               |               |
| fonts.                                                                       | 1       | packages.                                                   | 793           |
| Test Suite: Supports XeLaTeX,                                                |         | minipage: Fix: <code>\linewidth</code> ,                    |               |
| LuaLaTeX.                                                                    | 1       | <code>\textwidth</code> , <code>\textheight</code>          |               |
| v0.17                                                                        |         | inside a minipage.                                          | 481           |
| <code>\LWR@htmlsectionfilename</code> : Fix:                                 |         | v0.19                                                       |               |
| Links when entire doc is one                                                 |         | <code>\HTMLFilename</code> : Docs: Escape                   |               |
| HTML page.                                                                   | 250     | filename underscores.                                       | 249           |
| General: 2016/04/14                                                          | 1       | <code>\HomeHTMLFilename</code> : Docs: Escape               |               |
| <b>mdframed</b> : Added.                                                     | 665     | filename underscores.                                       | 249           |
| Test Suite: Fix: Print-version                                               |         | <code>\LWR@LwarpStart</code> : Enabled <code>\equal</code>  |               |
| front-matter page numbers.                                                   | 1       | to <code>\newline</code> .                                  | 301           |
| Test Suite: Mdfamed                                                          | 1       | <code>\LWR@doequation</code> : MATHJAX                      |               |
| v0.18                                                                        |         | support.                                                    | 440           |
| <code>\LWR@hspace</code> : <code>\hspace</code> supported.                   | 499     | <code>\LWR@doubledollar</code> : MATHJAX                    |               |
| <code>\LWR@includegraphicsb</code> : Add: svgz                               |         | support.                                                    | 434           |
| file extension.                                                              | 626     | <code>\LWR@filestart</code> : lwarp_mathjax.txt             |               |
| em, ex, %, px dimensions                                                     |         | loaded.                                                     | 299           |
| preserved.                                                                   | 626     | <code>\LWR@hspace</code> : Fix: <code>\hspace</code> length |               |
| Fix: <code>\linewidth</code> , <code>\textwidth</code> ,                     |         | computations.                                               | 499           |
| <code>\textheight</code> inside a minipage.                                  | 626     | <code>\LWR@minipagestartpars</code> :                       |               |
| Improved HTML output linebreaks.                                             | 626     | Surpresses paragraph tags                                   |               |
| <code>\LWR@myshorttoc</code> : Reorganize                                    |         | between minipages.                                          | 498           |
| <code>\HomeHTMLFilename</code> logic.                                        | 409     | <code>\LWR@subsingledollar</code> : MATHJAX                 |               |
| <code>\LWR@newhtmlfile</code> : sidetoc after                                |         | support.                                                    | 429           |
| title, improving responsive                                                  |         | <code>\LateximageFontSizeName</code> : Add:                 |               |
| design.                                                                      | 284     | User-adjustable math/lateximage                             |               |
| <code>\LWR@requesttoc</code> : Reorganize                                    |         | font size.                                                  | 456           |
| <code>\HomeHTMLFilename</code> logic.                                        | 305     | <code>\minipagefullwidth</code> : Added: No                 |               |
| <code>\LWR@subhyperref</code> : Improved HTML                                |         | width tag for the next minipage                             |               |
| output linebreaks.                                                           | 399     | in HTML.                                                    | 480           |
| <code>\LWR@subhyperrefclass</code> : Improved                                |         | <code>\rule</code> : Added                                  | 504           |
| HTML output linebreaks.                                                      | 399     | <code>\warpHTMLonly</code> : Added.                         | 157           |
| <code>\LWR@subinlineimage</code> : Surpress                                  |         | <code>\warpprintonly</code> : Replaces                      |               |
| extra space.                                                                 | 401     | <code>\rowprintedonly</code> .                              | 157           |
| General: 2016/05/19                                                          | 1       | <code>\xfracHTMLfontsize</code> : Added.                    | 811           |
| File: lwarp.css: Improved TOC                                                |         | General: 2016/06/08                                         | 1             |
| outline display.                                                             | 1       | MATHJAX support added.                                      | 438, 444, 446 |
| Files: lwarp.css and                                                         |         | <b>multirow</b> : Added optional args.                      | 684           |
| lwarp_formal.css: Improved                                                   |         | Adapts to tikz version.                                     | 760           |
| responsive design.                                                           | 1       | Avoids MATHJAX.                                             | 428           |
| Microtype disabled during HTML                                               |         | cleveref: Loaded                                            |               |
| generation                                                                   | 166     | <code>\AtEndPreamble</code> .                               | 476           |
| PDF Unicode input characters.                                                | 151     | CSS for table note item.                                    | 759           |
| Test Suite: Verse package                                                    | 1       | Docs: Math options.                                         | 89            |
| <code>lateximage</code> : <code>pdfcrop</code> : <code>--hires</code> added. | 461     | Docs: Table: Cross-referencing                              |               |
|                                                                              |         | data structures, updated.                                   | 391           |

|                                           |     |
|-------------------------------------------|-----|
| File: lwarp.css:                          |     |
| tnoteitemheader added. . . . .            | 1   |
| File: lwarp_mathjax.txt added. . .        | 1   |
| Introduction: MATHJAX support             |     |
| mentioned. . . . .                        | 55  |
| Options: mathsvg and mathjax . .          | 155 |
| Supports colored \rule. . . . .           | 804 |
| titles: null \pagestyle and               |     |
| \thispagestyle for HTML. . .              | 761 |
| v0.20                                     |     |
| \BlockClassSingle: Renamed from           |     |
| "LWR@htmldivclassline". . . . .           | 262 |
| \HTMLDescription: Added                   |     |
| \NewHTMLdescription.                      |     |
| (Renamed in v0.30.) . . . . .             | 272 |
| \HTMLFilename: No longer escape           |     |
| underscores. . . . .                      | 249 |
| \HomeHTMLFilename: No longer              |     |
| escape underscores. . . . .               | 249 |
| \InlineClass: Renamed from                |     |
| "inlineclass". . . . .                    | 262 |
| \LWR@LwarpStart: Fix: math cross          |     |
| references. . . . .                       | 303 |
| \LWR@closeparagraph: \unskip              |     |
| extra spaces. . . . .                     | 266 |
| No break tags in the start/end of a       |     |
| tabular. . . . .                          | 266 |
| \LWR@endoffline: Fix: \ \ . . . . .       | 498 |
| \LWR@filestart: Adds meta                 |     |
| description. . . . .                      | 299 |
| \LWR@hspace: Add: Supports HTML           |     |
| thin breakable space. . . . .             | 499 |
| \LWR@htmldivclass: Added                  |     |
| optional style. . . . .                   | 260 |
| \LWR@htmlElementclass: Added              |     |
| optional style. . . . .                   | 260 |
| \LWR@htmlsectionfilename:                 |     |
| HTMLFilename: removed                     |     |
| additional trailing '-', and may be       |     |
| empty. . . . .                            | 250 |
| Sections called "Index" or "index"        |     |
| have an underscore prepended to           |     |
| their filenames if no prefix. . . .       | 250 |
| \LWR@includegraphicsb: Fix:               |     |
| \linewidth in a floatrow. . . . .         | 626 |
| Fix: Expands filename. . . . .            | 626 |
| \LWR@longtabledatacaptiontag:             |     |
| Fix: Pars in captions. . . . .            | 374 |
| \LWR@section: Combined                    |     |
| higher-level sections together            |     |
| into files. . . . .                       | 291 |
| \LWR@setOSWindows: Auto-detects           |     |
| operating system. . . . .                 | 153 |
| \LWR@subhtmlElementclass:                 |     |
| Factored code. . . . .                    | 260 |
| \SetHTMLFileNumber: Add: Control          |     |
| file numbers. . . . .                     | 249 |
| \cpagerefFor: User-redefinable            |     |
| word for page references. . . . .         | 477 |
| \dotfill: Inserts an ellipsis. . . . .    | 497 |
| \hfill: Inserts a \qqquad. . . . .        | 497 |
| \hrulefill: Inserts a short rule. . .     | 497 |
| \hyperindexref: Print mode                |     |
| provided in case hyperref not             |     |
| used. . . . .                             | 419 |
| \pageref: Added. . . . .                  | 398 |
| \tracinglwarp: Added. . . . .             | 176 |
| General: 2017/02/09 . . . . .             | 1   |
| <b>afterpage</b> : Added. . . . .         | 517 |
| <b>alltt</b> : Added. . . . .             | 519 |
| <b>bookmark</b> : Added. . . . .          | 530 |
| <b>caption and subcaption</b>             |     |
| supported. . . . .                        | 1   |
| <b>cleveref</b> and referencing patches:  |     |
| Applied \AfterEndPreamble. . .            | 476 |
| <b>draftwatermark</b> : Added. . . . .    | 574 |
| <b>eso-pic</b> : Added. . . . .           | 582 |
| <b>everypage</b> : Added. . . . .         | 582 |
| <b>extramarks</b> : Added. . . . .        | 583 |
| <b>fancyhdr</b> : Added. . . . .          | 590 |
| <b>hyperref</b> : Additional user macros. | 637 |
| <b>keyfloat</b> : Added. . . . .          | 646 |
| <b>letterspace</b> : User-interface       |     |
| emulated. . . . .                         | 649 |
| <b>listings</b> : Added. . . . .          | 653 |
| <b>lrcaption</b> : Added. . . . .         | 659 |
| <b>lwarp-newproject</b> : Added. . . . .  | 185 |
| <b>microtype</b> : User-interface         |     |
| emulated. . . . .                         | 678 |
| <b>needspace</b> : Added. . . . .         | 688 |
| <b>nowidow</b> : Added. . . . .           | 691 |
| <b>placeins</b> : Added. . . . .          | 709 |
| <b>ragged2e</b> : Added. . . . .          | 711 |
| <b>setspace</b> : Improved support. . . . | 726 |
| <b>textpos</b> : Added. . . . .           | 754 |
| <b>titles</b> : Added. . . . .            | 761 |
| <b>titlesec</b> : Added. . . . .          | 765 |
| <b>titletoc</b> : Added. . . . .          | 767 |

|                                                         |     |                                                 |     |
|---------------------------------------------------------|-----|-------------------------------------------------|-----|
| <b>titling</b> : Improved compatibility. . . . .        | 769 | <b>inputenc</b> : Added. . . . .                | 646 |
| <b>tocloft</b> : Added. . . . .                         | 776 | <b>newclude</b> : Added. . . . .                | 689 |
| <b>wallpaper</b> : Added. . . . .                       | 798 | <b>newunicodechar</b> : Added. . . . .          | 689 |
| <b>wrapfig</b> : Added. . . . .                         | 799 | <b>lwarpmk</b> : Fix: <i>lwarpmk again</i> for  |     |
| Added @, <, > columns. . . . .                          | 334 | WINDOWS. . . . .                                | 229 |
| Added single-expansion data                             |     | <b>lwarpmk</b> : Fix: <i>lwarpmk images</i>     |     |
| arrays. . . . .                                         | 247 | for WINDOWS. . . . .                            | 229 |
| Code factored into independent                          |     | <b>lwarpmk</b> : Fix: <b>lwarpmk</b> uses       |     |
| <i>lwarp_html</i> files. . . . .                        | 509 | <i>lateximages</i> text file instead of         |     |
| Docs: Examples for generating                           |     | shell script. . . . .                           | 229 |
| HTML file names. . . . .                                | 95  | Add: Errors for misplaced                       |     |
| Docs: Improved index. . . . .                           | 1   | packages. . . . .                               | 158 |
| Enhanced <b>titling</b> support. . . . .                | 310 | Docs: Added <b>internet</b> class. . . . .      | 61  |
| File: <i>lwarp.css</i> : Minor fixes for                |     | Docs: Added TeX2page, GladTeX. . . . .          | 61  |
| validation. . . . .                                     | 1   | Docs: Installing on WINDOWS. . . . .            | 68  |
| File: <i>lwarpmk</i> used to compile                    |     | File: <i>lwarp_tutorial.txt</i> added. . . . .  | 72  |
| print, HTML, indexes, and                               |     |                                                 |     |
| <i>lateximages</i> . . . . .                            | 1   | v0.22                                           |     |
| Fix: <code>\linewidth</code> in a floatrow. . . . .     | 607 | <code>\LWR@parseDcolumn</code> : Added tabular  |     |
| Improved float caption type                             |     | D column. . . . .                               | 348 |
| handling. . . . .                                       | 601 | <code>\LWR@parsebangcolumn</code> : Added       |     |
| Moved sidebar and example code                          |     | tabular ! column. . . . .                       | 345 |
| to test suite. . . . .                                  | 1   | <code>\LWR@parsetablecols</code> : Unknown      |     |
| Page geometry set to 6in wide with                      |     | table column types become 1.                    |     |
| large margins. . . . .                                  | 166 | Added tabular D, !, X columns. . . . .          | 349 |
| Parallel versions of aux files for                      |     | <code>\LWR@printmccoldata</code> : Added        |     |
| print/HTML. . . . .                                     | 1   | tabular D, !, and X columns. . . . .            | 369 |
| Removed reliance on make, grep,                         |     | General: 2017/03/02 . . . . .                   | 1   |
| gawk. . . . .                                           | 1   | <b>abstract</b> : Added. . . . .                | 511 |
| Tabular: <code>\unskip</code> extra spaces. . . . .     | 334 | <b>changepage</b> : Added. . . . .              | 538 |
| Test Suite: HTML meta                                   |     | <b>dcolumn</b> : Added. . . . .                 | 572 |
| descriptions. . . . .                                   | 1   | <b>ftnright</b> : Added. . . . .                | 618 |
| <code>verbatim</code> : Added. . . . .                  | 322 | <b>geometry</b> : Nullified commands. . . . .   | 619 |
| <code>BlockClass</code> : Added optional style. . . . . | 262 | <b>indentfirst</b> : Added. . . . .             | 645 |
| Renamed from "blockclass". . . . .                      | 262 | <b>layout</b> : Added. . . . .                  | 648 |
| <code>LWR@nestspan</code> : Fix: Minipages inside       |     | <b>lscape</b> : Added. . . . .                  | 659 |
| a span. . . . .                                         | 257 | <b>mcaption</b> : Added. . . . .                | 664 |
| v0.21                                                   |     | <b>nameref</b> : Added. . . . .                 | 687 |
| <code>\LWR@LwarpStart</code> : Changed                  |     | <b>nextpage</b> : Added. . . . .                | 689 |
| <i>lateximages</i> to a .txt file. . . . .              | 301 | <b>parskip</b> : Added. . . . .                 | 706 |
| <code>\LWR@filestart</code> : Skip title if not         |     | <b>showkeys</b> : Added. . . . .                | 728 |
| given. . . . .                                          | 299 | <b>sidecap</b> : Added. . . . .                 | 729 |
| <code>\LWR@newhtmlfile</code> : Skip title if not       |     | <b>tabularx</b> : Added. . . . .                | 748 |
| given. . . . .                                          | 284 | <b>varioref</b> : Supported. . . . .            | 109 |
| <code>\marginpar</code> : Fixed source listing. . . . . | 279 | <b>verse</b> : Added. . . . .                   | 792 |
| <code>\marginparBlock</code> : Fixed source             |     | v0.23                                           |     |
| listing. . . . .                                        | 279 | <code>\LWR@parsetablecols</code> : Fix for vert |     |
| General: 2017/02/23 . . . . .                           | 1   | bar column type. . . . .                        | 349 |
| <b>fontenc</b> : Added. . . . .                         | 612 | <code>\LWR@printmccoldata</code> : Fix for vert |     |
| <b>fontspec</b> : Added. . . . .                        | 612 | bar column type. . . . .                        | 369 |
|                                                         |     | General: 2017/03/02 . . . . .                   | 1   |

|                                               |         |
|-----------------------------------------------|---------|
| v0.24                                         |         |
| \LRW@hspace: Add: \hspace \fill               |         |
| converts to 2em                               | 499     |
| \LRW@htmlfileref: Fix: Index links            |         |
| while \tracinglwrap.                          | 394     |
| \hypertocfloat: List of floats                |         |
| responds to lofdepth,                         |         |
| lotdepth.                                     | 416     |
| General: 2017/03/15                           | 1       |
| <b>floatrow</b> : Support for <b>subfig</b> . | 604     |
| <b>subfig</b> : Added.                        | 740     |
| <b>tikz</b> : For tikz v3.0.0 or later,       |         |
| auto-loads tikz babel library if              |         |
| necessary.                                    | 760     |
| Docs: Filename underscore.                    | 92, 103 |
| Fix for inline images.                        | 760     |
| No longer preloads <b>subcaption</b> ;        |         |
| conflicted with <b>subfig</b> .               | 168     |
| picture: Fix for inline images.               | 479     |
| v0.25                                         |         |
| \LRW@loadnever: Added the ability             |         |
| to prevent conflicting packages.              | 159     |
| \addcontentsline: Handles                     |         |
| theorems.                                     | 408     |
| General: 2016/03/22                           | 1       |
| <b>amsthm</b> : Added.                        | 519     |
| <b>caption</b> : Prevented.                   | 537     |
| <b>ellipsis</b> : Added.                      | 576     |
| <b>emptypage</b> : Added.                     | 576     |
| <b>framed</b> : Added.                        | 615     |
| <b>lips</b> : Added.                          | 653     |
| <b>mdframed</b> : Help avoid                  |         |
| hyphenation.                                  | 667     |
| <b>ntheorem</b> : Added.                      | 692     |
| <b>showidx</b> : Added.                       | 728     |
| <b>theorem</b> : Added.                       | 755     |
| Basic $\LaTeX$ theorems: improved             |         |
| css.                                          | 323     |
| Docs: Adds credits for patched                |         |
| code.                                         | 1       |
| Docs: Testing <b>lwrap</b> .                  | 142     |
| Fix: Allows $X\LaTeX$ and $\Lua\LaTeX$ to     |         |
| preload graphics and graphicx.                | 160     |
| v0.26                                         |         |
| General: 2017/03/31                           | 1       |
| <b>lwrap.css</b> : Improved responsive        |         |
| marginpar and marginblock.                    | 187     |
| <b>cutwin</b> : Added.                        | 571     |
| <b>endnotes</b> : Added.                      | 578     |
| <b>floatflt</b> : Added.                      | 603     |
| <b>footmisc</b> : Added.                      | 612     |
| <b>footnotehyper</b> : Added.                 | 615     |
| <b>footnote</b> : Added.                      | 614     |
| <b>marginfix</b> : Added.                     | 663     |
| <b>marginnote</b> : Added.                    | 664     |
| <b>mparhack</b> : Added.                      | 682     |
| <b>pagenote</b> : Supported as-is.            | 705     |
| <b>sidenotes</b> : Added.                     | 729     |
| Docs: Improved $\text{MiKTeX}$ install        |         |
| instructions.                                 | 66, 68  |
| Dollar span avoided in a                      |         |
| lateximage.                                   | 428     |
| Footnotes now are $\LaTeX$ boxes              |         |
| instead of pagenotes.                         | 273     |
| <b>lateximage</b> : Labels track page         |         |
| numbers of lateximages.                       | 461     |
| Print mode now uses a minipage                |         |
| of \linewidth.                                | 461     |
| picture: Fix for \makebox in                  |         |
| picture.                                      | 479     |
| v0.27                                         |         |
| \LRW@footnotetext: Fix for table              |         |
| footnote par tags.                            | 275     |
| General: 2017/04/04                           | 1       |
| <b>lettrine</b> : Added.                      | 649     |
| <b>microtype</b> : Fix with $\Xe\LaTeX$ ,     |         |
| $\Lua\LaTeX$ .                                | 678     |
| <b>soul</b> : Added.                          | 736     |
| <b>ulem</b> : Added.                          | 789     |
| Docs: Installing utilities for                |         |
| MACOS.                                        | 70      |
| Docs: Limitations of saveboxes.               | 104     |
| Page geometry modified to reduce              |         |
| line overflow.                                | 166     |
| v0.28                                         |         |
| \@wrindex: Improved indexing.                 | 419     |
| \HTMLAuthor: Added \HTMLauthor.               |         |
| (Renamed in v0.30.)                           | 272     |
| \LRW@LwrapEnd: If FormatEpub or               |         |
| FormatWP, no bottom nav.                      | 305     |
| \LRW@LwrapStart:                              |         |
| FormatWordProcessor forces                    |         |
| single-file output.                           | 301     |
| \LRW@filestart: Adds HTML meta                |         |
| author.                                       | 299     |
| \LRW@forcenewpage: Forces new                 |         |
| PDF page before major                         |         |
| environments.                                 | 253     |
| \LRW@htmlcomment: Breaks ligatures            |         |
| in HTML comments.                             | 259     |

|                                                                                         |     |                                                                                                                 |     |
|-----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------|-----|
| \LWR@includegraphicsb: Adapts to <b>graphics</b> syntax. . . . .                        | 626 | \HTMLAuthor: Renamed from<br>\HTMLauthor. . . . .                                                               | 272 |
| \LWR@newhtmlfile: If FormatEPUB<br>or FormatWP: skips headers,<br>footers, nav. . . . . | 284 | \HTMLDescription: Renamed from<br>\NewHTMLdescription. . . . .                                                  | 272 |
| \LWR@parsetablecols: Added L, C,<br>R, J column types. . . . .                          | 349 | \HTMLFirstPageTop: Renamed from<br>\SetFirstPageTop. . . . .                                                    | 270 |
| \LWR@startref: Removed space. . .                                                       | 396 | \HTMLLanguage: Renamed from<br>\MetaLanguage. . . . .                                                           | 299 |
| \chapter: If EPUB, prints footnotes<br>before each section. . . . .                     | 297 | \HTMLPageBottom: Renamed from<br>\SetPageBottom. . . . .                                                        | 271 |
| \hyperindexref: Improved<br>indexing. . . . .                                           | 419 | \HTMLPageTop: Renamed from<br>\SetPageTop. . . . .                                                              | 271 |
| \textup: Fixed span class. . . . .                                                      | 491 | General: 2017/04/29 . . . . .                                                                                   | 1   |
| General: 2017/04/14 . . . . .                                                           | 1   | <b>lwarp-newproject</b> removed, and<br>combined with <b>lwarp</b> . . . . .                                    | 185 |
| <b>glossaries</b> : Added. . . . .                                                      | 620 | <b>lwarpmk</b> : Add: xdyfile<br>configuration option. . . . .                                                  | 229 |
| <b>graphics</b> : Added. . . . .                                                        | 621 | <b>lwarpmk</b> : Fix: xindy and texindy<br>adjusted for pdf $\LaTeX$ , x $\LaTeX$<br>and lua $\LaTeX$ . . . . . | 229 |
| <b>tabularx</b> : Fix for optional pos. . .                                             | 748 | <b>lwarpmk</b> : Fix: xindy now used for<br>print index generation with<br><b>latexmk</b> . . . . .             | 229 |
| <b>tabulary</b> : Added. . . . .                                                        | 749 | <b>lwarpmk</b> : language now used for<br>both index and glossary<br>generation. . . . .                        | 229 |
| <b>lwarpmk</b> : Add: <i>printglossary</i><br>and <i>htmlglossary</i> commands. . . . . | 229 | File: lwarp_html.xdy renamed to<br>lwarp.xdy. . . . .                                                           | 225 |
| Added boolean FormatEPUB. . . . .                                                       | 177 | Fix: *.css files only written in<br>print mode. . . . .                                                         | 187 |
| Added boolean FormatWP. . . . .                                                         | 177 | Fix: lwarp.xdy only written in<br>print mode. . . . .                                                           | 225 |
| Added boolean<br>HTMLDebugComments. . . . .                                             | 176 | Fix: lwarp_mathjax.txt: Only<br>written in print mode. . . . .                                                  | 226 |
| Added boolean HTMLMarkFloats,<br>changed to WPMarkFloats as of<br>v0.42. . . . .        | 177 | Option lwarpmklang changed to<br>IndexLanguage. . . . .                                                         | 155 |
| Docs: Modfying lwarpmk and<br>index processing. . . . .                                 | 142 | Option OSWindows replaces macro<br>\warpOSWindows. . . . .                                                      | 156 |
| File: lwarp_mathjax.txt:<br>Updated CDN repository. . . . .                             | 226 | Option xdyFilename added. . . . .                                                                               | 155 |
| Forced oneside to maintain large<br>right margin. . . . .                               | 166 | Option <b>latexmk</b> replaces macro<br>\UseLatexmk. . . . .                                                    | 156 |
| v0.29                                                                                   |     | Options HomeHTMLFilename and<br>HTMLFilename replace macros<br>\HomeHTMLFilename and<br>\HTMLFilename. . . . .  | 156 |
| \LWR@includegraphicsb: Fix: Error<br>when no optional arguments. . .                    | 626 | v0.31                                                                                                           |     |
| General: 2017/04/15 . . . . .                                                           | 1   | General: 2017/05/15 . . . . .                                                                                   | 1   |
| <b>lwarpmk</b> : Add: language option<br>for config files. . . . .                      | 229 | <b>keyfloat</b> : Improved compatibility. . . . .                                                               | 646 |
| Add: lwarpmklang option for<br><b>lwarp</b> . . . . .                                   | 155 |                                                                                                                 |     |
| Docs: Using a glossary . . . . .                                                        | 83  |                                                                                                                 |     |
| File: *.lwarpmkconf: Add:<br>language option for config files. . . . .                  | 186 |                                                                                                                 |     |
| File: lwarpmk.conf: Add:<br>language option for config files. . . . .                   | 185 |                                                                                                                 |     |
| v0.30                                                                                   |     |                                                                                                                 |     |
| \CSSFilename: Renamed from<br>\NewCSS. . . . .                                          | 271 |                                                                                                                 |     |

|       |                                          |                                             |          |
|-------|------------------------------------------|---------------------------------------------|----------|
| v0.32 |                                          | \LWR@htmlelementclassline:                  |          |
|       | \RequirePackage: Fix: Ignores            | Moved optional argument in                  |          |
|       | blanks in package list. . . . .          | front of mandatory. . . . .                 | 261      |
|       | General: 2016/06/09 . . . . .            | \LWR@htmlspanclass: Moved                   |          |
|       | 1                                        | optional argument in front of               |          |
|       | <b>glossaries</b> : Prevent error with   | mandatory. . . . .                          | 258      |
|       | \glo@name not defined. . . . .           | \LWR@nullfonts: Improved font               |          |
|       | 420                                      | control. . . . .                            | 492      |
|       | <b>lwarpnk</b> : Fix: <i>io.lines()</i>  | \LWR@restoreorigformatting:                 |          |
|       | changed to <i>file:lines()</i> due       | <b>booktabs</b> : Works inside              |          |
|       | to <b>luatex</b> changes. . . . .        | lateximage. . . . .                         | 421      |
|       | 229                                      | Improved font control. . . . .              | 421      |
| v0.33 |                                          | \LWR@subhtmlelementclass:                   |          |
|       | \HTMLAuthor: Fix: Provides empty         | Moved optional argument in                  |          |
|       | default author if none given. . .        | front of mandatory. . . . .                 | 260      |
|       | 272                                      | \LWR@tabledatacolumnntag:                   |          |
|       | \LWR@loadbefore: Fix: No                 | <b>booktabs</b> : Works inside              |          |
|       | \PackageError if already                 | lateximage. . . . .                         | 381      |
|       | loaded. . . . .                          | \fboxBlock: Added. . . . .                  | 486      |
|       | 159                                      | \makebox: Fix: Handles paren arg. .         | 484      |
|       | \LWR@parseatcolumn: Fix: Column          | General: 2017/08/08 . . . . .               | 1        |
|       | alignment with leftmost @. . . .         | <b>babel-french</b> : Adds fixed-width      |          |
|       | 344                                      | HTML spaces to punctuation. . .             | 255      |
|       | \LWR@tabledatasinglecolumnntag:          | <b>balance</b> : Added. . . . .             | 527      |
|       | Fix: Macros in tabular could             | <b>booktabs</b> : Works inside              |          |
|       | cause extra data cell. . . . .           | lateximage. . . . .                         | 384, 530 |
|       | 358                                      | <b>boxedminipage2e</b> : Added. . . . .     | 531      |
|       | \LWR@vspace: Add: \vspace                | <b>boxedminipage</b> : Prevented. . . . .   | 531      |
|       | nullified. . . . .                       | <b>crop</b> : Added. . . . .                | 570      |
|       | 501                                      | <b>enumerate</b> : Added. . . . .           | 579      |
|       | \StartDefiningTabulars: Add:             | <b>enumitem</b> : Added, no longer          |          |
|       | Avoids error: misplaced                  | required. . . . .                           | 579      |
|       | alignment tab character &. 340           | <b>everyshi</b> : Added. . . . .            | 583      |
|       | General: 2017/07/10 . . . . .            | <b>fancybox</b> : Added. . . . .            | 585      |
|       | 1                                        | <b>fancyvrb</b> : Added, no longer          |          |
|       | <b>amsmath</b> : Removed <i>fleqn</i>    | required. . . . .                           | 592      |
|       | option. . . . .                          | <b>figcaps</b> : Added. . . . .             | 598      |
|       | 169                                      | <b>filecontents</b> : Required. Patched for |          |
|       | <b>fancyhdr</b> : Fix: Optional args for | <b>morewrites</b> . . . . .                 | 167      |
|       | \lhead, etc. . . . .                     | <b>floatpag</b> : Added. . . . .            | 604      |
|       | 590                                      | <b>flushend</b> : Added. . . . .            | 610      |
|       | Add: Tabular at and bang columns         | <b>fullpage</b> : Added. . . . .            | 618      |
|       | now have their own HTML                  | <b>hyperxmp</b> : Added. . . . .            | 643      |
|       | columns. . . . .                         | <b>idxlayout</b> : Added. . . . .           | 644      |
|       | 334                                      | <b>marginfit</b> : Added. . . . .           | 663      |
|       | <b>cleveref</b> : Fix: Loaded            | <b>mdframed</b> : Improved <i>mdtheorem</i> |          |
|       | \AtEndPreamble. . . . .                  | patch. . . . .                              | 673      |
|       | 476                                      | <b>moreverb</b> : Added. . . . .            | 680      |
|       | Fix: Incorrectly-inline math             | <b>paralist</b> : Added. . . . .            | 706      |
|       | environments. . . . .                    | <b>pdflscape</b> : Added. . . . .           | 707      |
|       | 446                                      |                                             |          |
|       | New handling of & to localize            |                                             |          |
|       | catcode changes. . . . .                 |                                             |          |
|       | 334                                      |                                             |          |
| v0.34 |                                          |                                             |          |
|       | \@fnsymbol: Text symbols instead of      |                                             |          |
|       | math. . . . .                            |                                             |          |
|       | 313                                      |                                             |          |
|       | \InlineClass: Moved optional             |                                             |          |
|       | argument in front of mandatory. 262      |                                             |          |
|       | \LWR@htmldivclass: Moved                 |                                             |          |
|       | optional argument in front of            |                                             |          |
|       | mandatory. . . . .                       |                                             |          |
|       | 260                                      |                                             |          |
|       | \LWR@htmlelementclass: Moved             |                                             |          |
|       | optional argument in front of            |                                             |          |
|       | mandatory. . . . .                       |                                             |          |
|       | 260                                      |                                             |          |

|                                                                                                                                                                                                                                                                                |     |                                                                                                                                      |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------|-----|
| <b>pdfsync</b> : Added. . . . .                                                                                                                                                                                                                                                | 707 | Force HTML superscripts. . . . .                                                                                                     | 275 |
| <b>prelim2e</b> : Added. . . . .                                                                                                                                                                                                                                               | 709 | <code>\LWR@nullfonts</code> : Fix: Filenames<br>while using MATHJAX. . . . .                                                         | 492 |
| <b>rotfloat</b> : Added. . . . .                                                                                                                                                                                                                                               | 716 | <code>\LWR@restoreorigformatting</code> :<br><b>siunitx</b> : Improved<br>super/subscripts in a<br><code>lateximage</code> . . . . . | 421 |
| <b>savetrees</b> : Added. . . . .                                                                                                                                                                                                                                              | 717 | <code>\LWR@section</code> : Improved spacing. . . . .                                                                                | 291 |
| <b>shadow</b> : Added. . . . .                                                                                                                                                                                                                                                 | 728 | <code>\LWR@stoppars</code> : Extra HTML source<br>space after paragraphs. . . . .                                                    | 269 |
| <b>syntonly</b> : Added. . . . .                                                                                                                                                                                                                                               | 747 | <code>\fbox</code> : Fix: Uses <code>\fboxrule</code> and<br><code>\fboxsep</code> . . . . .                                         | 486 |
| <b>titles</b> : No longer required. . . . .                                                                                                                                                                                                                                    | 761 | <code>\framebox</code> : Fix: Handles width and<br>horiz position. . . . .                                                           | 485 |
| <b>titleref</b> : Prevented. . . . .                                                                                                                                                                                                                                           | 764 | <code>\makebox</code> : Fix: Handles width and<br>horiz position. . . . .                                                            | 484 |
| <b>xmpinl</b> : Added. . . . .                                                                                                                                                                                                                                                 | 814 | General: 2017/08/17 . . . . .                                                                                                        | 1   |
| Added. . . . .                                                                                                                                                                                                                                                                 | 808 | <b>babel-french</b> : Adjustements for<br>French variants, load order,<br>footnotes, ellipses. . . . .                               | 255 |
| Docs: Horizontal space<br>limitations. . . . .                                                                                                                                                                                                                                 | 1   | <b>footnote</b> : Extra HTML source space<br>after paragraphs. . . . .                                                               | 614 |
| Docs: Misplaced alignment<br>character. . . . .                                                                                                                                                                                                                                | 143 | <b>siunitx</b> : Fix for <b>babel-french</b> . . . . .                                                                               | 468 |
| File: <code>lwarp_mathjax.txt</code> : Version<br>change. . . . .                                                                                                                                                                                                              | 226 | <b>siunitx</b> : Improved symbol<br>support. . . . .                                                                                 | 731 |
| File: <code>README.txt</code> : updated. . . . .                                                                                                                                                                                                                               | 1   | <b>transparent</b> : Added. . . . .                                                                                                  | 786 |
| Fix: Added the <code>eqnarray</code><br>environments. . . . .                                                                                                                                                                                                                  | 446 | <b>upref</b> : Added. . . . .                                                                                                        | 791 |
| Improved font control. . . . .                                                                                                                                                                                                                                                 | 489 | <b>xcolor</b> : Added <code>\fcolorboxBlock</code> ,<br><code>\colorboxBlock</code> . . . . .                                        | 800 |
| Lists refactored to remove<br><b>enumitem</b> requirement. . . . .                                                                                                                                                                                                             | 324 | <b>xcolor</b> : Fix: Background none in<br>print mode. . . . .                                                                       | 800 |
| Verbatim refactored to remove<br><b>fancyvrb</b> requirement. . . . .                                                                                                                                                                                                          | 319 | <b>xcolor</b> : Refactored<br><code>\LWR@colorstyle</code> . . . . .                                                                 | 804 |
| <code>lateximage</code> : Fix: <code>lateximage</code> with<br><code>minipage</code> , <code>\parbox</code> , <code>\makebox</code> ,<br><code>\fbox</code> , <code>\framebox</code> , <code>\raisebox</code> ,<br><code>\scalebox</code> , <code>\reflectbox</code> . . . . . | 461 | <b>xcolor</b> : Uses <code>\fboxrule</code> and<br><code>\fboxsep</code> . . . . .                                                   | 800 |
| BlockClass: Moved optional<br>argument in front of mandatory. . . . .                                                                                                                                                                                                          | 262 | <b>xcolor</b> : <code>\fcolorbox</code> etc. now work<br>inside <code>lateximage</code> . . . . .                                    | 800 |
| <code>fminipage</code> : Added. . . . .                                                                                                                                                                                                                                        | 487 | Docs: Reorganized: Special cases<br>and limitations. . . . .                                                                         | 102 |
| <code>LWR@nestspan</code> : Fix: Minipages,<br>BlocksClass, and lists inside a<br>span. . . . .                                                                                                                                                                                | 257 | Source: Improved formatting. . . . .                                                                                                 | 1   |
| <code>LWR@tabular</code> : <b>booktabs</b> : Works<br>inside <code>lateximage</code> . . . . .                                                                                                                                                                                 | 386 | <code>lateximage</code> : Footnotes appear in<br>regular text instead of the<br><code>lateximage minipage</code> . . . . .           | 461 |
| v0.35                                                                                                                                                                                                                                                                          |     | <code>LWR@tabular</code> : Fix for <b>babel-french</b> . . . . .                                                                     | 386 |
| General: 2017/08/08 . . . . .                                                                                                                                                                                                                                                  | 1   | v0.37                                                                                                                                |     |
| Fix: <code>\textbf</code> and related. . . . .                                                                                                                                                                                                                                 | 489 | <code>\include</code> : Maintains independent<br>aux files for HTML. . . . .                                                         | 174 |
| v0.36                                                                                                                                                                                                                                                                          |     | General: 2017/08/19 . . . . .                                                                                                        | 1   |
| <code>\LWR@HTMLsanitize</code> : Fix for<br><b>babel-french</b> . . . . .                                                                                                                                                                                                      | 457 | ℒ <sub>TeX</sub> accents: Added. . . . .                                                                                             | 183 |
| <code>\LWR@HTMLsanitizeexpand</code> : Fix for<br><b>babel-french</b> . . . . .                                                                                                                                                                                                | 458 |                                                                                                                                      |     |
| <code>\LWR@closeparagraph</code> : Extra HTML<br>source space after paragraphs. . . . .                                                                                                                                                                                        | 266 |                                                                                                                                      |     |
| <code>\LWR@currenttextcolor</code> : Fix for<br><code>\rule</code> when <b>xcolor</b> not loaded. . . . .                                                                                                                                                                      | 496 |                                                                                                                                      |     |
| <code>\LWR@footnotetext</code> : Extra HTML<br>source space after paragraphs. . . . .                                                                                                                                                                                          | 275 |                                                                                                                                      |     |

|                                                                                           |     |       |                                                                                                                 |
|-------------------------------------------------------------------------------------------|-----|-------|-----------------------------------------------------------------------------------------------------------------|
| <b>babel-french</b> : Adjustment for load order. . . . .                                  | 255 |       |                                                                                                                 |
| <b>color</b> : Prevented. . . . .                                                         | 568 |       |                                                                                                                 |
| <b>comment</b> : Maintains independent cutfiles for print, HTML. . . . .                  | 157 | v0.39 |                                                                                                                 |
| <b>siunitx</b> : Improved symbol support. . . . .                                         | 731 |       |                                                                                                                 |
| <b>textcomp</b> : Improved support. . . . .                                               | 750 |       |                                                                                                                 |
| <b>lwarpmk</b> : Removes additional HTML aux files. . . . .                               | 229 |       |                                                                                                                 |
| File handles reorganized. . . . .                                                         | 173 |       |                                                                                                                 |
| v0.38                                                                                     |     |       |                                                                                                                 |
| <b>\@secntformat</b> : Added for <b>appendix</b> . . . . .                                | 291 |       |                                                                                                                 |
| <b>\ForceHTMLPage</b> : Added. . . . .                                                    | 288 |       |                                                                                                                 |
| <b>\ForceHTMLTOC</b> : Added. . . . .                                                     | 288 |       |                                                                                                                 |
| <b>\LWR@section</b> : <b>\part*</b> starts a new HTML page, for <b>appendix</b> . . . . . | 291 |       |                                                                                                                 |
| Modified spacing, uses <b>\numberline</b> . . . . .                                       | 291 |       |                                                                                                                 |
| <b>\numberline</b> : Added trailing <b>\quad</b> . . . . .                                | 415 |       |                                                                                                                 |
| <b>\part</b> : Fix with <b>article</b> class. . . . .                                     | 296 |       |                                                                                                                 |
| General: 2017/08/27 . . . . .                                                             | 1   |       |                                                                                                                 |
| <b>appendix</b> : Added. . . . .                                                          | 524 |       |                                                                                                                 |
| <b>arabicfront</b> : Added. . . . .                                                       | 524 |       |                                                                                                                 |
| <b>caption2</b> : Prevented. . . . .                                                      | 537 |       |                                                                                                                 |
| <b>chappg</b> : Added. . . . .                                                            | 539 |       |                                                                                                                 |
| <b>color</b> : Forces <b>xcolor</b> as well. . . . .                                      | 568 |       |                                                                                                                 |
| <b>fix2col</b> : Added. . . . .                                                           | 599 |       |                                                                                                                 |
| <b>fncychap</b> : Added. . . . .                                                          | 611 |       |                                                                                                                 |
| <b>grffile</b> : Added. . . . .                                                           | 633 |       |                                                                                                                 |
| <b>metalogo</b> : Added. . . . .                                                          | 675 |       |                                                                                                                 |
| <b>nonumonpart</b> : Added. . . . .                                                       | 691 |       |                                                                                                                 |
| <b>nopageno</b> : Added. . . . .                                                          | 691 |       |                                                                                                                 |
| <b>pagenote</b> : Option page disabled. . . . .                                           | 705 |       |                                                                                                                 |
| <b>realscripts</b> : Added. . . . .                                                       | 712 |       |                                                                                                                 |
| <b>resize</b> : Added. . . . .                                                            | 713 |       |                                                                                                                 |
| <b>romanbarpagenumber</b> : Added. . . . .                                                | 715 |       |                                                                                                                 |
| <b>romanbar</b> : Added. . . . .                                                          | 714 |       |                                                                                                                 |
| <b>scalefnt</b> : Added. . . . .                                                          | 717 |       |                                                                                                                 |
| <b>siunitx</b> : Removed from <b>lwarp</b> core. . . . .                                  | 731 |       |                                                                                                                 |
| <b>textcomp</b> : Removed from <b>lwarp</b> core. . . . .                                 | 750 |       |                                                                                                                 |
| <b>tocbibind</b> : Added. . . . .                                                         | 775 |       |                                                                                                                 |
| <b>xltxtra</b> : Added. . . . .                                                           | 813 |       |                                                                                                                 |
| <b>lwarpmk</b> : Added <b>print1</b> and <b>html1</b> actions. . . . .                    | 229 |       |                                                                                                                 |
| Added <b>\markboth</b> , <b>\sloppy</b> , etc. . . . .                                    | 253 |       |                                                                                                                 |
|                                                                                           |     |       | Docs: Enhanced <i>Supported Features</i> table. . . . .                                                         |
|                                                                                           |     |       | 57                                                                                                              |
|                                                                                           |     |       | Docs: Index, <b>tocbibind</b> . . . . .                                                                         |
|                                                                                           |     |       | 114                                                                                                             |
|                                                                                           |     |       | Docs: Starred sections. . . . .                                                                                 |
|                                                                                           |     |       | 111                                                                                                             |
|                                                                                           |     |       | <b>\@maketitle</b> : <b>titling</b> version. . . . .                                                            |
|                                                                                           |     |       | 772                                                                                                             |
|                                                                                           |     |       | Native $\LaTeX$ version. . . . .                                                                                |
|                                                                                           |     |       | 314                                                                                                             |
|                                                                                           |     |       | Removed minipages. . . . .                                                                                      |
|                                                                                           |     |       | 314, 772                                                                                                        |
|                                                                                           |     |       | Supports <b>authblk</b> with <b>&lt;div&gt;</b> s of class <b>oneauthor</b> instead of <b>tabular</b> . . . . . |
|                                                                                           |     |       | 314, 772                                                                                                        |
|                                                                                           |     |       | <b>\AddSubtitlePublished</b> : Added. . . . .                                                                   |
|                                                                                           |     |       | 315                                                                                                             |
|                                                                                           |     |       | <b>\LWR@domulticolumn</b> : Add: Optional <b>vpos</b> and <b># rows</b> . . . . .                               |
|                                                                                           |     |       | 372                                                                                                             |
|                                                                                           |     |       | <b>\LWR@restoreorigformatting</b> : Appended with <b>\appto</b> instead of calling various macros. . . . .      |
|                                                                                           |     |       | 421                                                                                                             |
|                                                                                           |     |       | <b>\LWR@tabledatacolumnntag</b> : Don't start a data cell if see <b>\TabularMacro</b> . . . . .                 |
|                                                                                           |     |       | 381                                                                                                             |
|                                                                                           |     |       | <b>\ResumeTabular</b> : Added. . . . .                                                                          |
|                                                                                           |     |       | 380                                                                                                             |
|                                                                                           |     |       | <b>\TabularMacro</b> : Added. . . . .                                                                           |
|                                                                                           |     |       | 380                                                                                                             |
|                                                                                           |     |       | <b>\multicolumnrow</b> : Added. . . . .                                                                         |
|                                                                                           |     |       | 378, 686                                                                                                        |
|                                                                                           |     |       | <b>\printauthor</b> : Removed minipages. . . . .                                                                |
|                                                                                           |     |       | 310                                                                                                             |
|                                                                                           |     |       | Supports <b>authblk</b> with <b>&lt;div&gt;</b> s of class <b>oneauthor</b> instead of <b>tabular</b> . . . . . |
|                                                                                           |     |       | 310                                                                                                             |
|                                                                                           |     |       | <b>\thanksmarkseries</b> : Removed minipage footnotes. . . . .                                                  |
|                                                                                           |     |       | 773                                                                                                             |
|                                                                                           |     |       | General: 2017/09/05 . . . . .                                                                                   |
|                                                                                           |     |       | 1                                                                                                               |
|                                                                                           |     |       | <b>a4wide</b> : Added. . . . .                                                                                  |
|                                                                                           |     |       | 510                                                                                                             |
|                                                                                           |     |       | <b>a4</b> : Added. . . . .                                                                                      |
|                                                                                           |     |       | 510                                                                                                             |
|                                                                                           |     |       | <b>a5comb</b> : Added. . . . .                                                                                  |
|                                                                                           |     |       | 510                                                                                                             |
|                                                                                           |     |       | <b>addlines</b> : Added. . . . .                                                                                |
|                                                                                           |     |       | 517                                                                                                             |
|                                                                                           |     |       | <b>anysize</b> : Added. . . . .                                                                                 |
|                                                                                           |     |       | 523                                                                                                             |
|                                                                                           |     |       | <b>authblk</b> : Added. . . . .                                                                                 |
|                                                                                           |     |       | 526                                                                                                             |
|                                                                                           |     |       | <b>bigdelim</b> : Added. . . . .                                                                                |
|                                                                                           |     |       | 528                                                                                                             |
|                                                                                           |     |       | <b>bigstrut</b> : Added. . . . .                                                                                |
|                                                                                           |     |       | 529                                                                                                             |
|                                                                                           |     |       | <b>chngepage</b> : Prevented. . . . .                                                                           |
|                                                                                           |     |       | 538                                                                                                             |
|                                                                                           |     |       | <b>ebook</b> : Added. . . . .                                                                                   |
|                                                                                           |     |       | 576                                                                                                             |
|                                                                                           |     |       | <b>fullwidth</b> : Added. . . . .                                                                               |
|                                                                                           |     |       | 618                                                                                                             |
|                                                                                           |     |       | <b>midpage</b> : Added. . . . .                                                                                 |
|                                                                                           |     |       | 680                                                                                                             |
|                                                                                           |     |       | <b>multirow</b> : Add: New optional <b>vpos</b> argument. . . . .                                               |
|                                                                                           |     |       | 684                                                                                                             |
|                                                                                           |     |       | <b>multirow</b> : Add: Supports left/right border for <b>bigdelim</b> . . . . .                                 |
|                                                                                           |     |       | 684                                                                                                             |
|                                                                                           |     |       | <b>multirow</b> : Fix: Long text argument. . . . .                                                              |
|                                                                                           |     |       | 684                                                                                                             |
|                                                                                           |     |       | <b>supertabular</b> : Added. . . . .                                                                            |
|                                                                                           |     |       | 746                                                                                                             |
|                                                                                           |     |       | <b>textarea</b> : Added. . . . .                                                                                |
|                                                                                           |     |       | 749                                                                                                             |

|                                                         |     |                                                 |     |
|---------------------------------------------------------|-----|-------------------------------------------------|-----|
| <b>titling</b> : Improved compatibility. . . . .        | 769 | <b>graphics</b> : Moved out of the <b>lwarp</b> |     |
| <b>titling</b> : Removed extraneous                     |     | core. . . . .                                   | 621 |
| center environments. . . . .                            | 770 | <b>graphics</b> : Restores                      |     |
| <b>typearea</b> : Added. . . . .                        | 789 | \includegraphics and                            |     |
| <b>xtabular</b> : Added. . . . .                        | 814 | \DeclareGraphicsExtensions                      |     |
| <b>zwpagelayout</b> : Added. . . . .                    | 817 | in a lateximage. . . . .                        | 621 |
| Docs: Reorganized tabular                               |     | <b>graphicx</b> : Moved out of the <b>lwarp</b> |     |
| discussion. . . . .                                     | 122 | core. . . . .                                   | 633 |
| Titlepage \published and                                |     | <b>grffile</b> : Directly supported. . . . .    | 633 |
| \subtitle removed.                                      |     | <b>midfloat</b> : Added. . . . .                | 679 |
| \AddSubtitlePublished                                   |     | <b>multirow</b> : Improved <b>bigdelim</b>      |     |
| restores. . . . .                                       | 315 | borders. . . . .                                | 684 |
| titlepage: Clear pending footnotes. . . . .             | 309 | <b>pfnote</b> : Added. . . . .                  | 708 |
| Removed minipages. . . . .                              | 309 | <b>quotchap</b> : Added. . . . .                | 710 |
| titlingpage: Clear pending                              |     | <b>sectsty</b> : Added. . . . .                 | 726 |
| footnotes. . . . .                                      | 769 | <b>stabular</b> : Added. . . . .                | 739 |
| v0.40                                                   |     | <b>tabs</b> : Added. . . . .                    | 748 |
| \@chapcntformat: Added for                              |     | <b>textcomp</b> : Additional symbols,           |     |
| <b>tocbibind</b> , <b>anonchap</b> . . . . .            | 291 | improved XeLaTeX and LuaLaTeX                   |     |
| \LWR@HTMLhline: Added. . . . .                          | 385 | support. . . . .                                | 750 |
| \LWR@includegraphicsb: Add: Full                        |     | <b>tocbibind</b> : Improved for                 |     |
| \graphicspath support. . . . .                          | 626 | \simplechapter. . . . .                         | 775 |
| \LWR@nullfonts: Fix: Long                               |     | <b>xltxtra</b> : Fix for \showhyphens with      |     |
| arguments for expandable                                |     | XeLaTeX. . . . .                                | 813 |
| command. . . . .                                        | 492 | No longer preloads <b>xfrac</b> . . . . .       | 169 |
| \LWR@restoreorigformatting:                             |     | v0.41                                           |     |
| Improved L <sup>A</sup> T <sub>E</sub> X logos inside a |     | \LWR@addcmidruletrim: Add:                      |     |
| lateximage. . . . .                                     | 421 | \cmidrule trims. . . . .                        | 363 |
| Improved symbols inside a                               |     | \LWR@clearmidrules: Add:                        |     |
| lateximage. . . . .                                     | 421 | \cmidrule trims. . . . .                        | 361 |
| Nullified \InlineClass, etc.                            |     | \LWR@closetabledatacell: Add:                   |     |
| inside a lateximage. . . . .                            | 421 | Mute > for \bottomrule. . . . .                 | 339 |
| \LWR@tabledatacolumnntag: Fix for                       |     | Fix: At/bang column with                        |     |
| <b>bigdelim</b> : \ldelim, \rdelim. . . . .             | 381 | \multirow. . . . .                              | 339 |
| \chapter: Added support for                             |     | Fix: Cancel < for \multicolumn. . . . .         | 339 |
| <b>quotchap</b> . . . . .                               | 297 | \LWR@domulticolumn: Add:                        |     |
| \multicolumnrow: Fix: Adapts to                         |     | \cmidrule trims. . . . .                        | 372 |
| older <b>multirow</b> and <b>xparse</b> . . . . .       | 378 | Added vertical rules. . . . .                   | 373 |
| \simplechapterdelim: Added for                          |     | \LWR@nullifyNoAutoSpacing: Fix:                 |     |
| <b>tocbibind</b> , <b>anonchap</b> . . . . .            | 291 | \NoAutoSpacing in a tabular                     |     |
| \underline: Added. . . . .                              | 495 | with <b>babel-french</b> . . . . .              | 385 |
| General: 2017/09/25 . . . . .                           | 1   | \LWR@parsebarcolumn: Added                      |     |
| <b>adjmulticol</b> : Added. . . . .                     | 516 | vertical rules. . . . .                         | 347 |
| <b>anonchap</b> : Added. . . . .                        | 523 | \LWR@printatbang: Add: \cmidrule                |     |
| <b>bigdelim</b> : Improved                              |     | trims. . . . .                                  | 357 |
| documentation. . . . .                                  | 528 | Add: Mute at and bang columns                   |     |
| <b>cuted</b> : Added. . . . .                           | 571 | for \bottomrule. . . . .                        | 357 |
| <b>dblfnote</b> : Added. . . . .                        | 572 | \LWR@printbartag: Added vertical                |     |
| <b>fnpos</b> : Added. . . . .                           | 612 | rules. . . . .                                  | 356 |
|                                                         |     | \LWR@subaddcmidruletrim: Added. . . . .         | 363 |

|                                                                                                                 |     |                                                                                                                  |     |
|-----------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------|-----|
| <code>\LWR@subcmidrule</code> : Add: <code>\cmidrule</code><br>trims. . . . .                                   | 361 | <code>\LWR@hspace</code> : If FormatWP add<br><code>\quads</code> . . . . .                                      | 500 |
| <code>\LWR@tabledatasinglecolumn</code> :<br>Add: <code>\cmidrule</code> trims. . . . .                         | 358 | <code>\LWR@htmlmathlabel</code> : If FormatWP<br>print LaTeX expression. . . . .                                 | 445 |
| Add: Mute < for <code>\bottomrule</code> . . .                                                                  | 358 | <code>\LWR@includegraphics</code> : Fix:<br>Filename expansion. . . . .                                          | 626 |
| <code>\LWR@tabularfinishrow</code> :<br>Unfinished tabular rows<br>automatically filled. . . . .                | 342 | If FormatWP, use explicit size. . . .                                                                            | 627 |
| <code>\mcolrowcell</code> : Added for<br><code>\multicolumn</code> cells. . . . .                               | 384 | <code>\LWR@remembertag</code> : Fix: Numbering<br>and naming AMS math<br>environments. . . . .                   | 459 |
| General: 2017/10/07 . . . . .                                                                                   | 1   | <code>\LWR@restoreorigformatting</code> :<br>Improved <code>\ensuremath</code> . . . . .                         | 424 |
| <b>multirow</b> : Add: <code>\cmidrule</code> trims. . . . .                                                    | 684 | <code>\LWR@rule</code> : If FormatWP add <code>\quads</code> . . . . .                                           | 503 |
| Added vertical rules. . . . .                                                                                   | 685 | <code>\LWR@subaddcmidruletrim</code> : Opt if<br>no rule given. . . . .                                          | 363 |
| Fix: < spec. . . . .                                                                                            | 685 | <code>\LWR@subsingledollar</code> : If<br>FormatWP print LaTeX<br>expression. . . . .                            | 429 |
| <code>\LWR@tabular</code> : Fix: <code>\NoAutoSpacing</code><br>in a tabular with <b>babel-french</b> . . . . . | 386 | <code>\LWR@tabledatasinglecolumn</code> :<br>If FormatWP add cell alignment. . . . .                             | 359 |
| Improved rules. . . . .                                                                                         | 388 | <code>\LaTeX</code> : If FormatWP use explicit<br>style. . . . .                                                 | 505 |
| v0.42                                                                                                           |     | <code>\TeX</code> : If FormatWP use explicit style. . . . .                                                      | 505 |
| <code>\@ensuredmath</code> : Improved<br><code>\ensuremath</code> . . . . .                                     | 436 | <code>\listoffigures</code> : Added boolean<br><code>WPMarkLOFT</code> . . . . .                                 | 412 |
| <code>\@textsubscript</code> : Added. . . . .                                                                   | 495 | <code>\listoftables</code> : Added boolean<br><code>WPMarkLOFT</code> . . . . .                                  | 412 |
| <code>\@textsuperscript</code> : Added. . . . .                                                                 | 495 | <code>\marginpar</code> : If FormatWP emulate a<br>wrapfig. . . . .                                              | 279 |
| <code>\LWR@HTMLhline</code> : If FormatWP force<br>explicit border. . . . .                                     | 385 | <code>\marginparBlock</code> : If FormatWP<br>emulate a wrapfig. . . . .                                         | 279 |
| <code>\LWR@HTMLtextstyle</code> : Added. . . . .                                                                | 489 | <code>\tableofcontents</code> : Added boolean<br><code>WPMarkTOC</code> . . . . .                                | 411 |
| <code>\LWR@addformatwpalignment</code> : If<br>FormatWP add explicit style for<br>cell alignment. . . . .       | 365 | <code>\underline</code> : If FormatWP, use<br>explicit styles for <code>\underline</code> ,<br>etc. . . . .      | 495 |
| <code>\LWR@addrulewidth</code> : If FormatWP<br>force explicit border. . . . .                                  | 363 | General: 2017/10/30 . . . . .                                                                                    | 1   |
| <code>\LWR@amsmathbody</code> : Fix: Numbering<br>and naming AMS math<br>environments. . . . .                  | 460 | <code>\textbf</code> and related: If FormatWP,<br>use explicit styles for <code>\textsc</code> ,<br>etc. . . . . | 489 |
| <code>\LWR@amsmathbodynumbered</code> : Fix:<br>Numbering and naming AMS<br>math environments. . . . .          | 460 | <b>algorithmicx</b> : If FormatWP add<br><code>\quads</code> . . . . .                                           | 518 |
| <code>\LWR@doequation</code> : If FormatWP print<br>LaTeX expression. . . . .                                   | 441 | <b>epigraph</b> : If FormatWP add HTML<br>styles. . . . .                                                        | 580 |
| <code>\LWR@domulticolumn</code> : If FormatWP<br>add cell alignment. . . . .                                    | 373 | <b>fancybox</b> : If FormatWP add HTML<br>styles. . . . .                                                        | 585 |
| <code>\LWR@doubledollar</code> : If FormatWP<br>print LaTeX expression. . . . .                                 | 434 | <b>floatflt</b> : Added width. . . . .                                                                           | 603 |
| Improved <code>\ensuremath</code> . . . . .                                                                     | 434 | <b>includegraphics</b> : Fix: Class key. . . . .                                                                 | 626 |
| Improved line spacing with<br><code>mathjax</code> . . . . .                                                    | 435 | <b>keyfloat</b> : If FormatWP add explicit<br>HTML style. . . . .                                                | 647 |
| <code>\LWR@floatbegin</code> : If FormatWP add<br>a text frame. . . . .                                         | 403 |                                                                                                                  |     |
| <code>\LWR@floatend</code> : If FormatWP add a<br>text frame. . . . .                                           | 404 |                                                                                                                  |     |

|                                                                            |     |                                                                                                                         |               |
|----------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>moreverb</b> : Simplified formatting of listings. . . . .               | 680 | <b>LWR@figcaption</b> : If FormatWP forces italic captions. . . . .                                                     | 406           |
| <b>morewrites</b> : Added. . . . .                                         | 682 | <b>LWR@tabular</b> : If FormatWP force explicit border. . . . .                                                         | 388           |
| <b>multirow</b> : If FormatWP add cell alignment. . . . .                  | 685 | v0.43                                                                                                                   |               |
| <b>overpic</b> : Added. . . . .                                            | 704 | <b>\LWR@domulticolumn</b> : Fix for vertical rules. . . . .                                                             | 373           |
| <b>realscripts</b> : Fix for subscripts in a lateximage. . . . .           | 712 | Fix: Multicolumn trim. . . . .                                                                                          | 372, 373      |
| <b>sidenotes</b> : If FormatWP add explicit HTML style. . . . .            | 730 | <b>\LWR@maybeprintpendingfootnotes</b> : Added FootnoteDepth. . . . .                                                   | 278           |
| <b>siunitx</b> : Improved \ensuremath. . . . .                             | 731 | <b>\LWR@nullfonts</b> : Fix: Nullify dollar inside filenames. . . . .                                                   | 492           |
| <b>soul</b> : If FormatWP, add explicit styles. . . . .                    | 736 | <b>\LWR@parsetablecols</b> : Ignore spaces in col spec. . . . .                                                         | 349           |
| <b>textcomp</b> : Improved <b>\interrobangdown</b> . . . . .               | 750 | <b>\LWR@printmccoltype</b> : Added vertical rules. . . . .                                                              | 368           |
| <b>wrapfig</b> : If FormatWP add explicit HTML style. . . . .              | 799 | <b>\LWR@restoreorigformatting</b> : Fix: <b>\ref</b> in math or lateximage. . . . .                                     | 422           |
| Added boolean WPMarkLOFT. . . . .                                          | 178 | <b>\LWR@section</b> : Fix: Expansion in comparison. . . . .                                                             | 292           |
| Added boolean WPMarkMath. . . . .                                          | 178 | Fix: Math in section name. . . . .                                                                                      | 293, 295      |
| Added boolean WPMarkMinipages. . . . .                                     | 177 | Fix: Nullify fonts inside HTML comment. . . . .                                                                         | 293           |
| Added boolean WPMarkTOC. . . . .                                           | 178 | <b>\TabularMacro</b> : <b>\newcommand</b> instead of <b>\relax</b> to fix <b>supertabular</b> and <b>xtab</b> . . . . . | 380           |
| Added boolean WPTitleHeading. . . . .                                      | 178 | <b>\href</b> : Made robust. . . . .                                                                                     | 399           |
| Docs: Added support page. . . . .                                          | 2   | <b>\nameref</b> : Made robust. . . . .                                                                                  | 398           |
| Docs: Improper <b>\prevdepth</b> . . . . .                                 | 143 | <b>\nolinkurl</b> : Made robust. . . . .                                                                                | 400           |
| Docs: Reorganized math limitations . . . . .                               | 115 | <b>\url</b> : Made robust. . . . .                                                                                      | 400           |
| File: <b>lwarp_mathjax.txt</b> : Updated <b>siunitx</b> script. . . . .    | 226 | General: 2017/11/08 . . . . .                                                                                           | 1             |
| Fix: Numbering and naming AMS math environments. . . . .                   | 458 | <b>breakurl</b> : Added. . . . .                                                                                        | 532           |
| If FormatWP, shift section headings. . . . .                               | 179 | <b>hyperref</b> : Made robust. . . . .                                                                                  | 637, 639, 641 |
| tabbing: Added. . . . .                                                    | 322 | <b>hyperref</b> : <b>\Gauge</b> added. . . . .                                                                          | 642           |
| lateximage: Fix: Numbering and naming AMS math environments. . . . .       | 462 | <b>luatodonotes</b> : Added. . . . .                                                                                    | 661           |
| <b>center</b> : If FormatWP use explicit <b>text-align</b> . . . . .       | 467 | <b>todonotes</b> : Added. . . . .                                                                                       | 784           |
| minipage: Added boolean WPMarkMinipages. . . . .                           | 483 | <b>LWR@currentautosec</b> : Added. . . . .                                                                              | 291           |
| If FormatWP add a text frame. . . . .                                      | 482 | Added FootnoteDepth. . . . .                                                                                            | 274           |
| <b>eqnarray</b> : Fix: Numbering and naming AMS math environments. . . . . | 447 | Docs: HTML settings table. . . . .                                                                                      | 91            |
| If FormatWP print LaTeX expression. . . . .                                | 447 | Docs: Reorganized HTML customization. . . . .                                                                           | 91            |
| <b>LWR@BlockClassWP</b> : Added to factor code. . . . .                    | 263 | v0.44                                                                                                                   |               |
|                                                                            |     | <b>\@currentlabelname</b> : Adjustment for <b>koma-script</b> . . . . .                                                 | 391           |
|                                                                            |     | <b>\HTMLtitle</b> : Added. . . . .                                                                                      | 272           |
|                                                                            |     | <b>\LWR@addformatwpalignment</b> : Fix for multicolumn alignment if FormatWP. . . . .                                   | 365           |
|                                                                            |     | <b>\LWR@backgroundcolor</b> : Added. . . . .                                                                            | 804           |
|                                                                            |     | <b>\LWR@filestart</b> : Add <b>\HTMLtitle</b> . . . . .                                                                 | 300           |

|                                                                                   |     |                                                                               |     |
|-----------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------|-----|
| Fix \HTMLAuthor. . . . .                                                          | 300 | <b>tocbasic</b> : Added. . . . .                                              | 773 |
| \LWR@listitem: Added list and<br>trivlist. . . . .                                | 327 | <b>tocloft</b> : Added \newlistentry. . .                                     | 781 |
| \LWR@patchlists: Added list and<br>trivlist. . . . .                              | 330 | <b>tocloft</b> : Improved \newlistof. . .                                     | 782 |
| \LWR@strresult: Fix:<br>\providecommand. . . . .                                  | 337 | <b>tocstyle</b> : Added. . . . .                                              | 783 |
| \LWR@textcurrentcolor: <b>xcolor</b> :<br>Added<br>\LWR@textcurrentcolor. . . . . | 804 | <b>todonotes</b> : Improved. . . . .                                          | 784 |
| \addcontentsline: Automatic<br>\LWR@newfloatanchor. . . . .                       | 408 | <b>todo</b> : Added. . . . .                                                  | 783 |
| \chapter: Add preamble for<br><b>koma-script</b> . . . . .                        | 297 | <b>typearea</b> : Added expert<br>commands. . . . .                           | 789 |
| \marginparBlock: Added. . . . .                                                   | 279 | <b>watermark</b> : Added. . . . .                                             | 798 |
| \nopagecolor: <b>xcolor</b> : Fix for<br>\nopagecolor. . . . .                    | 806 | <b>xcolor</b> : Added<br>\LWR@currenttextcolorstyle. . . . .                  | 803 |
| \part: Add preamble for<br><b>koma-script</b> . . . . .                           | 296 | <b>xcolor</b> : Added<br>\LWR@findcurrenttextcolor. . . . .                   | 803 |
| \title: Added \thetitle. . . . .                                                  | 272 | <b>xtab</b> : Fix for caption. . . . .                                        | 815 |
| General: 2017/11/22 . . . . .                                                     | 1   | Adjustment for <b>koma-script</b> . . . . .                                   | 164 |
| <b>algorithmicx</b> : Improved comment<br>symbol. . . . .                         | 518 | AMS environments: Fix: Groups<br>for lateximages. . . . .                     | 449 |
| <b>atbegshi</b> : Added. . . . .                                                  | 525 | If pdfLaTeX, require T1 and UTF8<br>encoding. . . . .                         | 151 |
| <b>cancel</b> : Added. . . . .                                                    | 533 | picture: <b>overpic</b> : Fix: Groups for<br>lateximages. . . . .             | 479 |
| <b>change page</b> : Additional options. . . . .                                  | 538 | list: Added list and trivlist. . . . .                                        | 327 |
| <b>easy-todo</b> : Added. . . . .                                                 | 575 | LWR@nestspan: Added list and<br>trivlist. . . . .                             | 257 |
| <b>fancyref</b> : Added. . . . .                                                  | 590 | v0.45<br>\@currentHref: Added. . . . .                                        | 399 |
| <b>fixmetodonotes</b> : Added. . . . .                                            | 601 | \@donoparitem: Modified for HTML. . . . .                                     | 325 |
| <b>fixme</b> : Added. . . . .                                                     | 599 | \@item: Modified for HTML. . . . .                                            | 325 |
| <b>fontenc</b> : Allowed after <b>lwarp</b> . . . . .                             | 612 | \@mklab: Modified for HTML. . . . .                                           | 325 |
| <b>hang</b> : Added. . . . .                                                      | 634 | \CSSFilename: Improved filenames<br>with underscores. . . . .                 | 271 |
| <b>ifoddpage</b> : Added. . . . .                                                 | 645 | \LWR@LwarpStart: Fix: Lateximages<br>on incorrect pages with Mathjax. . . . . | 304 |
| <b>ltxtable</b> : Added. . . . .                                                  | 660 | \LWR@filenamenoblanks: Fix:<br>Section names with \ . . . . .                 | 282 |
| <b>luatodonotes</b> : Improved. . . . .                                           | 661 | Fix: Section names with<br>underscores. . . . .                               | 281 |
| <b>lwarp-patch-komascript</b> : Added. . . . .                                    | 819 | \LWR@includegraphicsb: Improved<br>URLs with underscores. . . . .             | 626 |
| <b>overpic</b> : Fix: Groups for<br>lateximages. . . . .                          | 704 | \LWR@newautoidanchor: Fix: No<br>anchor if frozen autoid. . . . .             | 404 |
| <b>pdfsync</b> : Fixes. . . . .                                                   | 707 | \LWR@notmemoirloadafter: Added. . . . .                                       | 159 |
| <b>preview</b> : Added. . . . .                                                   | 710 | \LWR@printpendingmpfootnotes:<br>Added. . . . .                               | 278 |
| <b>scrxend</b> : Added. . . . .                                                   | 718 | \LWR@startref: Fix: Labels with<br>underscores. . . . .                       | 397 |
| <b>scrhack</b> : Added. . . . .                                                   | 721 | \LWR@subhyperref: Improved URLs<br>with underscores. . . . .                  | 399 |
| <b>scrlayer-notecolumn</b> : Added. . . . .                                       | 723 | \LWR@subhyperrefclass: Improved<br>URLs with underscores. . . . .             | 399 |
| <b>scrlayer-scrpage</b> : Added. . . . .                                          | 723 |                                                                               |     |
| <b>scrlayer</b> : Added. . . . .                                                  | 721 |                                                                               |     |
| <b>section</b> : Added. . . . .                                                   | 724 |                                                                               |     |
| <b>soulpos</b> : Added. . . . .                                                   | 738 |                                                                               |     |
| <b>soulutf8</b> : Added. . . . .                                                  | 739 |                                                                               |     |
| <b>supertabular</b> : Fix for caption. . . . .                                    | 747 |                                                                               |     |
| <b>tikz</b> : Fix: Groups for lateximages. . . . .                                | 760 |                                                                               |     |

|                                                                                |          |                                                                                                     |          |
|--------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------|----------|
| <code>\LWR@sublabel</code> : Fix: Labels with underscores. . . . .             | 394      | Docs: Fix for double hyphens. . .                                                                   | 70       |
| <code>\LWR@tabledatacolumnstag</code> : Fix: Empty line between rows. . . . .  | 383      | Docs: Improved install instructions. . . . .                                                        | 70       |
| <code>\chapter</code> : Add optional heading title for <b>memoir</b> . . . . . | 297      | Docs: Improved MiKTeX install instructions. . . . .                                                 | 66       |
| <code>\newpage</code> : Added. . . . .                                         | 497      | Docs: Moved table so doesn't interfere with install docs. . . . .                                   | 65       |
| <code>\nolinkurl</code> : Fix: Underscore in URL. . . . .                      | 400      | File: <code>lwrap_mathjax.txt</code> : Allow MATHJAX inside tabbing. . . . .                        | 226      |
| <code>\normalmarginpar</code> : Added. . . . .                                 | 279      | File: <code>lwrap_mathjax.txt</code> : Allow MATHJAX inside verse. . . . .                          | 226      |
| <code>\reversemarginpar</code> : Added. . . . .                                | 279      | Fix: Empty sidetoc. . . . .                                                                         | 411      |
| <code>\section</code> : Add optional heading title for <b>memoir</b> . . . . . | 297      | Improved: Robust <code>\</code> , <code>\</code> , and <code>\textellipsis</code> commands. . . . . | 497      |
| <code>\tableofcontents</code> : Fix: Empty sidetoc. . . . .                    | 411      | Separate <code>LWR@thisautoidWP</code> for word processor <code>&lt;div&gt;s</code> . . . . .       | 404      |
| Fix: Patch <code>\AtBeginDocument</code> . . . . .                             | 411      | <code>thebibliography</code> : Patched to emphasize titles. . . . .                                 | 421      |
| <code>\url</code> : Improved URLs with underscores. . . . .                    | 400      | <code>minipage</code> : Fix: Improper <code>\prevdepth</code> . . . . .                             | 481, 483 |
| General: 2018/01/14 . . . . .                                                  | 1        | v0.46                                                                                               |          |
| <b>array</b> : Added. . . . .                                                  | 525      | <code>\LWR@closeparagraph</code> : Fix: Tabular empty lines. . . . .                                | 267      |
| <b>babel-french</b> : Robust commands. . . . .                                 | 255      | <code>\LWR@closeprevious</code> : Fix: Stack unnesting. . . . .                                     | 253      |
| <b>backref</b> : Added. . . . .                                                | 527      | <code>\LWR@forcenewpage</code> : Fix: Improper <code>\prevdepth</code> . . . . .                    | 253      |
| <b>breakurl</b> : Fix: Underscore in URL. . . . .                              | 532      | <code>\LWR@lookforpackagename</code> : Fix: Spaces in <code>\usepackage</code> . . . . .            | 171      |
| <b>changebar</b> : Added. . . . .                                              | 537      | <code>\LWR@providelength</code> : Added. . . . .                                                    | 152      |
| <b>cite</b> : Added. . . . .                                                   | 567      | <code>\LWRPrintStack</code> : Name changed from <code>\PrintStack</code> . . . . .                  | 252      |
| <b>continue</b> : Added. . . . .                                               | 570      | <code>\makebox</code> : Fix: Lateximage in a <code>\makebox</code> . . . . .                        | 485      |
| <b>endfloat</b> : Added. . . . .                                               | 577      | <code>\popclose</code> : Fix: Stack unnesting. . . . .                                              | 246      |
| <b>epigraph</b> : Support for <b>memoir</b> . . . . .                          | 580      | <code>\pushclose</code> : Fix: Stack unnesting. . . . .                                             | 245      |
| <b>fancyvrb</b> : Improvements. . . . .                                        | 592, 593 | General: 2018/01/23 . . . . .                                                                       | 1        |
| <b>flafter</b> : Added. . . . .                                                | 601      | <code>LWR@tabularpardepth</code> added. . . . .                                                     | 337      |
| <b>fltrace</b> : Added. . . . .                                                | 610      | <b>amsthm</b> : Adapted to <code>trivlist</code> changes. . . . .                                   | 521      |
| <b>footnpag</b> : Added. . . . .                                               | 615      | <b>mdframed</b> : Fixes for <code>svg math</code> or <code>lateximage</code> in title. . . . .      | 669      |
| <b>fwlw</b> : Added. . . . .                                                   | 619      | <b>mdframed</b> : Fixes for footnotes. . . . .                                                      | 670      |
| <b>hanging</b> : Added. . . . .                                                | 635      | <b>ntheorem</b> : Adapted to <code>trivlist</code> changes. . . . .                                 | 692      |
| <b>hyperref</b> : Fix: Underscore in URL. . . . .                              | 637, 638 | <b>theorem</b> : Adapt to <code>trivlist</code> changes. . . . .                                    | 757, 758 |
| <b>lwrap-patch-memoir</b> : Added. . . . .                                     | 821      | <code>list</code> : Fix: Stack unnesting. . . . .                                                   | 328      |
| <b>memhfix</b> : Added. . . . .                                                | 675      | <code>LWR@tabular</code> : Fix: Tabular empty lines. . . . .                                        | 389      |
| <b>memoir</b> : Added. . . . .                                                 | 508      |                                                                                                     |          |
| <b>natbib</b> : Added. . . . .                                                 | 687      |                                                                                                     |          |
| <b>pagesel</b> : Added. . . . .                                                | 705      |                                                                                                     |          |
| <b>prettyref</b> : Added. . . . .                                              | 709      |                                                                                                     |          |
| <b>subfigure</b> : Added. . . . .                                              | 745      |                                                                                                     |          |
| <b>subfig</b> : Fix for subcaption end tag. . . . .                            | 743      |                                                                                                     |          |
| <b>subfig</b> : Fix: Math in subcaptions. . . . .                              | 741      |                                                                                                     |          |
| <b>textfit</b> : Added. . . . .                                                | 753      |                                                                                                     |          |
| <b>titlerf</b> : Added. . . . .                                                | 764      |                                                                                                     |          |
| <b>turnthepage</b> : Added. . . . .                                            | 788      |                                                                                                     |          |
| Allows <b>memoir's</b> preloaded packages. . . . .                             | 160      |                                                                                                     |          |
| Docs: <b>xparse</b> warnings. . . . .                                          | 131      |                                                                                                     |          |

|                                                                                                         |            |
|---------------------------------------------------------------------------------------------------------|------------|
| v0.47                                                                                                   |            |
| \LWR@LwarpStart: Fix for SVG math<br>in \nameref. . . . .                                               | 304        |
| \LWR@WPcell: Fix: Line wrap at HTML<br>hyphen. . . . .                                                  | 364        |
| \LWR@caption@begin: Fix:<br>Argument passed to<br>\LWR@origcaption@begin. . .                           | 407        |
| \LWR@createautosec: Fix: Line<br>wrap at HTML hyphen. . . . .                                           | 290        |
| \LWR@domulticolumn: Fix: Line<br>wrap at HTML hyphen. . . . .                                           | 372        |
| \LWR@floatbegin: Fix: Line wrap at<br>HTML hyphen. . . . .                                              | 403        |
| \LWR@htmlclosecomment: Add<br>\mbox to prevent line breaks. .                                           | 259        |
| \LWR@newautoidanchor: Fix: Line<br>wrap at HTML hyphen. . . . .                                         | 404        |
| \LWR@printopenlist: Fix: Line<br>wrap at HTML hyphen. . . . .                                           | 324        |
| \LWR@startref: Fix: Line wrap at<br>HTML hyphen. . . . .                                                | 396        |
| \LWR@sublabel: Fix: Line wrap at<br>HTML hyphen. . . . .                                                | 395        |
| \LWR@subsingledollar: Added SVG<br>math image baseline adjust and<br>em sizing. . . . .                 | 429        |
| Fix: Line wrap at HTML hyphen. .                                                                        | 433        |
| \captionlistentry: Fix: Line wrap<br>at HTML hyphen. . . . .                                            | 408        |
| \hypertoc: Fix: Line wrap at HTML<br>hyphen. . . . .                                                    | 415        |
| \hypertocfloat: Fix: Line wrap at<br>HTML hyphen. . . . .                                               | 416        |
| \makebox: Fix: Line wrap at HTML<br>hyphen. . . . .                                                     | 485        |
| General: 2018/01/30 . . . . .                                                                           | 1          |
| <b>adjmulticol</b> : Fix: Line wrap at<br>HTML hyphen. . . . .                                          | 516        |
| <b>blowup</b> : Added. . . . .                                                                          | 530        |
| <b>caption</b> : Added. . . . .                                                                         | 534        |
| <b>caption</b> : Also loads<br><b>lwarp-caption</b> . . . . .                                           | 173        |
| <b>change page</b> : Fix for pagecheck<br>macros. . . . .                                               | 538        |
| <b>endheads</b> : Added. . . . .                                                                        | 577        |
| <b>epigraph</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                             | 580        |
| <b>hanging</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                              | 636        |
| <b>hang</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                                 | 634        |
| <b>keyfloat</b> : Fix for SVG math in<br>captions. . . . .                                              | 646        |
| <b>midpage</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                              | 680        |
| <b>multirow</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                             | 684        |
| <b>multitoc</b> : Added. . . . .                                                                        | 687        |
| <b>ntheorem</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                             | 696        |
| <b>realscripts</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                          | 712        |
| <b>scrextend</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                            | 718        |
| <b>sectionbreak</b> : Added. . . . .                                                                    | 725        |
| <b>sidenotes</b> : Fix for SVG math in<br>captions. . . . .                                             | 730        |
| <b>subfig</b> : Fix for SVG math in<br>captions. . . . .                                                | 741        |
| <b>subfig</b> : Fix: Support \nameref. . .                                                              | 740        |
| <b>xurl</b> : Added. . . . .                                                                            | 816        |
| <b>lwarpmk</b> : <b>pdfcrop</b> : Removed<br><b>hires</b> option for improved crop<br>accuracy. . . . . | 229        |
| <b>lateximage</b> : Added CSS style option.<br>Fix: Line wrap at HTML hyphen. .                         | 461<br>465 |
| <b>center</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                               | 467        |
| <b>minipage</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                             | 482        |
| <b>flushleft</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                            | 467        |
| <b>flushright</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                           | 467        |
| <b>enumerate</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                            | 329        |
| <b>itemize</b> : Fix: Line wrap at HTML<br>hyphen. . . . .                                              | 328        |
| LWR@BlockClassWP: Fix: Line wrap<br>at HTML hyphen. . . . .                                             | 263        |
| v0.48                                                                                                   |            |
| \@@@setcpageref: Fix for new v0.21<br>of <b>cleveref</b> . . . . .                                      | 477        |
| \@@@setcref: Fix for new v0.21 of<br><b>cleveref</b> . . . . .                                          | 476        |
| \@@@setcrefrange: Fix for new<br>v0.21 of <b>cleveref</b> . . . . .                                     | 476        |
| \@biblabel: Improved bibliography<br>label. . . . .                                                     | 420        |

|                                                 |          |                                                   |               |
|-------------------------------------------------|----------|---------------------------------------------------|---------------|
| <code>\@item: Honors \makelabel.</code>         | 325      | <code>\rightline: Added.</code>                   | 467           |
| <code>\@maketitle: Fix: Errors with</code>      |          | <code>\thempfootnote: Removed</code>              |               |
| <code>IEEEtran class.</code>                    | 314      | <code>\itshape.</code>                            | 277           |
| <code>\LWR@LwarpStart: Adjusted space</code>    |          | General: 2018/02/14                               | 1             |
| around captions.                                | 303      | <code>acronym: Added.</code>                      | 515           |
| <code>\LWR@ProvidesPackageDrop: Fix:</code>     |          | <code>acro: Added.</code>                         | 513           |
| Options with braces.                            | 173      | <code>chapterbib: Added.</code>                   | 539           |
| <code>\LWR@addtabularhrulecolor:</code>         |          | <code>colortbl: Added.</code>                     | 353, 365, 568 |
| <code>colortbl: Added.</code>                   | 365      | <code>fancyheadings: Prevented.</code>            | 589           |
| <code>\LWR@addtabularrulecolors:</code>         |          | <code>fancyref: Now directly supported.</code>    | 590           |
| <code>colortbl: Added.</code>                   | 366      | <code>hypcap: Added.</code>                       | 636           |
| <code>\LWR@closetabledatocell:</code>           |          | <code>hypernat: Added.</code>                     | 637           |
| <code>colortbl: Added.</code>                   | 339, 340 | <code>hyperref: \texorpdfstring now</code>        |               |
| <code>\LWR@includegraphicsb: Fix:</code>        |          | uses the $\TeX$ string.                           | 641           |
| Virtual page size limited to a                  |          | <code>luatodonotes: Improved</code>               |               |
| group.                                          | 626, 629 | <code>\todotoc.</code>                            | 661           |
| <code>\LWR@lookforpackagename: Fix:</code>      |          | <code>siunitx: Changes fraction to</code>         |               |
| Parsing similar package names.                  | 170      | symbol.                                           | 733, 734      |
| <code>\LWR@newautopagelabel: Fix: TOC,</code>   |          | <code>siunitx: Improved svg math.</code>          | 731, 733      |
| LOF, LOT links.                                 | 283      | <code>siunitx: Improved color output.</code>      | 732           |
| <code>\LWR@newhtmlfile: Fix: TOC, LOF,</code>   |          | <code>stfloats: Added.</code>                     | 740           |
| LOT links.                                      | 286      | <code>todonotes: Improved</code>                  |               |
| <code>\LWR@nullfonts: Fix: \newline in</code>   |          | <code>\todotoc.</code>                            | 785           |
| title.                                          | 492      | <code>vmargin: Added.</code>                      | 795           |
| <code>\LWR@parsedrequirepackagenames:</code>    |          | <code>xfrac: Fix: Added groups around</code>      |               |
| Fix: Parsing similar package                    |          | super/subscripts to localize                      |               |
| names.                                          | 170      | <code>LWR@nestspan changes.</code>                | 811           |
| <code>\LWR@parsetablecols: Fix: Ignore</code>   |          | Docs: Converting an existing                      |               |
| optional tabular column                         |          | document.                                         | 85            |
| arguments.                                      | 352      | Improved font control.                            | 493           |
| <code>\LWR@restoreorigformatting: Fix:</code>   |          | <code>lateximage: Print mode boxed to</code>      |               |
| <code>\mbox in svg math, lateximage,</code>     |          | natural width.                                    | 466           |
| <code>Tikz.</code>                              | 423      | <code>abstract: Allow optional name.</code>       | 316           |
| Fix: Font sizes in svg math,                    |          | <code>LWR@tabular: colortbl: Added.</code>        | 387           |
| <code>lateximage, Tikz.</code>                  | 422      | v0.49                                             |               |
| Fix: Spacing in svg math,                       |          | <code>\LWR@addtabularcellcolor:</code>            |               |
| <code>lateximage, Tikz.</code>                  | 422      | <code>xcolor: Added tabular row colors.</code>    | 367           |
| <code>\LWR@section: Fix: TOC, LOF, LOT</code>   |          | <code>\LWR@domulticolumn: xcolor: Added</code>    |               |
| links.                                          | 295      | tabular row colors.                               | 373           |
| <code>\LWR@tabledatasinglecolumn tag:</code>    |          | <code>\LWR@printlength: Fix: Group</code>         |               |
| <code>colortbl: Added.</code>                   | 359      | <code>printlen changes.</code>                    | 169           |
| <code>\LWR@textcurrentfont: Added.</code>       |          | <code>\affiliation: Fix: Adapts to classes</code> |               |
| Improves font control.                          | 493      | which already provide.                            | 308           |
| <code>\bibliography: Fix: \BaseJobname</code>   |          | <code>\href: Fix: Adapt to classes.</code>        | 399           |
| for bibliography.                               | 420      | <code>\noalign: Fix: \noalign inside</code>       |               |
| <code>\centerline: Added.</code>                | 467      | tabular.                                          | 384           |
| <code>\l@part: Adapts to classes without</code> |          | <code>\url: Fix: Adapt to classes.</code>         | 400           |
| <code>\part.</code>                             | 417      | General: 2018/02/19                               | 1             |
| <code>\leftline: Added.</code>                  | 467      | <code>amsmath: Fix: Patches for</code>            |               |
| <code>\mbox: Nullified for HTML.</code>         | 484      | <code>\eqref.</code>                              | 169           |

|                                           |               |
|-------------------------------------------|---------------|
| <b>eso-pic</b> : Fix for                  |               |
| \AddToShipoutPicture. . . . .             | 582           |
| <b>figsize</b> : Added. . . . .           | 598           |
| <b>fnlineno</b> : Added. . . . .          | 611           |
| <b>hypdestopt</b> : Added. . . . .        | 637           |
| <b>hyphenat</b> : Added. . . . .          | 643           |
| <b>lineno</b> : Added. . . . .            | 650           |
| <b>luacolor</b> : Added. . . . .          | 660           |
| <b>pagegrid</b> : Added. . . . .          | 705           |
| <b>pdfrender</b> : Added. . . . .         | 707           |
| <b>resizgather</b> : Added. . . . .       | 714           |
| <b>vertbars</b> : Added. . . . .          | 794           |
| <b>vwcol</b> : Added. . . . .             | 795           |
| <b>xcolor</b> : Added tabular row         |               |
| colors. . . . .                           | 353, 809      |
| Fix: Adapt to classes. . . . .            | 497           |
| v0.50                                     |               |
| \@ensuredmath: Fix: Use                   |               |
| lateximage even if MathJax. . . . .       | 436           |
| Improved svg math alt tags. . . . .       | 436           |
| \LWR@atbeginverbatim: Improved            |               |
| column alignment. . . . .                 | 320           |
| \LWR@doequation: Improved svg             |               |
| math display. . . . .                     | 441           |
| \LWR@doubledollar: Improved svg           |               |
| math alt tags. . . . .                    | 435           |
| Improved svg math display. . . . .        | 435           |
| \LWR@footnotetext: Robustify              |               |
| macros. . . . .                           | 275           |
| \LWR@htmlrefsectionfilename:              |               |
| Fix: SVG math in a section name. . . . .  | 251           |
| \LWR@newhtmlfile: Fix: SVG math           |               |
| in a section name. . . . .                | 286           |
| \LWR@nullfonts: Fix: \underline           |               |
| in sectioning file name. . . . .          | 493           |
| Robustify macros. . . . .                 | 492           |
| \LWR@overline: Added. . . . .             | 496           |
| \LWR@restoreorigformatting: Fix:          |               |
| \centering, etc. in svg math,             |               |
| lateximage, Tikz. . . . .                 | 422           |
| \LWR@subsingledollar: Fix: Use            |               |
| lateximage even if MathJax. . . . .       | 429           |
| Improved svg math alt tags. . . . .       | 429           |
| MD5 hash avoids duplicate svg             |               |
| math. . . . .                             | 433           |
| \newline: Robustify macros. . . . .       | 498           |
| \rule: Robustify macros. . . . .          | 504           |
| \textsubscript: Robustify macros. . . . . | 495           |
| \textsuperscript: Robustify               |               |
| macros. . . . .                           | 495           |
| \vspace: Robustify macros. . . . .        | 501           |
| General: 2018/03/03 . . . . .             | 1             |
| lwarp.css: Improved svg display           |               |
| math centering. . . . .                   | 187           |
| lwarp_one_limage.txt: Added. . . . .      | 226           |
| amsmath: Fix: Upright tags for            |               |
| svgmath. . . . .                          | 169           |
| axodraw2: Added. . . . .                  | 527           |
| bytefield: Added. . . . .                 | 532           |
| dblfloatfix: Added. . . . .               | 572           |
| diagbox: Added. . . . .                   | 573           |
| epstopdf: Added. . . . .                  | 581           |
| listings: Force flexible columns. . . . . | 653           |
| morefloats: Added. . . . .                | 680           |
| nonfloat: Added. . . . .                  | 690           |
| ntheorem: Fix: Not standard nor           |               |
| amsthm selected. . . . .                  | 699           |
| pbox: Added. . . . .                      | 706           |
| phfqit: Added. . . . .                    | 708           |
| schemata: Added. . . . .                  | 717           |
| siunitx: Fix: Loads xcolor. . . . .       | 731           |
| siunitx: Improved svg math alt            |               |
| tags. . . . .                             | 733           |
| siunitx: Improved units. . . . .          | 468, 731, 734 |
| xy: Added. . . . .                        | 816           |
| lwarpmk: Error if                         |               |
| lateximages.txt does not                  |               |
| exist. . . . .                            | 229           |
| lwarpmk: Error if lwarpmk.conf            |               |
| points to lwarp. . . . .                  | 229           |
| lwarpmk: Improved error                   |               |
| messages. . . . .                         | 229           |
| lwarpmk: MD5 hash avoids                  |               |
| duplicate svg math. . . . .               | 229           |
| lwarpmk: Multiprocess support             |               |
| making lateximages. . . . .               | 229           |
| AMS environments: Improved svg            |               |
| math display. . . . .                     | 449           |
| Fix: \centering, etc. in svg math,        |               |
| lateximage, Tikz. . . . .                 | 182           |
| Fix: Load fontspec if necessary. . . . .  | 165           |
| Robustify macros. . . . .                 | 493           |
| lateximage: Fix: SVG math in a            |               |
| section name. . . . .                     | 464           |
| MD5 hash avoids duplicate svg             |               |
| math. . . . .                             | 462, 465      |
| eqnarray: Improved svg math               |               |
| display. . . . .                          | 447, 448      |

|                                              |     |
|----------------------------------------------|-----|
| v0.51                                        |     |
| \@ensuredmath: Hashes                        |     |
| \ensuremath. . . . .                         | 436 |
| \@item: Restored list label space. . .       | 326 |
| \LWR@HTMLsanitize: Fix: Escapes              |     |
| double quotes. . . . .                       | 457 |
| \LWR@HTMLsanitizeexpand: Fix:                |     |
| Escapes double quotes. . . . .               | 458 |
| \LWR@LwarpStart: MathJax: Nullifies          |     |
| \ensuremath. . . . .                         | 304 |
| \LWR@addbaselinemarker:                      |     |
| Improved svg math baseline. . .              | 428 |
| \LWR@atbeginverbatim: Adds                   |     |
| vertical offset. . . . .                     | 320 |
| \LWR@customizeMathJax: MathJax:              |     |
| Nullifies \ensuremath. . . . .               | 284 |
| \LWR@doequation: Fix:                        |     |
| \addcontentsline inside svg                  |     |
| math. Provides an autoid anchor.             | 441 |
| \LWR@doubledollar: Fix:                      |     |
| \addcontentsline inside svg                  |     |
| math. Provides an autoid anchor.             | 435 |
| \LWR@findcurrenttextcolor:                   |     |
| Added                                        |     |
| \LWR@findcurrenttextcolor                    |     |
| when no <b>xcolor</b> . . . . .              | 496 |
| \LWR@newautoidanchor: Fix: No                |     |
| autoid is inside a lateximage.               | 404 |
| \LWR@newhtmlfile: MathJax:                   |     |
| Nullifies \ensuremath. . . . .               | 287 |
| \LWR@subsingledollar: Fix:                   |     |
| \ensuredmath inside svg image.               | 430 |
| Fix: lateximage inside $\mathcal{AMS}$       |     |
| \text. . . . .                               | 431 |
| Fix: Honors text font around svg             |     |
| math. . . . .                                | 431 |
| Fix: SVG math with enclosed                  |     |
| lateximage. . . . .                          | 430 |
| Improved svg math baseline. . . .            | 431 |
| SVG math baseline improved with              |     |
| invisible rule at corner. . . . .            | 434 |
| Typeset svg math only once                   |     |
| during measurement. . . . .                  | 431 |
| \LWR@textcurrentcolor: <b>xcolor</b> :       |     |
| \LWR@textcurrentcolor if                     |     |
| <b>xcolor</b> not loaded. . . . .            | 496 |
| \addcontentsline: Add missing                |     |
| support for float mechanism if               |     |
| necessary. . . . .                           | 408 |
| No anchor ID if inside svg image.            | 408 |
| \displaymathnormal: Processing for           |     |
| complicated display math. . . .              | 443 |
| \displaymathother: Processing for            |     |
| complicated display math. . . .              | 444 |
| \textcolor: Fix: SVG math color. . .         | 805 |
| General: 2018/03/24 . . . . .                | 1   |
| lwarp_one_limage.txt:                        |     |
| <b>pdftocairo</b> -noshrink added. . .       | 226 |
| <b>afterpackage</b> : No longer required.    | 167 |
| <b>chemfig</b> : Added. . . . .              | 539 |
| <b>chemformula</b> : Added. . . . .          | 541 |
| <b>chemgreek</b> : Added. . . . .            | 546 |
| <b>chemmacros</b> : Added. . . . .           | 546 |
| <b>chemnum</b> : Added. . . . .              | 566 |
| <b>epstopdf-base</b> : Added. . . . .        | 581 |
| <b>fancybox</b> : Fix: Optional tag for      |     |
| \item in a span. . . . .                     | 588 |
| <b>grid</b> : Added. . . . .                 | 633 |
| <b>listings</b> : Forces cleared options. .  | 654 |
| <b>ltxgrid</b> : Added. . . . .              | 660 |
| <b>mhchem</b> : Added. . . . .               | 677 |
| <b>tikz</b> : Fix for \tikz macro. . . . .   | 760 |
| <b>tikz</b> : Fix for tikz with optional     |     |
| argument. . . . .                            | 760 |
| <b>titling</b> : Fix for \thanks mark. . . . | 771 |
| <b>lwarpmk</b> : <b>pdfcrop</b> : Restored   |     |
| hires option. . . . .                        | 229 |
| <b>lwarpmk</b> : <b>pdftocairo</b> -noshrink |     |
| added. . . . .                               | 229 |
| AMS environments: Fix:                       |     |
| \addcontentsline inside svg                  |     |
| math. Provides an autoid anchor.             | 449 |
| Docs: <b>tikz</b> limitations. . . . .       | 121 |
| Docs: Multiple authors and                   |     |
| affiliations. . . . .                        | 111 |
| Docs: Things to avoid. . . . .               | 102 |
| Docs: Updated Converting an                  |     |
| existing document. . . . .                   | 85  |
| Fix: Remember original \# in case            |     |
| is redefined. . . . .                        | 180 |
| HTML entity used for text dollar.            | 428 |
| lateximage: Added additional                 |     |
| hashing option. . . . .                      | 461 |
| Fix: lateximage inside $\mathcal{AMS}$       |     |
| \text. . . . .                               | 461 |
| Processing for complicated display           |     |
| math. . . . .                                | 464 |
| alignat: Fix: Added. . . . .                 | 453 |

|                                                                                             |          |                                                                        |               |
|---------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------|---------------|
| eqnarray: Fix: \addcontentsline<br>inside svg math. Provides an<br>autoid anchor. . . . .   | 447, 448 | \attribution: Fix: Non-utf8<br>encoding. . . . .                       | 317           |
| LWR@displaymathother: Processing<br>for complicated display math. . .                       | 437      | \citetitle: Fix: Non-utf8<br>encoding. . . . .                         | 317           |
| LWR@equationother: Processing for<br>complicated display math. . . .                        | 438      | \href: Fix: #, %, &, ~, _ in URL. . . . .                              | 399           |
| v0.52                                                                                       |          | \nolinkurl: Fix: #, %, &, ~, _ in URL. . . . .                         | 400           |
| \@ensuredmath: Improved hashing<br>expansion. . . . .                                       | 436      | \url: Fix: #, %, &, ~, _ in URL. . . . .                               | 400           |
| \@mpfootnotetext: Fix: Paragraph<br>handling. . . . .                                       | 277      | General: 2018/04/01 . . . . .                                          | 1             |
| \CustomizeMathJax: Added. . . . .                                                           | 284      | <b>breakurl</b> : Fix: #, %, &, ~, _ in URL. . . . .                   | 532           |
| \LWR@addbaselinemarker:                                                                     |          | <b>endfloat</b> : Updated for v2.6. . . . .                            | 577           |
| Warnings if                                                                                 |          | <b>fancyvrb</b> : Initial support for<br>\VerbatimFootnotes. . . . .   | 585, 592      |
| lwarp_baseline_marker.png is<br>not present or if graphicx/s not<br>loaded. . . . .         | 428      | <b>hyperref</b> : Fix: #, %, &, ~, _ in<br>URL. . . . .                | 637, 638, 640 |
| \LWR@customizedMathJax: Added. . . . .                                                      | 283      | <b>nicefrac</b> : Added. . . . .                                       | 690           |
| \LWR@doequation: Fix: equation*<br>now based on equation instead<br>of displaymath. . . . . | 441      | <b>url</b> : Added. . . . .                                            | 792           |
| Fix: equation* with split. . . . .                                                          | 440      | <b>lwarpmk</b> : Fix: Memory overflow<br>when spawning tasks. . . . .  | 229           |
| \LWR@filenamenoblanks: Fix:                                                                 |          | <b>lwarpmk</b> : Fix: Skip image<br>generation if from page 0. . . . . | 229           |
| \FileDepth with non-utf8<br>encoding. . . . .                                               | 282      | Changed FootnoteDepth default<br>to \subsubsection. . . . .            | 274           |
| \LWR@footnotetext: Fix: Paragraph<br>handling. . . . .                                      | 276      | Docs: Improved install<br>instructions. . . . .                        | 67            |
| \LWR@newhtmlfile: Fix:                                                                      |          | Fix: MathJax script line wraps.<br>Reduced right margin. . . . .       | 166           |
| \FileDepth with non-utf8<br>encoding. . . . .                                               | 286      | If pdfLaTeX, allow other input<br>encoding. . . . .                    | 151           |
| \LWR@nullfonts: Fix:                                                                        |          | pkggraphics: Added defaults. . . . .                                   | 623, 624      |
| \texorpdfstring in section<br>names. . . . .                                                | 493      | pkggraphicx: Updated for v1.1a. . . . .                                | 624           |
| \LWR@section: Fix: Footnote<br>numbering: Limited HTML<br>comment if starred. . . . .       | 293      | pkggraphicx: Updated for v1.1b. . . . .                                | 624           |
| Fix: Footnote numbering: Use<br>short TOC entry for HTMLDebug<br>comments. . . . .          | 293      | Restore \kill in a lateximage. . . . .                                 | 659           |
| \LWR@subsingledollar: Added<br>user-adjustable svg math font<br>scaling. . . . .            | 431      | tabbing: Fix to allow inside<br>lateximage. . . . .                    | 322           |
| \LateximageFontScale: Added<br>user-adjustable svg math font<br>scaling. . . . .            | 456      | lateximage: Fix for hash expansion. . . . .                            | 463           |
|                                                                                             |          | thebibliography: Fix for <b>babelbib</b><br>\etalchar. . . . .         | 421           |
|                                                                                             |          | v0.53                                                                  |               |
|                                                                                             |          | General: 2018/04/01 . . . . .                                          | 1             |
|                                                                                             |          | <b>lwarpmk</b> : Adds<br><i>lwarpmk cleanimages</i> . . . . .          | 229           |
|                                                                                             |          | <b>lwarpmk</b> : Adds warning for<br>corrupted images. . . . .         | 229           |
|                                                                                             |          | Docs: <i>lwarpmk cleanimages</i> . . . . .                             | 84            |
|                                                                                             |          | Docs: <i>lwarpmk pdftohtml</i> . . . . .                               | 84            |

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

| Symbols                              |               |
|--------------------------------------|---------------|
| $\backslash$ \$                      | 428           |
| $\backslash$ &                       | 248, 5876     |
| $\backslash$ (                       | 7988          |
| $\backslash$ )                       | 7988          |
| $\backslash$ ,                       | 103           |
| $\backslash$ @@@setcpageref          | 9011          |
| $\backslash$ @@@setcref              | 8974          |
| $\backslash$ @@@setcrefrange         | 8988          |
| $\backslash$ @author                 | 307           |
| $\backslash$ @begintheorem           | 5536          |
| $\backslash$ @biblabel               | 7629          |
| $\backslash$ @capttype               | 7294          |
| $\backslash$ @chapcntformat          | 4813          |
| $\backslash$ @currentHref            | 7157          |
| $\backslash$ @currentlabelname       | 7018          |
| $\backslash$ @date                   | 307           |
| $\backslash$ @dlbfloat               | 7261          |
| $\backslash$ @donoparitem            | 5562          |
| $\backslash$ @endtheorem             | 5548          |
| $\backslash$ @ensuredmath            | 7995          |
| $\backslash$ @float                  | 7261          |
| $\backslash$ @fnsymbol               | 5306          |
| $\backslash$ @footnotetext           | 4469          |
| $\backslash$ @include                | 622           |
| $\backslash$ @item                   | 5575          |
| $\backslash$ @makecaption            | 7296          |
| $\backslash$ @makefnmark             | 4437          |
| $\backslash$ @makefntext             | 4436          |
| $\backslash$ @maketitle              | 56, 5329      |
| $\backslash$ @mklab                  | 5556          |
| $\backslash$ @mpfootnotetext         | 4471          |
| $\backslash$ @nbitem                 | 5642          |
| $\backslash$ @opargbegintheorem      | 5542          |
| $\backslash$ @rowc@lors              | 6122          |
| $\backslash$ @rowcolors              | 6121          |
| $\backslash$ @secntformat            | 4811          |
| $\backslash$ @starttoc               | 7424          |
| $\backslash$ @textsubscript          | 9431          |
| $\backslash$ @textsuperscript        | 9427          |
| $\backslash$ @title                  | 307           |
| $\backslash$ @wrglossary             | 7605          |
| $\backslash$ @wrindex                | 7596          |
| $\backslash$ \                       | 498           |
| \$                                   | 434           |
| \$\$                                 | 434           |
| ~                                    | 102           |
| <b>A</b>                             |               |
| a4 (package)                         | 510           |
| a4wide (package)                     | 510           |
| a5comb (package)                     | 510           |
| abstract (environment)               | 5392          |
| abstract (package)                   | 112, 510      |
| $\backslash$ abstractname            | 93, 5391      |
| accents                              | 288           |
| acro (package)                       | 513           |
| acronym (package)                    | 514           |
| adapting                             |               |
| class                                | 141           |
| document                             | 85            |
| package                              | 140           |
| $\backslash$ addcontentsline         | 7370          |
| addlines (package)                   | 517           |
| $\backslash$ AddSubtitlePublished    | 5357          |
| adjmulticol (package)                | 516           |
| Adobe (program)                      | 62            |
| affiliation                          |               |
| multiple authors                     | 111           |
| $\backslash$ affiliation             | 5209          |
| afterpage (package)                  | 517           |
| algorithmic                          |               |
| with newfloat, trivfloat             | 788           |
| algorithmicx (package)               | 517           |
| algorithmx (package)                 | 126           |
| align (environment)                  | 8394          |
| align* (environment)                 | 8420          |
| alignat (environment)                | 8498          |
| alignat* (environment)               | 8524          |
| alignment tab character &, misplaced | 122, 331, 340 |
| alltt (package)                      | 519           |
| alt tags                             | 118           |
| $\backslash$ AmS                     | 9654          |
| AMSMath                              |               |
| split miss-numbered                  | 118, 692      |



|                               |                    |                           |              |
|-------------------------------|--------------------|---------------------------|--------------|
| Calibre                       | 132                | Computer Modern           | 87           |
| cancel (package)              | 533                | \ConTeXt                  | 9646         |
| capt-of (package)             | 408                | continue (package)        | 570          |
| caption (package)             | 126, 173, 408, 534 | converting                |              |
| caption2 (package)            | 537                | class                     | 141          |
| \caption@begin                | 7351               | document                  | 85           |
| \caption@end                  | 7351               | package                   | 140          |
| \captionlistentry             | 7355               | counter:                  |              |
| \captionof                    | 7386               | FileDepth                 | 93, 280      |
| \CaptionSeparator             | 7295               | FootnoteDepth             | 93, 274      |
| ccaption (package)            | 537                | lofdepth                  | 415          |
| \cellcolor                    | 6130               | lotdepth                  | 416          |
| center (environment)          | 8783               | LWR@cellcolordepth        | 367          |
| \centering                    | 303                | LWR@currentautosec        | 291          |
| \centerline                   | 8808               | LWR@externalfilecnt       | 427          |
| changebar (package)           | 537                | LWR@htmlfilenumber        | 250          |
| changepage (package)          | 538                | LWR@latestautopage        | 406          |
| chappg (package)              | 539                | LWR@lateximagedepth       | 456          |
| \chapter                      | 4976               | LWR@lateximagenumber      | 456          |
| chapterbib (package)          | 539                | LWR@LIpage                | 456          |
| chemfig (package)             | 539                | LWR@midrulecounter        | 360          |
| chemformula                   |                    | LWR@minipagedepth         | 480          |
| troubleshooting               | 118                | LWR@nextautoid            | 405          |
| chemformula (package)         | 540                | LWR@nextautopage          | 405          |
| chemgreek (package)           | 546                | LWR@nextequation          | 438          |
| chemistry                     |                    | LWR@prevFileDepth         | 290          |
| Greek symbols                 | 546                | LWR@previousautopagelabel | 283          |
| chemmacros (package)          | 546                | LWR@spandepth             | 264          |
| chemnum (package)             | 566                | LWR@startingequation      | 458          |
| chnpage (package)             | 538                | LWR@tablecolindex         | 337          |
| cite (package)                | 567                | LWR@tablecolspecindex     | 337          |
| \citetitle                    | 5422               | LWR@tablecolspecwidth     | 337          |
| class                         |                    | LWR@tabletotalcols        | 338          |
| modifying for <b>lwarp</b>    | 141                | LWR@tabletotalcolsnext    | 338          |
| class (key) [Gin]             | 626                | LWR@tabularDepth          | 336          |
| class:                        |                    | LWR@tabularpardepth       | 336          |
| internet                      | 61                 | LWR@thisautoid            | 404          |
| komascript                    | 128                | LWR@thisautoidWP          | 404          |
| memoir                        | 128, 129, 793      | SideTOCDepth              | 92, 413      |
| \cleardoublepage              | 9552               | tocdepth                  | 92           |
| \clearpage                    | 9552               | \cpagerefFor              | 9010         |
| cleveref (package)            | 109, 475           | crop (package)            | 570          |
| cmap (package)                | 88                 | cross-references          |              |
| color (package)               | 121, 568           | missing or incorrect      | 144          |
| \colorbox                     | 81                 | CSS                       |              |
| \colorboxBlock                | 90, 8860           | file selection            | 96           |
| colortbl (package)            | 568                | lwarp.css                 | 97           |
| \columncolor                  | 6128               | per HTML page             | 96           |
| CombineHigherDepths (boolean) | 93, 280            | project-specific changes  | 97           |
| comment (package)             | 157                | \CSSFilename              | 94, 96, 4392 |

|                                               |                                                                                        |                                          |                                             |
|-----------------------------------------------|----------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------|
| <code>\CustomizeMathJax</code> .....          | <a href="#">4663</a> , <a href="#">4684</a>                                            | <code>titlepage</code> .....             | <a href="#">99</a>                          |
| <code>cuted</code> (package) .....            | <a href="#">571</a>                                                                    | <code>titlingpage</code> .....           | <a href="#">100</a>                         |
| <code>cutwin</code> (package) .....           | <a href="#">571</a>                                                                    | <code>warpall</code> .....               | <a href="#">98</a>                          |
|                                               |                                                                                        | <code>warpHTML</code> .....              | <a href="#">95</a> , <a href="#">98</a>     |
|                                               |                                                                                        | <code>warpprint</code> .....             | <a href="#">95</a> , <a href="#">98</a>     |
|                                               |                                                                                        | environments:                            |                                             |
| <b>D</b>                                      |                                                                                        | <code>abstract</code> .....              | <a href="#">5392</a>                        |
| <code>danger icon</code> .....                | <a href="#">149</a>                                                                    | <code>align</code> .....                 | <a href="#">8394</a>                        |
| <code>\date</code> .....                      | <a href="#">100</a>                                                                    | <code>align*</code> .....                | <a href="#">8420</a>                        |
| <code>dblfloatfix</code> (package) .....      | <a href="#">572</a>                                                                    | <code>alignat</code> .....               | <a href="#">8498</a>                        |
| <code>dblfnote</code> (package) .....         | <a href="#">572</a>                                                                    | <code>alignat*</code> .....              | <a href="#">8524</a>                        |
| <code>dcolumn</code> (package) .....          | <a href="#">572</a>                                                                    | <code>BlockClass</code> .....            | <a href="#">4175</a>                        |
| <code>debugging</code> .....                  | <a href="#">143</a>                                                                    | <code>BVerbatim</code> .....             | <a href="#">222</a>                         |
| HTML debug comments .....                     | <a href="#">176</a>                                                                    | <code>center</code> .....                | <a href="#">8783</a>                        |
| <code>\DeclareGraphicsExtensions</code> ..... | <a href="#">2</a>                                                                      | <code>description</code> .....           | <a href="#">5717</a>                        |
| <code>Deja Vu</code> .....                    | <a href="#">87</a>                                                                     | <code>enumerate</code> .....             | <a href="#">5698</a>                        |
| description                                   |                                                                                        | <code>eqnarray</code> .....              | <a href="#">8229</a>                        |
| HTML meta tag .....                           | <a href="#">100</a> , <a href="#">272</a>                                              | <code>equation</code> .....              | <a href="#">8151</a>                        |
| <code>description</code> (environment) .....  | <a href="#">5717</a>                                                                   | <code>equation*</code> .....             | <a href="#">8159</a>                        |
| <code>diagbox</code> (package) .....          | <a href="#">573</a>                                                                    | <code>fcolorminipage</code> .....        | <a href="#">153</a> , <a href="#">8902</a>  |
| <code>display math</code>                     |                                                                                        | <code>flalign</code> .....               | <a href="#">8446</a>                        |
| complicated objects .....                     | <a href="#">118</a>                                                                    | <code>flalign*</code> .....              | <a href="#">8472</a>                        |
| <code>\displaymathnormal</code> ..            | <a href="#">118</a> , <a href="#">427</a> , <a href="#">443</a> , <a href="#">8169</a> | <code>flushleft</code> .....             | <a href="#">8799</a>                        |
| <code>\displaymathother</code> ..             | <a href="#">118</a> , <a href="#">427</a> , <a href="#">443</a> , <a href="#">8180</a> | <code>flushright</code> .....            | <a href="#">8791</a>                        |
| document                                      |                                                                                        | <code>fminipage</code> .....             | <a href="#">9240</a> , <a href="#">9287</a> |
| convert existing .....                        | <a href="#">85</a>                                                                     | <code>gather</code> .....                | <a href="#">8342</a>                        |
| <code>\dotfill</code> .....                   | <a href="#">9482</a>                                                                   | <code>gather*</code> .....               | <a href="#">8368</a>                        |
| <code>\doublerulesepcolor</code> .....        | <a href="#">6133</a>                                                                   | <code>itemize</code> .....               | <a href="#">5692</a>                        |
| <code>draftwatermark</code> (package) .....   | <a href="#">574</a>                                                                    | <code>lateximage</code> .....            | <a href="#">8653</a> , <a href="#">8778</a> |
|                                               |                                                                                        | <code>list</code> .....                  | <a href="#">5662</a>                        |
| <b>E</b>                                      |                                                                                        | <code>longtable</code> .....             | <a href="#">2</a>                           |
| <code>easy-todo</code> (package) .....        | <a href="#">575</a>                                                                    | <code>LWR@BlockClassWP</code> .....      | <a href="#">4203</a>                        |
| <code>ebook</code> (package) .....            | <a href="#">576</a>                                                                    | <code>LWR@displaymathnormal</code> ..... | <a href="#">8025</a>                        |
| <code>ellipsis</code> (package) .....         | <a href="#">576</a>                                                                    | <code>LWR@displaymathother</code> .....  | <a href="#">8030</a>                        |
| <code>\emph</code> .....                      | <a href="#">9296</a>                                                                   | <code>LWR@equationother</code> .....     | <a href="#">8044</a>                        |
| <code>emptypage</code> (package) .....        | <a href="#">576</a>                                                                    | <code>LWR@figcaption</code> .....        | <a href="#">7310</a>                        |
| <code>\end@dblfloat</code> .....              | <a href="#">7277</a>                                                                   | <code>LWR@nestspan</code> .....          | <a href="#">4039</a>                        |
| <code>\end@float</code> .....                 | <a href="#">7277</a>                                                                   | <code>LWR@tabular</code> .....           | <a href="#">6885</a>                        |
| <code>\EndDefiningTabulars</code> .....       | <a href="#">5870</a>                                                                   | <code>LWRprint@fminipage</code> .....    | <a href="#">9263</a>                        |
| <code>endfloat</code> (package) .....         | <a href="#">577</a>                                                                    | <code>math</code> .....                  | <a href="#">8024</a>                        |
| <code>endheads</code> (package) .....         | <a href="#">577</a>                                                                    | <code>minipage</code> .....              | <a href="#">9093</a>                        |
| <code>endnotes</code> (package) .....         | <a href="#">113</a> , <a href="#">578</a>                                              | <code>multline</code> .....              | <a href="#">8287</a>                        |
| <code>\enlargethispage</code> .....           | <a href="#">9551</a>                                                                   | <code>multline*</code> .....             | <a href="#">8314</a>                        |
| <code>\enskip</code> .....                    | <a href="#">498</a> , <a href="#">9505</a>                                             | <code>picture</code> .....               | <a href="#">9074</a>                        |
| <code>enumerate</code> (environment) .....    | <a href="#">5698</a>                                                                   | <code>quote</code> .....                 | <a href="#">5443</a>                        |
| <code>enumerate</code> (package) .....        | <a href="#">579</a>                                                                    | <code>tabbing</code> .....               | <a href="#">5515</a>                        |
| <code>enumitem</code> (package) .....         | <a href="#">579</a>                                                                    | <code>thebibliography</code> .....       | <a href="#">7630</a>                        |
| <code>environ</code> (package) .....          | <a href="#">168</a>                                                                    | <code>theindex</code> .....              | <a href="#">7574</a>                        |
| environment:                                  |                                                                                        | <code>titlepage</code> .....             | <a href="#">5226</a>                        |
| <code>fminipage</code> .....                  | <a href="#">105</a>                                                                    | <code>titlingpage</code> .....           | <a href="#">14</a>                          |
| <code>lateximage</code> .....                 | <a href="#">455</a>                                                                    |                                          |                                             |
| <code>picture</code> .....                    | <a href="#">479</a>                                                                    |                                          |                                             |





|                                                    |               |                                              |                                 |
|----------------------------------------------------|---------------|----------------------------------------------|---------------------------------|
| <code>\HTMLentity</code> .....                     | 3823          | <code>IndexLanguage</code> (option) .....    |                                 |
| <code>\HTMLfilename</code> .....                   | 3841          | .....                                        | 83, 90, 113, 114, 155, 620, 774 |
| <code>HTMLfilename</code> (option) .....           | 90, 92, 156   | <code>\InlineClass</code> .....              | 4195                            |
| <code>\HTMLfirstpagetop</code> .....               | 94, 4380      | <code>inputenc</code> (package) .....        | 88, 646                         |
| <code>htmlglossary</code> (option) [lwarpmk] ..... | 114, 620      | <code>internet</code> (class) .....          | 61                              |
| <code>\HTMLlanguage</code> .....                   | 94, 5050      | <code>item</code>                            |                                 |
| <code>HTMLleftmargini</code> (length) ..           | 129, 319, 793 | empty .....                                  | 103, 324                        |
| <code>\HTMLpagebottom</code> .....                 | 94, 307, 4386 | <code>itemize</code> (environment) .....     | 5692                            |
| <code>\HTMLpagetop</code> .....                    | 94, 4383      | <code>\itshape</code> .....                  | 9421                            |
| <code>\HTMLtitle</code> .....                      | 94, 101, 4413 |                                              |                                 |
| <code>\HTMLunicode</code> .....                    | 3831          | <b>J</b>                                     |                                 |
| <code>HTMLvleftskip</code> (length) ....           | 129, 319, 793 | <code>JavaScript</code>                      |                                 |
| <code>hyccap</code> (package) .....                | 636           | <code>MathJax</code> .....                   | 115, 424                        |
| <code>hypdestopt</code> (package) .....            | 637           |                                              |                                 |
| <code>\hyperindexref</code> .....                  | 7612          | <b>K</b>                                     |                                 |
| <code>hypernat</code> (package) .....              | 637           | <code>\kern</code> .....                     | 103                             |
| <code>hyperref</code>                              |               | <code>key:</code>                            |                                 |
| incorrect links .....                              | 145           | [Gin]:                                       |                                 |
| <code>hyperref</code> (package) .....              | 109, 398, 637 | class .....                                  | 626                             |
| <code>\hypertoc</code> .....                       | 7514          | <code>keyfloat</code> (package) .....        | 128, 646                        |
| <code>\hypertocfloat</code> .....                  | 7534          | <code>komascript</code> (class) .....        | 128                             |
| <code>hyperxmp</code> (package) .....              | 643           | <code>kvoptions</code> (package) .....       | 154                             |
| <code>hyphenat</code> (package) .....              | 643           |                                              |                                 |
|                                                    |               | <b>L</b>                                     |                                 |
| <b>I</b>                                           |               | <code>\l@chapter</code> .....                | 7551                            |
| <code>icon</code>                                  |               | <code>\l@figure</code> .....                 | 7558                            |
| warning .....                                      | 149           | <code>\l@paragraph</code> .....              | 7556                            |
| <code>idxlayout</code> (package) .....             | 644           | <code>\l@part</code> .....                   | 7550                            |
| <code>\if@titlepage</code> .....                   | 5204          | <code>\l@section</code> .....                | 7553                            |
| <code>ifoddpages</code> (package) .....            | 645           | <code>\l@subparagraph</code> .....           | 7557                            |
| <code>ifplatform</code> (package) .....            | 152           | <code>\l@subsection</code> .....             | 7554                            |
| <code>images</code>                                |               | <code>\l@subsubsection</code> .....          | 7555                            |
| appearing as HTML .....                            | 78, 145       | <code>\l@table</code> .....                  | 7559                            |
| EPS .....                                          | 120, 469      | <code>label</code>                           |                                 |
| <code>graphicx</code> package .....                | 469           | in HTML .....                                | 303                             |
| hashed filenames .....                             | 429, 461      | math environment .....                       | 445                             |
| in strange places .....                            | 145           | valid characters .....                       | 109                             |
| PDF .....                                          | 119, 469      | <code>Label(s) may have changed</code> ..... | 143                             |
| processing .....                                   | 229           | <code>language</code>                        |                                 |
| <code>Improper \prevdepth</code> .....             | 144           | glossary .....                               | 83                              |
| <code>\include</code> .....                        | 622           | index .....                                  | 83                              |
| <code>\includegraphics</code> .....                | 230           | <code>language HTML metadata</code> .....    | 299                             |
| <code>indentfirst</code> (package) .....           | 645           | <code>\LaTeX</code> .....                    | 9622                            |
| <code>InDesign</code> (program) .....              | 62            | <code>LaTeX2HTML</code> (program) .....      | 61                              |
| <code>index</code>                                 |               | <code>\LaTeXe</code> .....                   | 9622                            |
| language .....                                     | 83            | <code>lateximage</code> (environment) .....  | 455, 8653, 8778                 |
| placement and toc options .....                    | 114           | <code>\LateximageFontScale</code> .....      | 8562                            |
| processing .....                                   | 76, 77        | <code>\LateximageFontSizeName</code> .....   | 8561                            |
| UTF-8 .....                                        | 88            | <code>lateximages</code>                     |                                 |
|                                                    |               | font size .....                              | 116, 425, 455                   |

|                                      |               |                                   |              |
|--------------------------------------|---------------|-----------------------------------|--------------|
| processing                           | 229           | ltxtable (package)                | 660          |
| latexmk (option)                     | 90, 92, 156   | luacolor (package)                | 660          |
| LaTeXML (program)                    | 61            | LuaLaTeX                          |              |
| layout (package)                     | 648           | detection                         | 150          |
| Leaders not followed by proper glue. | 143           | file & section names              | 288          |
| \leftline                            | 8807          | \LuaLaTeX                         | 9640         |
| length:                              |               | LuaLaTeX (program) [requirement]  | 65           |
| HTMLleftmargini                      | 129, 319, 793 | \LuaTeX                           | 9640         |
| HTMLvleftskip                        | 129, 319, 793 | luatodonotes (package)            | 130, 661     |
| LWR@minipageheight                   | 480           | lwarmp                            |              |
| LWR@minipagewidth                    | 480           | loading                           | 89           |
| LWR@tempheight                       | 499           | options                           | 89           |
| LWR@tempraise                        | 499           | lwarmp (package)                  | 89           |
| LWR@tempwidth                        | 499           | lwarmp-patch-komascript (package) | 818          |
| \LWR@cmidrulewidth                   | 360           | lwarmp-patch-memoir (package)     | 820          |
| \LWR@heavyrulewidth                  | 360           | lwarmp.css (file)                 | 97, 187      |
| \LWR@lightrulewidth                  | 360           | lwarmp.xdy                        |              |
| \LWR@thiscmidrulewidth               | 361           | customizing                       | 101          |
| \VerbatimHTMLWidth                   | 319           | lwarmp.xdy (file)                 | 101, 225     |
| vleftmargini                         | 129, 319, 793 | lwarmp_baseline_marker.png (file) | 428          |
| vleftskip                            | 129, 319, 793 | lwarmp_formal.css (file)          | 220          |
| letltxmacro (package)                | 152           | lwarmp_mathjax.txt (file)         | 226          |
| letterspace (package)                | 649           | lwarmp_one_limage.cmd (file)      | 226          |
| lettrine (package)                   | 649           | lwarmp_sagebrush.css (file)       | 215          |
| LibreOffice                          |               | lwarmp_tutorial.txt (file)        | 72           |
| conversion recommendations           | 137           | lwarmpmk                          |              |
| import into                          | 134           | customizing                       | 142          |
| section headings                     | 137           | [lwarmpmk]:                       |              |
| LibreOffice (program)                | 62            | htmlglossary (option)             | 114, 620     |
| ligatures                            | 87, 88, 166   | printglossary (option)            | 114, 620     |
| line numbers                         | 149           | lwarmpmk (option)                 | 90, 156, 229 |
| \linebreak                           | 9545          | lwarmpmk (program)                | 142, 229     |
| lineno (package)                     | 650           | lwarmpmk.conf (file)              | 185          |
| \LinkHome                            | 3895          | lwarmpmk.lua (file)               | 142          |
| Linux (program)                      | 97, 153       | \LWR@addbaselinemarker            | 7775         |
| lips (package)                       | 653           | \LWR@addcmidruletrim              | 6343         |
| list (environment)                   | 5662          | \LWR@addcmidrulewidth             | 6374         |
| list item, empty                     | 103, 324      | \LWR@addformatwppalignment        | 6381         |
| listings (package)                   | 653           | \LWR@addleftmostbartag            | 6205         |
| \listof                              | 7478          | \LWR@addmathjax                   | 8093         |
| \listoffigures                       | 7452          | \LWR@addmulticolvertrulecolor     | 6542         |
| \listoftables                        | 7465          | \LWR@addrulewidth                 | 6348         |
| lmodern (package)                    | 88            | \LWR@addtabularcellcolor          | 6445         |
| lofdepth (counter)                   | 415           | \LWR@addtabularhrulecolor         | 6409         |
| longtable (environment)              | 2             | \LWR@addtabulararrowcolor         | 6394         |
| longtable (package)                  | 125, 657      | \LWR@addtabularrulecolors         | 6421         |
| lotdepth (counter)                   | 416           | \LWR@afterendverbatim             | 5488         |
| lscope (package)                     | 659           | \LWR@amsmathbody                  | 8640         |
| ltxcaption (package)                 | 659           | \LWR@amsmathbodynumbered          | 8646         |
| ltxgrid (package)                    | 660           | LWR@amsmultline (boolean)         | 444          |

|                                                  |      |                                                 |      |
|--------------------------------------------------|------|-------------------------------------------------|------|
| <code>\LWR@atbeginverbatim</code> .....          | 5470 | <code>LWR@externalfilecnt</code> (counter) .... | 427  |
| <code>\LWR@backgroundcolor</code> .....          | 46   | <code>LWR@figcaption</code> (environment) ....  | 7310 |
| <code>\LWR@beginhideamsmath</code> .....         | 8214 | <code>\LWR@filenamoblanks</code> .....          | 4574 |
| <code>\LWR@blackborderpadding</code> .....       | 9219 | <code>\LWR@filestart</code> .....               | 5057 |
| <code>LWR@BlockClassWP</code> (environment) ..   | 4203 | <code>\LWR@findcurrenttextcolor</code> ....     | 9449 |
| <code>\LWR@botnavigation</code> .....            | 3903 | <code>\LWR@findword</code> .....                | 533  |
| <code>\LWR@caption@begin</code> .....            | 7330 | <code>\LWR@floatbegin</code> .....              | 7240 |
| <code>\LWR@caption@end</code> .....              | 7342 | <code>\LWR@floatend</code> .....                | 7263 |
| <code>LWR@cellcolordepth</code> (counter) ....   | 367  | <code>\LWR@footnotetext</code> .....            | 4440 |
| <code>\LWR@cellHTMLcolor</code> .....            | 6126 | <code>\LWR@forceminwidth</code> .....           | 9208 |
| <code>\LWR@clearmidrules</code> .....            | 6280 | <code>\LWR@forcenewpage</code> .....            | 3947 |
| <code>\LWR@closeparagraph</code> .....           | 4284 | <code>LWR@freezethisautoid</code> (boolean) ... | 404  |
| <code>\LWR@closeprevious</code> .....            | 3930 | <code>\LWR@futurenonSPACELET</code> .....       | 5772 |
| <code>\LWR@closetabledatacell</code> .....       | 5826 | <code>\LWR@FVstyle</code> .....                 | 56   |
| <code>\LWR@cmidrulewidth</code> (length) .....   | 360  | <code>\LWR@getexparray</code> .....             | 3809 |
| <code>LWR@colafterspec</code> .....              | 338  | <code>\LWR@getmynexttoken</code> .....          | 5779 |
| <code>LWR@colatspec</code> .....                 | 338  | <code>\LWR@heavyrulewidth</code> (length) ....  | 360  |
| <code>LWR@colbangspec</code> .....               | 338  | <code>\LWR@hidelatexequation</code> .....       | 8079 |
| <code>LWR@colbarspec</code> .....                | 338  | <code>\LWR@hspace</code> .....                  | 9513 |
| <code>LWR@colbeforespec</code> .....             | 338  | <code>\LWR@HTMLarrayrulecolor</code> .....      | 6132 |
| <code>\LWR@columnHTMLcolor</code> .....          | 6124 | <code>\LWR@htmlblockcomment</code> .....        | 4125 |
| <code>\LWR@convertto</code> .....                | 62   | <code>\LWR@htmlblocktag</code> .....            | 4127 |
| <code>LWR@copiedsidetoc</code> (boolean) .....   | 411  | <code>\LWR@HTMLcellcolor</code> .....           | 6130 |
| <code>\LWR@copyfile</code> .....                 | 657  | <code>\LWR@HTMLcline</code> .....               | 6870 |
| <code>\LWR@createautosec</code> .....            | 4798 | <code>\LWR@htmlclosecomment</code> .....        | 4097 |
| <code>LWR@currentautosec</code> (counter) .....  | 291  | <code>\LWR@HTMLcolumncolor</code> .....         | 6128 |
| <code>\LWR@currentcss</code> .....               | 4391 | <code>\LWR@htmlcomment</code> .....             | 4118 |
| <code>\LWR@currenttextcolor</code> .....         | 9446 | <code>\LWR@htmldivclass</code> .....            | 4152 |
| <code>\LWR@customizedMathJax</code> .....        | 4662 | <code>\LWR@htmldivclassend</code> .....         | 4155 |
| <code>\LWR@customizeMathJax</code> .....         | 4668 | <code>\LWR@HTMLdoublerulesepcolor</code> ....   | 6134 |
| <code>\LWR@descitem</code> .....                 | 5704 | <code>\LWR@html element</code> .....            | 4165 |
| <code>LWR@displaymathnormal</code> (environment) |      | <code>\LWR@html element class</code> .....      | 4139 |
| .....                                            | 8025 | <code>\LWR@html element class end</code> .....  | 4144 |
| <code>LWR@displaymathother</code> (environment)  | 8030 | <code>\LWR@html element class line</code> ....  | 4158 |
| <code>\LWR@docmidrule</code> .....               | 6311 | <code>\LWR@html element end</code> .....        | 4168 |
| <code>\LWR@doequation</code> .....               | 8104 | <code>LWR@htmlfilenumber</code> (counter) ....  | 250  |
| <code>LWR@doingapar</code> (boolean) .....       | 265  | <code>\LWR@htmlfileref</code> .....             | 7045 |
| <code>LWR@doingcmidrule</code> (boolean) .....   | 336  | <code>\LWR@HTMLhline</code> .....               | 6853 |
| <code>LWR@doinghline</code> (boolean) .....      | 335  | <code>\LWR@htmlmathlabel</code> .....           | 8199 |
| <code>LWR@doingstartpars</code> (boolean) .....  | 264  | <code>\LWR@htmlmulticolumn</code> .....         | 6595 |
| <code>LWR@doingtbrule</code> (boolean) .....     | 335  | <code>\LWR@htmlopencomment</code> .....         | 4097 |
| <code>\LWR@domulticolumn</code> .....            | 6556 | <code>\LWR@htmlrefsectionfilename</code> ....   | 3885 |
| <code>\LWR@doubledollar</code> .....             | 7943 | <code>\LWR@HTMLrowcolor</code> .....            | 6129 |
| <code>LWR@emptyatbang</code> (boolean) .....     | 336  | <code>\LWR@HTMLsanitize</code> .....            | 8565 |
| <code>\LWR@endhideamsmath</code> .....           | 8222 | <code>\LWR@HTMLsanitizeexpand</code> .....      | 8582 |
| <code>\LWR@endofline</code> .....                | 9488 | <code>\LWR@htmlsectionfilename</code> .....     | 3852 |
| <code>\LWR@ensuredoingapar</code> .....          | 4262 | <code>\LWR@htmlspan</code> .....                | 4074 |
| <code>LWR@equationother</code> (environment) .   | 8044 | <code>\LWR@htmlspanclass</code> .....           | 4082 |
| <code>\LWR@equationtag</code> .....              | 8613 | <code>\LWR@htmltag</code> .....                 | 4092 |
| <code>LWR@exitingtabular</code> (boolean) .....  | 381  | <code>\LWR@htmltagc</code> .....                | 4028 |

|                                                  |                  |                                                  |      |
|--------------------------------------------------|------------------|--------------------------------------------------|------|
| <code>\LWR@HTMLtextstyle</code> .....            | 9291             | <code>\LWR@newref</code> .....                   | 7133 |
| <code>\LWR@imagesizebox</code> .....             | 100              | <code>LWR@nextautoid (counter)</code> .....      | 405  |
| <code>\LWR@includegraphicsb</code> .....         | 105              | <code>LWR@nextautopage (counter)</code> .....    | 405  |
| <code>\LWR@indexitem</code> .....                | 7584, 7588, 7592 | <code>LWR@nextequation (counter)</code> .....    | 438  |
| <code>LWR@indisplaymathimage (boolean)</code> .. | 428              | <code>\LWR@nohspace</code> .....                 | 9541 |
| <code>LWR@infloatrow (boolean)</code> .....      | 625              | <code>\LWR@notmemoirloadafter</code> .....       | 166  |
| <code>\LWR@instertatbangcols</code> .....        | 5818             | <code>\LWR@nullfonts</code> .....                | 9361 |
| <code>LWR@intabularmetadata (boolean)</code> ..  | 336              | <code>\LWR@nullifyNoAutoSpacing</code> .....     | 6872 |
| <code>LWR@isstartingequation (boolean)</code> .. | 459              | <code>\LWR@nulllistfills</code> .....            | 5654 |
| <code>\LWR@itemizeitem</code> .....              | 5685             | <code>\LWR@opacity</code> .....                  | 99   |
| <code>LWR@latestautopage (counter)</code> .....  | 406              | <code>\LWR@openparagraph</code> .....            | 4267 |
| <code>LWR@lateximagedepth (counter)</code> ..... | 456              | <code>LWR@opttablecol (boolean)</code> .....     | 349  |
| <code>\LWR@lateximagedepthref</code> .....       | 7048             | <code>\LWR@origcolspec</code> .....              | 5812 |
| <code>\LWR@lateximagenumber (counter)</code> ..  | 456              | <code>\LWR@originname</code> .....               | 244  |
| <code>\LWR@lateximagenumberref</code> .....      | 7051             | <code>\LWR@originnames</code> .....              | 251  |
| <code>\LWR@lateximagesfile</code> .....          | 619              | <code>LWR@origmathjax (boolean)</code> .....     | 154  |
| <code>\LWR@lightrulewidth (length)</code> .....  | 360              | <code>\LWR@overline</code> .....                 | 9441 |
| <code>LWR@Lpage (counter)</code> .....           | 456              | <code>\LWR@parseaftercolumn</code> .....         | 5999 |
| <code>\LWR@listitem</code> .....                 | 5647             | <code>\LWR@parseatcolumn</code> .....            | 5945 |
| <code>\LWR@loadafter</code> .....                | 155              | <code>\LWR@parsebangcolumn</code> .....          | 5969 |
| <code>\LWR@loadbefore</code> .....               | 169              | <code>\LWR@parsebarcolumn</code> .....           | 6008 |
| <code>\LWR@loadnever</code> .....                | 178              | <code>\LWR@parsebeforecolumn</code> .....        | 5990 |
| <code>\LWR@longtabledatacaptiontag</code> ...    | 6606             | <code>\LWR@parsedcolumn</code> .....             | 6035 |
| <code>\LWR@lookforpackagename</code> .....       | 536              | <code>\LWR@parsedrequirepackagenames</code> ..   | 532  |
| <code>\LWR@LwarpEnd</code> .....                 | 5180, 9676       | <code>\LWR@parsenormalcolumn</code> .....        | 6019 |
| <code>\LWR@LwarpStart</code> .....               | 5107, 9676       | <code>\LWR@parsepcolumn</code> .....             | 6031 |
| <code>\LWR@maketitlesetup</code> .....           | 33, 5298         | <code>\LWR@parsetablecols</code> .....           | 6041 |
| <code>\LWR@maybenewtablerow</code> .....         | 6135             | <code>\LWR@patchlists</code> .....               | 5723 |
| <code>\LWR@maybeprintpendingfootnotes</code>     | 4514             | <code>LWR@prevFileDepth (counter)</code> .....   | 290  |
| <code>LWR@midrulecounter (counter)</code> .....  | 360              | <code>LWR@previousautopagelabel (counter)</code> | 283  |
| <code>LWR@midrules</code> .....                  | 360              | <code>\LWR@printatbang</code> .....              | 6181 |
| <code>LWR@minipagedepth (counter)</code> .....   | 480              | <code>\LWR@printbartag</code> .....              | 6171 |
| <code>LWR@minipagefullwidth (boolean)</code> ..  | 480              | <code>\LWR@printcloselist</code> .....           | 5554 |
| <code>LWR@minipageheight (length)</code> .....   | 480              | <code>\LWR@printlength</code> .....              | 514  |
| <code>\LWR@minipagestartpars</code> .....        | 9493             | <code>\LWR@printmccoldata</code> .....           | 6501 |
| <code>\LWR@minipagestoppars</code> .....         | 9496             | <code>\LWR@printmccoltype</code> .....           | 6466 |
| <code>LWR@minipagethispar (boolean)</code> ..... | 481              | <code>\LWR@printopenlist</code> .....            | 5555 |
| <code>LWR@minipagewidth (length)</code> .....    | 480              | <code>\LWR@printpendingfootnotes</code> .....    | 4504 |
| <code>\LWR@multicolother</code> .....            | 6492             | <code>\LWR@printpendingmpfootnotes</code> ...    | 4523 |
| <code>\LWR@multicolparttext</code> .....         | 6487             | <code>\LWR@printthetitle</code> .....            | 5250 |
| <code>\LWR@multicolskip</code> .....             | 6498             | <code>\LWR@providelength</code> .....            | 59   |
| <code>\LWR@multirowborder</code> .....           | 3                | <code>\LWR@ProvidesPackageDrop</code> .....      | 600  |
| <code>\LWR@mynexttoken</code> .....              | 5771             | <code>\LWR@ProvidesPackagePass</code> .....      | 589  |
| <code>\LWR@myshorttoc</code> .....               | 7396             | <code>\LWR@pushhoneyclose</code> .....           | 4801 |
| <code>\LWR@nameref</code> .....                  | 7042             | <code>\LWR@quickfile</code> .....                | 616  |
| <code>LWR@nestspan (environment)</code> .....    | 4039             | <code>\LWR@remembertag</code> .....              | 8617 |
| <code>\LWR@newautoidanchor</code> .....          | 7283             | <code>\LWR@requesttoc</code> .....               | 5173 |
| <code>\LWR@newautopagelabel</code> .....         | 4654             | <code>\LWR@requirepackagenames</code> .....      | 531  |
| <code>\LWR@newhtmlfile</code> .....              | 4687             | <code>\LWR@restoreorigaccents</code> .....       | 927  |
| <code>\LWR@newlabel</code> .....                 | 7082             | <code>\LWR@restoreorigformatting</code> .....    | 7654 |



|                                            |                      |                                    |               |
|--------------------------------------------|----------------------|------------------------------------|---------------|
| makeidx (package) . . . . .                | 114, 168             | MD5 hash                           |               |
| \MakeIndex . . . . .                       | 9649                 | SVG image filename . . . . .       | 429, 461      |
| \makelabel . . . . .                       | 324                  | mdframed (package) . . . . .       | 108, 665      |
| \maketitle . . . . .                       | 47, 99, 5310         | \mdseries . . . . .                | 9415          |
| margin                                     |                      | memhfixc (package) . . . . .       | 675           |
| numbers . . . . .                          | 149                  | memoir                             |               |
| tags . . . . .                             | 149                  | options clash . . . . .            | 129           |
| marginfit (package) . . . . .              | 663                  | verse . . . . .                    | 793           |
| marginfix (package) . . . . .              | 663                  | memoir (class) . . . . .           | 128, 129, 793 |
| marginnote (package) . . . . .             | 664                  | meta tag, HTML                     |               |
| \marginpar . . . . .                       | 104, 278, 4535       | author . . . . .                   | 101, 272      |
| \marginparBlock . . . . .                  | 104, 278, 4546, 4563 | description . . . . .              | 100, 272      |
| \markboth . . . . .                        | 3954                 | generator . . . . .                | 300           |
| \markright . . . . .                       | 3955                 | Title . . . . .                    | 272           |
| markup languages . . . . .                 | 62                   | title . . . . .                    | 101, 272      |
| math                                       |                      | viewport . . . . .                 | 300           |
| \displayingmath . . . . .                  | 118                  | metalogo (package) . . . . .       | 675           |
| \displayingmore . . . . .                  | 118                  | mhchem                             |               |
| tabbing . . . . .                          | 122                  | troubleshooting . . . . .          | 676           |
| mathjax option . . . . .                   | 155                  | mhchem (package) . . . . .         | 676           |
| mathsvg option . . . . .                   | 155                  | microtype (package) . . . . .      | 88, 166, 678  |
| <b>chemformula</b> . . . . .               | 118                  | midfloat (package) . . . . .       | 679           |
| <b>mhchem</b> . . . . .                    | 676                  | midpage (package) . . . . .        | 680           |
| Tikz . . . . .                             | 118                  | \MiKTeX . . . . .                  | 9656          |
| appearing as HTML . . . . .                | 78, 145              | minipage                           |               |
| display with complicated objects . . . . . | 118                  | framed . . . . .                   | 105           |
| font size — SVG . . . . .                  | 116, 425, 455        | horizontal space between . . . . . | 498           |
| footnotes . . . . .                        | 110                  | minipage (environment) . . . . .   | 9093          |
| labels — valid characters . . . . .        | 109                  | \minipagefullwidth . . . . .       | 9085          |
| MathJax custom functions . . . . .         | 117, 426             | misplaced \noalign . . . . .       | 124, 334      |
| MathJax summary . . . . .                  | 116, 425             | . . . . .                          | 122, 331, 340 |
| SVG summary . . . . .                      | 116, 425             | Missing \$ inserted. . . . .       | 143           |
| word processor conversion . . . . .        | 137                  | missing sections . . . . .         | 92, 93        |
| math (environment) . . . . .               | 8024                 | modifying                          |               |
| MathJax                                    |                      | class . . . . .                    | 141           |
| mathjax option . . . . .                   | 155                  | document . . . . .                 | 85            |
| custom functions . . . . .                 | 117, 426             | package . . . . .                  | 140           |
| errors . . . . .                           | 118                  | morefloats (package) . . . . .     | 680           |
| subequations . . . . .                     | 117, 426             | moreverb (package) . . . . .       | 680           |
| summary . . . . .                          | 116, 425             | morewrites (package) . . . . .     | 682           |
| tagged equations . . . . .                 | 117, 426             | mparhack (package) . . . . .       | 682           |
| MathJax (program) . . . . .                | 116, 117, 425, 426   | \mrowcell . . . . .                | 6829          |
| MathJax (program) [requirement] . . . . .  | 65                   | MS-Windows (program) . . . . .     | 97, 153       |
| mathjax (boolean) . . . . .                | 154                  | multicol (package) . . . . .       | 682           |
| mathjax (option) . . . . .                 | 89, 92, 155          | multicolumn                        |               |
| mathsvg (option) . . . . .                 | 89, 92, 155          | with multirow . . . . .            | 686           |
| \mbox . . . . .                            | 9182                 | \multicolumnrow . . . . .          | 36, 6703      |
| mcaption (package) . . . . .               | 664                  | multirow                           |               |
| \mcolrowcell . . . . .                     | 6832                 | with multicolumn . . . . .         | 686           |



|                 |                    |                 |                    |
|-----------------|--------------------|-----------------|--------------------|
| bigdelim        | 126, 528           | epigraph        | 580                |
| bigstrut        | 529                | epstopdf        | 120, 121, 469, 581 |
| blowup          | 530                | epstopdf-base   | 581                |
| bookmark        | 530                | eso-pic         | 582                |
| booktabs        | 530                | etoolbox        | 152                |
| boxedminipage   | 531                | everyhook       | 167                |
| boxedminipage2e | 531                | everypage       | 582                |
| breakurl        | 532                | everyshi        | 583                |
| bytefield       | 532                | expl3           | 167                |
| calc            | 168                | extramarks      | 583                |
| cancel          | 533                | fancybox        | 107, 584           |
| capt-of         | 408                | fancyhdr        | 590                |
| caption         | 126, 173, 408, 534 | fancyheadings   | 589                |
| caption2        | 537                | fancyref        | 590                |
| ccaption        | 537                | fancyvrb        | 591                |
| changebar       | 537                | figcaps         | 598                |
| changepage      | 538                | figsize         | 598                |
| chappg          | 539                | filecontents    | 167                |
| chapterbib      | 539                | fix2col         | 599                |
| chemfig         | 539                | fixme           | 130, 599           |
| chemformula     | 540                | fixmetodonotes  | 601                |
| chemgreek       | 546                | flafter         | 601                |
| chemmacros      | 546                | float           | 126, 601           |
| chemnum         | 566                | floatflt        | 603                |
| chnpage         | 538                | floatpag        | 604                |
| cite            | 567                | floatrow        | 127, 604           |
| cleveref        | 109, 475           | fltrace         | 610                |
| cmap            | 88                 | flushend        | 610                |
| color           | 121, 568           | fncychap        | 611                |
| colortbl        | 568                | fnlineno        | 611                |
| comment         | 157                | fnpos           | 612                |
| continue        | 570                | fontenc         | 88, 612            |
| crop            | 570                | fontspec        | 87, 612            |
| cuted           | 571                | footmisc        | 612                |
| cutwin          | 571                | footnote        | 614                |
| dblfloatfix     | 572                | footnotehyper   | 615                |
| dblfnote        | 572                | footnpag        | 615                |
| dcolumn         | 572                | framed          | 615                |
| diagbox         | 573                | ftnright        | 618                |
| draftwatermark  | 574                | fullpage        | 618                |
| easy-todo       | 575                | fullwidth       | 618                |
| ebook           | 576                | fwlw            | 619                |
| ellipsis        | 576                | geometry        | 166, 619           |
| emptypage       | 576                | getttitlestring | 167                |
| endfloat        | 577                | glossaries      | 113, 620           |
| endheads        | 577                | graphics        | 119, 621           |
| endnotes        | 113, 578           | graphicx        | 119, 633           |
| enumerate       | 579                | grffile         | 121, 633           |
| enumitem        | 579                | grid            | 633                |
| environ         | 168                | hang            | 634                |

|                        |               |                    |          |
|------------------------|---------------|--------------------|----------|
| hanging                | 635           | multitoc           | 687      |
| hypcap                 | 636           | nameref            | 687      |
| hypdestopt             | 637           | natbib             | 687      |
| hypernat               | 637           | needspace          | 688      |
| hyperref               | 109, 398, 637 | newclude           | 129, 689 |
| hyperxmp               | 643           | newfloat           | 168      |
| hyphenat               | 643           | newtxmath          | 119      |
| idxlayout              | 644           | newunicodechar     | 88, 689  |
| ifoddpages             | 645           | nextpage           | 689      |
| ifplatform             | 152           | nicefrac           | 119, 690 |
| indentfirst            | 645           | nonfloat           | 690      |
| inputenc               | 88, 646       | nonumonpart        | 691      |
| keyfloat               | 128, 646      | nopageno           | 691      |
| kvoptions              | 154           | nowidow            | 691      |
| layout                 | 648           | ntheorem           | 118, 692 |
| letltxmacro            | 152           | overpic            | 122, 704 |
| letterspace            | 649           | pagegrid           | 705      |
| lettrine               | 649           | pagenote           | 112, 705 |
| lineno                 | 650           | pagesel            | 705      |
| lips                   | 653           | paralist           | 706      |
| listings               | 653           | parskip            | 706      |
| lmodern                | 88            | pbox               | 706      |
| longtable              | 125, 657      | pdfscape           | 707      |
| lscap                  | 659           | pdfrender          | 707      |
| ltxcaption             | 659           | pdfsync            | 707      |
| ltxgrid                | 660           | pfnote             | 708      |
| ltxtable               | 660           | phfqit             | 708      |
| luacolor               | 660           | placeins           | 709      |
| luatodonotes           | 130, 661      | prelim2e           | 709      |
| lwrap                  | 89            | prettyref          | 709      |
| lwrap-patch-komascript | 818           | preview            | 710      |
| lwrap-patch-memoir     | 820           | printlen           | 169      |
| makeidx                | 114, 168      | quotchap           | 710      |
| marginfit              | 663           | ragged2e           | 711      |
| marginfix              | 663           | realscripts        | 712      |
| marginnote             | 664           | refcount           | 168      |
| mcaption               | 664           | relsize            | 104, 713 |
| mdframed               | 108, 665      | resizegather       | 714      |
| memhfixc               | 675           | romanbar           | 714      |
| metalogo               | 675           | romanbarpagenumber | 715      |
| mhchem                 | 676           | rotating           | 715      |
| microtype              | 88, 166, 678  | rotfloat           | 716      |
| midfloat               | 679           | savetrees          | 717      |
| midpage                | 680           | scalefnt           | 717      |
| morefloats             | 680           | schemata           | 717      |
| moreverb               | 680           | scrextend          | 718      |
| morewrites             | 682           | scrhack            | 721      |
| mparhack               | 682           | sclayer            | 721      |
| multicol               | 682           | sclayer-notecolumn | 723      |
| multirow               | 684           | sclayer-scrpage    | 723      |

|                |               |                                  |               |
|----------------|---------------|----------------------------------|---------------|
| section        | 724           | varwidth                         | 169           |
| sectionbreak   | 725           | verbatim                         | 168           |
| sectsty        | 726           | verse                            | 129, 792, 793 |
| setspace       | 726           | vertbars                         | 794           |
| shadow         | 728           | vmargin                          | 795           |
| showidx        | 728           | vwcol                            | 795           |
| showkeys       | 728           | wallpaper                        | 798           |
| sidecap        | 729           | watermark                        | 798           |
| sidenotes      | 729           | wrapfig                          | 799           |
| siunitx        | 119, 468, 731 | xcolor                           | 121, 471, 800 |
| soul           | 736           | xfrac                            | 810           |
| soulpos        | 738           | xifthen                          | 167           |
| soulutf8       | 739           | xltxtra                          | 813           |
| stabular       | 739           | xmpincl                          | 814           |
| stfloats       | 740           | xparse                           | 131, 166      |
| subcaption     | 126           | xpatch                           | 152           |
| subfig         | 127, 740      | xstring                          | 168           |
| subfigure      | 745           | xtab                             | 126, 814      |
| supertabular   | 126, 746      | xurl                             | 816           |
| syntonly       | 747           | xy                               | 816           |
| tabls          | 748           | zref                             | 168           |
| tabularx       | 748           | zwpagelayout                     | 817           |
| tabulary       | 749           | page                             |               |
| textarea       | 749           | counter                          | 78, 145       |
| textcomp       | 88, 103, 750  | inaccessible                     | 92, 93        |
| textfit        | 753           | \pagebreak                       | 9547          |
| textpos        | 754           | \pagecolor                       | 79            |
| theorem        | 755           | pagegrid (package)               | 705           |
| threeparttable | 759           | pagenote (package)               | 112, 705      |
| tikz           | 120, 760      | \pagenumbering                   | 3960          |
| titleps        | 761           | \pageref                         | 7140          |
| titleref       | 764           | \pagerefPageFor                  | 7139          |
| titlesec       | 765           | pagesel (package)                | 705           |
| titletoc       | 767           | \pagestyle                       | 3952          |
| titling        | 112, 769      | Pandoc (program)                 | 62            |
| tocbasic       | 773           | \par                             |               |
| tocbibind      | 114, 774, 775 | hooks                            | 268           |
| tocloft        | 112, 776      | \paragraph                       | 5032          |
| tocstyle       | 783           | paralist (package)               | 706           |
| todo           | 783           | \parbox                          | 9175          |
| todonotes      | 130, 784      | \parsemulticolumnalignment       | 6528          |
| transparent    | 786           | parskip (package)                | 706           |
| trivfloat      | 126, 787      | \part                            | 4963          |
| turnthepage    | 788           | pbox (package)                   | 706           |
| typearea       | 788           | PDF images                       | 119, 469      |
| ulem           | 789           | pdfcrop (program) [requirement]  | 65            |
| units          | 119           | pdfLaTeX (program) [requirement] | 65            |
| upref          | 791           | pdfscape (package)               | 707           |
| url            | 109, 792      | pdfrender (package)              | 707           |
| varioref       | 109           |                                  |               |



|                                         |         |                                    |               |
|-----------------------------------------|---------|------------------------------------|---------------|
| pdfseparate (program) . . . . .         | 65, 70  | title page . . . . .               | 99            |
| pdftocairo (program) . . . . .          | 65, 70  | \sffamily . . . . .                | 9418          |
| pdftotext (program) . . . . .           | 65, 70  | \sfrac . . . . .                   | 811           |
| perl (program) . . . . .                | 71      | shadow (package) . . . . .         | 728           |
| XeLaTeX (program) . . . . .             | 65      | showidx (package) . . . . .        | 728           |
| \RequirePackage . . . . .               | 564     | showkeys (package) . . . . .       | 728           |
| \resizebox . . . . .                    | 302     | sidecap (package) . . . . .        | 729           |
| resizegather (package) . . . . .        | 714     | sidenotes (package) . . . . .      | 729           |
| \ResumeTabular . . . . .                | 6737    | SideTOCDepth (counter) . . . . .   | 92, 413       |
| \reversemarginpar . . . . .             | 4559    | \sitetocname . . . . .             | 7488          |
| \rightline . . . . .                    | 8809    | \simplechapterdelim . . . . .      | 4812          |
| \rmfamily . . . . .                     | 9417    | siunitx                            |               |
| romanbar (package) . . . . .            | 714     | with TeXMaths . . . . .            | 137           |
| romanbarpagenumber (package) . . . . .  | 715     | siunitx (package) . . . . .        | 119, 468, 731 |
| \rotatebox . . . . .                    | 263     | \sloppy . . . . .                  | 3958          |
| rotating (package) . . . . .            | 715     | soul (package) . . . . .           | 736           |
| rotfloat (package) . . . . .            | 716     | soulpos (package) . . . . .        | 738           |
| \rowcolor . . . . .                     | 6129    | soulutf8 (package) . . . . .       | 739           |
| \rownum . . . . .                       | 6120    | \sp . . . . .                      | 9424          |
| \rule . . . . .                         | 9602    | space                              |               |
|                                         |         | horizontal . . . . .               | 102           |
|                                         |         | between minipages . . . . .        | 498           |
| <b>S</b>                                |         |                                    |               |
| sample_project.css (file) . . . . .     | 97, 225 | split                              |               |
| savetrees (package) . . . . .           | 717     | miss-numbered . . . . .            | 118, 692      |
| \sb . . . . .                           | 9425    | stabular (package) . . . . .       | 739           |
| \scalebox . . . . .                     | 282     | stack depths . . . . .             | 148           |
| scalegnt (package) . . . . .            | 717     | \StartDefiningTabulars . . . . .   | 5866          |
| schemata (package) . . . . .            | 717     | stfloats (package) . . . . .       | 740           |
| scrextend (package) . . . . .           | 718     | subcaption (package) . . . . .     | 126           |
| scrhack (package) . . . . .             | 721     | subequations                       |               |
| scllayer (package) . . . . .            | 721     | MathJax . . . . .                  | 117, 426      |
| scllayer-notecolumn (package) . . . . . | 723     | subfig (package) . . . . .         | 127, 740      |
| scllayer-scrpage (package) . . . . .    | 723     | subfigure (package) . . . . .      | 745           |
| \scshape . . . . .                      | 9422    | \subparagraph . . . . .            | 5040          |
| section                                 |         | \subsection . . . . .              | 5015          |
| depths . . . . .                        | 148     | \subsubsection . . . . .           | 5023          |
| heading, word processor . . . . .       | 137     | subtitle . . . . .                 | 315           |
| missing . . . . .                       | 92, 93  | supertabular (package) . . . . .   | 126, 746      |
| \section . . . . .                      | 5002    | SVG                                |               |
| section (package) . . . . .             | 724     | mathsvg option . . . . .           | 155           |
| sectionbreak (package) . . . . .        | 725     | image processing . . . . .         | 229           |
| sectsty (package) . . . . .             | 726     | images appearing as HTML . . . . . | 78, 145       |
| \SetHTMLFileNumber . . . . .            | 3843    | math summary . . . . .             | 116, 425      |
| setspace (package) . . . . .            | 726     | syntonly (package) . . . . .       | 747           |
| settings                                |         |                                    |               |
| css project-specific . . . . .          | 97      | <b>T</b>                           |               |
| CSS selection . . . . .                 | 96      | tabbing                            |               |
| HTML conversion . . . . .               | 91      | and math . . . . .                 | 122           |
| lwrap package options . . . . .         | 89      | tabbing (environment) . . . . .    | 5515          |
| selecting output . . . . .              | 98      | \tableofcontents . . . . .         | 95, 7433      |





|                      |          |                              |
|----------------------|----------|------------------------------|
|                      | <b>Z</b> |                              |
| zref (package) ..... | 168      |                              |
|                      |          | zwpagelayout (package) ..... |
|                      |          | 817                          |

For the most recent changes and the start of the Index, see page 865.