

Hypertext marks in \LaTeX

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<https://github.com/ho-tex/hyperref/issues>

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1 Documentation overview for `hyperref`

The documentation for package `hyperref` consists of several files:

Manual The **USER MANUAL** (also available as HTML).

README The **README** file (also available as text file). Here information is collected that is not yet in the manual: new features, package compatibility, limitations, known problems, ...


ChangeLog This file records the version history (also available as text file).

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thumbpdf`” at Euro \TeX 1999.

Bookmark talk, paper The paper version of the talk.

Source code documentation:

 **hyperref.dtx** This is the source code documentation for `hyperref` (this file).

backref.dtx “Back referencing from bibliographical citations”

nameref.dtx “Section name references in \LaTeX ”

2 Contents

1	Documentation overview for hyperref	1
2	Contents	2
3	File hycheck.tex	7
4	Package options and setup	11
4.1	LuaTeX compatibility	11
4.2	Save catcodes	11
4.3	Version check	13
4.4	Checks with regular expressions	14
4.5	Compatibility with format dumps	15
4.6	Switches	16
5	Common help macros	17
5.1	Macros for recursions	18
5.2	Babel's protection of shorthand characters	18
5.3	Coordinate transformations	18
6	Dealing with PDF strings	19
6.1	Description of PDF strings	19
6.2	Definition of <code>\pdfstringdef</code>	20
6.2.1	Preprocessing	20
6.2.2	Expansion	26
6.2.3	Postprocessing	27
6.3	Encodings	32
6.3.1	XeTeX	32
6.3.2	Workaround for package linguex	33
6.3.3	Catcodes saving and restoring for <code>.def</code> files	33
6.3.4	PD1 encoding	34
6.3.5	PU encoding	35
6.4	Additional user commands	35
6.4.1	<code>\texorpdfstring</code>	35
6.4.2	Hooks for <code>\pdfstringdef</code>	35
6.5	Help macros for expansion	37
6.5.1	<code>\ignorespaces</code>	37
6.5.2	Babel languages	37
6.5.3	CJK patch	42
6.5.4	CJK bookmarks	42
6.5.5	CJK unicode	44
6.5.6	<code>\@inmathwarn-Patch</code>	49
6.5.7	Unexpandable spaces	50
6.5.8	Marker for commands	50
6.5.9	<code>\hspace fix</code>	50
6.5.10	Fix for AMS classes	51
6.5.11	Reference commands	51
6.5.12	Redefining the defining commands	53
6.5.13	<code>\ifnextchar</code>	54
6.5.14	<code>\@protected@testoptifnextchar</code>	55
6.6	Help macros for postprocessing	55
6.6.1	Generic warning.	55
6.6.2	Protecting spaces	55

6.6.3	Remove grouping braces	56
6.6.4	Catcode check	57
6.6.5	Check for wrong glyphs	61
6.6.6	Replacing tokens	62
6.6.7	Support for package <code>xspace</code>	63
6.6.8	Converting to Unicode	63
6.6.9	Support for UTF-8 input encoding	66
6.6.10	Support for die faces (ifsym et. al.)	69
6.6.11	Support for moon phases of package <code>china2e</code>	70
6.6.12	Support for package <code>pifont</code>	70
7	Support of other packages	72
7.1	Class memoir	72
7.2	Package subfigure	72
7.3	Package xr and xr-hyper	73
8	Help macros for links	73
9	Options	75
9.1	Help macros	75
9.2	Defining the options	77
10	Options for different drivers	82
11	Options to add extra features	86
12	Language options	87
13	Options to change appearance of links	94
14	Bookmarking	94
15	PDF-specific options	97
15.1	Package <code>xspace</code> support	110
15.2	Option <code>draft</code>	111
15.3	PDF/A	111
15.4	Patch for babel's <code>\texttilde</code>	112
15.4.1	Driver loading	114
15.4.2	Bookmarks	117
16	User hypertext macros	120
16.1	Link box support for XeTeX	126
17	Underlying basic hypertext macros	127
18	Option ‘destlabel’	131
19	Compatibility with the <i>L^AT_EX</i>2html package	133
20	Forms creation	133
20.1	Field flags	133
20.1.1	Declarations of field flags	135
20.1.2	Set submit flags	137
20.1.3	Set annot flags in fields	138
20.1.4	Pushbutton field	138

20.1.5	Check box field	139
20.1.6	Radio button field	139
20.1.7	Text fields	139
20.1.8	Choice fields	140
20.2	Choice field	140
20.3	Forms	142
21	Setup	150
22	Low-level utility macros	151
23	Localized nullifying of package	152
24	Package nohyperref	152
25	The Mangling Of Aux and Toc Files	153
26	Title strings	155
27	Page numbers	156
28	Every page	156
28.1	PDF /PageLabels	157
28.1.1	pdfTeX and VTeX	161
28.1.2	xetex	162
28.1.3	pdfmarkbase, dvipdfm, xetex	163
29	Automated L^AT_EX hypertext cross-references	164
30	Package lastpage support	170
31	Package ifthen support	171
32	Package titlesec and titletoc support	171
33	Package varioref support	172
34	Package longtable support	173
35	Equations	173
36	Footnotes	179
37	Float captions	183
38	Bibliographic references	185
38.1	Package harvard	189
38.2	Package chicago	190
39	Page numbers	191
40	Table of contents	193
41	New counters	195

42 AMS\LaTeX compatibility	195
42.1 <code>\@addtoreset</code> and <code>\numberwithin</code> patches	196
43 Included figures	197
44 hyperindex entries	198
45 Compatibility with foiltex	201
46 Compatibility with seminar slide package	201
47 Configuration files	209
47.1 PS/PDF strings	209
47.2 pdftex	211
47.2.1 Fix for problem with different nesting levels	225
47.3 hypertext	226
47.4 dviwindo	228
47.5 dvipdfm/xetex dvi to PDF converter	233
47.6 VTeX typesetting system	243
47.7 Fix for Adobe bug number 466320	255
47.8 Direct pdfmark support	256
47.9 Rokicki's dvips	270
47.10 VTeX's vtexpdfmark driver	272
47.11 Textures	274
47.12 dvipsone	278
47.13 TeX4ht	281
48 Driver-specific form support	284
48.1 pdfmarks	284
48.2 HyperTeX	292
48.3 TeX4ht	293
48.4 pdfTeX	295
48.5 dvipdfm, xetex	304
48.6 Common forms part	311
49 Bookmarks in the PDF file	318
49.1 Bookmarks	319
49.1.1 Rerun warning	322
49.1.2 Driver stuff	322
50 Compatibility with koma-script classes	328
51 Encoding definition files for encodings of PDF strings	329
51.1 PD1 encoding	329
51.2 PU encoding	337
51.2.1 NFSS2 accents	337
51.2.2 Basic Latin: U+0000 to U+007F	339
51.2.3 Latin-1 Supplement: U+0080 to U+00FF	341
51.2.4 Latin Extended-A: U+0080 to U+017F	345
51.2.5 Latin Extended-B: U+0180 to U+024F	350
51.2.6 IPA Extensions: U+0250 to U+02AF	354
51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF	360
51.2.8 Combining Diacritical Marks: U+0300 to U+036F	361
51.2.9 Greek and Coptic: U+0370 to U+03FF	361

51.2.10 Cyrillic: U+0400 to U+04FF	364
51.2.11 Hebrew: U+0590 to U+05FF	375
51.2.12 Thai: U+0E00 to U+0E7F	376
51.2.13 Phonetic Extensions: U+1D00 to U+1D7F	376
51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF	377
51.2.15 Latin Extended Additional: U+1E00 to U+1EFF	377
51.2.16 General Punctuation: U+2000 to U+206F	383
51.2.17 Superscripts and Subscripts: U+2070 to U+209F	384
51.2.18 Currency Symbols: U+20A0 to U+20CF	385
51.2.19 Letterlike Symbols: U+2100 to U+214F	386
51.2.20 Number Forms: U+2150 to U+218F	387
51.2.21 Arrows: U+2190 to U+21FF	388
51.2.22 Mathematical Operators: U+2200 to U+22FF	391
51.2.23 Miscellaneous Technical: U+2300 to U+23FF	401
51.2.24 Control Pictures: U+2400 to U+243F	403
51.2.25 Optical Character Recognition: U+2440 to U+245F	403
51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF	403
51.2.27 Box Drawing: U+2500 to 257F	406
51.2.28 Geometric Shapes: U+25A0 to U+25FF	406
51.2.29 Miscellaneous Symbols: U+2600 to U+26FF	407
51.2.30 Dingbats: U+2700 to U+27BF	411
51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF	414
51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF	414
51.2.33 Supplemental Arrows-B: U+2900 to U+297F	415
51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF	417
51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF	417
51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF	420
51.2.37 Latin Extended-C: U+2C60 to U+2C7F	420
51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F	421
51.2.39 Modifier Tone Letters: U+A700 to U+A71F	421
51.2.40 Latin Extended-D: U+A720 to U+A7FF	421
51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F	421
51.2.42 Musical Symbols: U+1D100 to U+1D1FF	421
51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF	422
51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF	422
51.2.45 Miscellaneous	422
51.2.46 Aliases	422
51.3 PU encoding, additions for VnT _E X	423
51.4 PU encoding, additions for Arabi	425
52 End of file hycheck.tex	449
53 Index	450

3 File hycheck.tex

Many commands of L^AT_EX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than L^AT_EX's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 \langle*check\rangle
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of L^AT_EX.

```
4 \newcommand*{\checklatex}[1][]{\%
5   \typeout{}}\%
6   \typeout{* Format: 'LaTeX2e' #1}\%
7   \typeout{\space\space Loaded: '\fmtname' \fmtversion}\%
8 }\%
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1]{\%
10  \def\HyC@package{#1}\%
11  \let\HyC@date\@empty
12  \@ifnextchar[\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1]{\%
15  \def\HyC@date{#1}\%
16  \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{\%
19  \typeout{}}\%
20  \begingroup
21  \edef\x{\endgroup
22    \noexpand\RequirePackage{\HyC@package}}\%
23    \ifx\HyC@date\@empty\relax\else\HyC@date\fi\%
24  }\%
25  \x
26  \typeout{}}\%
27  \typeout{\%
28    * Package '\HyC@package'\%
29    \ifx\HyC@date\@empty
30      \else
31        \space\HyC@date
32      \fi
33  }\%
34  \@ifundefined{ver@\HyC@package.sty}{\%
35  }\%
36  \typeout{\%
37    \space\space Loaded: '\HyC@package' \%
38    \csname ver@\HyC@package.sty\endcsname
39  }\%
```

```

40 }%
41 }

```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a L^AT_EX definition and compares this definition with the current meaning of that command.

```

42 \newcommand*{\checkcommand}[1]{%
43   \begingroup
44   \ifx\long#1\relax
45     \expandafter\HyC@checklong
46   \else
47     \def\HyC@defcmd{#1}%
48     \expandafter\let\expandafter\HyC@next
49       \csname HyC@\expandafter\@gobble\string#1\endcsname
50     \expandafter\HyC@checkcommand
51   \fi
52 }

```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```

53 \def\HyC@checklong#1{%
54   \def\HyC@defcmd{\long#1}%
55   \expandafter\let\expandafter\HyC@next
56     \csname HyC@\expandafter\@gobble\string#1\endcsname
57   \HyC@checkcommand
58 }

```

`\HyC@checkcommand` The optional star of L^AT_EX's definitions is parsed.

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hycheck}{%
62       Unknown command '\expandafter\strip@prefix\meaning\HyC@cmd'%
63     }\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\HyC@star{*}%
68     \HyC@check
69   }{%
70     \let\HyC@star\@empty
71     \HyC@check
72   }%
73 }

```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```

74 \def\HyC@check#1{%
75   \def\HyC@cmd{#1}%
76   \let\HyC@org@cmd#1%
77   \let#1\relax
78   \let\HyC@param\@empty
79   \HyC@Toks{}%
80   \let\HyC@org@optcmd\HyC@noValue
81   \let\HyC@org@robustcmd\HyC@noValue
82   \let\HyC@org@robustoptcmd\HyC@noValue
83   \HyC@next
84 }

```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}

```


`\HyC@newcommand` The code for `\newcommand`.

```
86 \def\HyC@newcommand{%
87   \let\HyC@@cmd\HyC@cmd
88   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }
```

`\HyC@Toks` A register for storing the default value of an optional argument.

```
90 \newtoks\HyC@Toks
```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```
91 \long\def\HyC@nc@noopt#1{%
92   \edef\x{%
93     \expandafter\noexpand\HyC@defcmd
94     \HyC@star
95     \expandafter\noexpand\HyC@cmd
96     \HyC@param\the\HyC@Toks
97   }%
98   \x{#1}%
99   \HyC@doCheck
100 }
```

`\HyC@nc@opt` This macro scans the first optional argument of a \LaTeX definition (number of arguments).

```
101 \def\HyC@nc@opt[#1]{%
102   \def\HyC@param{{#1}}%
103   \@ifnextchar[\HyC@nc@default\HyC@nc@noopt
104 }
```

`\HyC@nc@default` Macro `\HyC@nc@default` scans the default for an optional argument.

```
105 \def\HyC@nc@default[#1]{%
106   \HyC@Toks={{#1}}%
107   \edef\HyC@optcmd{%
108     \expandafter\noexpand
109     \csname\expandafter\string\HyC@@cmd\endcsname
110   }%
111   \expandafter\let\expandafter\HyC@org@optcmd\HyC@optcmd
112   \HyC@nc@noopt
113 }
```

`\HyC@DeclareRobustCommand` `\DeclareRobustCommand{\cmd}` makes the command `\cmd` robust, that then calls `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```
114 \def\HyC@DeclareRobustCommand{%
115   \edef\HyC@robustcmd{%
116     \expandafter\noexpand
117     \csname\expandafter\expandafter\expandafter\@gobble
118     \expandafter\string\HyC@cmd\space\endcsname
119   }%
120   \expandafter\let\expandafter\HyC@org@robustcmd\HyC@robustcmd
121   \expandafter\let\HyC@robustcmd\relax
122   \let\HyC@@cmd\HyC@robustcmd
123   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
124 }
```

`\HyC@def` The parameter text of `\def` or `\edef` is stored in the token register `\HyC@Toks`.

`\HyC@edef`

```

125 \def\HyC@def#1#{%
126   \HyC@Toks={#1}%
127   \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

`\HyC@doCheck` This command performs the checks and prints the result.

```

130 \def\HyC@doCheck{%
131   \typeout{* Checking ‘\HyC@string\HyC@cmd’:}%
132   \HyC@checkItem{cmd}%
133   \HyC@checkItem{robustcmd}%
134   \HyC@checkItem{optcmd}%
135   \HyC@checkItem{robustoptcmd}%
136   \endgroup
137 }

```

`\HyC@checkItem` A single check.

```

138 \def\HyC@checkItem#1{%
139   \expandafter\ifx\csname HyC@org@#1\endcsname\HyC@noValue
140   \else
141     \expandafter\expandafter\expandafter\ifx
142     \csname HyC@#1\expandafter\endcsname
143     \csname HyC@org@#1\endcsname
144     \expandafter\HyC@checkOk\csname HyC@#1\endcsname
145   \else
146     \expandafter\HyC@checkFailed
147     \csname HyC@#1\expandafter\endcsname
148     \csname HyC@org@#1\endcsname
149   \fi
150 \fi
151 }

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

152 \def\HyC@string#1{\expandafter\string#1}
153 \def\HyC@meaning#1{\expandafter\meaning#1}

```

`\HyC@checkOk` The result, if the check succeeds.

```

154 \def\HyC@checkOk#1{%
155   \typeout{\space\space‘\HyC@string#1’ ok.}%
156 }

```

`\HyC@checkFailed` The result, if the check fails.

```

157 \def\HyC@checkFailed#1#2{%
158   \typeout{\space\space‘\HyC@string#1’ failed.}%
159   \typeout{\space\space* original: \meaning#2}%
160   \typeout{\space\space* expected: \HyC@meaning#1}%
161 }

162 % *****
163 \</check>
164 \<*/package>

```

4 Package options and setup

4.1 LuaTeX compatibility

Until a LuaTeX driver is written, load `luatex85` so that the `pdfTeX` driver continues to work with LuaTeX.

```
165 %\ifx\directlua\@undefined\else
166 % \RequirePackage{luatex85}
167 %\fi
```

4.2 Save catcodes

There are many packages that change the standard catcodes.

First we save the original meaning of ‘ and = in the token register `\toks@`, because we need the two characters in the macros `\Hy@SetCatcodes` and `\Hy@RestoreCatcodes`.

```
168 \begingroup
169 \@makeother\‘%
170 \@makeother\=%
171 \edef\x{%
172   \edef\noexpand\x{%
173     \endgroup
174     \noexpand\toks@{%
175       \catcode 96=\noexpand\the\catcode\‘\noexpand\‘\relax
176       \catcode 61=\noexpand\the\catcode\=\noexpand\=\relax
177     }%
178   }%
179   \noexpand\x
180 }%
181 \x
182 \@makeother\‘
183 \@makeother\=
```

`\Hy@SetCatcodes`

```
184 \def\Hy@SetCatcodes{%
185   \@makeother\‘%
186   \@makeother\=%
187   \catcode\‘$=3 %
188   \catcode\&=4 %
189   \catcode\^=7 %
190   \catcode\_ =8 %
191   \@makeother\| %
192   \@makeother\: %
193   \@makeother\(%
194   \@makeother\) %
195   \@makeother\[ %
196   \@makeother\] %
197   \@makeother\/ %
198   \@makeother\! %
199   \@makeother\< %
200   \@makeother\> %
201   \@makeother\. %
202   \@makeother\; %
203   \@makeother\+ %
204   \@makeother\- %
205   \@makeother\" %
```

```

206 \@makeother\'%
207 }

```

\Hy@RestoreCatcodes

```

208 \begingroup
209 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
210 \xdef\Hy@RestoreCatcodes{%
211   \the\toks@
212   \x\$%
213   \x\&%
214   \x\~%
215   \x\_%
216   \x\|%
217   \x\:%
218   \x\(%
219   \x\)%
220   \x\[%
221   \x\]%
222   \x\/%
223   \x\!%
224   \x\<%
225   \x\>%
226   \x\.%
227   \x\;%
228   \x\+%
229   \x\-%
230   \x\'%
231   \x\'%
232 }%
233 \endgroup

234 \Hy@SetCatcodes

```

It needs the December 95 release of L^AT_EX, because it uses `\protected@write`, and it defines commands in options; and the page setup internal code changed at that point. It'll probably break with the later releases!

Use package `hobsub-hyperref` for faster package loading.

```

235 \IfFileExists{hobsub-hyperref.sty}{%
236   \RequirePackage{hobsub-hyperref}[2011/01/30]%
237 }{}

238 \RequirePackage{ltxcmds}[2010/11/12]
239 \RequirePackage{ifpdf}[2006/02/20]
240 \RequirePackage{pdftexcmds}[2009/04/10]
241 \@ifpackagelater{pdftexcmds}{2010/11/04}{}{%
242   \ltx@ifundefined{pdfdraftmode}{%
243     \let\pdf@ifdraftmode\ltx@secondoftwo
244   }{%
245     \ifpdf
246       \def\pdf@ifdraftmode{%
247         \ifnum\pdfdraftmode=\ltx@one
248           \expandafter\ltx@firstoftwo
249         \else
250           \expandafter\ltx@secondoftwo
251         \fi
252       }%
253     \else
254       \let\pdf@ifdraftmode\ltx@secondoftwo

```

```

255 \fi
256 }%
257 }

258 \RequirePackage{infwarerr}[2010/04/08]
259 \RequirePackage{keyval}[1997/11/10]
260 \RequirePackage{kvsetkeys}[2007/09/29]
261 \RequirePackage{kvdefinekeys}[2011/04/07]
262 \RequirePackage{pdfescape}[2007/11/11]
263 \RequirePackage{ifvtex}
264 \RequirePackage{ifxetex}[2006/08/21]
265 \RequirePackage{hycolor}
266 \RequirePackage{letltxmacro}[2008/06/13]
267 \RequirePackage{auxhook}[2009/12/14]
268 \def\Hy@Error{\@PackageError{hyperref}}
269 \def\Hy@Warning{\@PackageWarning{hyperref}}
270 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
271 \def\Hy@Info{\@PackageInfo{hyperref}}
272 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
273 \def\Hy@Message#1{%
274   \GenericWarning{%
275     (hyperref)\@spaces\@spaces\@spaces\@spaces
276   }{%
277     Package hyperref Message: #1\ltx@gobble
278   }%
279 }

```

4.3 Version check

\Hy@VersionChecked

```

280 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

281 \def\Hy@VersionCheck#1{%
282   \begingroup
283   \ltx@ifundefined{ver@hyperref.sty}{%
284     \Hy@Error{%
285       This should not happen!\MessageBreak
286       Missing hyperref version%
287     }\@ehd
288   }{%
289     \ltx@ifundefined{ver@#1}{%
290       \Hy@Error{%
291         This should not happen!\MessageBreak
292         Missing version of '#1'%
293       }\@ehd
294     }{%
295       \def\x##1##2##3{%
296         \expandafter\expandafter\expandafter\Hy@@VersionCheck
297         \expandafter\expandafter\expandafter##2%
298         \csname ver@##3\endcsname##1##1\@nil
299       }%
300       \x{ }\y{hyperref.sty}%
301       \x{ }\z{#1}%
302       \ifx\y\z
303         \else
304         \edef\a{#1}%

```

```

305     \edef\b{\HyOpt@CustomDriver.def}%
306     \ifx\a\b
307       \Hy@WarningNoLine{%
308         Version mismatch (custom driver)!\MessageBreak
309         * \y: hyperref.sty\MessageBreak
310         * \z: \a
311       }%
312     \else
313       \Hy@Error{%
314         Version mismatch!\MessageBreak
315         * \y: hyperref.sty\MessageBreak
316         * \z: \a
317       }\@ehd
318     \fi
319   \fi
320 }%
321 }%
322 \endgroup
323 \chardef\Hy@VersionChecked=1 %
324 }

```

\Hy@@VersionCheck

```

325 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
326   \def#1{#2 #3}%
327 }

```

4.4 Checks with regular expressions

```

328 \ltx@ifundefined{pdfmatch}{%
329   \def\Hy@Match#1#2#3#4#5{%
330   }{%
331     \def\Hy@Match#1#2#3{%
332       \begingroup
333       \edef\~{\ltx@backslashchar\string~}%
334       \edef\.\{\ltx@backslashchar.}%
335       \edef\[\{\ltx@backslashchar[% ]%
336       \edef\${\ltx@backslashchar$}%
337       \edef\(\{\ltx@backslashchar(%
338       \edef\)\{\ltx@backslashchar)%
339       \edef\|\{\ltx@backslashchar|}%
340       \edef\*\{\ltx@backslashchar*}%
341       \edef\+\{\ltx@backslashchar+}%
342       \edef\?\{\ltx@backslashchar?}%
343       \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
344       \edef\}\{\ltx@rightbracechar}%
345       \edef\\{\ltx@backslashchar\ltx@backslashchar}%
346       \let\ \ltx@space
347       \ifcase\pdfmatch#2{#3}{#1} %
348         \endgroup
349         \expandafter\ltx@secondoftwo
350       \or
351         \endgroup
352         \expandafter\ltx@firstoftwo
353       \else
354         \Hy@Warning{%
355           Internal error: Wrong pattern!\MessageBreak
356         --> #3 <--\MessageBreak

```

```

357     Pattern check ignored%
358   }%
359   \endgroup
360   \expandafter\ltx@firstoftwo
361   \fi
362 }%
363 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{%
364   \begingroup
365     \lccode'0='\relax
366     \lowercase{\endgroup
367       \def\ltx@leftbracechar{0}%
368     }%
369     \begingroup
370       \lccode'0='\relax
371       \lowercase{\endgroup
372         \def\ltx@rightbracechar{0}%
373       }%
374     }%
375 }

```

4.5 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```

376 \@ifundefined{AfterBeginDocument}{%
377   \def\AfterBeginDocument{\AtBeginDocument}%
378 }{}%

```

`\Hy@AtBeginDocument` For the case that package ‘hyperref’ is loaded using `\AtBeginDocument`, we have to wrap the calls of `\AtBeginDocument`/`\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package ‘kvoptions’ has to perform its option cleanup. Therefore we use a hook.

```

379 \def\Hy@AtBeginDocument{%
380   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
381 }

```

`\Hy@AtEndOfPackage`

```

382 \def\Hy@AtEndOfPackage{%
383   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
384 }

```

`\Hy@AtBeginDocumentHook`

```

385 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

386 \let\Hy@AtEndOfPackageHook\ltx@empty

```

Install the hook, before package ‘kvoptions’ is loaded.

```

387 \AtEndOfPackage{%
388   \Hy@AtEndOfPackageHook
389   \let\Hy@AtEndOfPackageHook\@undefined
390   \AfterBeginDocument{%

```

```

391 \Hy@AtBeginDocumentHook{}%
392 \let\Hy@AtBeginDocumentHook\@undefined
393 }%
394 }

```

Package kvoptions is used for processing options that are given as key value pairs. The package provides `\ProcessKeyvalOptions`, formerly known as `\ProcessOptionsWithKV`.

```

395 \RequirePackage{kvoptions}[2009/07/21]

```

4.6 Switches

```

396 \newif\ifHy@stoppedearly
397 \newif\ifHy@typexml
398 \newif\ifHy@activeanchor
399 \newif\ifHy@backref
400 \newif\ifHy@bookmarks
401 \newif\ifHy@bookmarksnumbered
402 \newif\ifHy@bookmarksopen
403 \newif\ifHy@breaklinks
404 \newif\ifHy@pdfcenterwindow
405 \newif\ifHy@CJKbookmarks
406 \newif\ifHy@colorlinks
407 \newif\ifHy@destlabel
408 \newif\ifHy@draft
409 \let\Hy@finaltrue\Hy@draftfalse
410 \let\Hy@finalfalse\Hy@drafttrue
411 \newif\ifHy@pdfescapeform
412 \newif\ifHy@hyperfigures
413 \newif\ifHy@pdffitwindow
414 \newif\ifHy@frenchlinks
415 \newif\ifHy@hyperfootnotes
416 \newif\ifHy@hyperindex
417 \newif\ifHy@hypertextnames
418 \newif\ifHy@implicit
419 \newif\ifHy@linktocpage
420 \newif\ifHy@localanchorname
421 \newif\ifHy@pdfmenubar
422 \newif\ifHy@naturalnames
423 \newif\ifHy@nesting
424 \newif\ifHy@pdfnewwindowset
425 \newif\ifHy@pdfnewwindow
426 \newif\ifHy@ocgcolorlinks
427 \newif\ifHy@pageanchor
428 \newif\ifHy@pdfpagelabels
429 \newif\ifHy@pdfpagehidden
430 \newif\ifHy@pdfstring
431 \newif\ifHy@plainpages
432 \newif\ifHy@psize
433 \newif\ifHy@raiselinks
434 \newif\ifHy@seminarslides
435 \newif\ifHy@setpagesize
436 \newif\ifHy@texht
437 \newif\ifHy@psdextra
438 \newif\ifHy@pdftoolbar
439 \newif\ifHy@unicode
440 \newif\ifHy@pdfusetitle
441 \newif\ifHy@verbose

```



```

442 \let\Hy@debugtrue\Hy@verbosetrue
443 \let\Hy@debugfalse\Hy@verbosefalse
444 \newif\ifHy@pdfwindowui
445 \newif\ifHy@pdfdisplaydoctitle
446 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

447 \Hy@backreffalse
448 \Hy@bookmarksnumberedfalse
449 \Hy@bookmarksopenfalse
450 \Hy@bookmarkstrue
451 \Hy@breaklinksfalse
452 \Hy@pdfcenterwindowfalse
453 \Hy@CJKbookmarksfalse
454 \Hy@destlabelfalse
455 \Hy@pdfescapeformfalse
456 \Hy@hyperfiguresfalse
457 \Hy@pdffitwindowfalse
458 \Hy@hyperfootnotetrue
459 \Hy@hyperindextrue
460 \Hy@hypertextnamestrue
461 \Hy@implicittrue
462 \Hy@linktocpagefalse
463 \Hy@localanchornamefalse
464 \Hy@pdfmenubartrue
465 \Hy@naturalnamesfalse
466 \Hy@nestingfalse
467 \Hy@pdfnewwindowsetfalse
468 \Hy@pdfnewwindowfalse
469 \Hy@pageanchortrue
470 \Hy@pdfpagelabelstrue
471 \Hy@pdfpagehiddenfalse
472 \Hy@pdfstringfalse
473 \Hy@plainpagesfalse
474 \Hy@raiselinksfalse
475 \Hy@setpagesizetrue
476 \Hy@texhtfalse
477 \Hy@psdextrafalse
478 \Hy@pdftoolbartrue
479 \Hy@typexmlfalse
480 \Hy@unicodetrue
481 \Hy@pdfusetitlefalse
482 \Hy@verbosefalse
483 \Hy@pdfwindowuitrue
484 \Hy@pdfdisplaydoctitlefalse
485 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

486 \def\Hy@StepCount#1{\advance#1 by 1 }%

```

\Hy@GlobalStepCount

```

487 \def\Hy@GlobalStepCount#1{\global\advance#1 by 1 }%

```

```

488 \newdimen\@linkdim
489 \let\Hy@driver\ltx@empty
490 \let\MaybeStopEarly\relax

```

```

491 \newcount\Hy@linkcounter
492 \newcount\Hy@pagecounter
493 \Hy@linkcounter0
494 \Hy@pagecounter0

```

5.1 Macros for recursions

```

495 \let\Hy@ReturnEnd\@empty
496 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
497 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

`\Hy@safe@activetrue` Babel's switch setting commands cannot be used directly, because they can be undefined if babel is not loaded.

```

498 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
499 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

At some places numbers in pdf units are expected (eg: FitBH, ...). The following macros perform the transformation from TeX units (pt) to PDF units (bp).

`\hypercalsbp` The user macro `\hypercalsbp` can be used, for example, inside option values:

```
pdfstartview={FitBH \hypercalsbp{\paperheight-\topmargin-1in}}
```

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalsbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalsbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalsbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalsbpdef`. Limitations:
 - Works only in options that use `\hypercalsbpdef` (currently only `pdfstartview`).
 - For calculations package `calc` has to be loaded.
 - The expansion of the argument is done at definition time.

Example (TeX):

```

\usepackage{calc}
\usepackage[...]{hyperref}
\hypersetup{
  pdfstartview={FitBH \hypercalsbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}

```

`\hypercalsbp`

```

500 \begingroup\expandafter\expandafter\expandafter\endgroup
501 \expandafter\ifx\csname dimexpr\endcsname\relax
502 \def\hypercalsbpdef#1#2{%
503   \begingroup
504     \toks@{\}%
505     \HyCal@scan#2\hypercalsbp\@nil
506   \expandafter\endgroup

```

```

507 \expandafter\def\expandafter#1\expandafter{\the\toks@}%
508 }%
509 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
510 \toks@\expandafter{\the\toks@ #1}%
511 \ifx\\#2\\%
512 \else
513 \ltx@ReturnAfterFi{%
514 \HyCal@do#2\@nil
515 }%
516 \fi
517 }%
518 \def\HyCal@do#1#2\@nil{%
519 \@ifpackageloaded{calc}{%}%
520 \Hy@Warning{%
521 For calculations \string\hypercalcbp\space needs\MessageBreak
522 package calc or e-TeX%
523 }%
524 }%
525 \setlength{\dimen@}{#1}%
526 \setlength{\dimen@}{0.99626401\dimen@}%
527 \edef\x{%
528 \toks@{%
529 \the\toks@
530 \strip@pt\dimen@
531 }%
532 }\x
533 \HyCal@scan#2\@nil
534 }%
535 \else
536 \def\hypercalcbp#1{%
537 \strip@pt\dimexpr 0.99626401\dimexpr(#1)\relax\relax
538 }%
539 \def\hypercalcbpdef{\def}%
540 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

Naming convention: All internal commands that are only needed by `\pdfstringdef` are prefixed with `\HyPsd@`.

6.1 Description of PDF strings

The PDF specification defines several places to hold text strings (bookmark names, document information, text annotations, etc.). The PDF strings have following properties:

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code ddd

- Strings are stored either in PDFDocEncoding, which is a superset of ISO-Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

The central macro for dealing with PDF strings is `\pdfstringdef`. It defines a command `#1` to be the result of the conversion from the string in `#2` to a legal PDFDocEncoded string. Currently the definition is global, but this can be changed in the future.

Important: In \TeX 's view PDF strings are written to a file and are expanded only in its mouth. Stomach commands that cannot be expanded further aren't executed, they are written verbatim. But the PDF reader that reads such a string isn't a \TeX interpreter!

The macro `\pdfstringdef` consists of three main parts:

1. Preprocessing. Here the expansion is prepared. The encoding is set and many commands are redefined, so that they work appropriate.
2. Expansion. The \TeX string is expanded the first time to get a PDF string.
3. Postprocessing. The result of the expansion is checked and converted to the final form.

`\pdfstringdef` `\pdfstringdef` works on the tokens in `#2` and converts them to a PDF string as far as possible:

- The result should obey the rules of the PDF specification for strings.
- The string can safely be processed by \TeX , because the tokens have only cat-codes 10 until 12.

The result is stored in the command token given in `#1`.

```
541 \def\pdfstringdef#1#2{%
```

Many redefinitions are needed, so all the work is done in a group.

```
542 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vtex driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

```
543 \escapechar'\%
```

From the view of \TeX a octal sequence consists of the command tokens `\0` until `\3` and two digits. For saving tokens `\0`, `\1`, `\2`, and `\3` are directly used without a preceding `\string` in the glyph definitions. This is done here locally by defining the `\0` until `\3` commands. So the user can use octal escape sequences directly, the disadvantage is that a previous definition of this short commands does not apply.

```
544 \edef\0{\string\0}%
545 \edef\1{\string\1}%
546 \edef\2{\string\2}%
547 \edef\3{\string\3}%
```

Setting font encoding. The unicode encoding uses `\8` and `\9` as marker for the higher byte. `\8` is an abbreviation for the higher bytes 0 until 7 that can be expressed by one digit. `\8` will be converted to `\00`. However `\9` only marks the next three digits as higher byte and will be removed later.

The encoding is set by `\enc@update` for optimizing reasons.

```
548 \ifHy@unicode
549 \edef\8{\string\8}%
550 \edef\9{\string\9}%
551 \fontencoding{PU}%
552 \HyPsd@UTFviii
553 \def\ifpdfstringunicode###1##2{##1}%
554 \else
555 \fontencoding{PD1}%
556 \def\ifpdfstringunicode###1##2{##2}%
557 \fi
558 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
559 \enc@update
```

Internal encoding commands. `\pdfstringdef` interpretes text strings which are not allowed to contain mathematical stuff. The text glyph commands will produce a warning, if called in math mode. But this warning disturbs while expanding. Therefore we check for math mode here, before `\@inmathwarn` will be disabled (see below).

```
560 \@inmathwarn\pdfstringdef
```

If a glyph is used, that isn't in the PD1/PU encoding there will be an infinite error loop, because the NFSS encoding stuff have to be expanded unprotected (`\edef`), so that the assignments of `\@changed@cmd` don't take place. To patch this behaviour I only found `\@inmathwarn` as a usable hook. While an `\edef` a warning message by `\@inmathwarn` or `\TextSymbolUnavailable` cannot be give out, so `\@inmathwarn` should be disabled. And with the help of it the assignments in `\@changed@cmd` can easily be caught (see below).

```
561 \let\@inmathwarn\HyPsd@inmathwarn
```

Unknown composite characters are built with `\add@accent`, so it is redefined to provide a warning.

```
562 \let\add@accent\HyPsd@add@accent
```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here.

```
563 \let\{\textbraceleft
564 \let\}\textbraceright
```

```

565 \let\\\textbackslash
566 \let\#\textnumbersign
567 \let\$\textdollar
568 \let\%\textpercent
569 \let\&\textampersand
570 % \let\~\textasciitilde
571 \let\_ \textunderscore
572 \let\P\textparagraph
573 \let\ldots\textellipsis
574 \let\dots\textellipsis

```

Newline `\newline` or `\\` do not work in bookmarks, in text annotations they should expand to `\r`. In pdf strings `\\` stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: `\pdfstringdefDisableCommands{\let\\\textbackslash}`

new line: `\pdfstringdefDisableCommands{\let\\\textCR}`

disabled: `\pdfstringdefDisableCommands{\let\\\empty}`

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```

575 \def\{\pdfstringdefWarn\}%
576 \def\newline{\pdfstringdefWarn\newline}%

```

Logos. Because the box shifting used in the T_EX logo does not work while writing to a file, the standard T_EX logos are redefined.

```

577 \def\TeX{\TeX}%
578 \def\LaTeX{La\TeX}%
579 \def\LaTeXe{%
580   \LaTeX2%
581   \ifHy@unicode\textepsilon\else e\fi
582 }%
583 \def\eTeX{%
584   \ifHy@unicode\textepsilon\else e\fi
585   -\TeX%
586 }%
587 \def\SliTeX{Sli\TeX}%
588 \def\MF{Metafont}%
589 \def\MP{Metapost}%

```

Standard font commands. Because font changes do not work, the standard font switching commands are disabled.

```

590 \let\fontencoding\@gobble
591 \let\fontfamily\@gobble
592 \let\fontseries\@gobble
593 \let\fontshape\@gobble
594 \let\fontsize\@gobbletwo
595 \let\selectfont\@empty
596 \let\usefont\@gobblefour
597 \let\emph\@firstofone
598 \let\textnormal\@firstofone
599 \let\textrm\@firstofone
600 \let\textsf\@firstofone

```

```

601 \let\texttt\@firstofone
602 \let\textbf\@firstofone
603 \let\textmd\@firstofone
604 \let\textit\@firstofone
605 \let\textsc\@firstofone
606 \let\textsl\@firstofone
607 \let\textup\@firstofone
608 \let\normalfont\@empty
609 \let\rmfamily\@empty
610 \let\sffamily\@empty
611 \let\ttfamily\@empty
612 \let\bfseries\@empty
613 \let\mdseries\@empty
614 \let\itshape\@empty
615 \let\scshape\@empty
616 \let\slshape\@empty
617 \let\upshape\@empty
618 \let\em\@empty
619 \let\rm\@empty
620 \let\Huge\@empty
621 \let\LARGE\@empty
622 \let\Large\@empty
623 \let\footnotesize\@empty
624 \let\huge\@empty
625 \let\large\@empty
626 \let\normalsize\@empty
627 \let\scriptsize\@empty
628 \let\small\@empty
629 \let\tiny\@empty
630 \let\mathversion\@gobble
631 \let\phantom\@gobble
632 \let\vphantom\@gobble
633 \let\hphantom\@gobble

```

Package pifont.

```

634 \let\ding\HyPsd@ding
635 \let\Cube\HyPsd@DieFace
636 %* \HyPsd@DieFace -> \epsdice (epsdice)
637 %* \HyPsd@DieFace -> \fcdice (hhcount)

```

Environments.

```

638 \def\begin#1{\csname#1\endcsname}%
639 \def\end#1{\csname end#1\endcsname}%

```

Package color.

```

640 \def\textcolor##1##{\@secondoftwo}%

```

Upper- and lowercase.

```

641 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
642 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

Support of math commands without prefix text. This is controlled by option “psdextra” and only activated with Unicode PDF strings.

```

643 \ifHy@psdextra

```

```

644 \ifHy@unicode
645 \csname psdmapshortnames\endcsname
646 \csname psdaliasnames\endcsname
647 \fi
648 \fi

```

Package babel. Wherever “naturalnames” is used, disable `\textlatin` (from Babel 3.6k). Thanks to Felix Neubauer (Email: Felix.Neubauer@gmx.net).

```

649 \let\foreignlanguage\@secondoftwo
650 \let\textlatin\@firstofone
651 \ltx@ifundefined{language@group}{-}{%
652 \csname HyPsd@babel@\language@group\endcsname
653 }%
654 \HyPsd@GreekPatch
655 \HyPsd@SpanishPatch
656 \HyPsd@RussianPatch
657 \HyPsd@BabelPatch
658 \let\@safe@activetrue\relax
659 \let\@safe@activesfalse\relax

```

Disable `\cyr`, used in `russianb.ldf`.

```
660 \let\cyr\relax
```

Redefine `\es@roman`, used in `spanish.ldf`.

```
661 \let\es@roman\@Roman
```

Package german.

```

662 \let\glqq\textglqq
663 \let\grqq\textgrqq
664 \let\glq\textglq
665 \let\grq\textgrq
666 \let\flqq\textflqq
667 \let\frqq\textfrqq
668 \let\flq\textflq
669 \let\frq\textfrq

```

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```

\if@mid@expandable{not fully expandable code}{fully expandable
code}

```

```
670 \let\if@mid@expandable\@firstoftwo
```

AMS classes.

```
671 \HyPsd@AMSclassfix
```

Redefinition of `\hspace` `\hspace` don’t work in bookmarks, the following fix tries to set a space if the argument is a positive length.

```
672 \let\hspace\HyPsd@hspace
```


Commands of referencing and indexing systems. Some L^AT_EX commands that are legal in \section commands have to be disabled here.

```
673 \let\label\@gobble
674 \let\index\@gobble
675 \let\glossary\@gobble
676 \let\href\HyPsd@href
677 \let\@mkboth\@gobbletwo
```

The \ref and \pageref is much more complicate because of their star form.

```
678 \let\ref\HyPsd@ref
679 \let\pageref\HyPsd@pageref
680 \let\nameref\HyPsd@nameref
681 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
682 \let\leavevmode\@empty
683 \let\mbox\@empty
\halign causes error messages because of the template character #.
684 \def\halign{\pdfstringdefWarn\halign\@gobble}%
685 \let\ignorespaces\HyPsd@ignorespaces
686 \let\Hy@sectionAnchorHref\@gobble
687 \let\ensuremath\@firstofone
```

Patch for cjk bookmarks.

```
688 \HyPsd@CJKhook
```

User hook. The switch \Hy@pdfstring is turned on. So user commands can detect that they are processed not to be typesetted within T_EX's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in #2 additional redefinitions can be added by the hook \pdfstringdef-PreHook.

The position in the middle of the redefinitions is a compromise: The user should be able to provide his own (perhaps better) redefinitions, but some commands should have their original meaning, because they can be used in the hook (\bgroup, or \@protected@testopt, and \@ifnextchar for \renewcommand).

```
689 \Hy@pdfstringtrue
690 \pdfstringdefPreHook
```

Spaces. For checking the token of the string, spaces must be masked, because they cannot be caught by undelimited arguments.

```
691 \HyPsd@LetUnexpandableSpace\space
692 \HyPsd@LetUnexpandableSpace\ %
693 \HyPsd@LetUnexpandableSpace~%
694 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
695 \ltx@ifundefined{@xspace}{}%
696 \let\xspace\HyPsd@ITALCORR
697 }{%
698 \let\xspace\HyPsd@XSPACE
699 }%
700 \let\/\HyPsd@ITALCORR
```

```

701 \let\bgroup\/%
702 \let\egroup\/%

```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```

703 \let\discretionary\@gobbletwo
    \@ifstar is defined in LATEX as follows:

```

```

\def\@ifstar#1{\@ifnextchar *{\@firstoftwo{#1}}

```

\@ifnextchar doesn't work, because it uses stomach commands like \let and \futurelet. But it doesn't break. Whereas \@firstoftwo{#1} gives an error message because \@firstoftwo misses its second argument.

A mimicry of \@ifnextchar only with expandible commands would be very extensive and the result would be only an approximation. So here a cheaper solution follows in order to get rid of the error message at least:

```

704 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
705 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
706 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
707 \let\@protected@testopt\HyPsd@protected@testopt

```

Support for package 'xargs':

```

708 \let\@protected@testopt@xargs\HyPsd@protected@testopt

```

6.2.2 Expansion

There are several possibilities to expand tokens within L^AT_EX:

\protected@edef: The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

\csname: First the string is expanded within a \csname and \endcsname. Then the command name is converted to characters with catcode 12 by \string and the first escape character removed by \@gobble. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by T_EX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. T_EX provides no way to catch the error caused by \csname or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option **exactdef** in previous versions less or equal 6.50.

\edef This version uses this standard form for expansion. It is stronger than L^AT_EX's \protected@edef. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of L^AT_EX doesn't work within an \edef, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see \texorpdfstring). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with \csname. However a PDF reader isn't T_EX, so these tokens are viewed verbatim. So this

version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via `\xdef` the `\Generic...` messages don't work and causes problems (error messages, invalid `.out` file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, `\pdfstringdef` is slow enough).

```
709 \begingroup
710 \let\GenericError\@gobblefour
711 \let\GenericWarning\@gobbletwo
712 \let\GenericInfo\@gobbletwo
```

Package french. This fix only works, if `\GenericError` is disabled.

```
713 \ifx\nofrenchguillemets\@undefined
714 \else
715 \nofrenchguillemets
716 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.12). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
717 \let\Hy@temp\xdef
718 \let\def\HyPsd@DefCommand
719 \let\gdef\HyPsd@DefCommand
720 \let\edef\HyPsd@DefCommand
721 \let\xdef\HyPsd@DefCommand
722 \let\futurelet\HyPsd@LetCommand
723 \let\let\HyPsd@LetCommand
724 \Hy@temp#1{#2}%
725 \endgroup
```

6.2.3 Postprocessing

If the string is empty time can be saved by omitting the postprocessing process.

```
726 \ifx#1\@empty
727 \else
```

Protecting spaces and removing grouping characters. In order to check the tokens we must separate them. This will be done with `TEX`'s argument parsing. With this method we must the following item takes into account, that makes makes things a litte more complicate:

- `TEX` does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by `TEX`'s argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.

- \TeX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character `|` is appended to the string to make an outer brace to an inner one.

First the top level spaces are protected by replacing. Then the string is scanned to detect token groups. Each token group will now be space protected and again scanned for another token groups.

```

728 \HyPsd@ProtectSpaces#1%
729 \let\HyPsd@String\@empty
730 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
731 \global\let#1\HyPsd@String

```

Check tokens. After removing the spaces and the grouping characters the string now should only consists of the following tokens/catcodes:

- 0 command names with start with an escape character.
- 3 math shift
- 4 alignment tabs
- 6 parameter, but this is unlikely.
- 7 superscript
- 8 subscript
- 11 letter
- 12 other
- 13 commands that are active characters.

After `\HyPsd@CheckCatcodes` the command `\HyPsd@RemoveMask` is reused to remove the group protection character `|`. This character is needed to ensure that the string at least consists of one token if `\HyPsd@CheckCatcodes` is called.

Because of internal local assignments and tabulars group braces are used.

```

732 \let\HyPsd@SPACEOPTI\relax
733 {%
734 \let\HyPsd@String\@empty
735 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
736 \global\let#1\HyPsd@String
737 }%
738 \expandafter\HyPsd@RemoveMask\expandafter
739 |\expandafter\@empty#1\HyPsd@End#1%

```

`\HyPsd@CheckCatcodes` should no have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause to many errors before, there should now be only tokens with catcodes 11 or 12. So I think there is no need for a safety step like:

```
\xdef#1{\expandafter\strip@prefix\meaning#1}%
```

Looking for wrong glyphs. The case that glyphs aren't defined in the PD1 encoding is caught above in such a way, that the glyph name and a marker is inserted into the string. Now we can safely scan the string for this marker and provide a descriptive warning.

```

740 \expandafter
741 \HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
742 \let\HyPsd@String\@empty
743 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
744 \global\let#1\HyPsd@String

```

Backslash. The double backslash disturbs parsing octal sequences, for example in a string like `abc\\051` the sequence `\051` is detected although the second `\` belongs to the first backslash.

```
745 \HyPsd@StringSubst{\}{\textbackslash}#1%
```

Spaces. All spaces have already the form `\040`. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command `\HyPsd@SPACEOPTI`. But first it is defined to be `\relax` in order to prevent a too early expansion by an `\edef`. Secondly a `\relax` serves as a marker for a token that is detected by `\xspace`.

The code of `frenchb.ldf` can produce an additional space before `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```
746 \iffHy@unicode
747 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
748 \HyPsd@SPACEOPTI#1%
749 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
750 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
751 {\HyPsd@SPACEOPTI\80\273}#1%
752 \else
753 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
754 \expandafter\HyPsd@Subst\expandafter{%
755 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
756 \string\273}\HyPsd@SPACEOPTI\273}#1%
757 \fi
```

Right parenthesis. Also `\xspace` detects a right parenthesis. For the `\xspace` support and the following parenthesis check the different parenthesis notations `)`, `\)`, and `\051` are converted to one type `\)` and before `\HyPsd@empty` with the meaning of `\relax` is introduced for `\xspace`. By redefining to `\@empty` `\HyPsd@empty` can easily be removed later.

```
758 \iffHy@unicode
759 \HyPsd@StringSubst{\)}{\80\051}#1%
760 \HyPsd@Subst){\80\051}#1%
761 \let\HyPsd@empty\relax
762 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
763 {\HyPsd@empty\80\051}#1%
764 \else
765 \HyPsd@StringSubst{\)}{\051}#1%
766 \HyPsd@Subst){\051}#1%
767 \let\HyPsd@empty\relax
768 \HyPsd@StringSubst{\051}\HyPsd@empty\string\)}#1%
769 \fi
```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\/` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace`

comes last. Because `\HyPsd@Subst` with several equal tokens (--) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

770 \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
771 \ltx@ifundefined{@xspace}{%
772 }{%
773 \let\HyPsd@xspace\relax
774 \expandafter\HyPsd@Subst\expandafter
775 {\HyPsd@XSPACE}\HyPsd@xspace#1%
776 \let\HyPsd@xspace\HyPsd@doxspace
777 }%
778 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the current version 3 of the `AcrobatReader` lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the `AcrobatReader` is better. To break the ligatures the user can use an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

Since newer `AcrobatReader` versions now show the en- and emdash in a correct way (AR7/Linux, AR8/Linux), the substitution code for them is enabled starting with version 6.78l.

```

779 \HyPsd@Subst{---}\textemdash#1%
780 \HyPsd@Subst{--}\textendash#1%
781 % \HyPsd@Subst{fi}\textfi#1%
782 % \HyPsd@Subst{fl}\textfl#1%
783 \HyPsd@Subst{!'}\texttexclamdown#1%
784 \HyPsd@Subst{?'}\textquestiondown#1%

```

With the next `\edef` we get rid of the token `\HyPsd@empty`.

```

785 \let\HyPsd@empty\@empty

```

Left parentheses. Left parentheses are now converted to safe forms to avoid problems with unmatched ones (`\(` with `PDFDocEncoding`, the octal sequence with Unicode).

An optimization is possible. Matched parentheses can be replaced by a `()` pair. But this code is removed to save \TeX memory and time.

```

786 \ifHy@unicode
787 \HyPsd@StringSubst\(\textparenleft#1%
788 \HyPsd@Subst(\textparenleft#1%
789 \else
790 \HyPsd@StringSubst\({\050}#1%
791 \HyPsd@Subst({\050}#1%
792 \HyPsd@StringSubst{\050}\string\{}#1%
793 \fi

```

Optimizing spaces. Spaces are often used, but they have a very long form `\040`. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the `.out` file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

794 \ifHy@unicode

```

```

795 \edef\HyPsd@SPACEOPTI{\80\040}%
796 \else
797 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
798 \fi
799 \xdef#1{#1\@empty}%
800 \fi

```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```

801 \endgroup
802 \begingroup
803 \ifHy@unicode
804 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

805 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
806 \ltx@ifundefined{StringEncodingConvertTest}{%
807 }{%
808 \EdefUnescapeString\HyPsd@temp#1%
809 \ifxetex
810 \let\HyPsd@UnescapedString\HyPsd@temp
811 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
812 {utf16be}{ascii-print}{%
813 \EdefEscapeString\HyPsd@temp\HyPsd@temp
814 \global\let#1\HyPsd@temp
815 \HyPsd@EscapeTeX#1%
816 \Hy@unicodedefalse
817 }{%
818 \HyPsd@ToBigChars#1%
819 }%
820 \else
821 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
822 {utf16be}{pdfdoc}{%
823 \EdefEscapeString\HyPsd@temp\HyPsd@temp
824 \global\let#1\HyPsd@temp
825 \HyPsd@EscapeTeX#1%
826 \Hy@unicodedefalse
827 }{}%
828 \fi
829 }%
830 \fi
831 \fi
832 \HyPsd@XeTeXBigCharsfalse

```

User hook. The hook \pdfstringdefPostHook can be used for the purpose to postprocess the string further.

```

833 \pdfstringdefPostHook#1%
834 \endgroup
835 }

```

\Hy@pdfstringdef

```

836 \def\Hy@pdfstringdef#1#2{%
837 \pdfstringdef\Hy@gtemp{#2}%
838 \let#1\Hy@gtemp
839 }

```

6.3 Encodings

6.3.1 XeTeX

```
840 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
841 \catcode\z@=12 %
842 \ifxetex
843   \expandafter\@firstofone
844 \else
845   \let\HyPsd@XeTeXBigCharstrue\@empty
846   \let\HyPsd@XeTeXBigCharsfalse\@empty
847   \expandafter\@gobble
848 \fi
849 {%
850   \newif\ifHyPsd@XeTeXBigChars
851   \def\HyPsd@XeTeXBigCharsfalse{%
852     \global\let\ifHyPsd@XeTeXBigChars\iffalse
853   }%
854   \def\HyPsd@XeTeXBigCharstrue{%
855     \global\let\ifHyPsd@XeTeXBigChars\iftrue
856   }%
857   \def\HyPsd@ToBigChars#1{%
858     \ifHyPsd@XeTeXBigChars
859       \EdefEscapeHex\HyPsd@UnescapedString{%
860         \expandafter\@gobbletwo\HyPsd@UnescapedString
861       }%
862       \begingroup
863       \toks@{%}%
864       \escapechar=92\relax
865       \let\x\HyPsd@ToBigChar
866       \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
867       \relax\relax\relax\relax\relax\relax\relax
868       \edef\x{%
869         \endgroup
870         \gdef\noexpand#1{\the\toks@}%
871       }%
872       \x
873     \fi
874   }%
875   \def\HyPsd@ToBigChar#1#2#3#4{%
876     \ifx\relax#1\relax
877       \let\x\relax
878     \else
879       \count@=" #1#2#3#4\relax
880       \let\y\@empty
881       \lccode\z@=\count@
882       \ifnum\count@=40 % (
883         \let\y\@backslashchar
884       \else
885         \ifnum\count@=41 % )
886         \let\y\@backslashchar
887       \else
888         \ifnum\count@=92 % backslash
889         \let\y\@backslashchar
890       \else
891         \ifnum\count@=10 % newline
892         \edef\y##1{\string\n}%
893       \else
```



```

894         \ifnum\count@=13 % carriage return
895         \edef\y##1{\string\r}%
896         \fi
897     \fi
898 \fi
899 \fi
900 \fi
901 \lowercase{%
902     \toks@\expandafter{%
903         \the\expandafter\toks@
904         \y
905         ^^@%
906     }%
907 }%
908 \fi
909 \x
910 }%
911 }
912 \Hy@temp

```

6.3.2 Workaround for package linguex

```

913 \@ifpackageloaded{linguex}{%
914     \let\HyLinguex@OrgB\b
915     \let\HyLinguex@OrgC\c
916     \let\HyLinguex@OrgD\d
917     \def\HyLinguex@Restore{%
918         \let\b\HyLinguex@OrgB
919         \let\c\HyLinguex@OrgC
920         \let\d\HyLinguex@OrgD
921     }%
922     \Hy@AtEndOfPackage{%
923         \pdfstringdefDisableCommands{%
924             \ltx@ifundefined{oldb}{-}{\let\b\oldb}%
925             \ltx@ifundefined{oldc}{-}{\let\c\oldc}%
926             \ltx@ifundefined{oldd}{-}{\let\d\oldd}%
927         }%
928     }%
929 }{%
930     \let\HyLinguex@Restore\relax
931 }%

```

6.3.3 Catcodes saving and restoring for .def files

\Hy@SaveCatcodeSettings

```

932 \def\Hy@SaveCatcodeSettings#1{%
933     \expandafter\edef\csname Hy@cat@#1\endcsname{%
934         \endlinechar=\the\endlinechar\relax
935         \catcode32 \the\catcode32\relax % (space)
936         \catcode34 \the\catcode34\relax % "
937         \catcode35 \the\catcode35\relax % #
938         \catcode37 \the\catcode37\relax % (percent)
939         \catcode40 \the\catcode40\relax % (
940         \catcode41 \the\catcode41\relax % )
941         \catcode42 \the\catcode42\relax % *
942         \catcode46 \the\catcode46\relax % .
943         \catcode58 \the\catcode58\relax % :
944         \catcode60 \the\catcode60\relax % <
945         \catcode61 \the\catcode61\relax % =

```

```

946 \catcode62 \the\catcode62\relax % >
947 \catcode64 \the\catcode64\relax % @
948 \catcode91 \the\catcode91\relax % [
949 \catcode92 \the\catcode92\relax % \
950 \catcode93 \the\catcode93\relax % ]
951 \catcode123 \the\catcode123\relax % {
952 \catcode124 \the\catcode124\relax % |
953 \catcode125 \the\catcode125\relax % }
954 }%
955 \endlinechar=-1 %
956 \catcode32 10 % (space)
957 \catcode34 12 % "
958 \catcode35 6 % #
959 \catcode37 14 % (percent)
960 \catcode40 12 % (
961 \catcode41 12 % )
962 \catcode42 12 % *
963 \catcode46 12 % .
964 \catcode58 12 % :
965 \catcode60 12 % <
966 \catcode61 12 % =
967 \catcode62 12 % >
968 \catcode91 12 % [
969 \catcode92 0 % \
970 \catcode93 12 % ]
971 \catcode123 1 % {
972 \catcode124 12 % |
973 \catcode125 2 % }
974 \makeatletter
975 }

```

\Hy@RestoreCatcodeSettings

```

976 \def\Hy@RestoreCatcodeSettings#1{%
977 \csname Hy@cat@#1\endcsname
978 \expandafter\let\csname Hy@cat@#1\endcsname\relax
979 }

```

6.3.4 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for interpreting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

The PD1 encoding can be specified as an option of the 'fontenc' package or loaded here. It does not matter what font family is selected, as T_EX does not process it anyway. So use CM.

```

980 \@ifundefined{T@PD1}{%
981 \Hy@SaveCatcodeSettings{pd1}%
982 \input{pd1enc.def}%
983 \Hy@RestoreCatcodeSettings{pd1}%
984 \HyLinguex@Restore
985 }{}
986 \DeclareFontFamily{PD1}{pdf}{}
987 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
988 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.5 PU encoding

The PU encoding implements the Unicode encoding for use with L^AT_EX's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option `unicode` is specified as package option.

`\HyPsd@LoadUnicode` Because the file `puenc.def` takes a lot of memory, the loading is defined in the macro `\HyPsd@LoadUnicode` called by the package option `unicode`.

```
989 \def\HyPsd@LoadUnicode{%
990   \ifundefined{T@PU}{%
991     \Hy@SaveCatcodeSettings{pu}%
992     \input{puenc.def}%
993     \Hy@RestoreCatcodeSettings{pu}%
994     \HyLinguex@Restore
995   }{%
996     \DeclareFontFamily{PU}{pdf}{}%
997     \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{%
998       \DeclareFontSubstitution{PU}{pdf}{m}{n}%
999       \HyPsd@LoadExtra
1000   \let\HyPsd@LoadUnicode\relax
1001 }
```

`\HyPsd@LoadExtra`

```
1002 \def\HyPsd@LoadExtra{%
1003   \ifHy@psdextra
1004     \ltx@iffileloaded{puenc.def}{%
1005       \Hy@SaveCatcodeSettings{psdextra}%
1006       \input{psdextra.def}%
1007       \Hy@RestoreCatcodeSettings{psdextra}%
1008       \let\HyPsd@LoadExtra\relax
1009     }{%
1010       \fi
1011 }
```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

`\texorpdfstring` While expanding the string in `\pdfstringdef` the switch `\ifHy@pdfstring` is set. This is used by the full expandable macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by T_EX's stomach, the second contains the replacement for PDF strings.

```
1012 \def\texorpdfstring{%
1013   \ifHy@pdfstring
1014     \expandafter\@secondoftwo
1015   \else
1016     \expandafter\@firstoftwo
1017   \fi
1018 }
```

6.4.2 Hooks for `\pdfstringdef`

`\pdfstringdefPreHook` Default definition of the hooks for `\pdfstringdef`. The construct `\@ifundefined`
`\pdfstringdefPostHook` with `\let` is a little bit faster than `\providecommand`.

```
1019 \@ifundefined{pdfstringdefPreHook}{%
1020   \let\pdfstringdefPreHook\empty
1021 }
```

```

1022 \@ifundefined{pdfstringdefPostHook}{%
1023   \let\pdfstringdefPostHook\@gobble
1024 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

Macro `\pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\pdfstringdefPreHook`, e.g.:

```

\pdfstringdefDisableCommands{%
  \let~\textasciitilde
  \def\url{\pdfstringdefWarn\url}%
  \let\textcolor\@gobble
}%

```

In the argument of `\pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful L^AT_EX commands like `\@gobble` or `\@firstofone`.

```

1025 \def\pdfstringdefDisableCommands{%
1026   \begingroup
1027   \makeatletter
1028   \HyPsd@DisableCommands
1029 }

```

`\HyPsd@DisableCommands`

```

1030 \long\def\HyPsd@DisableCommands#1{%
1031   \ltx@GlobalAppendToMacro\pdfstringdefPreHook{#1}%
1032   \endgroup
1033 }

```

(Partial) fix for bug in frenchb.ldf 2010/08/21 v2.5a that destroys `\pdfstringdefDisableCommands` after usage in `\AtBeginDocument`.

```

1034 \let\HyPsd@pdfstringdefDisableCommands\pdfstringdefDisableCommands
1035 \AtBeginDocument{%
1036   \@ifundefined{pdfstringdefDisableCommands}{%
1037     \let\pdfstringdefDisableCommands\HyPsd@pdfstringdefDisableCommands
1038   }{}%
1039 }

```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>-` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```

1040 \def\pdfstringdefWarn#1{%
1041   \expandafter\noexpand\csname<>-string#1\endcsname
1042 }

```

6.5 Help macros for expansion

6.5.1 \ignorespaces

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little, In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```
1043 \begingroup
1044 \catcode0=12 %
1045 \def\x{\endgroup
1046 \def\HyPsd@ignorespaces{%
1047 \romannumeral\expandafter'\expandafter^^@%
1048 \romannumeral'^^^@%
1049 }%
1050 }%
1051 \x
```

6.5.2 Babel languages

Since version 2008/03/16 v3.8j babel uses inside `\AtBeginDocument`:

```
\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}
```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```
1052 \def\HyPsd@BabelPatch{%
1053 \let\HyOrg@languageshorthands\languageshorthands
1054 \let\languageshorthands\HyPsd@LanguageShorthands
1055 }
1056 \begingroup\expandafter\expandafter\expandafter\endgroup
1057 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
1058 \let\HyPsd@langshort@system\@empty
1059 \def\HyPsd@LanguageShorthands#1{%
1060 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
1061 \HyPsd@langshort@system
1062 \expandafter\@gobble
1063 \else
1064 \expandafter\@firstofone
1065 \fi
1066 {%
1067 \HyOrg@languageshorthands{#1}%
1068 }%
1069 }%
1070 \else
1071 \def\HyPsd@LanguageShorthands#1{%
1072 \ifnum\pdf@strcmp{#1}{system}=\z@
1073 \expandafter\@gobble
1074 \else
1075 \expandafter\@firstofone
1076 \fi
1077 {%
1078 \HyOrg@languageshorthands{#1}%
```

```

1079 }%
1080 }%
1081 \fi
1082 \def\Hy@temp{%
1083 \ifpackageloaded{babel}{%
1084 \ifpackagelater{babel}{2008/03/16}{%
1085 \let\Hy@temp\@empty
1086 }{%
1087 \def\HyPsd@BabelPatch{%
1088 \let\HyOrg@languageshorthands\languageshorthands
1089 }%
1090 }%
1091 }{}%
1092 }
1093 \Hy@temp
1094 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1095 \newif\ifHy@next

Nothing to do for english.
1096 \ltx@ifundefined{danish@sh@}{@sel}{}{}%
1097 \def\HyPsd@babel@danish{%
1098 \declare@shorthand{danish}{"}|{}%
1099 \declare@shorthand{danish}{"}~{}-{}%
1100 }%
1101 }
1102 \ltx@ifundefined{dutch@sh@}{@sel}{}{}%
1103 \def\HyPsd@babel@dutch{%
1104 \declare@shorthand{dutch}{"}|{}%
1105 \declare@shorthand{dutch}{"}~{}-{}%
1106 }%
1107 }
1108 \ltx@ifundefined{finnish@sh@}{@sel}{}{}%
1109 \def\HyPsd@babel@finnish{%
1110 \declare@shorthand{finnish}{"}|{}%
1111 }%
1112 }
1113 \ltx@ifundefined{french@sh@}{@sel}{}{}%
1114 \def\HyPsd@babel@frenchb{%
1115 \def\guill@spacing{ }%
1116 }%
1117 }
1118 \ltx@ifundefined{german@sh@}{@sel}{}{}%
1119 \def\HyPsd@babel@german{%
1120 \declare@shorthand{german}{"}f{}f{}%
1121 \declare@shorthand{german}{"}|{}%
1122 \declare@shorthand{german}{"}~{}-{}%
1123 }%
1124 }
1125 \ltx@ifundefined{macedonian@sh@}{@sel}{}{}%
1126 \def\HyPsd@babel@macedonian{%
1127 \declare@shorthand{macedonian}{"}|{}%
1128 \declare@shorthand{macedonian}{"}~{}-{}%
1129 }%
1130 }{}
1131 \ltx@ifundefined{ngerman@sh@}{@sel}{}{}%
1132 \def\HyPsd@babel@ngerman{%
1133 \declare@shorthand{ngerman}{"}|{}%

```

```

1134 \declare@shorthand{ngerman}{"-~}{-}%
1135 }%
1136 }
1137 \ltx@ifundefined{portuges@sh@"}@sel{}{}%
1138 \def\HyPsd@babel@portuges{%
1139 \declare@shorthand{portuges}{"}|{}%
1140 }%
1141 }
1142 \ltx@ifundefined{russian@sh@"}@sel{}{}%
1143 \def\HyPsd@babel@russian{%
1144 \declare@shorthand{russian}{"}|{}%
1145 \declare@shorthand{russian}{"-~}{-}%
1146 }%
1147 }
1148 \ltx@ifundefined{slovene@sh@"}@sel{}{}%
1149 \def\HyPsd@babel@slovene{%
1150 \declare@shorthand{slovene}{"}|{}%
1151 }%
1152 }

```

Nested quoting environments are not supported (<<, >>).

```

1153 \ltx@ifundefined{spanish@sh@>}@sel{}{}%
1154 \def\HyPsd@babel@spanish{%
1155 \declare@shorthand{spanish}{<<}{\guillemotleft}%
1156 \declare@shorthand{spanish}{>>}{\guillemotright}%
1157 \declare@shorthand{spanish}{"}=}{-}%
1158 \declare@shorthand{spanish}{"-~}{-}%
1159 \declare@shorthand{spanish}{"!}{\textexclamdown}%
1160 \declare@shorthand{spanish}{"?}{\textquestiondown}%
1161 }%
1162 }
1163 \ltx@ifundefined{swedish@sh@"}@sel{}{}%
1164 \def\HyPsd@babel@swedish{%
1165 \declare@shorthand{swedish}{"}|{}%
1166 \declare@shorthand{swedish}{"-~}{-}%
1167 }%
1168 }
1169 \ltx@ifundefined{ukrainian@sh@"}@sel{}{}%
1170 \def\HyPsd@babel@ukrainian{%
1171 \declare@shorthand{ukrainian}{"}|{}%
1172 \declare@shorthand{ukrainian}{"-~}{-}%
1173 }%
1174 }
1175 \ltx@ifundefined{usorbian@sh@"}@sel{}{}%
1176 \def\HyPsd@babel@usorbian{%
1177 \declare@shorthand{usorbian}{"}f}{f}%
1178 \declare@shorthand{usorbian}{"}|{}%
1179 }%
1180 }
1181 \ltx@ifundefined{greek@sh@\string~}@sel{}{}%
1182 \let\HyPsd@GreekPatch\@empty
1183 }{}%
1184 \def\HyPsd@GreekPatch{%
1185 \let\greeknumeral\HyPsd@greeknumeral
1186 \let\Greeknnumeral\HyPsd@Greeknnumeral
1187 }%
1188 }
1189 \def\HyPsd@greeknumeral#1{%

```

```

1190 \HyPsd@GreekNum\@firstoftwo{#1}%
1191 }
1192 \def\HyPsd@Greeknumeral#1{%
1193 \HyPsd@GreekNum\@secondoftwo{#1}%
1194 }
1195 \def\HyPsd@GreekNum#1#2{%
1196 \ifHy@unicode
1197 \ifnum#2<\@ne
1198 \@arabic{#2}%
1199 \else
1200 \ifnum#2<1000000 %
1201 \HyPsd@@GreekNum#1{#2}%
1202 \else
1203 \@arabic{#2}%
1204 \fi
1205 \fi
1206 \else
1207 \@arabic{#2}%
1208 \fi
1209 }
1210 \def\HyPsd@@GreekNum#1#2{%
1211 \ifnum#2<\@m
1212 \ifnum#2<10 %
1213 \expandafter\HyPsd@GreekNumI
1214 \expandafter\@gobble\expandafter#1\number#2%
1215 \else
1216 \ifnum#2<100 %
1217 \expandafter\HyPsd@GreekNumII
1218 \expandafter\@gobble\expandafter#1\number#2%
1219 \else
1220 \expandafter\HyPsd@GreekNumIII
1221 \expandafter\@gobble\expandafter#1\number#2%
1222 \fi
1223 \fi
1224 \ifnum#2>\z@
1225 \textnumeralsigngreek
1226 \fi
1227 \else
1228 \ifnum#2<\@M
1229 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1230 \else
1231 \ifnum#2<100000 %
1232 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1233 \else
1234 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1235 \fi
1236 \fi
1237 \fi
1238 }
1239 \def\HyPsd@GreekNumI#1#2#3{%
1240 #1{%
1241 \ifnum#3>\z@
1242 \textnumeralsignlowergreek
1243 \fi
1244 }%
1245 \expandafter#2%
1246 \ifcase#3 %

```



```

1247  {}{}%
1248  \or\textalpha\textAlpha
1249  \or\textbeta\textBeta
1250  \or\textgamma\textGamma
1251  \or\textdelta\textDelta
1252  \or\textepsilon\textEpsilon
1253  \or\textstigmagreek\textStigmagreek
1254  \or\textzeta\textZeta
1255  \or\texteta\textEta
1256  \or\texttheta\textTheta
1257  \else
1258  {}{}%
1259  \fi
1260 }
1261 \def\HyPsd@GreekNumII#1#2#3#4{%
1262   #1{%
1263     \ifnum#3>\z@
1264       \textnumeralsignlowergreek
1265     \fi
1266   }%
1267   \expandafter#2%
1268   \ifcase#3 %
1269     {}{}%
1270     \or\textiota\textIota
1271     \or\textkappa\textKappa
1272     \or\textlambda\textLambda
1273     \or\textmu\textMu
1274     \or\textnu\textNu
1275     \or\textxi\textXi
1276     \or\textomicron\textOmicron
1277     \or\textpi\textPi
1278     \or\textkoppagreek\textKoppagreek
1279     \else
1280       {}{}%
1281     \fi
1282   \HyPsd@GreekNumI#1#2#4%
1283 }
1284 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1285   #1{%
1286     \ifnum#3>\z@
1287       \textnumeralsignlowergreek
1288     \fi
1289   }%
1290   \expandafter#2%
1291   \ifcase#3 %
1292     {}{}%
1293     \or\extrho\textRho
1294     \or\textsigma\textSigma
1295     \or\texttau\textTau
1296     \or\textupsilon\textUpsilon
1297     \or\textphi\textPhi
1298     \or\textchi\textChi
1299     \or\textpsi\textPsi
1300     \or\textomega\textOmega
1301     \or\textsampigreek\textSampigreek
1302     \else
1303       {}{}%

```

```

1304 \fi
1305 \HyPsd@GreekNumII#1#2#4#5%
1306 }
1307 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1308 \HyPsd@GreekNumI\@firstofone#1#2%
1309 \HyPsd@@@GreekNum#1{#3#4#5}%
1310 }
1311 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1312 \HyPsd@GreekNumII\@firstofone#1#2#3%
1313 \HyPsd@@@GreekNum#1{#4#5#6}%
1314 }
1315 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1316 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1317 \HyPsd@@@GreekNum#1{#5#6#7}%
1318 }

1319 \def\HyPsd@SpanishPatch{%
1320 \ltx@ifundefined{es@save@dot}{%
1321 }{%
1322 \let\.\es@save@dot
1323 }%
1324 }

```

Shorthand "- of 'russianb.ldf' is not expandable, therefore it is disabled and replaced by -.

```

1325 \def\HyPsd@RussianPatch{%
1326 \ltx@ifundefined{russian@sh@"@-@}{%
1327 }{%
1328 \@namedef{russian@sh@"@-@}{-}%
1329 }%
1330 }

```

6.5.3 CJK patch

```

1331 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1332 \def\HyPsd@CJKhook{%
1333 \ltx@ifpackageloaded{CJK}{%
1334 \let\CJK@kern\relax
1335 \let\CJKkern\relax
1336 \let\CJK@CJK\relax
1337 \ifHy@CJKbookmarks
1338 \HyPsd@CJKhook@bookmarks
1339 \fi
1340 \HyPsd@CJKhook@unicode
1341 }{%
1342 }

```

6.5.4 CJK bookmarks

\HyPsd@CJKhook Some internal commands of package cjk are redefined to avoid error messages. For a rudimental support of CJK bookmarks the active characters are redefined so that they print themselves.

After preprocessing of Big5 encoded data the following string for a double-byte character is emitted:

```
^^7f<arg1>^^7f<arg2>^^7f
```

<arg1> is the first byte in the range (always > 0x80); <arg2> is the second byte in decimal notation ($\geq 0x40$).

```

1343 \begingroup
1344 \catcode"7F=\active
1345 \toks@{%
1346 \let\CJK@ignorespaces\empty
1347 \def\CJK@char#1{\@gobbletwo}%
1348 \let\CJK@charx\@gobblefour
1349 \let\CJK@punctchar\@gobblefour
1350 \def\CJK@punctcharx#1{\@gobblefour}%
1351 \catcode"7F=\active
1352 \def^^7f#1^^7f#2^^7f{%
1353 \string #1\HyPsd@DecimalToOctal{#2}%
1354 }%
1355 % ... ?
1356 \ifHy@unicode
1357 \def\Hy@cjkpu{\80}%
1358 \else
1359 \let\Hy@cjkpu\@empty
1360 \fi
1361 \HyPsd@CJKActiveChars
1362 }%
1363 \count@=127 %
1364 \@whilenum\count@<255 \do{%
1365 \advance\count@ by 1 %
1366 \lccode'\-=\count@
1367 \lowercase{%
1368 \toks@\expandafter{\the\toks@ ~}%
1369 }%
1370 }%
1371 \toks@\expandafter{\the\toks@ !}%
1372 \xdef\HyPsd@CJKhook@bookmarks{%
1373 \the\toks@
1374 }%
1375 \endgroup

```

`\HyPsd@CJKActiveChars` The macro `\HyPsd@CJKActiveChars` is only defined to limit the memory consumption of `\HyPsd@CJKhook`.

```

1376 \def\HyPsd@CJKActiveChars#1{%
1377 \ifx#1!%
1378 \let\HyPsd@CJKActiveChars\relax
1379 \else
1380 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1381 \fi
1382 \HyPsd@CJKActiveChars
1383 }

```

`\HyPsd@DecimalToOctal` A character, given by the decimal number is converted to a PDF character.

```

1384 \def\HyPsd@DecimalToOctal#1{%
1385 \ifcase #1 %
1386 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1387 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1388 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1389 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1390 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1391 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1392 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%

```

```

1393 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1394 \or @\or A\or B\or C\or D\or E\or F\or G%
1395 \or H\or I\or J\or K\or L\or M\or N\or O%
1396 \or P\or Q\or R\or S\or T\or U\or V\or W%
1397 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1398 \or \140\or a\or b\or c\or d\or e\or f\or g%
1399 \or h\or i\or j\or k\or l\or m\or n\or o%
1400 \or p\or q\or r\or s\or t\or u\or v\or w%
1401 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1402 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1403 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1404 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1405 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1406 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1407 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1408 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1409 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1410 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1411 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1412 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1413 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1414 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1415 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1416 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1417 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1418 \fi
1419 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1420 \def\HyPsd@CJKhook@unicode{%
1421 \let\Unicode\HyPsd@CJK@Unicode
1422 \let\CJKnumber\HyPsd@CJKnumber
1423 \let\CJKdigits\HyPsd@CJKdigits
1424 }

```

\HyPsd@CJK@Unicode

```

1425 \def\HyPsd@CJK@Unicode#1#2{%
1426 \ifnum#1<256 %
1427 \HyPsd@DecimalToOctalFirst{#1}%
1428 \HyPsd@DecimalToOctalSecond{#2}%
1429 \else
1430 \933%
1431 \expandafter\expandafter\expandafter\HyPsd@HighA
1432 \intcalcDiv{#1}{4}!%
1433 \933%
1434 \ifcase\intcalcMod{#1}{4} %
1435 4\or 5\or 6\or 7%
1436 \fi
1437 \HyPsd@DecimalToOctalSecond{#2}%
1438 \fi
1439 }

1440 \def\HyPsd@HighA#1!{%
1441 \expandafter\expandafter\expandafter\HyPsd@HighB
1442 \IntCalcDiv#1!64!!%

```

```

1443 \expandafter\expandafter\expandafter\HyPsd@HighD
1444 \IntCalcMod#1!64!!%
1445 }
1446 \def\HyPsd@HighB#1!{%
1447 \expandafter\expandafter\expandafter\HyPsd@HighC
1448 \IntCalcDec#1!!%
1449 }
1450 \def\HyPsd@HighC#1!{%
1451 \IntCalcDiv#1!4!%
1452 \@backslashchar
1453 \IntCalcMod#1!4!%
1454 }
1455 \def\HyPsd@HighD#1!{%
1456 \ifcase\IntCalcDiv#1!8! %
1457 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1458 \fi
1459 \ifcase\IntCalcMod#1!8! %
1460 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1461 \fi
1462 }
1463 \def\HyPsd@DecimalToOctalFirst#1{%
1464 \9%
1465 \ifcase#1 %
1466 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1467 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1468 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1469 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1470 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1471 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1472 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1473 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1474 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1475 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1476 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1477 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1478 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1479 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1480 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1481 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1482 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1483 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1484 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1485 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1486 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1487 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1488 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1489 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1490 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1491 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1492 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1493 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1494 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1495 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1496 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1497 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1498 \fi
1499 }

```

```

1500 \def\HyPsd@DecimalToOctalSecond#1{%
1501   \ifcase #1 %
1502     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1503     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1504     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1505     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1506     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1507     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1508     \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1509     \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1510     \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1511     \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1512     \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1513     \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1514     \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1515     \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1516     \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1517     \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1518     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1519     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1520     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1521     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1522     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1523     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1524     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1525     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1526     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1527     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1528     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1529     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1530     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1531     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1532     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1533     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1534   \fi
1535 }

1536 \def\HyPsd@CJKnumber#1{%
1537   \ifnum#1<\z@
1538     \CJK@minus
1539     \expandafter\HyPsd@@@CJKnumber\expandafter{\number-\number#1}%
1540   \else
1541     \expandafter\HyPsd@@@CJKnumber\expandafter{\number#1}%
1542   \fi
1543 }

1544 \def\HyPsd@@@CJKnumber#1{%
1545   \ifcase#1 %
1546     \CJK@zero\or \CJK@one\or \CJK@two\or \CJK@three\or \CJK@four\or
1547     \CJK@five\or \CJK@six\or \CJK@seven\or \CJK@eight\or \CJK@nine\or
1548     \CJK@ten\or \CJK@ten\or \CJK@one\or \CJK@ten\or \CJK@two\or
1549     \CJK@ten\or \CJK@three\or \CJK@ten\or \CJK@four\or \CJK@ten\or \CJK@five\or
1550     \CJK@ten\or \CJK@six\or \CJK@ten\or \CJK@seven\or \CJK@ten\or \CJK@eight\or
1551     \CJK@ten\or \CJK@nine
1552   \else
1553     \ifnum#1<10000 %
1554       \HyPsd@CJKnumberFour#1!\@empty{20}%
1555     \@empty
1556   \else

```

```

1557 \ifnum#1<100000000 %
1558 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1559 \IntCalcDiv#1!10000!%
1560 !\{20}%
1561 \CJK@tenthousand
1562 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1563 \IntCalcMod#1!10000!%
1564 !\CJK@zero{10}%
1565 \@empty
1566 \else
1567 \expandafter\HyPsd@CJKnumberLarge
1568 \number\IntCalcDiv#1!100000000!\expandafter!%
1569 \number\IntCalcMod#1!100000000!!%
1570 \fi
1571 \fi
1572 \fi
1573 }
1574 \def\HyPsd@CJKnumberLarge#1!#2!{%
1575 \HyPsd@CJKnumberFour#1!\{20}%
1576 \CJK@hundredmillion
1577 \ifnum#2=\z@
1578 \else
1579 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1580 \IntCalcDiv#2!10000!%
1581 !\CJK@zero{10}%
1582 \CJK@tenthousand
1583 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1584 \IntCalcMod#2!10000!%
1585 !\CJK@zero{10}%
1586 \@empty
1587 \fi
1588 }
1589 \def\HyPsd@CJKnumberFour#1!#2#3{%
1590 \ifnum#1=\z@
1591 \expandafter\@gobble
1592 \else
1593 \ifnum#1<1000 %
1594 #2%
1595 \HyPsd@CJKnumberThree#1!\{3}%
1596 \else
1597 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1598 \CJK@thousand
1599 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1600 \IntCalcMod#1!1000!%
1601 !\CJK@zero{10}%
1602 \fi
1603 \fi
1604 }
1605 \def\HyPsd@CJKnumberThree#1!#2#3{%
1606 \ifnum#1=\z@
1607 \else
1608 \ifnum#1<100 %
1609 #2%
1610 \HyPsd@CJKnumberTwo#1!\{3}%
1611 \else
1612 \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1613 \CJK@hundred

```

```

1614 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1615 \IntCalcMod#1!100!%
1616 !\CJK@zero{10}%
1617 \fi
1618 \fi
1619 }
1620 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1621 \ifnum#1=\z@
1622 \else
1623 \ifnum#1<#3 %
1624 #2%
1625 \HyPsd@@CJKnumber{#1}%
1626 \else
1627 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1628 \CJK@ten
1629 \ifnum\IntCalcMod#1!10!=\z@
1630 \else
1631 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1632 \fi
1633 \fi
1634 \fi
1635 }
1636 \def\HyPsd@CJKdigits#1{%
1637 \ifx*#1\relax
1638 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1639 \else
1640 \HyPsd@@CJKdigits\CJK@null{#1}%
1641 \fi
1642 }
1643 \def\HyPsd@@CJKdigits#1#2{%
1644 \ifx\#2\%
1645 \else
1646 \HyPsd@@@CJKdigits#1#2\@nil
1647 \fi
1648 }%
1649 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1650 \HyPsd@CJKdigit#1{#2}%
1651 \ifx\#3\%
1652 \expandafter\@gobble
1653 \else
1654 \expandafter\@firstofone
1655 \fi
1656 {%
1657 \HyPsd@@@CJKdigits#1#3\@nil
1658 }%
1659 }
1660 \def\HyPsd@CJKdigit#1#2{%
1661 \ifcase#2 %
1662 #1\or
1663 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1664 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1665 \fi
1666 }

```


6.5.6 \@inmathwarn-Patch

`\HyPsd@inmathwarn` The patch of `\@inmathwarn` is needed to get rid of the infinite error loop with glyphs of other encodings (see the explanation above). Potentially the patch is dangerous, if the code in `ltoutenc.dtx` changes. Checked with \LaTeX 2_ε versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

To understand the patch easier, the original code of `\@current@cmd` and `\@changed@cmd` follows (\LaTeX 2_ε release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typesetprotect` (`=\relax`).

```

\def\@current@cmd#1{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname?\string#1\endcsname\relax
        \expandafter\def\csname?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
      \global\expandafter\let
        \csname\cf@encoding\string#1\expandafter\endcsname
        \csname?\string#1\endcsname
    \fi
    \csname\cf@encoding\string#1%
      \expandafter\endcsname
  \else
    \noexpand#1%
  \fi}
\gdef\TextSymbolUnavailable#1{%
  \@latex@error{%
    Command \protect#1 unavailable in encoding \cf@encoding%
  }\@eha}
\def\@inmathwarn#1{%
  \ifmmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1667 \def\HyPsd@inmathwarn#1#2{%
1668   \ifx#2\expandafter
1669     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1670       \HyPsd@GLYPHERR
1671       \expandafter\@gobble\string#1%
1672     >%
1673     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1674   \else
1675     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1676   \fi
1677 \else
1678   \expandafter#2%
1679 \fi

```

```

1680 }
1681 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1682 \def\HyPsd@EndWithElse#1\else{\else}

```

\HyPsd@add@accent

```

1683 \def\HyPsd@add@accent#1#2{%
1684   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1685   #2%
1686 }%

```

6.5.7 Unexpandable spaces

\HyPsd@LetUnexpandableSpace In \HyPsd@@ProtectSpaces the space tokens are replaced by not expandable commands, that work like spaces:

- So they can caught by undelimited arguments.
- And they work in number, dimen, and skip assignments.

These properties are used in \HyPsd@CheckCatcodes.

```

1687 \def\HyPsd@LetUnexpandableSpace#1{%
1688   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1689 }

```

\HyPsd@UnexpandableSpace \HyPsd@UnexpandableSpace is used in \HyPsd@@ProtectSpaces. In \HyPsd@@ProtectSpaces the space tokens are replaced by unexpandable commands \HyPsd@UnexpandableSpace, but that have the effect of spaces.

```

1690 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

\HyPsd@XSPACE Some commands and informations cannot be utilized before the string expansion and the checking process. Command names are filtered out, so we need another way to transport the information: An unusual # with catcode 12 marks the beginning of the extra information.

```

1691 \edef\HyPsd@XSPACE{\string#\string X}
1692 \edef\HyPsd@ITALCORR{\string#\string I}
1693 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1694 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}

```

\HyPsd@@hspace \HyPsd@@hspace checks whether \hspace is called in its star form.

```

1695 \def\HyPsd@@hspace#1*#2\END{%
1696   \ifx\#2\%
1697     \HyPsd@hspacetest{#1}%
1698   \else
1699     \expandafter\HyPsd@hspacetest
1700   \fi
1701 }

```

\HyPsd@hspacetest \HyPsd@hspacetest replaces the \hspace by a space, if the length is greater than zero.

```

1702 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}

```

6.5.10 Fix for AMS classes

```

1703 \ltx@ifundefined{tocsection}{%
1704   \let\HyPsd@AMSclassfix\relax
1705 }{%
1706   \def\HyPsd@AMSclassfix{%
1707     \let\tocpart\HyPsd@tocsection
1708     \let\tocchapter\HyPsd@tocsection
1709     \let\tocappendix\HyPsd@tocsection
1710     \let\tocsection\HyPsd@tocsection
1711     \let\tocsubsection\HyPsd@tocsection
1712     \let\tocsubsubsection\HyPsd@tocsection
1713     \let\tocparagraph\HyPsd@tocsection
1714   }%
1715   \def\HyPsd@tocsection#1#2#3{%
1716     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1717     #3%
1718   }%
1719 }

```

6.5.11 Reference commands

`\HyPsd@href`

```

1720 \def\HyPsd@href#1#{\@secondoftwo}

```

`\HyPsd@ref` Macro `\HyPsd@ref` calls the macro `\HyPsd@@ref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1721 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

`\HyPsd@@ref` Macro `\HyPsd@@ref` checks if a star is present.

```

1722 \def\HyPsd@@ref#1*#2\END{%
1723   \ifx\#2\%
1724     \HyPsd@@@ref{#1}%
1725   \else
1726     \expandafter\HyPsd@@@ref
1727   \fi
1728 }%

```

`\HyPsd@@@ref` `\HyPsd@@@ref` does the work and extracts the first argument.

```

1729 \def\HyPsd@@@ref#1{%
1730   \expandafter\ifx\csname r@#1\endcsname\relax
1731     ??%
1732   \else
1733     \expandafter\expandafter\expandafter
1734     \@car\csname r@#1\endcsname\@nil
1735   \fi
1736 }

```

`\HyPsd@pageref` Macro `\HyPsd@pageref` calls the macro `\HyPsd@@pageref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1737 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

`\HyPsd@@pageref` Macro `\HyPsd@@pageref` checks if a star is present.

```

1738 \def\HyPsd@@pageref#1*#2\END{%
1739   \ifx\#2\%
1740     \HyPsd@@@pageref{#1}%
1741   \else
1742     \expandafter\HyPsd@@@pageref

```

```

1743 \fi
1744 }

```

`\HyPsd@@@pageref` `\HyPsd@@@pageref` does the work and extracts the second argument.

```

1745 \def\HyPsd@@@pageref#1{%
1746   \expandafter\ifx\csname r@#1\endcsname\relax
1747     ??%
1748   \else
1749     \expandafter\expandafter\expandafter\expandafter
1750     \expandafter\expandafter\expandafter\@car
1751     \expandafter\expandafter\expandafter\@gobble
1752     \csname r@#1\endcsname{}\@nil
1753   \fi
1754 }

```

`\HyPsd@nameref` Macro `\HyPsd@nameref` calls the macro `\HyPsd@@nameref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1755 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

`\HyPsd@@nameref` Macro `\HyPsd@@nameref` checks if a star is present.

```

1756 \def\HyPsd@@nameref#1*#2\END{%
1757   \ifx\#2\%
1758     \HyPsd@@@nameref{#1}%
1759   \else
1760     \expandafter\HyPsd@@@nameref
1761   \fi
1762 }

```

`\HyPsd@@@nameref` `\HyPsd@@@nameref` does the work and extracts the third argument.

```

1763 \def\HyPsd@@@nameref#1{%
1764   \expandafter\ifx\csname r@#1\endcsname\relax
1765     ??%
1766   \else
1767     \expandafter\expandafter\expandafter\expandafter
1768     \expandafter\expandafter\expandafter\@car
1769     \expandafter\expandafter\expandafter\@gobbletwo
1770     \csname r@#1\endcsname{}\@nil
1771   \fi
1772 }

```

`\HyPsd@autoref` Macro `\HyPsd@autoref` calls the macro `\HyPsd@@autoref` for star checking. The same methods like in `\HyPsd@hspace` is used.

```

1773 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

`\HyPsd@@autoref` Macro `\HyPsd@@autoref` checks if a star is present.

```

1774 \def\HyPsd@@autoref#1*#2\END{%
1775   \ifx\#2\%
1776     \HyPsd@@@autoref{#1}%
1777   \else
1778     \expandafter\HyPsd@@@autoref
1779   \fi
1780 }

```

`\HyPsd@@@autoref` `\HyPsd@@@autoref` does the work and extracts the second argument.

```

1781 \def\HyPsd@@@autoref#1{%
1782   \expandafter\ifx\csname r@#1\endcsname\relax

```

```

1783   ??%
1784   \else
1785     \expandafter\expandafter\expandafter\HyPsd@autorefname
1786       \csname r@#1\endcsname\}\}\}\}\@nil
1787     \expandafter\expandafter\expandafter
1788       \@car\csname r@#1\endcsname\@nil
1789   \fi
1790 }

```

`\HyPsd@autorefname` At least a basic definition for getting the `\autoref` name.

```

1791 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1792   \ifx\#4\%
1793   \else
1794     \HyPsd@@autorefname#4.\@nil
1795   \fi
1796 }

```

`\HyPsd@@autorefname`

```

1797 \def\HyPsd@@autorefname#1.#2\@nil{%
1798   \ltx@ifundefined{#1autorefname}{%
1799     \ltx@ifundefined{#1name}{%
1800       }{%
1801         \csname#1name\endcsname\space
1802       }%
1803     }{%
1804       \csname#1autorefname\endcsname\space
1805     }%
1806 }

```

6.5.12 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would causes TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

`\HyPsd@DefCommand` and `\HyPsd@LetCommand` expands to the commands `\<def>-command` and `\<let>-command` with the meaning of `\def` and `\let`. So it is detected by `\HyPsd@CheckCatcodes` and the command name `\<def>-command` or `\<let>-command` should indicate a forbidden definition command.

The command to be defined is converted to a string and back to a command name with the help of `\csname`. If the command is already defined, `\noexpand` prevents a further expansion, even though the command would expand to legal stuff. If the command don't have the meaning of `\relax`, `\HyPsd@CheckCatcodes` will produce a warning. (The command itself can be legal, but the warning is legitimate because of the position after a defining command.)

The difference between `\HyPsd@DefCommand` and `\HyPsd@LetCommand` is that the first one also cancels this arguments, the parameter and definition text. The right side of the `\let` commands cannot be canceled with an undelimited parameter because of a possible space token after `\futurelet`.

To avoid unmatched `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```

\HyPsd@DefCommand
\HyPsd@LetCommand 1807 \begingroup
1808   \def\x#1#2{%
1809     \endgroup
1810     \let#1\def
1811     \def\HyPsd@DefCommand##1##2###{%
1812       #1%
1813       \expandafter\noexpand
1814       \csname\expandafter\@gobble\string##1\@empty\endcsname
1815       \@gobble
1816     }%
1817     \let#2\let
1818     \def\HyPsd@@LetCommand##1{%
1819       \expandafter\ifx\csname##1\expandafter\endcsname
1820         \csname iftrue\endcsname
1821       \pdfstringdefWarn\let
1822       \expandafter\@gobble
1823     \else
1824       \expandafter\ifx\csname##1\expandafter\endcsname
1825         \csname iffalse\endcsname
1826       \pdfstringdefWarn\let
1827       \expandafter\expandafter\expandafter\@gobble
1828     \else
1829       #2%
1830       \expandafter\noexpand
1831       \csname##1\expandafter\expandafter\expandafter\endcsname
1832     \fi
1833   \fi
1834 }%
1835 }%
1836 \expandafter\x\csname <def>-command\expandafter\endcsname
1837   \csname <let>-command\endcsname
1838 \def\HyPsd@LetCommand#1{%
1839   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1840   \expandafter\expandafter\expandafter{%
1841     \expandafter\@gobble\string#1\@empty
1842   }%
1843 }

```

6.5.13 `\ifnextchar`

`\HyPsd@ifnextchar` In `\pdfstringdef \@ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\@ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\@ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

1844 \def\HyPsd@ifnextchar#1{%
1845   \pdfstringdefWarn#1%

```

```

1846 \expandafter\@gobbletwo\@gobble
1847 }

```

6.5.14 \@protected@testopt@ifnextchar

\HyPsd@protected@testopt Macros with optional arguments doesn't work properly, because they call \@ifnextchar to detect the optional argument (see the explanation of \HyPsd@ifnextchar). But a warning, that \@ifnextchar doesn't work, doesn't help the user very much. Therefore \@protected@testopt is also disabled, because its first argument is the problematic macro with the optional argument and it is called before \@ifnextchar.

```

1848 \def\HyPsd@protected@testopt#1{%
1849   \pdfstringdefWarn#1%
1850   \@gobbletwo
1851 }

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

\HyPsd@Warning For several reasons \space is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```

1852 \def\HyPsd@Warning#1{%
1853   \begingroup
1854   \let\space\ltx@space
1855   \Hy@Warning{#1}%
1856   \endgroup
1857 }

```

6.6.2 Protecting spaces

```

1858 \RequirePackage{etexcmds}[2007/09/09]
1859 \ifetex@unexpanded
1860   \expandafter\@secondoftwo
1861 \else
1862   \expandafter\@firstoftwo
1863 \fi
1864 {%

```

\HyPsd@ProtectSpaces \HyPsd@ProtectSpaces calls with the expanded string \HyPsd@@ProtectSpacesFi. The expanded string is protected by | at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of \HyPsd@@ProtectSpacesFi.

```

1865   \def\HyPsd@ProtectSpaces#1{%
1866     \iftrue
1867       \expandafter\HyPsd@@ProtectSpacesFi
1868       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1869     \fi
1870   }%

```

\HyPsd@@ProtectSpacesFi The string can contain command tokens, so it is better to use an \def instead of an \edef.

```

1871   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1872     \fi
1873     \ifx\scrollmode#2\scrollmode

```

```

1874 \HyPsd@RemoveMask#1\HyPsd@End#3%
1875 \else
1876 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1877 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1878 \fi
1879 }%

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

1880 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1881 \toks\expandafter{#1}%
1882 \xdef#2{\the\toks@}%
1883 }%

1884 }{%
1885 \let\HyPsd@fi\fi
1886 \def\HyPsd@ProtectSpaces#1{%
1887 \xdef#1{%
1888 \iftrue
1889 \expandafter\HyPsd@@ProtectSpacesFi
1890 \expandafter|\expandafter\@empty#1| %
1891 \HyPsd@fi
1892 }%
1893 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1894 }%
1895 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1896 \fi
1897 \etex@unexpanded{#1}%
1898 \ifx\scrollmode#2\scrollmode
1899 \else
1900 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1901 \HyPsd@fi
1902 }%
1903 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1904 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1905 }%
1906 }

```

6.6.3 Remove grouping braces

`\HyPsd@RemoveBraces` `#1` contains the expanded string, the result will be locally written in command `\HyPsd@String`.

```

1907 \def\HyPsd@RemoveBraces#1{%
1908 \ifx\scrollmode#1\scrollmode
1909 \else
1910 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1911 \fi
1912 }

```

`\HyPsd@@RemoveBraces` `\HyPsd@@RemoveBraces` is called with the expanded string, the end marked by `\HyPsd@End`, the expanded string again, but enclosed in braces and the string command. The first expanded string is scanned by the parameter text `#1#2`. By a comparison with the original form in `#3` we can decide whether `#1` is a single

token or a group. To avoid the case that #2 is a group, the string is extended by a | before.

While removing the grouping braces an italic correction marker is inserted for supporting package `xspace` and letting ligatures broken.

Because the string is already expanded, the `\if` commands should disappeared. So we can move some parts out of the argument of `\ltx@ReturnAfterFi`.

```

1913 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1914   \fi
1915   \def\Hy@temp@A{#1#2}%
1916   \def\Hy@temp@B{#3}%
1917   \ifx\Hy@temp@A\Hy@temp@B
1918     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1919       \HyPsd@String#1%
1920     }%
1921     \ifx\scrollmode#2\scrollmode
1922     \else
1923       \Hy@ReturnAfterFiFiEnd{%
1924         \HyPsd@RemoveBraces{#2}%
1925       }%
1926     \fi
1927   \else
1928     \def\Hy@temp@A{#1}%
1929     \HyPsd@AppendItalcorr\HyPsd@String
1930     \ifx\Hy@temp@A\@empty
1931       \Hy@ReturnAfterElseFiFiEnd{%
1932         \HyPsd@RemoveBraces{#2}%
1933       }%
1934     \else
1935       \HyPsd@ProtectSpaces\Hy@temp@A
1936       \HyPsd@AppendItalcorr\Hy@temp@A
1937       \Hy@ReturnAfterFiFiEnd{%
1938         \expandafter\HyPsd@RemoveBraces\expandafter
1939         {\Hy@temp@A#2}%
1940       }%
1941     \fi
1942   \fi
1943   \Hy@ReturnEnd
1944 }
```

`\HyPsd@AppendItalcorr` The string can contain commands yet, so it is better to use `\def` instead of a shorter `\edef`. The two help macros limit the count of `\expandafter`.

```

1945 \def\HyPsd@AppendItalcorr#1{%
1946   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1%
1947 }
1948 \def\HyPsd@@AppendItalcorr#1#2{%
1949   \expandafter\def\expandafter#2\expandafter{#2#1}%
1950 }
```

6.6.4 Catcode check

Workaround for LuaTeX. `\HyPsd@CheckCatcodes` might trigger a bug of LuaTeX (0.60.2, 0.70.1, 0.70.2, ...) in the comparison with `\ifcat`, see <http://tracker.luatex.org/view.php?id=773>.

```

1951 \ltx@ifundefined{directlua}{%
1952 }{%
1953   \expandafter\ifx\csname\endcsname\relax\fi
```

Check catcodes.

`\HyPsd@CheckCatcodes` Because `\ifcat` expands its arguments, this is prevented by `\noexpand`. In case of command tokens and active characters `\ifcat` now sees a `\relax`. After protecting spaces and removing braces `#1` should be a single token, no group of several tokens, nor an empty group. (So the `\expandafter\relax` between `\ifcat` and `\noexpand` is only for safety and it should be possible to remove it.)

`\protect` and `\relax` should be removed silently. But it is too dangerous and breaks some code giving them the meaning of `\@empty`. So commands with the meaning of `\protect` are removed here. (`\protect` should have the meaning of `\@typeset@protect` that is equal to `\relax`).

For the comparison with active characters, `~` cannot be used because it has the meaning of a blank space here. And active characters need to be checked, if they have been defined using `\protected`.

```

1955 \begingroup
1956   \catcode'\Q=\active
1957   \let Q\ltx@empty
1958   \gdef\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1959     \global\let\HyPsd@Rest\relax
1960     \ifcat\relax\noexpand#1\relax
1961       \ifx#1\protect
1962         \else
1963           \ifx#1\penalty
1964             \setbox\z@=\hbox{%
1965               \afterassignment\HyPsd@AfterCountRemove
1966               \count@=#2\HyPsd@End
1967             }%
1968           \else
1969             \ifx#1\kern
1970               \setbox\z@=\hbox{%
1971                 \afterassignment\HyPsd@AfterDimenRemove
1972                 \dimen@=#2\HyPsd@End
1973               }%
1974             \else
1975               \ifx#1\hskip
1976                 \setbox\z@=\hbox{%
1977                   \afterassignment\HyPsd@AfterSkipRemove
1978                   \skip@=#2\HyPsd@End
1979                 }%
1980               \else
1981                 \HyPsd@CatcodeWarning{#1}%
1982               \fi
1983             \fi
1984           \fi
1985         \fi
1986       \else
1987         \ifcat\noexpand#1\noexpandQ% active character
1988           \expandafter\expandafter\expandafter\def
1989             \expandafter\expandafter\expandafter\HyPsd@String
1990             \expandafter\expandafter\expandafter{%
1991               \expandafter\HyPsd@String\string#1%
1992             }%
1993         \else
1994           \ifcat#1A% letter

```

```

1995     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1996     \HyPsd@String#1%
1997     }%
1998     \else
1999     \ifcat#1 % SPACE
2000     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2001     \HyPsd@String\HyPsd@SPACEOPTI
2002     }%
2003     \else
2004     \ifcat$#1%
2005     \HyPsd@CatcodeWarning{math shift}%
2006     \else
2007     \ifcat&#1%
2008     \HyPsd@CatcodeWarning{alignment tab}%
2009     \else
2010     \ifcat^#1%
2011     \HyPsd@CatcodeWarning{superscript}%
2012     \else
2013     \ifcat_#1%
2014     \HyPsd@CatcodeWarning{subscript}%
2015     \else
2016     \expandafter\def\expandafter\HyPsd@String\expandafter{%
2017     \HyPsd@String#1%
2018     }%
2019     \fi
2020     \fi
2021     \fi
2022     \fi
2023     \fi
2024     \fi
2025     \fi
2026     \fi
2027     \ifx\HyPsd@Rest\relax
2028     \ifx\scrollmode#2\scrollmode
2029     \else
2030     \Hy@ReturnAfterFiFiEnd{%
2031     \HyPsd@CheckCatcodes#2\HyPsd@End
2032     }%
2033     \fi
2034     \else
2035     \ifx\HyPsd@Rest\@empty
2036     \else
2037     \Hy@ReturnAfterFiFiEnd{%
2038     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
2039     }%
2040     \fi
2041     \fi
2042     \Hy@ReturnEnd
2043     }%
2044 \endgroup

```

Remove counts, dimens, skips.

\HyPsd@AfterCountRemove Counts like \penalty are removed silently.

```

2045 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
2046   \gdef\HyPsd@Rest{#1}%
2047 }

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

2048 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
2049   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
2050     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
2051     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2052   \else
2053     \ifdim\dimen@=\z@
2054     \else
2055       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
2056     \fi
2057     \gdef\HyPsd@Rest{#1}%
2058   \fi
2059 }
```

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

2060 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
2061   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
2062     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
2063     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
2064   \else
2065     \ifdim\skip@=\z@
2066     \else
2067       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
2068     \fi
2069     \gdef\HyPsd@Rest{#1}%
2070   \fi
2071 }
```

Catcode warnings.

`\HyPsd@CatcodeWarning` `\HyPsd@CatcodeWarning` produces a warning for the user.

```

2072 \def\HyPsd@CatcodeWarning#1{%
2073   \HyPsd@Warning{%
2074     Token not allowed in a PDF string (%
2075     \ifHy@unicode
2076       Unicode%
2077     \else
2078       PDFDocEncoding%
2079     \fi
2080   ):%
2081   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
2082 }%
2083 }
2084 \begingroup
2085   \catcode'\|=0 %
2086   \catcode'\|=12 %
2087   \gdef\HyPsd@RemoveCmdPrefix#1{%
2088     \expandafter\HyPsd@@RemoveCmdPrefix
2089     \string#1\@empty\<>-|\@empty|\@empty
2090   }%
2091   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
2092 \endgroup
```

\HyPsd@RemoveSpaceWarning

```
2093 \def\HyPsd@RemoveSpaceWarning#1{%
2094   \HyPsd@Warning{%
2095     Token not allowed in a PDF string (%
2096     \ifHy@unicode
2097       Unicode%
2098     \else
2099       PDFDocEncoding%
2100     \fi
2101   ):%
2102   \MessageBreak #1\MessageBreak
2103   removed%
2104 }%
2105 }
```

\HyPsd@ReplaceSpaceWarning

```
2106 \def\HyPsd@ReplaceSpaceWarning#1{%
2107   \HyPsd@Warning{%
2108     Token not allowed in a PDF string (%
2109     \ifHy@unicode
2110       Unicode%
2111     \else
2112       PDFDocEncoding%
2113     \fi
2114   ):%
2115   \MessageBreak #1\MessageBreak
2116   replaced by space%
2117 }%
2118 }
```

6.6.5 Check for wrong glyphs

A wrong glyph is marked with \relax, the glyph name follows, delimited by >. \@empty ends the string.

```
2119 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2120   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2121     \HyPsd@String#1%
2122   }%
2123   \ifx\#2\%
2124   \else
2125     \ltx@ReturnAfterFi{%
2126       \HyPsd@GlyphProcessWarning#2\@empty
2127     }%
2128   \fi
2129 }
2130 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2131   \HyPsd@@@GlyphProcessWarning#1++>%
2132   \HyPsd@GlyphProcess#2\@empty
2133 }
2134 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2135   \ifx\#2\%
2136     \HyPsd@Warning{%
2137       Glyph not defined in %
2138       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2139       removing '@backslashchar#1'%
2140     }%
2141   \else
```

```

2142 \HyPsd@Warning{%
2143   Composite letter '@backslashchar#1+#2'\MessageBreak
2144   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2145   \MessageBreak
2146   removing '@backslashchar#1'%
2147 }%
2148 \fi
2149 }

```

Spaces.

`\HyPsd@spaceopti` In the string the spaces are represented by `\HyPsd@spaceopti` tokens. Within an `\edef` it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next `\HyPsd@spaceopti` by an protected space `\040`.

```

2150 \def\HyPsd@spaceopti#1{ % first space
2151   \ifx\HyPsd@spaceopti#1%
2152     \040%
2153   \else
2154     #1%
2155   \fi
2156 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is an wrapper for the command `\HyPsd@Subst` that does all the work: In string stored in command `#3` it replaces the tokens `#1` with `#2`.

`#1` Exact the tokens that should be replaced.
`#2` The replacement (don't need to be expanded).
`#3` Command with the string.

```

2157 \def\HyPsd@Subst#1#2#3{%
2158   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2159     \fi
2160     ##1%
2161     \ifx\scrollmode##2\scrollmode
2162     \else
2163       #2%
2164       \HyPsd@@@ReplaceFi##2\END
2165     \fi
2166   }%
2167   \xdef#3{%
2168     \iftrue
2169       \expandafter\HyPsd@@@ReplaceFi#3#1\END
2170     \fi
2171   }%
2172 }

```

`\HyPsd@StringSubst` To save tokens in `\pdfstringdef` `\HyPsd@StringSubst` is a wrapper, that expands argument `#1` before calling `\HyPsd@Subst`.

```

2173 \def\HyPsd@StringSubst#1{%
2174   \expandafter\HyPsd@Subst\expandafter{\string#1}%
2175 }

```

`\HyPsd@EscapeTeX`

```

2176 \begingroup

```

```

2177 \lccode'\!=\'%%
2178 \lccode'\|=\'%%
2179 \lccode'\(=\{\'%
2180 \lccode'\)=\'%
2181 \lccode'0=\ltx@zero
2182 \lccode'1=\ltx@zero
2183 \lccode'3=\ltx@zero
2184 \lccode'4=\ltx@zero
2185 \lccode'5=\ltx@zero
2186 \lccode'7=\ltx@zero
2187 \lowercase{\endgroup
2188 \def\HyPsd@EscapeTeX#1{%
2189   \HyPsd@Subst!{|045}#1%
2190   \HyPsd@Subst({|173}#1%
2191   \HyPsd@Subst){|175}#1%
2192 }%
2193 }

```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in \TeX 's mouth. So this implementation uses an argument to examine the next token. In a previous version I reused `\@xspace`, but this version is shorter and easier to understand.

```

2194 \def\HyPsd@doxspace#1{%
2195   \ifx#1\relax\else
2196     \ifx#1.\else
2197       \ifx#1:\else
2198         \ifx#1,\else
2199           \ifx#1;\else
2200             \ifx#1!\else
2201               \ifx#1?\else
2202                 \ifx#1/\else
2203                   \ifx#1-\else
2204                     \ifx#1'\else
2205                       \HyPsd@SPACEOPTI
2206                     \fi
2207                   \fi
2208                 \fi
2209               \fi
2210             \fi
2211           \fi
2212         \fi
2213       \fi
2214     \fi
2215   \fi
2216   #1%
2217 }%

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, `\8` is replaced by `\00`, and `\9` is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

2218 \begingroup
2219 \catcode'\|=0 %
2220 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```
2221 |gdef|HyPsd@ConvertToUnicode#1{%
2222 |xdef#1{%
2223 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2224 }%
2225 |ifx#1|@empty
2226 |else
2227 |xdef#1{%
2228 \376\377%
2229 #1%
2230 }%
2231 |fi
2232 }%
```

\HyPsd@DoConvert

```
2233 |gdef|HyPsd@DoConvert#1{%
2234 |ifx#1|@empty
2235 |else
2236 |ltx@ReturnAfterFi{%
2237 |ifx#1\%%
2238 \%%
2239 |expandafter|HyPsd@DoEscape
2240 |else
2241 |HyPsd@Char{#1}%
2242 |expandafter|HyPsd@DoConvert
2243 |fi
2244 }%
2245 |fi
2246 }%
```

\HyPsd@DoEscape

```
2247 |gdef|HyPsd@DoEscape#1{%
2248 |ifx#19%
2249 |expandafter|HyPsd@GetTwoBytes
2250 |else
2251 |ltx@ReturnAfterFi{%
2252 |ifx#18%
2253 00%
2254 |expandafter|HyPsd@GetTwoBytes
2255 |else
2256 #1%
2257 |expandafter|HyPsd@GetOneByte
2258 |fi
2259 }%
2260 |fi
2261 }%
```

\HyPsd@GetTwoBytes

```
2262 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2263 #1\#2#3#4%
2264 |HyPsd@DoConvert
2265 }%
```

\HyPsd@GetOneByte

```
2266 |gdef|HyPsd@GetOneByte#1#2{%
2267 #1#2%
2268 |HyPsd@DoConvert
```



```

2269 }%
2270 |endgroup

\HyPsd@@GetNextTwoTokens TeX does only allow nine parameters, so we need another macro to get more
arguments.
2271 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2272   \xdef#4{#4#1#2}%
2273   \HyPsd@@ConvertToUnicode#3\END#4%
2274 }

\HyPsd@Char
2275 \begingroup
2276   \catcode0=9 %
2277   \catcode'\^=7 %
2278   \catcode'\^^=12 %
2279   \def\x{^^^0000}%
2280 \expandafter\endgroup
2281 \ifx\x\@empty
2282   \def\HyPsd@Char#1{%
2283     \ifnum'#1<128 %
2284       \@backslashchar 000#1%
2285     \else
2286       \ifnum'#1<65536 %
2287         \expandafter\HyPsd@CharTwoByte\number'#1!%
2288       \else
2289         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2290         \intcalcSub{'#1}{65536}!%
2291       \fi
2292     \fi
2293   }%
2294   \def\HyPsd@CharTwoByte#1!{%
2295     \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2296     \IntCalcDiv#1!256!!%
2297     \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2298     \IntCalcMod#1!256!!%
2299   }%
2300   \def\HyPsd@CharOctByte#1!{%
2301     \@backslashchar
2302     \IntCalcDiv#1!64!%
2303     \intcalcDiv{\IntCalcMod#1!64!}{8}%
2304     \IntCalcMod#1!8!%
2305   }%
2306   \def\HyPsd@CharSurrogate#1!{%
2307     \@backslashchar 33%
2308     \IntCalcDiv#1!262144!%
2309     \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2310     \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2311     \@backslashchar 33%
2312     \expandafter\expandafter\expandafter\IntCalcAdd
2313     \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2314     \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2315     \IntCalcMod#1!256!!%
2316   }%
2317 \else
2318   \def\HyPsd@Char#1{%
2319     \@backslashchar 000#1%
2320   }%
2321 \fi

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

```

\numexpr 123/4\relax is replaced by
\number\dimexpr.25\dimexpr 123sp\relax\relax

2322 \begingroup\expandafter\expandafter\expandafter\endgroup
2323 \expandafter\ifx\csname numexpr\endcsname\relax
2324   \let\HyPsd@UTFviii\relax
2325 \else
2326   \begingroup
2327     \lccode'\~='^f4\relax
2328   \lowercase{\endgroup
2329     \def\HyPsd@UTFviii{%
2330       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2331       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2332       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2333       \ifx~\HyPsd@UTFviii@ccxliv@undef
2334         \let~\HyPsd@UTFviii@ccxliv@def
2335       \fi
2336       \let\unichar\HyPsd@unichar
2337     }%
2338   }%
2339   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2340   \edef\HyPsd@UTFviii@ccxliv@def{%
2341     \noexpand\UTFviii@four@octets\string ^f4%
2342   }%

```

The two octet form of UTF-8 110aaabb (A) and 10cccd (B) must be converted into octal numbers 00a and bcd. The result is `\8a\bcd` (with a, b, c, d as octal numbers). The conversion equations.

$$a := A/4 - 48 \quad (1)$$

$$b := A - 4 * (A/4) \quad (2)$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \quad (3)$$

$$d := B - 8 * (B/8) \quad (4)$$

$$(5)$$

```

2343 \def\HyPsd@UTFviii@two#1#2{%
2344   \expandafter\HyPsd@UTFviii@@two
2345   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2346   \number'#1\expandafter| %
2347   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2348   \number'#2 \@nil
2349 }%
2350 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2351   \expandafter\8%
2352   \number\dimexpr #1-48\expandafter\relax
2353   \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
2354   \number\dimexpr #3-8*%

```

```

2355 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2356 \number\numexpr #4-8*#3\relax
2357 }%

```

Three octet form: 1110aabb (A), 10bccdd (B), and 10eeefff (C). The result is \9abc\def (with a, ..., f as octal numbers). The conversion equations:

$$a := A/4 - 56 \quad (6)$$

$$b := 2 * (A - 4 * (A/4)) + ((B - 128 < 32)?0 : 1) \quad (7)$$

$$c := B/4 - 32 - ((B - 128 < 32)?0 : 8) \quad (8)$$

$$d := B - 4 * (B/4) \quad (9)$$

$$e := C/8 - 16 \quad (10)$$

$$f := C - 8 * (C/8) \quad (11)$$

$$(12)$$

```

2358 \def\HyPsd@UTFviii@three#1#2#3{%
2359 \expandafter\HyPsd@UTFviii@@three
2360 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
2361 \number'#1\expandafter|
2362 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
2363 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
2364 \number'#2\expandafter|
2365 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
2366 \number'#3 \@nil
2367 }%
2368 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2369 \expandafter\9%
2370 \number\numexpr #1-56\expandafter\relax
2371 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2372 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2373 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2374 \number\numexpr #6-16\expandafter\relax
2375 \number\numexpr #7-8*#6\relax
2376 }%

```

Surrogates: 4 octets in UTF-8, a surrogate pair in UTF-16. High surrogate range: U+D800-U+DBFF, low surrogate range: U+DC00-U+DFFF.

```

UTF-8: 11110uuu 10uuzzzz 10yyyyyy 10xxxxxx
www = uuuu - 1
UTF-16: 110110ww wwzzzyy 110111yy yyxxxxxx
octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

```

2377 \def\HyPsd@UTFviii@four#1#2{%
2378 \expandafter\HyPsd@@UTFviii@four\number
2379 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2380 \expandafter|\number
2381 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|
2382 }%
2383 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2384 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2385 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2386 \ifodd#2 %
2387 \number\numexpr(#2-1)/2\relax
2388 \else
2389 \number\numexpr#2/2\relax
2390 \fi

```

```

2391 \number\numexpr\ifodd#2 4+\fi
2392 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2393 \933%
2394 \expandafter\HyPsd@@@UTFviii@four\number
2395 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2396 }%
2397 \def\HyPsd@@@UTFviii@four#1|#2{%
2398 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2399 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2400 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2401 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2402 }%

```

Input encoding utf8x of package ucs uses macro \unichar. Values greater than "FFFF are not supported.

```

2403 \def\HyPsd@unichar#1{%
2404 \ifHy@unicode
2405 \ifnum#1>"10FFFF %
2406 \HyPsd@UnicodeReplacementCharacter % illegal
2407 \else
2408 \ifnum#1>"FFFF %

```

High-surrogate code point. ("D800 = 55296, \p@ = 1pt = 65536sp)

```

2409 \expandafter\HyPsd@unichar\expandafter{%
2410 \number\numexpr 55296+%
2411 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2412 \relax\relax\relax
2413 }%

```

Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)

```

2414 \expandafter\HyPsd@unichar\expandafter{%
2415 \number\numexpr#1-9216%
2416 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2417 \relax\relax\relax
2418 }%
2419 \else
2420 \ifnum#1>"7FF %
2421 \9%
2422 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2423 \number
2424 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2425 }%
2426 \else
2427 \8%
2428 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2429 \fi
2430 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2431 \number
2432 \numexpr#1-256*\number
2433 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2434 }%
2435 \fi
2436 \fi
2437 \else
2438 .% unsupported (Unicode -> PDF Doc Encoding)
2439 \fi
2440 }%
2441 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2442 \def\HyPsd@unichar@first@byte#1{%
2443   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2444   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2445     \number
2446     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2447     \relax\relax\relax
2448   }%
2449 }%
2450 \def\HyPsd@unichar@second@byte#1{%
2451   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2452   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2453     \number
2454     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2455     \relax\relax\relax
2456   }%
2457 }%
2458 \def\HyPsd@unichar@octtwo#1{%
2459   \number\dimexpr.125\dimexpr#1sp\relax\relax
2460   \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2461   \relax\relax\relax
2462 }%
2463 \fi

```

\HyPsd@utf@viii@undeferr \utf@viii@undeferr comes from file utf8x.def from package ucs.

```

2464 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2465   \ifx\@gobble#1%
2466   \else
2467     [Please insert \textbackslash PrerenderUnicode%
2468     \textbraceleft#1\textbraceright\space
2469     into preamble]%
2470   \fi
2471 }%

```

6.6.10 Support for die faces (ifsym et. al.)

\HyPsd@DieFace Die faces are provided by

Package	Macro
ifsym	\Cube
epsdice	\epsdice
hhcount	\fcdice

\Cube and \epsdice restrict the range to the numbers one to six. \fcdice generates for larger numbers several dice faces with the sum matching the number. The implementation for the PDF strings follows \fcdice.

```

2472 \def\HyPsd@DieFace#1{%
2473   \ifHy@unicode
2474   \ifnum#1<1 %
2475     \HyPsd@UnicodeReplacementCharacter
2476   \else
2477     \ifnum#1>6 %
2478       \9046\205%
2479       \expandafter\expandafter\expandafter
2480       \HyPsd@DieFaceLarge\intcalcSub{#1}{6}!%
2481     \else
2482       \9046\20\intcalcDec{#1}%
2483     \fi

```

```

2484 \fi
2485 \else
2486 .% Die faces are not part of PDFDocEncoding
2487 \fi
2488 }

```

\HyPsd@DieFaceLarge

```

2489 \def\HyPsd@DieFaceLarge#1{%
2490 \ifnum#1>6 %
2491 \expandafter\ltx@firstoftwo
2492 \else
2493 \expandafter\ltx@secondoftwo
2494 \fi
2495 {%
2496 \9046\205%
2497 \expandafter\expandafter\expandafter
2498 \HyPsd@DieFaceLarge\IntCalcSub#1!6!!%
2499 }{%
2500 \9046\20\IntCalcDec#1!%
2501 }%
2502 }

```

6.6.11 Support for moon phases of package china2e

```

2503 \def\HyPsd@MoonPha#1{%
2504 \ifcase\intcalcNum{#1} %
2505 \HyPsd@UnicodeReplacementCharacter
2506 \or % 1
2507 % U+1F31A NEW MOON WITH FACE; \MoonPha{1} (china2e)
2508 \9330\074\9337\032%
2509 \or % 2
2510 \HyPsd@UnicodeReplacementCharacter
2511 \or % 3
2512 % U+1F31D FULL MOON WITH FACE; \MoonPha{3} (china2e)
2513 \9330\074\9337\035%
2514 \or % 4
2515 % U+1F31C LAST QUARTER MOON WITH FACE; \MoonPha{4} (china2e)
2516 \9330\074\9337\034%
2517 \else
2518 \HyPsd@UnicodeReplacementCharacter
2519 \fi
2520 }
2521 %* \HyPsd@MoonPha -> \MoonPha

```

6.6.12 Support for package pifont

\HyPsd@ding

```

2522 \def\HyPsd@ding#1{%
2523 \ifHy@unicode
2524 \ifnum#1<32 %
2525 \HyPsd@UnicodeReplacementCharacter
2526 \else
2527 \ifnum#1>254 %
2528 \HyPsd@UnicodeReplacementCharacter
2529 \else
2530 \ifnum#1<127 %
2531 \expandafter\expandafter\expandafter
2532 \HyPsd@@@ding\intcalcNum{#1}!%

```

```

2533     \else
2534     \ifnum#1>160 %
2535     \expandafter\expandafter\expandafter
2536     \HyPsd@@ding\intcalcNum{#1}!%
2537     \else
2538     \HyPsd@UnicodeReplacementCharacter
2539     \fi
2540     \fi
2541     \fi
2542     \fi
2543     \else
2544     .% Dingbats are not part of PDFDocEncoding
2545     \fi
2546 }

```

\HyPsd@@ding

```

2547 \def\HyPsd@@ding#1!{%
2548 \ltx@ifundefined{HyPsd@ding@#1}{%
2549 \ifnum#1<127 %
2550 \9047%
2551 \HyPsd@DecimalToOctalSecond{\IntCalcSub#1!32!}%
2552 \else
2553 \ifnum#1<168 %
2554 \9047\14\IntCalcSub#1!160!%
2555 \else
2556 \ifnum#1>181 %
2557 \9047\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!64!}%
2558 \else
2559 % 172..181 -> U+2460..U+2469
2560 \9044\HyPsd@DecimalToOctalSecond{\IntCalcSub#1!76!}%
2561 \fi
2562 \fi
2563 \fi
2564 }{%
2565 \csname HyPsd@ding@#1\endcsname
2566 }%
2567 }

2568 \@namedef{HyPsd@ding@32}{\space}
2569 % U+260E BLACK TELEPHONE
2570 \@namedef{HyPsd@ding@37}{\9046\016}% U+260E
2571 % U+261B BLACK RIGHT POINTING INDEX
2572 \@namedef{HyPsd@ding@42}{\9046\033}% U+261B
2573 % U+261E WHITE RIGHT POINTING INDEX
2574 \@namedef{HyPsd@ding@43}{\9046\036}% U+261E
2575 % U+2605 BLACK STAR
2576 \@namedef{HyPsd@ding@72}{\9046\005}% U+2605
2577 % U+25CF BLACK CIRCLE
2578 \@namedef{HyPsd@ding@108}{\9045\317}% U+25CF
2579 % U+25A0 BLACK SQUARE
2580 \@namedef{HyPsd@ding@110}{\9045\240}% U+25A0
2581 % U+25B2 BLACK UP-POINTING TRIANGLE
2582 \@namedef{HyPsd@ding@115}{\9045\262}% U+25B2
2583 % U+25BC BLACK DOWN-POINTING TRIANGLE
2584 \@namedef{HyPsd@ding@116}{\9045\274}% U+25BC
2585 % U+25C6 BLACK DIAMOND
2586 \@namedef{HyPsd@ding@117}{\9045\306}% U+25C6
2587 % U+25D7 RIGHT HALF BLACK CIRCLE

```

```

2588 \@namedef{HyPsd@ding@119}{\9045\327}% U+25D7
2589 \@namedef{HyPsd@ding@168}{\textclubsuitblack}%
2590 \@namedef{HyPsd@ding@169}{\textdiamondsuitblack}%
2591 \@namedef{HyPsd@ding@170}{\textheartsuitblack}%
2592 \@namedef{HyPsd@ding@171}{\textspadesuitblack}%
2593 \@namedef{HyPsd@ding@213}{\textrightarrow}%
2594 \@namedef{HyPsd@ding@214}{\textleftarrow}%
2595 \@namedef{HyPsd@ding@215}{\textupdownarrow}%
2596 \@namedef{HyPsd@ding@240}{\HyPsd@UnicodeReplacementCharacter}

```

7 Support of other packages

7.1 Class memoir

```

2597 \@ifclassloaded{memoir}{%
2598   \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2599 }{}

```

7.2 Package subfigure

Added fix for version 2.1. Here \sub@label is defined.

```

2600 \@ifpackageloaded{subfigure}{%
2601   \ltx@ifundefined{sub@label}{%
2602     \Hy@hypertextnamesfalse
2603   }{%
2604     \renewcommand*{\sub@label}[1]{%
2605       \@bsphack
2606       \subfig@oldlabel{#1}%
2607       \if@filesw
2608         \begingroup
2609         \edef\@currentlabstr{%
2610           \expandafter\strip@prefix\meaning\@currentlabelname
2611         }%
2612         \protected@write\@auxout{}{%
2613           \string\newlabel{sub@#1}{%
2614             {\@nameuse{\@thesub\@capytype}}%
2615             {\thepage}%
2616             {%
2617               \expandafter\strip@period\@currentlabstr
2618               \relax.\relax\@@@%
2619             }%
2620             {\@currentHref}%
2621             {}%
2622           }%
2623         }%
2624         \endgroup
2625       \fi
2626       \@esphack
2627     }%
2628     \@ifpackagelater{subfigure}{2002/03/26}{%
2629       \providecommand*{\toclevel@subfigure}{1}%
2630       \providecommand*{\toclevel@subtable}{1}%
2631     }%
2632   }%
2633 }{}

```


7.3 Package xr and xr-hyper

The beta version of xr that supports `\XR@addURL` is called `xr-hyper`. Therefore we test for the macro itself and not for the package name:

```
2634 \ltx@ifundefined{XR@addURL}{%
2635 }{%
```

If reading external aux files check whether they have a non zero fourth field in `\newlabel` and if so, add the URL as the fifth field.

```
2636 \def\xR@addURL#1{\xR@dURL#1{}{}{}%
2637 \def\xR@dURL#1#2#3#4#5\{%
2638   {#1}{#2}%
2639   \if!#4!%
2640   \else
2641     {#3}{#4}{\XR@URL}%
2642   \fi
2643 }%
2644 }

2645 \def\Hy@true{true}
2646 \def\Hy@false{false}
```

Providing dummy definitions.

```
2647 \let\literalps@out\@gobble
2648 \newcommand\pdfbookmark[3]{}{}
2649 \def\Acrobatmenu#1#2{\leavevmode#2}
2650 \def\Hy@writebookmark#1#2#3#4#5{%
```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to `\baselineskip`, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine `\HyperRaiseLinkDefault` to be eg the height of a `\strut`
2. Redefine `\HyperRaiseLinkHook` to do something complicated; it must give a value to `\HyperRaiseLinkLength`, which is what actually gets used

```
2651 \let\HyperRaiseLinkHook\@empty
2652 \def\HyperRaiseLinkDefault{\baselineskip}
```

`\HyperRaiseLinkHook` allows the user to reassign `\HyperRaiseLinkLength`.

```
2653 \newcount\Hy@SavedSpaceFactor
2654 \def\Hy@SaveSpaceFactor{%
2655   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@
2656 }
2657 \def\Hy@RestoreSpaceFactor{%
2658   \relax
2659   \ifhmode
2660     \ifnum\Hy@SavedSpaceFactor>\z@
2661       \spacefactor=\Hy@SavedSpaceFactor
2662     \fi
2663   \fi
```

```

2664 }
2665 \def\Hy@SaveSavedSpaceFactor{%
2666 \edef\Hy@RestoreSavedSpaceFactor{%
2667 \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2668 }%
2669 }
2670 \def\Hy@raisedlink#1{%
2671 \ifvmode
2672 #1%
2673 \else
2674 \Hy@SaveSpaceFactor
2675 \penalty\@M
2676 \smash{%
2677 \begingroup
2678 \let\HyperRaiseLinkLength\@tempdima
2679 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2680 \HyperRaiseLinkHook
2681 \expandafter\endgroup
2682 \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2683 \Hy@RestoreSpaceFactor
2684 #1%
2685 \Hy@SaveSpaceFactor
2686 }%
2687 }%
2688 \Hy@RestoreSpaceFactor
2689 \fi
2690 }

```

\Hy@SaveLastskip Inserting a \special command to set a destination destroys the \lastskip value.
\Hy@RestoreLastskip

```

2691 \def\Hy@SaveLastskip{%
2692 \let\Hy@RestoreLastskip\relax
2693 \ifvmode
2694 \ifdim\lastskip=\z@
2695 \let\Hy@RestoreLastskip\nobreak
2696 \else
2697 \begingroup
2698 \skip@=-\lastskip
2699 \edef\x{%
2700 \endgroup
2701 \def\noexpand\Hy@RestoreLastskip{%
2702 \noexpand\ifvmode
2703 \noexpand\nobreak
2704 \vskip\the\skip@
2705 \vskip\the\lastskip\relax
2706 \noexpand\fi
2707 }%
2708 }%
2709 \x
2710 \fi
2711 \else
2712 \ifhmode
2713 \ifdim\lastskip=\z@
2714 \let\Hy@RestoreLastskip\nobreak
2715 \else
2716 \begingroup
2717 \skip@=-\lastskip
2718 \edef\x{%

```

```

2719         \endgroup
2720         \def\noexpand\Hy@RestoreLastskip{%
2721             \noexpand\ifhmode
2722             \noexpand\nobreak
2723             \hskip\the\skip@
2724             \hskip\the\lastskip\relax
2725             \noexpand\fi
2726         }%
2727     }%
2728     \x
2729     \fi
2730     \fi
2731     \fi
2732 }%

```

9 Options

```

2733 \SetupKeyvalOptions{%
2734     family=Hyp,%
2735     prefix=HyOpt%
2736 }

```

9.1 Help macros

`\IfHyperBooleanExists`

```

2737 \def\IfHyperBooleanExists#1{%
2738     \ltx@ifundefined{Hy@#1false}\ltx@secondoftwo{%
2739         \ltx@ifundefined{KV@Hyp@#1@default}\ltx@secondoftwo\ltx@firstoftwo
2740     }%
2741 }

2742 \@namedef{KV@Hyp@stoppeearly@default}{\}

```

`\IfHyperBoolean`

```

2743 \def\IfHyperBoolean#1{%
2744     \IfHyperBooleanExists{#1}{%
2745         \csname ifHy@#1\endcsname
2746         \expandafter\ltx@firstoftwo
2747     \else
2748         \expandafter\ltx@secondoftwo
2749     \fi
2750 } \ltx@secondoftwo
2751 }

```

`\Hy@boolkey`

```

2752 \def\Hy@boolkey#1#2{%
2753     \edef\Hy@tempa{#2}%
2754     \lowercase\expandafter{%
2755         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2756     }%
2757     \ifx\Hy@tempa\@empty
2758         \let\Hy@tempa\Hy@true
2759     \fi
2760     \ifx\Hy@tempa\Hy@true
2761     \else
2762         \ifx\Hy@tempa\Hy@false
2763         \else

```

```

2764 \let\Hy@tempa\relax
2765 \fi
2766 \fi
2767 \ifx\Hy@tempa\relax
2768 \Hy@WarnOptionValue{#2}{#1}{‘true’ or ‘false’}%
2769 \else
2770 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2771 \csname Hy@#1\Hy@tempa\endcsname
2772 \fi
2773 }

```

\Hy@WarnOptionValue

```

2774 \def\Hy@WarnOptionValue#1#2#3{%
2775 \Hy@Warning{%
2776 Unexpected value ‘#1’\MessageBreak
2777 of option ‘#2’ instead of\MessageBreak
2778 #3%
2779 }%
2780 }

```

\Hy@DisableOption

```

2781 \def\Hy@DisableOption#1{%
2782 \ltx@ifundefined{KV@Hyp@#1@default}{%
2783 \define@key{Hyp}{#1}%
2784 }{%
2785 \define@key{Hyp}{#1}[]%
2786 }%
2787 {\Hy@WarnOptionDisabled{#1}}%
2788 }

```

\Hy@WarnOptionDisabled

```

2789 \def\Hy@WarnOptionDisabled#1{%
2790 \Hy@Warning{%
2791 Option ‘#1’ has already been used,\MessageBreak
2792 setting the option has no effect%
2793 }%
2794 }

```

\Hy@CheckOptionValue Some options take a string value out of a limited set of values. Macro \Hy@CheckOptionValue checks whether the given value #1 for option #2 is a member of the value list #3.

```

2795 \def\Hy@CheckOptionValue#1#2#3{%
2796 \begingroup
2797 \edef\x{#1}%
2798 \@onelevel@sanitize\x
2799 \let\y=y%
2800 \def\do##1##2{%
2801 \def\z{##1}%
2802 \@onelevel@sanitize\z
2803 \ifx\x\z
2804 \let\y=n%
2805 \let\do\@gobbletwo
2806 \fi
2807 }%
2808 #3%
2809 \ifx\y y%
2810 \def\do##1##2{%

```

```

2811      * '#1'%
2812      \ifx\##2\\\else\space(##2)\fi
2813      \MessageBreak
2814    }%
2815    \Hy@Warning{%
2816      Values of option '#2':\MessageBreak
2817      #3%
2818      * An empty value disables the option.\MessageBreak
2819      Unknown value '\x'%
2820    }%
2821    \fi
2822  \endgroup
2823 }

```

`\Hy@DefNameKey` **#1**: option name
#2: `\do` list with known values, first argument of `\do` is value, second argument is a comment.

```

2824 \def\Hy@DefNameKey#1{%
2825   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2826 }

```

`\Hy@@DefNameKey` **#1**: macro for value storage
#2: option name
#3: `\do` list with known values.

```

2827 \def\Hy@@DefNameKey#1#2#3{%
2828   \define@key{Hyp}{#2}{%
2829     \edef#1{##1}%
2830     \ifx#1\@empty
2831     \else
2832       \Hy@CheckOptionValue{##1}{#2}{#3}%
2833     \fi
2834   }%
2835   \let#1\@empty
2836 }

```

`\Hy@UseNameKey`

```

2837 \def\Hy@UseNameKey#1#2{%
2838   \ifx#2\@empty
2839   \else
2840     /#1/#2%
2841   \fi
2842 }

```

9.2 Defining the options

```

2843 \define@key{Hyp}{implicit}[true]{%
2844   \Hy@boolkey{implicit}{#1}%
2845 }
2846 \define@key{Hyp}{draft}[true]{%
2847   \Hy@boolkey{draft}{#1}%
2848 }
2849 \define@key{Hyp}{final}[true]{%
2850   \Hy@boolkey{final}{#1}%
2851 }
2852 \let\KV@Hyp@nolinks\KV@Hyp@draft
2853 \def\Hy@ObsoletePaperOption#1{%

```

```

2854 \Hy@WarningNoLine{%
2855   Option '#1' is no longer used%
2856 }%
2857 \define@key{Hyp}{#1}[true]{}%
2858 }
2859 \def\Hy@temp#1{%
2860   \define@key{Hyp}{#1}[true]{}%
2861   \Hy@ObsoletePaperOption{#1}%
2862 }%
2863 }
2864 \Hy@temp{a4paper}
2865 \Hy@temp{a5paper}
2866 \Hy@temp{b5paper}
2867 \Hy@temp{letterpaper}
2868 \Hy@temp{legalpaper}
2869 \Hy@temp{executivepaper}

2870 \define@key{Hyp}{setpagesize}[true]{}%
2871 \Hy@boolkey{setpagesize}{#1}%
2872 }
2873 \define@key{Hyp}{debug}[true]{}%
2874 \Hy@boolkey{debug}{#1}%
2875 }
2876 \define@key{Hyp}{linktocpage}[true]{}%
2877 \Hy@boolkey{linktocpage}{#1}%
2878 \ifHy@linktocpage
2879   \let\Hy@linktoc\Hy@linktoc@page
2880 \else
2881   \let\Hy@linktoc\Hy@linktoc@section
2882 \fi
2883 }
2884 \chardef\Hy@linktoc@none=0 %
2885 \chardef\Hy@linktoc@section=1 %
2886 \chardef\Hy@linktoc@page=2 %
2887 \chardef\Hy@linktoc@all=3 %
2888 \ifHy@linktocpage
2889   \let\Hy@linktoc\Hy@linktoc@page
2890 \else
2891   \let\Hy@linktoc\Hy@linktoc@section
2892 \fi
2893 \define@key{Hyp}{linktoc}{}%
2894 \@ifundefined{Hy@linktoc@#1}{}%
2895   \Hy@Warning{%
2896     Unexpected value '#1' of\MessageBreak
2897     option 'linktoc' instead of 'none',\MessageBreak
2898     'section', 'page' or 'all'%
2899   }%
2900 }{}%
2901 \expandafter\let\expandafter\Hy@linktoc
2902   \csname Hy@linktoc@#1\endcsname
2903 }%
2904 }
2905 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2906 \let\XR@ext\relax
2907 \define@key{Hyp}{verbose}[true]{}%
2908 \Hy@boolkey{verbose}{#1}%
2909 }
2910 \define@key{Hyp}{typexml}[true]{}%

```

```

2911 \Hy@boolkey{typexml}{#1}%
2912 }

```

If we are going to PDF via HyperTeX `\special` commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing `\special`. If we use this option, the `\special` is raised up by the right amount, to fool the dvi processor.

```

2913 \define@key{Hyp}{raiselinks}[true]{%
2914 \Hy@boolkey{raiselinks}{#1}%
2915 }

```

Most PDF-creating drivers do not allow links to be broken

```

2916 \def\Hy@setbreaklinks#1{%
2917 \csname breaklinks#1\endcsname
2918 }

2919 \def\Hy@breaklinks@unsupported{%
2920 \ifx\Hy@setbreaklinks\@gobble
2921 \ifHy@breaklinks
2922 \Hy@WarningNoLine{%
2923 You have enabled option 'breaklinks'.\MessageBreak
2924 But driver '\Hy@driver.def' does not support this.\MessageBreak
2925 Expect trouble with the link areas of broken links%
2926 }%
2927 \fi
2928 \fi
2929 }

```

```

2930 \define@key{Hyp}{breaklinks}[true]{%
2931 \Hy@boolkey{breaklinks}{#1}%
2932 \let\Hy@setbreaklinks\@gobble
2933 }

```

```

2934 \define@key{Hyp}{localanchorname}[true]{%
2935 \Hy@boolkey{localanchorname}{#1}%
2936 }

```

Determines whether an automatic anchor is put on each page

```

2937 \define@key{Hyp}{pageanchor}[true]{%
2938 \Hy@boolkey{pageanchor}{#1}%
2939 }

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

2940 \define@key{Hyp}{plainpages}[true]{%
2941 \Hy@boolkey{plainpages}{#1}%
2942 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what L^AT_EX provides?

```

2943 \define@key{Hyp}{naturalnames}[true]{%
2944 \Hy@boolkey{naturalnames}{#1}%
2945 }

```

Completely ignore the names as per the HyperTeX system, and use unique counters.

```

2946 \define@key{Hyp}{hypertextnames}[true]{%
2947 \Hy@boolkey{hypertextnames}{#1}%
2948 }

```

Currently, dvips doesn't allow anchors nested within targets, so this option tries to stop that happening. Other processors may be able to cope.

```

2949 \define@key{Hyp}{nesting}[true]{%

```

```

2950 \Hy@boolkey{nesting}{#1}%
2951 }
2952 \define@key{Hyp}{destlabel}[true]{%
2953 \Hy@boolkey{destlabel}{#1}%
2954 }
2955 \define@key{Hyp}{unicode}[true]{%
2956 \Hy@boolkey{unicode}{#1}%
2957 \ifHy@unicode
2958 \def\HyPsd@pdfencoding{unicode}%
2959 \HyPsd@LoadUnicode
2960 \else
2961 \def\HyPsd@pdfencoding{pdfdoc}%
2962 \fi
2963 }
2964 \Hy@AtBeginDocument{%
2965 \ifx\HyPsd@LoadUnicode\relax
2966 \else
2967 \def\HyPsd@LoadUnicode{%
2968 \Hy@Error{%
2969 Unicode support for bookmarks is not available.\MessageBreak
2970 Activate unicode support by using one of the options\MessageBreak
2971 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2972 in the preamble%
2973 } \@ehc
2974 \global\let\HyPsd@LoadUnicode\relax
2975 \global\Hy@unicodetrue
2976 \global\let\Hy@unicodetrue\Hy@unicodetrue
2977 }%
2978 \fi
2979 }
2980 \define@key{Hyp}{pdfencoding}{%
2981 \edef\HyPsd@temp{#1}%
2982 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2983 \let\HyPsd@pdfencoding\HyPsd@temp
2984 \Hy@unicodetrue
2985 \else
2986 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2987 \z@
2988 \else
2989 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2990 \z@
2991 \else
2992 \@ne
2993 \fi
2994 \fi
2995 \let\HyPsd@pdfencoding\HyPsd@temp
2996 \hypersetup{unicode}%
2997 \ifHy@unicode
2998 \def\HyPsd@pdfencoding{#1}%
2999 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
3000 \HyPsd@LoadStringEnc
3001 \fi
3002 \else
3003 \Hy@Warning{Cannot switch to unicode bookmarks}%
3004 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
3005 \fi
3006 \else

```



```

3007 \@onelevel@sanitize\HyPsd@temp
3008 \Hy@Warning{%
3009   Values of option 'pdfencoding':\MessageBreak
3010   'pdfdoc', 'unicode', 'auto'.\MessageBreak
3011   Ignoring unknown value '\HyPsd@temp'%
3012 }%
3013 \fi
3014 \fi
3015 }
3016 \def\HyPsd@pdfencoding@auto{auto}
3017 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
3018 \def\HyPsd@pdfencoding@unicode{unicode}
3019 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
3020 \def\HyPsd@LoadStringEnc{%
3021   \RequirePackage{stringenc}[2009/12/15]%
3022   \let\HyPsd@LoadStringEnc\relax
3023 }
3024 \Hy@AtBeginDocument{%
3025   \ifpackageloaded{stringenc}{%
3026     \let\HyPsd@LoadStringEnc\relax
3027   }{%
3028     \def\HyPsd@LoadStringEnc{%
3029       \Hy@WarningNoLine{%
3030         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
3031         in the preamble or load the package there%
3032       }%
3033     }%
3034   }%
3035 }
3036 \define@key{Hyp}{psdextra}[true]{%
3037   \Hy@boolkey{psdextra}{#1}%
3038   \HyPsd@LoadExtra
3039 }
3040 \def\hypersetup{\kvsetkeys{Hyp}}
3041 \newif\ifHy@setpdfversion
3042 \define@key{Hyp}{pdfversion}{%
3043   \ifundefined{Hy@pdfversion@#1}{%
3044     \PackageWarning{hyperref}{%
3045       Unsupported PDF version '#1'.\MessageBreak
3046       Valid values: 1.2 until 1.9%
3047     }%
3048   }{%
3049     \Hy@setpdfversiontrue
3050     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
3051   }%
3052 }
3053 \@namedef{Hy@pdfversion@1.2}{2}%
3054 \@namedef{Hy@pdfversion@1.3}{3}%
3055 \@namedef{Hy@pdfversion@1.4}{4}%
3056 \@namedef{Hy@pdfversion@1.5}{5}%
3057 \@namedef{Hy@pdfversion@1.6}{6}%
3058 \@namedef{Hy@pdfversion@1.7}{7}%
3059 \@namedef{Hy@pdfversion@1.8}{8}%
3060 \@namedef{Hy@pdfversion@1.9}{9}%
3061 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

3062 \newif\ifHy@DviMode
3063 \let\Hy@DviErrMsg\ltx@empty
3064 \ifpdf
3065   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
3066 \else
3067   \ifxetex
3068     \def\Hy@DviErrMsg{XeTeX is running}%
3069   \else
3070     \ifvtex
3071       \ifvtexdvi
3072         \Hy@DviModetrue
3073       \else
3074         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
3075       \fi
3076     \else
3077       \Hy@DviModetrue
3078     \fi
3079   \fi
3080 \fi
3081 \def\HyOpt@CheckDvi#1{%
3082   \ifHy@DviMode
3083     \expandafter\ltx@firstofone
3084   \else
3085     \Hy@Error{%
3086       Wrong DVI mode driver option ‘#1’,\MessageBreak
3087       because \Hy@DviErrMsg
3088     }\@ehc
3089     \expandafter\ltx@gobble
3090   \fi
3091 }

3092 \DeclareVoidOption{tex4ht}{%
3093   \Hy@texhttrue
3094   \kvsetkeys{Hyp}{colorlinks=true}%
3095   \def\BeforeTeXIVht{\RequirePackage{color}}}%
3096 \def\Hy@driver{htex4ht}%
3097 \def\MaybeStopEarly{%
3098   \Hy@Message{Stopped early}%
3099   \Hy@AtBeginDocument{%
3100     \PDF@FinishDoc
3101     \gdef\PDF@FinishDoc{}%
3102   }%
3103   \endinput
3104 }%
3105 }

3106 \DeclareVoidOption{pdftex}{%
3107   \ifpdf
3108     \def\Hy@driver{hpdftex}%
3109     \PassOptionsToPackage{pdftex}{color}%
3110   \else
3111     \Hy@Error{%
3112       Wrong driver option ‘pdftex’,\MessageBreak
3113       because pdfTeX in PDF mode is not detected%
3114     }\@ehc
3115   \fi
3116 }

```

```

3117 \DeclareVoidOption{luatex}{%
3118   \ifpdf
3119     \ifx\pdfextension\@undefined
3120       \def\Hy@driver{hpdfTeX}%
3121       \PassOptionsToPackage{pdfTeX}{color}%
3122     \else
3123       \def\Hy@driver{hluatex}%
3124       \PassOptionsToPackage{luatex}{color}%
3125     \fi
3126   \else
3127     \Hy@Error{%
3128       Wrong driver option 'luatex',\MessageBreak
3129       because luaTeX in PDF mode is not detected%
3130     }\@ehc
3131   \fi
3132 }
3133 \DeclareVoidOption{nativepdf}{%
3134   \HyOpt@CheckDvi{nativepdf}{%
3135     \def\Hy@driver{hdvips}%
3136     \PassOptionsToPackage{dvips}{color}%
3137   }%
3138 }
3139 \DeclareVoidOption{dvipdfm}{%
3140   \HyOpt@CheckDvi{dvipdfm}{%
3141     \def\Hy@driver{hdvipdfm}%
3142   }%
3143 }
3144 \DeclareVoidOption{dvipdfmx}{%
3145   \HyOpt@CheckDvi{dvipdfmx}{%
3146     \def\Hy@driver{hdvipdfm}%
3147     \PassOptionsToPackage{dvipdfmx}{color}%
3148   }%
3149 }
3150 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
3151   \expandafter\ifx\csname if#1\expandafter\endcsname
3152     \csname iftrue\endcsname
3153   \chardef\SpecialDvipdfmxOutlineOpen\@ne
3154 \else
3155   \chardef\SpecialDvipdfmxOutlineOpen\z@
3156 \fi
3157 }
3158 \DeclareVoidOption{xetex}{%
3159   \ifxetex
3160     \def\Hy@driver{hxetex}%
3161   \else
3162     \Hy@Error{%
3163       Wrong driver option 'xetex',\MessageBreak
3164       because XeTeX is not detected%
3165     }\@ehc
3166   \fi
3167 }
3168 \DeclareVoidOption{pdfmark}{%
3169   \HyOpt@CheckDvi{pdfmark}{%
3170     \def\Hy@driver{hdvips}%
3171   }%
3172 }
3173 \DeclareVoidOption{dvips}{%

```

```

3174 \HyOpt@CheckDvi{dvips}{%
3175   \def\Hy@driver{hdvips}%
3176   \PassOptionsToPackage{dvips}{color}%
3177 }%
3178 }
3179 \DeclareVoidOption{hypertex}{%
3180   \HyOpt@CheckDvi{hypertex}{%
3181     \def\Hy@driver{hypertex}%
3182   }%
3183 }
3184 \let\Hy@MaybeStopNow\relax
3185 \DeclareVoidOption{vtex}{%
3186   \ifvtex
3187     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3188     \def\Hy@driver{hvtex}%
3189   \else
3190     \ifnum\OpMode=10\relax
3191     \def\Hy@driver{hvtexhtm}%
3192     \def\MaybeStopEarly{%
3193       \Hy@Message{Stopped early}%
3194       \Hy@AtBeginDocument{%
3195         \PDF@FinishDoc
3196         \gdef\PDF@FinishDoc{}%
3197       }%
3198     \endinput
3199   }%
3200   \else
3201     \Hy@Error{%
3202       Wrong driver option 'vtex',\MessageBreak
3203       because of wrong OpMode (\the\OpMode)%
3204     }\@ehc
3205   \fi
3206 \fi
3207 \else
3208   \Hy@Error{%
3209     Wrong driver option 'vtex',\MessageBreak
3210     because VTeX is not running%
3211   }\@ehc
3212 \fi
3213 }
3214 \DeclareVoidOption{vtexpdfmark}{%
3215   \ifvtex
3216     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
3217     \def\Hy@driver{hvtexmrk}%
3218   \else
3219     \Hy@Error{%
3220       Wrong driver option 'vtexpdfmark',\MessageBreak
3221       because of wrong OpMode (\the\OpMode)%
3222     }\@ehc
3223   \fi
3224   \else
3225     \Hy@Error{%
3226       Wrong driver option 'vtexpdfmark',\MessageBreak
3227       because VTeX is not running%
3228     }\@ehc
3229   \fi
3230 }

```

```

3231 \DeclareVoidOption{dviwindo}{%
3232   \HyOpt@CheckDvi{dviwindo}{%
3233     \def\Hy@driver{hdviwind}%
3234     \kvsetkeys{Hyp}{colorlinks}%
3235     \PassOptionsToPackage{dviwindo}{color}%
3236   }%
3237 }
3238 \DeclareVoidOption{dvipsone}{%
3239   \HyOpt@CheckDvi{dvipsone}{%
3240     \def\Hy@driver{hdvipson}%
3241     \PassOptionsToPackage{dvipsone}{color}%
3242   }%
3243 }
3244 \DeclareVoidOption{textures}{%
3245   \HyOpt@CheckDvi{textures}{%
3246     \def\Hy@driver{htexture}%
3247   }%
3248 }
3249 \DeclareVoidOption{latex2html}{%
3250   \HyOpt@CheckDvi{latex2html}{%
3251     \Hy@AtBeginDocument{\@@latextohtmlX}%
3252   }%
3253 }

```

No more special treatment for ps2pdf. Let it sink or swim.

```

3254 \DeclareVoidOption{ps2pdf}{%
3255   \HyOpt@CheckDvi{ps2pdf}{%
3256     \def\Hy@driver{hdvips}%
3257     \PassOptionsToPackage{dvips}{color}%
3258   }%
3259 }
3260 \let\HyOpt@DriverFallback\ltx@empty
3261 \define@key{Hyp}{driverfallback}{%
3262   \ifHy@DviMode
3263     \def\HyOpt@DriverFallback{#1}%
3264     \Hy@Match\HyOpt@DriverFallback{}{%
3265       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3266       latex2html|tex4ht)$%
3267     }{}{%
3268       \Hy@Warning{%
3269         Invalid driver '#1' for option\MessageBreak
3270         'driverfallback'%
3271       }%
3272       \let\HyOpt@DriverFallback\ltx@empty
3273     }%
3274   \fi
3275 }
3276 \let\HyOpt@CustomDriver\ltx@empty
3277 \define@key{Hyp}{customdriver}{%
3278   \IfFileExists{#1.def}{%
3279     \def\HyOpt@CustomDriver{#1}%
3280   }{%
3281     \Hy@Warning{%
3282       Missing driver file '#1.def',\MessageBreak
3283       ignoring custom driver%
3284     }%
3285   }%

```

3286 }

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```
3287 \define@key{Hyp}{hyperfigures}[true]{%
3288   \Hy@boolkey{hyperfigures}{#1}%
3289 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
3290 \define@key{Hyp}{hyperfootnotes}[true]{%
3291   \Hy@boolkey{hyperfootnotes}{#1}%
3292 }
```

Set up back-referencing to be hyper links, by page, slide or section number,

```
3293 \def\back@none{none}
3294 \def\back@section{section}
3295 \def\back@page{page}
3296 \def\back@slide{slide}
3297 \define@key{Hyp}{backref}[section]{%
3298   \lowercase{\def\Hy@tempa{#1}}%
3299   \ifx\Hy@tempa\@empty
3300     \let\Hy@tempa\back@section
3301   \fi
3302   \ifx\Hy@tempa\Hy@false
3303     \let\Hy@tempa\back@none
3304   \fi
3305   \ifx\Hy@tempa\back@slide
3306     \let\Hy@tempa\back@section
3307   \fi
3308   \ifx\Hy@tempa\back@page
3309     \PassOptionsToPackage{hyperpageref}{backref}%
3310     \Hy@backreftrue
3311   \else
3312     \ifx\Hy@tempa\back@section
3313       \PassOptionsToPackage{hyperref}{backref}%
3314       \Hy@backreftrue
3315     \else
3316       \ifx\Hy@tempa\back@none
3317         \Hy@backreffalse
3318       \else
3319         \Hy@WarnOptionValue{#1}{backref}{%
3320           'section', 'slide', 'page', 'none', \MessageBreak
3321           or 'false'}%
3322       \fi
3323     \fi
3324   \fi
3325 }
3326 \define@key{Hyp}{pagebackref}[true]{%
3327   \edef\Hy@tempa{#1}%
3328   \lowercase\expandafter{%
3329     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3330   }%
3331   \ifx\Hy@tempa\@empty
3332     \let\Hy@tempa\Hy@true
3333   \fi
3334   \ifx\Hy@tempa\Hy@true
```

```

3335 \PassOptionsToPackage{hyperpageref}{backref}%
3336 \Hy@backreftrue
3337 \else
3338 \ifx\Hy@tempa\Hy@false
3339 \Hy@backreffalse
3340 \else
3341 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
3342 \fi
3343 \fi
3344 }

```

Make index entries be links back to the relevant pages. By default this is turned on, but may be stopped.

```

3345 \define@key{Hyp}{hyperindex}[true]{%
3346 \Hy@boolkey{hyperindex}{#1}%
3347 }

```

Configuration of encap char.

```

3348 \define@key{Hyp}{encap}[|]{%
3349 \def\HyInd@EncapChar{#1}%
3350 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3351 \def\HyLang@afrikaans{%
3352 \def\equationautorefname{Vergelyking}%
3353 \def\footnoteautorefname{Voetnota}%
3354 \def\itemautorefname{Item}%
3355 \def\figureautorefname{Figuur}%
3356 \def\tableautorefname{Tabel}%
3357 \def\partautorefname{Deel}%
3358 \def\appendixautorefname{Bylae}%
3359 \def\chapterautorefname{Hoofstuk}%
3360 \def\sectionautorefname{Afdeling}%
3361 \def\subsectionautorefname{Subafdeling}%
3362 \def\subsubsectionautorefname{Subsubafdeling}%
3363 \def\paragraphautorefname{Paragraaf}%
3364 \def\subparagraphautorefname{Subparagraaf}%
3365 \def\FancyVerbLineautorefname{Lyn}%
3366 \def\theoremautorefname{Teorema}%
3367 \def\pageautorefname{Bladsy}%
3368 }
3369 \def\HyLang@english{%
3370 \def\equationautorefname{Equation}%
3371 \def\footnoteautorefname{footnote}%
3372 \def\itemautorefname{item}%
3373 \def\figureautorefname{Figure}%
3374 \def\tableautorefname{Table}%
3375 \def\partautorefname{Part}%
3376 \def\appendixautorefname{Appendix}%
3377 \def\chapterautorefname{chapter}%
3378 \def\sectionautorefname{section}%
3379 \def\subsectionautorefname{subsection}%
3380 \def\subsubsectionautorefname{subsubsection}%
3381 \def\paragraphautorefname{paragraph}%
3382 \def\subparagraphautorefname{subparagraph}%

```

```

3383 \def\FancyVerbLineautorefname{line}%
3384 \def\theoremautorefname{Theorem}%
3385 \def\pageautorefname{page}%
3386 }
3387 \def\HyLang@french{%
3388 \def\equationautorefname{'Equation}%
3389 \def\footnoteautorefname{note}%
3390 \def\itemautorefname{item}%
3391 \def\figureautorefname{Figure}%
3392 \def\tableautorefname{Tableau}%
3393 \def\partautorefname{Partie}%
3394 \def\appendixautorefname{Appendice}%
3395 \def\chapterautorefname{chapitre}%
3396 \def\sectionautorefname{section}%
3397 \def\subsectionautorefname{sous-section}%
3398 \def\subsubsectionautorefname{sous-sous-section}%
3399 \def\paragraphautorefname{paragraphe}%
3400 \def\subparagraphautorefname{sous-paragraphe}%
3401 \def\FancyVerbLineautorefname{ligne}%
3402 \def\theoremautorefname{Th\'eor\`eme}%
3403 \def\pageautorefname{page}%
3404 }
3405 \def\HyLang@german{%
3406 \def\equationautorefname{Gleichung}%
3407 \def\footnoteautorefname{Fu\ss note}%
3408 \def\itemautorefname{Punkt}%
3409 \def\figureautorefname{Abbildung}%
3410 \def\tableautorefname{Tabelle}%
3411 \def\partautorefname{Teil}%
3412 \def\appendixautorefname{Anhang}%
3413 \def\chapterautorefname{Kapitel}%
3414 \def\sectionautorefname{Abschnitt}%
3415 \def\subsectionautorefname{Unterabschnitt}%
3416 \def\subsubsectionautorefname{Unterunterabschnitt}%
3417 \def\paragraphautorefname{Absatz}%
3418 \def\subparagraphautorefname{Unterabsatz}%
3419 \def\FancyVerbLineautorefname{Zeile}%
3420 \def\theoremautorefname{Theorem}%
3421 \def\pageautorefname{Seite}%
3422 }
3423 \def\HyLang@italian{%
3424 \def\equationautorefname{Equazione}%
3425 \def\footnoteautorefname{nota}%
3426 \def\itemautorefname{punto}%
3427 \def\figureautorefname{Figura}%
3428 \def\tableautorefname{Tabella}%
3429 \def\partautorefname{Parte}%
3430 \def\appendixautorefname{Appendice}%
3431 \def\chapterautorefname{Capitolo}%
3432 \def\sectionautorefname{sezione}%
3433 \def\subsectionautorefname{sottosezione}%
3434 \def\subsubsectionautorefname{sottosottosezione}%
3435 \def\paragraphautorefname{paragrafo}%
3436 \def\subparagraphautorefname{sottoparagrafo}%
3437 \def\FancyVerbLineautorefname{linea}%
3438 \def\theoremautorefname{Teorema}%
3439 \def\pageautorefname{Pag.\@}%

```



```

3440 }
3441 \def\HyLang@magyar{%
3442 \def\equationautorefname{Egyenlet}%
3443 \def\footnoteautorefname{l\'abjegyzet}%
3444 \def\itemautorefname{Elem}%
3445 \def\figureautorefname{\`A bra}%
3446 \def\tableautorefname{T\'abl\'azat}%
3447 \def\partautorefname{R\'esz}%
3448 \def\appendixautorefname{F\'uggel\'ek}%
3449 \def\chapterautorefname{fejezet}%
3450 \def\sectionautorefname{szakasz}%
3451 \def\subsectionautorefname{alszakasz}%
3452 \def\subsubsectionautorefname{alalszakasz}%
3453 \def\paragraphautorefname{bekezd\'es}%
3454 \def\subparagraphautorefname{albekezd\'es}%
3455 \def\FancyVerbLineautorefname{sor}%
3456 \def\theoremautorefname{T\'etel}%
3457 \def\pageautorefname{oldal}%
3458 }
3459 \def\HyLang@portuges{%
3460 \def\equationautorefname{Equa\c c\~ao}%
3461 \def\footnoteautorefname{Nota de rodap\'e}%
3462 \def\itemautorefname{Item}%
3463 \def\figureautorefname{Figura}%
3464 \def\tableautorefname{Tabela}%
3465 \def\partautorefname{Parte}%
3466 \def\appendixautorefname{Ap\~endice}%
3467 \def\chapterautorefname{Cap\'itulo}%
3468 \def\sectionautorefname{Se\c c\~ao}%
3469 \def\subsectionautorefname{Subse\c c\~ao}%
3470 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3471 \def\paragraphautorefname{par\'agrafo}%
3472 \def\subparagraphautorefname{subpar\'agrafo}%
3473 \def\FancyVerbLineautorefname{linha}%
3474 \def\theoremautorefname{Teorema}%
3475 \def\pageautorefname{P\'agina}%
3476 }

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

3477 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```

3478 \def\equationautorefname{\cyr\cyrv\cyrry\cyrr.}%

```

The name of the equation reference has common form for both nominative and accusative but changes in other forms, like “of `\auto{auto}`” etc. The full name must follow full name of the `\theoremautorefname`.

```

3479 % \def\equationautorefname{%
3480 % \cyr\cyrv\cyrry\cyrr\cyra\cyrzh\cyre\cyrn\cyri\cyre
3481 % }%

```

The variant of footnote has abbreviation form of the synonym of the word “footnote”. This variant of abbreviated synonym has alternative status (maybe obsolete?).

```
3482 \def\footnoteautorefname{%
3483   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3484 }%
```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}”

```
3485 % \def\footnoteautorefname{%
3486 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
3487 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
3488 % }%
```

Commented forms of the “footnote”: have different forms, the same is for the nominative and accusative. (The others needed?)

```
3489 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3490 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%

```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
3491 \def\itemautorefname{\cyr\cyrp.}%
3492 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%

```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3493 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3494 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%

```

Names of the part, chapter, section(s) have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
3495 \def\partautorefname{\cyr\cyrch.}%
3496 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3497 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

Name of the appendix can use this abbreviation, but it is not standard for books, i.e, not for “the good face of the book”. Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
3498 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3499 % \def\appendixautorefname{%
3500 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
3501 % }%
```

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

```
3502 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3503 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%

```

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

```
3504 \def\paragraphautorefname{\cyr\cyrp.}%
3505 \def\subparagraphautorefname{\cyr\cyrp.}%

```

Commented variant can be used in books but since it has common form for both nominative and accusative but it changes in other forms, like “of \autoref{auto}” etc.

```
3506 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3507 % \def\subparagraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

```
3508 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

Commented names of the “verbatim line”: have different forms, also the nominative and accusative.

```
3509 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3510 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

The alternative, ve-e-e-ery professional abbreviation, was used in typography markup for typesetters.

```
3511 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But ...

```
3512 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

Commented forms of the “theorem”: have different forms, also the nominative and accusative.

```
3513 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3514 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

Name of the page stable (standard) abbreviation form. No problem.

```
3515 \def\pageautorefname{\cyr\cyrs.}%
3516 }
```

```
3517 \def\HyLang@spanish{%
3518 \def\equationautorefname{Ecuaci\`on}%
3519 \def\footnoteautorefname{Nota a pie de p\`agina}%
3520 \def\itemautorefname{Elemento}%
3521 \def\figureautorefname{Figura}%
3522 \def\tableautorefname{Tabla}%
3523 \def\partautorefname{Parte}%
3524 \def\appendixautorefname{Ap\`endice}%
3525 \def\chapterautorefname{Cap\`itulo}%
3526 \def\sectionautorefname{Secci\`on}%
3527 \def\subsectionautorefname{Subsecci\`on}%
3528 \def\subsubsectionautorefname{Subsubsecci\`on}%
3529 \def\paragraphautorefname{P\`arrafo}%
3530 \def\subparagraphautorefname{Subp\`arrafo}%
3531 \def\FancyVerbLineautorefname{L\`inea}%
3532 \def\theoremautorefname{Teorema}%
3533 \def\pageautorefname{P\`agina}%
3534 }
```

```
3535 \def\HyLang@catalan{%
3536 \def\equationautorefname{Equaci\`o}%
3537 \def\footnoteautorefname{Nota al peu de p\`agina}%
3538 \def\itemautorefname{Element}%
3539 \def\figureautorefname{Figura}%
3540 \def\tableautorefname{Taula}%
3541 \def\partautorefname{Part}%
```

```

3542 \def\appendixautorefname{Ap\`endix}%
3543 \def\chapterautorefname{Cap\`itol}%
3544 \def\sectionautorefname{Secci\`o}%
3545 \def\subsectionautorefname{Subsecci\`o}%
3546 \def\subsubsectionautorefname{Subsubsecci\`o}%
3547 \def\paragraphautorefname{Par\`agraf}%
3548 \def\subparagraphautorefname{Subpar\`agraf}%
3549 \def\FancyVerbLineautorefname{L\`inia}%
3550 \def\theoremautorefname{Teorema}%
3551 \def\pageautorefname{P\`agina}%
3552 }

3553 \def\HyLang@vietnamese{%
3554   \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
3555   \def\footnoteautorefname{Ch\`u th\`ich}%
3556   \def\itemautorefname{m\`d{u}c}%
3557   \def\figureautorefname{H\`inh}%
3558   \def\tableautorefname{B\`h{a}ng}%
3559   \def\partautorefname{Ph\`acircumflex{}n}%
3560   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
3561   \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3562   \def\sectionautorefname{m\`d{u}c}%
3563   \def\subsectionautorefname{m\`d{u}c}%
3564   \def\subsubsectionautorefname{m\`d{u}c}%
3565   \def\paragraphautorefname{\dj{}o\`d{a}n}%
3566   \def\subparagraphautorefname{\dj{}o\`d{a}n}%
3567   \def\FancyVerbLineautorefname{d\`ong}%
3568   \def\theoremautorefname{D{J}{\`d{i}nh l\`y}%
3569   \def\pageautorefname{Trang}%
3570 }

```

Instead of package babel's definition of `\addto` the implementation of package `varioref` is used. Additionally argument `#1` is checked for `\relax`.

```

3571 \def\HyLang@addto#1#2{%
3572   #2%
3573   \@temptokena{#2}%
3574   \ifx#1\relax
3575     \let#1\@empty
3576   \fi
3577   \ifx#1\@undefined
3578     \edef#1{\the\@temptokena}%
3579   \else
3580     \toks@\expandafter{#1}%
3581     \edef#1{\the\toks@\the\@temptokena}%
3582   \fi
3583   \@temptokena{}\toks@\@temptokena
3584 }

3585 \def\HyLang@DeclareLang#1#2#3{%
3586   \@ifpackagewith{babel}{#1}{%
3587     \expandafter\HyLang@addto
3588       \csname extras#1\expandafter\endcsname
3589       \csname HyLang@#2\endcsname
3590     \begingroup
3591       \edef\x{\endgroup
3592         #3%
3593       }%
3594     \x
3595     \@namedef{HyLang@#1@done}{}%

```

```

3596 }{}%
3597 \begingroup
3598 \edef\x##1##2{%
3599 \noexpand\ifx##2\relax
3600 \errmessage{No definitions for language #2' found!}%
3601 \noexpand\fi
3602 \endgroup
3603 \noexpand\define@key{Hyp}{#1}[]{}%
3604 \noexpand\@ifundefined{HyLang@#1@done}{}%
3605 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3606 #3%
3607 \noexpand\@namedef{HyLang@#1@done}{}%
3608 }{}%
3609 }%
3610 }%
3611 \expandafter\x\csname extras#1\expandafter\endcsname
3612 \csname HyLang@#2\endcsname
3613 }
3614 \HyLang@DeclareLang{english}{english}{}
3615 \HyLang@DeclareLang{UKenglish}{english}{}
3616 \HyLang@DeclareLang{british}{english}{}
3617 \HyLang@DeclareLang{USenglish}{english}{}
3618 \HyLang@DeclareLang{american}{english}{}
3619 \HyLang@DeclareLang{german}{german}{}
3620 \HyLang@DeclareLang{austrian}{german}{}
3621 \HyLang@DeclareLang{ngerman}{german}{}
3622 \HyLang@DeclareLang{naustrian}{german}{}
3623 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3624 \HyLang@DeclareLang{brazil}{portuges}{}
3625 \HyLang@DeclareLang{brazilian}{portuges}{}
3626 \HyLang@DeclareLang{portuguese}{portuges}{}
3627 \HyLang@DeclareLang{spanish}{spanish}{}
3628 \HyLang@DeclareLang{catalan}{catalan}{}
3629 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3630 \HyLang@DeclareLang{french}{french}{}
3631 \HyLang@DeclareLang{frenchb}{french}{}
3632 \HyLang@DeclareLang{francais}{french}{}
3633 \HyLang@DeclareLang{acadian}{french}{}
3634 \HyLang@DeclareLang{canadien}{french}{}
3635 \HyLang@DeclareLang{italian}{italian}{}
3636 \HyLang@DeclareLang{magyar}{magyar}{}
3637 \HyLang@DeclareLang{hungarian}{magyar}{}

```

More work is needed in case of options `vietnamese` and `vietnam`.

```

3638 \DeclareVoidOption{vietnamese}{}%
3639 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3640 \Hy@AtEndOfPackage{%
3641 \@ifundefined{T@PU}{}{}%
3642 \input{puvnenc.def}%
3643 }%
3644 }%
3645 }
3646 \DeclareVoidOption{vietnam}{}%
3647 \HyLang@addto\extrasvietnam\HyLang@vietnamese
3648 \Hy@AtEndOfPackage{%
3649 \@ifundefined{T@PU}{}{}%
3650 \input{puvnenc.def}%
3651 }%

```

```

3652 }%
3653 }

```

Similar for option `arabic` that just loads the additions to PU encoding for Arabi.

```

3654 \DeclareVoidOption{arabic}{%
3655   \Hy@AtEndOfPackage{%
3656     \@ifundefined{T@PU}{-}{%
3657       \input{puarenc.def}%
3658     }%
3659   }%
3660 }

```

13 Options to change appearance of links

Colouring links at the L^AT_EX level is useful for debugging, perhaps.

```

3661 \define@key{Hyp}{colorlinks}[true]{%
3662   \Hy@boolkey{colorlinks}{#1}%
3663 }
3664 \DeclareVoidOption{hidelinks}{%
3665   \Hy@colorlinksfalse
3666   \Hy@ocgcolorlinksfalse
3667   \Hy@frenchlinksfalse
3668   \def\Hy@colorlink##1{\begingroup}%
3669   \def\Hy@endcolorlink{\endgroup}%
3670   \def\@pdfborder{0 0 0}%
3671   \let\@pdfborderstyle\ltx@empty
3672 }
3673 \define@key{Hyp}{ocgcolorlinks}[true]{%
3674   \Hy@boolkey{ocgcolorlinks}{#1}%
3675 }
3676 \Hy@AtBeginDocument{%
3677   \begingroup
3678   \@ifundefined{OBJ@OCG@view}{%
3679     \ifHy@ocgcolorlinks
3680       \Hy@Warning{%
3681         Driver does not support ‘ocgcolorlinks’,\MessageBreak
3682         using ‘colorlinks’ instead%
3683       }%
3684     \fi
3685   }{}%
3686   \endgroup
3687 }
3688 \define@key{Hyp}{frenchlinks}[true]{%
3689   \Hy@boolkey{frenchlinks}{#1}%
3690 }

```

14 Bookmarking

```

3691 \begingroup\expandafter\expandafter\expandafter\endgroup
3692 \expandafter\ifx\csname chapter\endcsname\relax
3693   \def\toclevel@part{0}%
3694 \else
3695   \def\toclevel@part{-1}%
3696 \fi
3697 \def\toclevel@chapter{0}
3698 \def\toclevel@section{1}

```

```

3699 \def\toclevel@subsection{2}
3700 \def\toclevel@subsubsection{3}
3701 \def\toclevel@paragraph{4}
3702 \def\toclevel@subparagraph{5}
3703 \def\toclevel@figure{0}
3704 \def\toclevel@table{0}
3705 \@ifpackageloaded{listings}{%
3706   \providecommand*\theHlstlisting{\thelstlisting}%
3707   \providecommand*\toclevel@lstlisting{0}%
3708 }{}
3709 \@ifpackageloaded{listing}{%
3710   \providecommand*\theHlisting{\thelisting}%
3711   \providecommand*\toclevel@listing{0}%
3712 }{}

3713 \define@key{Hyp}{bookmarks}[true]{%
3714   \Hy@boolkey{bookmarks}{#1}%
3715 }

3716 \define@key{Hyp}{bookmarksopen}[true]{%
3717   \Hy@boolkey{bookmarksopen}{#1}%
3718 }

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

3719 \let\Hy@bookmarksdepth\c@tocdepth
3720 \define@key{Hyp}{bookmarksdepth}[]{%
3721   \begingroup
3722     \edef\x{#1}%
3723     \ifx\x\empty
3724       \global\let\Hy@bookmarksdepth\c@tocdepth
3725     \else
3726       \@ifundefined{toclevel@\x}{%
3727         \@onelevel@sanitize\x
3728         \edef\y{\expandafter\@car\x\@nil}%
3729         \ifcase 0\expandafter\ifx\y-1\fi
3730           \expandafter\ifnum\expandafter'\y>47 %
3731             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3732           \Hy@Warning{Unknown document division name (\x)}%
3733         \else
3734           \setbox\z@=\hbox{%
3735             \count@=\x
3736             \xdef\Hy@bookmarksdepth{\the\count@}%
3737           }%
3738         \fi
3739       }{%
3740         \setbox\z@=\hbox{%
3741           \count@=\csname toclevel@\x\endcsname
3742           \xdef\Hy@bookmarksdepth{\the\count@}%
3743         }%

```

```

3744 }%
3745 \fi
3746 \endgroup
3747 }

```

‘bookmarksopenlevel’ to specify the open level. From Heiko Oberdiek.

```

3748 \define@key{Hyp}{bookmarksopenlevel}{%
3749 \def\@bookmarksopenlevel{#1}%
3750 }
3751 \def\@bookmarksopenlevel{\maxdimen}
3752 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3753 \define@key{Hyp}{bookmarkstype}{%
3754 \def\Hy@bookmarkstype{#1}%
3755 }
3756 \def\Hy@bookmarkstype{toc}

```

Richard Curnow <richard@curnow.demon.co.uk> suggested this functionality. It adds section numbers etc to bookmarks.

```

3757 \define@key{Hyp}{bookmarksnumbered}[true]{%
3758 \Hy@boolkey{bookmarksnumbered}{#1}%
3759 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3760 \define@key{Hyp}{CJKbookmarks}[true]{%
3761 \Hy@boolkey{CJKbookmarks}{#1}%
3762 }

3763 \def\Hy@temp#1{%
3764 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3765 }
3766 \def\Hy@@temp#1#2#3{%
3767 \define@key{Hyp}{#2color}{%
3768 \HyColor@HyperrefColor{##1}#1%
3769 }%
3770 \def#1{#3}%
3771 }
3772 \Hy@temp{link}{red}
3773 \Hy@temp{anchor}{black}
3774 \Hy@temp{cite}{green}
3775 \Hy@temp{file}{cyan}
3776 \Hy@temp{url}{magenta}
3777 \Hy@temp{menu}{red}
3778 \Hy@temp{run}{\@filecolor}
3779 \define@key{Hyp}{pagecolor}{%
3780 \Hy@WarningPageColor
3781 }
3782 \def\Hy@WarningPageColor{%
3783 \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3784 \global\let\Hy@WarningPageColor\relax
3785 }
3786 \define@key{Hyp}{allcolors}{%
3787 \HyColor@HyperrefColor{#1}\@linkcolor
3788 \HyColor@HyperrefColor{#1}\@anchorcolor
3789 \HyColor@HyperrefColor{#1}\@citecolor
3790 \HyColor@HyperrefColor{#1}\@filecolor
3791 \HyColor@HyperrefColor{#1}\@urlcolor
3792 \HyColor@HyperrefColor{#1}\@menucolor
3793 \HyColor@HyperrefColor{#1}\@runcolor
3794 }

```



```

3795 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3796 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3797 \let\@baseurl\@empty
3798 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3799 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3800 \hyperlinkfileprefix{file:}

```

15 PDF-specific options

`\pdfpagetransition` The value of option `pdfpagetransition` is stored in `\pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

3801 \let\pdfpagetransition\relax
3802 \define@key{Hyp}{pdfpagetransition}{%
3803   \def\pdfpagetransition{#1}%
3804 }

```

`\pdfpageduration` The value of option `pdfpageduration` is stored in `\pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

3805 \let\pdfpageduration\relax
3806 \define@key{Hyp}{pdfpageduration}{%
3807   \def\pdfpageduration{#1}%
3808   \Hy@Match\pdfpageduration{}{%
3809     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3810   }{}{%
3811     \Hy@Warning{%
3812       Invalid value '\pdfpageduration'\MessageBreak
3813       of option 'pdfpageduration'\MessageBreak
3814       is replaced by an empty value%
3815     }%
3816     \let\pdfpageduration\ltx@empty
3817   }%
3818 }

```

The entry for the `/Hid` key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the `/Hid` key is not written to the pdf page object in order not to enlarge the pdf file.

```

3819 \newif\ifHy@useHidKey
3820 \Hy@useHidKeyfalse
3821 \define@key{Hyp}{pdfpagehidden}[true]{%
3822   \Hy@boolkey{pdfpagehidden}{#1}%
3823   \ifHy@pdfpagehidden
3824     \global\Hy@useHidKeytrue
3825   \fi
3826 }

```

The value of the `bordercolor` options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package `xcolor` provides `\XC@bordercolor` since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package `xcolor` by using `\XC@bordercolor` (since `xcolor` 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

3827 \def\Hy@ColorList{cite,file,link,menu,run,url}
3828 \@for\Hy@temp:=\Hy@ColorList\do{%
3829   \edef\Hy@temp{%
3830     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3831       \noexpand\HyColor@HyperrefBorderColor
3832       {##1}%
3833       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3834       {hyperref}%
3835       {\Hy@temp bordercolor}%
3836     }%
3837   }%
3838   \Hy@temp
3839 }
3840 \define@key{Hyp}{pagebordercolor}{%
3841   \Hy@WarningPageBorderColor
3842 }
3843 \def\Hy@WarningPageBorderColor{%
3844   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3845   \global\let\Hy@WarningPageBorderColor\relax
3846 }
3847 \define@key{Hyp}{allbordercolors}{%
3848   \def\Hy@temp###1##2{%
3849     \HyColor@HyperrefBorderColor{##1}##1{hyperref}{##2bordercolor}%
3850   }%
3851   \Hy@temp\@citebordercolor{cite}%
3852   \Hy@temp\@filebordercolor{file}%
3853   \Hy@temp\@linkbordercolor{link}%
3854   \Hy@temp\@menubordercolor{menu}%
3855   \Hy@temp\@runbordercolor{run}%
3856   \Hy@temp\@urlbordercolor{url}%
3857 }

3858 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{##1}}
3859 \Hy@DefNameKey{pdfhighlight}{%
3860   \do{/I}{Invert}%
3861   \do{/N}{None}%
3862   \do{/O}{Outline}%
3863   \do{/P}{Push}%
3864 }
3865 \define@key{Hyp}{pdfborder}{%
3866   \let\Hy@temp\@pdfborder
3867   \def\@pdfborder{##1}%
3868   \Hy@Match\@pdfborder{}{%
3869     ~\HyPat@NonNegativeReal/ %
3870     \HyPat@NonNegativeReal/ %
3871     \HyPat@NonNegativeReal/%
3872     ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3873   }{}{%
3874     \Hy@Warning{%
3875       Invalid value '\@pdfborder'\MessageBreak
3876       for option 'pdfborder'.\MessageBreak
3877       Option setting is ignored%
3878     }%
3879     \let\@pdfborder\Hy@temp
3880   }%
3881 }
3882 \define@key{Hyp}{pdfborderstyle}{%
3883   \let\Hy@temp\@pdfborderstyle

```

```

3884 \def\@pdfborderstyle{#1}%
3885 \Hy@Match\@pdfborderstyle{}{%
3886   ~%
3887   ( */Type */Border%
3888   | */W +\HyPat@NonNegativeReal/%
3889   | */S */[SDBIU]%
3890   | */D *\[ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))?)?]%
3891   )* *$%
3892 }{}{%
3893   \Hy@Warning{%
3894     Invalid value '\@pdfborderstyle'\MessageBreak
3895     for option 'pdfborderstyle'.\MessageBreak
3896     Option setting is ignored%
3897   }%
3898   \let\@pdfborderstyle\Hy@temp
3899 }%
3900 }
3901 \def\Hy@setpdfborder{%
3902   \ifx\@pdfborder\@empty
3903   \else
3904     /Border[\@pdfborder]%
3905   \fi
3906   \ifx\@pdfborderstyle\@empty
3907   \else
3908     /BS<<\@pdfborderstyle>>%
3909   \fi
3910 }
3911 \Hy@DefNameKey{pdfpagemode}{%
3912   \do{UseNone}{}%
3913   \do{UseOutlines}{}%
3914   \do{UseThumbs}{}%
3915   \do{FullScreen}{}%
3916   \do{UseOC}{PDF 1.5}%
3917   \do{UseAttachments}{PDF 1.6}%
3918 }
3919 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3920   \do{UseNone}{}%
3921   \do{UseOutlines}{}%
3922   \do{UseThumbs}{}%
3923   \do{FullScreen}{}%
3924   \do{UseOC}{PDF 1.5}%
3925   \do{UseAttachments}{PDF 1.6}%
3926 }
3927 \Hy@DefNameKey{pdfdirection}{%
3928   \do{L2R}{Left to right}%
3929   \do{R2L}{Right to left}%
3930 }
3931 \Hy@DefNameKey{pdfviewarea}{%
3932   \do{MediaBox}{}%
3933   \do{CropBox}{}%
3934   \do{BleedBox}{}%
3935   \do{TrimBox}{}%
3936   \do{ArtBox}{}%
3937 }
3938 \Hy@DefNameKey{pdfviewclip}{%
3939   \do{MediaBox}{}%
3940   \do{CropBox}{}%

```

```

3941 \do{BleedBox}{}%
3942 \do{TrimBox}{}%
3943 \do{ArtBox}{}%
3944 }
3945 \Hy@DefNameKey{pdfprintarea}{%
3946 \do{MediaBox}{}%
3947 \do{CropBox}{}%
3948 \do{BleedBox}{}%
3949 \do{TrimBox}{}%
3950 \do{ArtBox}{}%
3951 }
3952 \Hy@DefNameKey{pdfprintclip}{%
3953 \do{MediaBox}{}%
3954 \do{CropBox}{}%
3955 \do{BleedBox}{}%
3956 \do{TrimBox}{}%
3957 \do{ArtBox}{}%
3958 }
3959 \Hy@DefNameKey{pdfprintscaling}{%
3960 \do{AppDefault}{}%
3961 \do{None}{}%
3962 }
3963 \Hy@DefNameKey{pdfduplex}{%
3964 \do{Simplex}{}%
3965 \do{DuplexFlipShortEdge}{}%
3966 \do{DuplexFlipLongEdge}{}%
3967 }
3968 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3969 \do{true}{}%
3970 \do{false}{}%
3971 }
3972 \define@key{Hyp}{pdfprintpagerange}{%
3973 \def\@pdfprintpagerange{#1}%
3974 }
3975 \Hy@DefNameKey{pdfnumcopies}{%
3976 \do{2}{two copies}%
3977 \do{3}{three copies}%
3978 \do{4}{four copies}%
3979 \do{5}{five copies}%
3980 }
3981 \define@key{Hyp}{pdfusetitle}[true]{%
3982 \Hy@boolkey{pdfusetitle}{#1}%
3983 }
3984 \def\HyXeTeX@CheckUnicode{%
3985 \ifxetex
3986 \ifHy@unicode
3987 \else
3988 \Hy@WarningNoLine{%
3989 XeTeX driver only supports unicode.\MessageBreak
3990 Enabling option 'unicode'%
3991 }%
3992 \kvsetkeys{Hyp}{unicode}%
3993 \fi
3994 \else
3995 \let\HyXeTeX@CheckUnicode\relax
3996 \fi
3997 }

```

```

3998 \def\HyPsd@PrerenderUnicode#1{%
3999   \begingroup
4000   \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
4001     \else
4002     \sbox0{%
4003       \let\GenericInfo\@gobbletwo
4004       \let\GenericWarning\@gobbletwo
4005       \let\GenericError\@gobblefour
4006       \PrerenderUnicode{#1}%
4007     }%
4008   \fi
4009 \endgroup
4010 }
4011 \define@key{Hyp}{pdftitle}{%
4012   \HyXeTeX@CheckUnicode
4013   \HyPsd@XeTeXBigCharstrue
4014   \HyPsd@PrerenderUnicode{#1}%
4015   \pdfstringdef\@pdftitle{#1}%
4016 }
4017 \define@key{Hyp}{pdfauthor}{%
4018   \HyXeTeX@CheckUnicode
4019   \HyPsd@XeTeXBigCharstrue
4020   \HyPsd@PrerenderUnicode{#1}%
4021   \pdfstringdef\@pdfauthor{#1}%
4022 }
4023 \define@key{Hyp}{pdfproducer}{%
4024   \HyXeTeX@CheckUnicode
4025   \HyPsd@XeTeXBigCharstrue
4026   \HyPsd@PrerenderUnicode{#1}%
4027   \pdfstringdef\@pdfproducer{#1}%
4028   \ifxetex
4029     \Hy@Warning{%
4030       pdfproducer: %
4031       xdvipdfmx will use its own setting\MessageBreak
4032       instead of the value given%
4033     }%
4034   \else
4035     \def\Hy@temp{hdvipdfm}%
4036     \ifx\Hy@driver\Hy@temp
4037       \Hy@Warning{%
4038         pdfproducer: %
4039         dvipdfm(x) will use its own setting\MessageBreak
4040         instead of the value given%
4041       }%
4042     \fi
4043   \fi
4044 }
4045 \define@key{Hyp}{pdfcreator}{%
4046   \HyXeTeX@CheckUnicode
4047   \HyPsd@XeTeXBigCharstrue
4048   \HyPsd@PrerenderUnicode{#1}%
4049   \pdfstringdef\@pdfcreator{#1}%
4050 }
4051 \define@key{Hyp}{pdfcreationdate}{%
4052   \begingroup
4053   \Hy@unicodedefalse
4054   \pdfstringdef\@pdfcreationdate{#1}%

```

```

4055 \endgroup
4056 }
4057 \define@key{Hyp}{pdfmoddate}{%
4058 \begingroup
4059 \Hy@unicodetrue
4060 \pdfstringdef\@pdfmoddate{#1}%
4061 \endgroup
4062 }
4063 \define@key{Hyp}{pdfsubject}{%
4064 \HyXeTeX@CheckUnicode
4065 \HyPsd@XeTeXBigCharstrue
4066 \HyPsd@PrerenderUnicode{#1}%
4067 \pdfstringdef\@pdfsubject{#1}%
4068 }
4069 \define@key{Hyp}{pdfkeywords}{%
4070 \HyXeTeX@CheckUnicode
4071 \HyPsd@XeTeXBigCharstrue
4072 \HyPsd@PrerenderUnicode{#1}%
4073 \pdfstringdef\@pdfkeywords{#1}%
4074 }
4075 \define@key{Hyp}{pdftrapped}{%
4076 \lowercase{\edef\Hy@temp{#1}}%
4077 \ifx\Hy@temp\HyInfo@trapped@true
4078 \def\@pdftrapped{True}%
4079 \else
4080 \ifx\Hy@temp\HyInfo@trapped@false
4081 \def\@pdftrapped{False}%
4082 \else
4083 \ifx\Hy@temp\HyInfo@trapped@unknown
4084 \def\@pdftrapped{Unknown}%
4085 \else
4086 \ifx\Hy@temp\@empty
4087 \else
4088 \Hy@Warning{%
4089   Unsupported value '#1'\MessageBreak
4090   for option 'pdftrapped'%
4091 }%
4092 \fi
4093 \def\@pdftrapped{}%
4094 \fi
4095 \fi
4096 \fi
4097 }
4098 \def\HyInfo@trapped@true{true}
4099 \def\HyInfo@trapped@false{false}
4100 \def\HyInfo@trapped@unknown{unknown}
4101 \def\HyInfo@TrappedUnsupported{%
4102 \ifx\@pdftrapped\@empty
4103 \else
4104 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
4105 \gdef\HyInfo@TrappedUnsupported{}%
4106 \fi
4107 }
4108 \define@key{Hyp}{pdfinfo}{%
4109 \kvsetkeys{pdfinfo}{#1}%
4110 }
4111 \def\Hy@temp#1{%

```

```

4112 \lowercase{\Hy@temp@A{#1}}{#1}%
4113 }
4114 \def\Hy@temp@A#1#2{%
4115 \define@key{pdfinfo}{#2}{%
4116 \hypersetup{pdf#1={##1}}}%
4117 }%
4118 }
4119 \Hy@temp{Title}
4120 \Hy@temp{Author}
4121 \Hy@temp{Keywords}
4122 \Hy@temp{Subject}
4123 \Hy@temp{Creator}
4124 \Hy@temp{Producer}
4125 \Hy@temp{CreationDate}
4126 \Hy@temp{ModDate}
4127 \Hy@temp{Trapped}
4128 \newif\ifHyInfo@AddonUnsupported
4129 \kv@set@family@handler{pdfinfo}{%
4130 \HyInfo@AddonHandler{#1}{#2}%
4131 }
4132 \let\HyInfo@do\relax
4133 \def\HyInfo@AddonHandler#1#2{%
4134 \ifx\kv@value\relax
4135 \Hy@Warning{%
4136 Option 'pdfinfo': ignoring key '\kv@key' without value%
4137 }%
4138 \else
4139 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
4140 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
4141 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
4142 \ifHyInfo@AddonUnsupported
4143 \Hy@Warning{%
4144 This driver does not support additional\MessageBreak
4145 information entries, therefore\MessageBreak
4146 '\kv@key' is ignored%
4147 }%
4148 \else
4149 \def\HyInfo@tmp##1{%
4150 \kv@define@key{pdfinfo}{##1}{%
4151 \HyXeTeX@CheckUnicode
4152 \HyPsd@XeTeXBigCharstrue
4153 \HyPsd@PrerenderUnicode{####1}%
4154 \pdfstringdef\HyInfo@Value{####1}%
4155 \global\expandafter
4156 \let\csname HyInfo@Value@##1\endcsname
4157 \HyInfo@Value
4158 }%
4159 }%
4160 \expandafter\HyInfo@tmp\expandafter{\HyInfo@Key}%
4161 \global\expandafter
4162 \let\csname KV@pdfinfo@\HyInfo@Key\expandafter\endcsname
4163 \csname KV@pdfinfo@\HyInfo@Key\endcsname
4164 \xdef\HyInfo@AddonList{%
4165 \HyInfo@AddonList
4166 \HyInfo@do{\HyInfo@Key}%
4167 }%
4168 \kv@parse@normalized{%

```

```

4169     \HyInfo@Key={#2}%
4170   }{%
4171     \kv@processor@default{pdfinfo}%
4172   }%
4173   \fi
4174 \else
4175   \kv@parse@normalized{%
4176     \HyInfo@Key={#2}%
4177   }{%
4178     \kv@processor@default{pdfinfo}%
4179   }%
4180   \fi
4181 \fi
4182 }
4183 \def\HyInfo@GenerateAddons{%
4184   \ifHyInfo@AddonUnsupported
4185     \def\HyInfo@Addons{}%
4186   \else
4187     \begingroup
4188     \toks@{}%
4189     \def\HyInfo@do##1{%
4190       \EdefEscapeName\HyInfo@Key{##1}%
4191       \edef\x{%
4192         \toks@{%
4193           \the\toks@
4194           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
4195         }%
4196       }%
4197       \x
4198     }%
4199     \HyInfo@AddonList
4200     \edef\x{\endgroup
4201       \def\noexpand\HyInfo@Addons{\the\toks@}%
4202     }%
4203     \x
4204   \fi
4205 }
4206 \global\let\HyInfo@AddonList\ltx@empty
4207 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
4208 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
4209 \let\setpdflinkmargin@gobble
4210 \def\calculate@pdfview#1 #2\\{%
4211   \def\@pdfview{#1}%
4212   \ifx\#2\\%
4213     \def\@pdfviewparams{-32768}%
4214   \else
4215     \def\@pdfviewparams{ #2}%
4216   \fi
4217 }
4218 \begingroup\expandafter\expandafter\expandafter\endgroup
4219 \expandafter\ifx\csname numexpr\endcsname\relax
4220   \def\Hy@number#1{%
4221     \expandafter\@firstofone\expandafter{\number#1}%
4222   }%
4223 \else
4224   \def\Hy@number#1{%
4225     \the\numexpr#1\relax

```



```

4226 }%
4227 \fi
4228 \define@key{Hyp}{pdfstartpage}{%
4229   \ifx\|#1\%
4230     \let\@pdfstartpage\ltx@empty
4231   \else
4232     \edef\@pdfstartpage{\Hy@number{#1}}%
4233   \fi
4234 }%
4235 \define@key{Hyp}{pdfstartview}{%
4236   \ifx\|#1\%
4237     \let\@pdfstartview\ltx@empty
4238   \else
4239     \hypercalcbpdef\@pdfstartview{/#1}%
4240   \fi
4241 }
4242 \def\HyPat@NonNegativeReal/{%
4243   \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
4244 }
4245 \define@key{Hyp}{pdfremotestartview}{%
4246   \ifx\|#1\%
4247     \def\@pdfremotestartview{/Fit}%
4248   \else
4249     \hypercalcbpdef\@pdfremotestartview{#1}%
4250     \edef\@pdfremotestartview{\@pdfremotestartview}%
4251     \Hy@Match\@pdfremotestartview{%
4252       ~ (XYZ -?(null|\HyPat@NonNegativeReal/) %
4253         -?(null|\HyPat@NonNegativeReal/) %
4254         (null|\HyPat@NonNegativeReal/)|%
4255       Fit(|B| %
4256         (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
4257         R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
4258         \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
4259       )$%
4260     }%
4261     \Hy@Warning{%
4262       Invalid value '\@pdfremotestartview'\MessageBreak
4263       of 'pdfremotestartview'\MessageBreak
4264       is replaced by 'Fit'%
4265     }%
4266     \let\@pdfremotestartview\@empty
4267   }%
4268   \ifx\@pdfremotestartview\@empty
4269     \def\@pdfremotestartview{/Fit}%
4270   \else
4271     \edef\@pdfremotestartview{/ \@pdfremotestartview}%
4272   \fi
4273 \fi
4274 }
4275 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
4276 \define@key{Hyp}{pdftoolbar}[true]{%
4277   \Hy@boolkey{pdftoolbar}{#1}%
4278 }
4279 \define@key{Hyp}{pdfmenubar}[true]{%
4280   \Hy@boolkey{pdfmenubar}{#1}%
4281 }
4282 \define@key{Hyp}{pdfwindowui}[true]{%

```

```

4283 \Hy@boolkey{pdfwindowui}{#1}%
4284 }
4285 \define@key{Hyp}{pdffitwindow}[true]{%
4286 \Hy@boolkey{pdffitwindow}{#1}%
4287 }
4288 \define@key{Hyp}{pdfcenterwindow}[true]{%
4289 \Hy@boolkey{pdfcenterwindow}{#1}%
4290 }
4291 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
4292 \Hy@boolkey{pdfdisplaydoctitle}{#1}%
4293 }
4294 \define@key{Hyp}{pdfa}[true]{%
4295 \Hy@boolkey{pdfa}{#1}%
4296 }
4297 \define@key{Hyp}{pdfnewwindow}[true]{%
4298 \def\Hy@temp{#1}%
4299 \ifx\Hy@temp\@empty
4300 \Hy@pdfnewwindowsetfalse
4301 \else
4302 \Hy@pdfnewwindowsettrue
4303 \Hy@boolkey{pdfnewwindow}{#1}%
4304 \fi
4305 }
4306 \def\Hy@SetNewWindow{%
4307 \ifHy@pdfnewwindowset
4308 /NewWindow %
4309 \ifHy@pdfnewwindow true\else false\fi
4310 \fi
4311 }
4312 \Hy@DefNameKey{pdfpagelayout}{%
4313 \do{SinglePage}{}%
4314 \do{OneColumn}{}%
4315 \do{TwoColumnLeft}{}%
4316 \do{TwoColumnRight}{}%
4317 \do{TwoPageLeft}{PDF 1.5}%
4318 \do{TwoPageRight}{PDF 1.5}%
4319 }
4320 \define@key{Hyp}{pdflang}{%
4321 \edef\@pdflang{#1}%
4322 \def\Hy@temp{\relax}%
4323 \ifx\@pdflang\Hy@temp
4324 \let\@pdflang\relax
4325 \fi
4326 \ifx\@pdflang\relax
4327 \else
4328 \ifx\@pdflang\ltx@empty
4329 \else

```

Test according to ABNF of RFC 3066.

```

4330 \Hy@Match\@pdflang{icase}{%
4331 ~%
4332 [a-z]{1,8}%
4333 (-[a-z0-9]{1,8})*%
4334 $%
4335 }{%

```

Test according to ABNF of RFC 5646.

```

4336 \Hy@Match\@pdflang{icase}{%

```

```

4337 ~%
4338 (%)
4339 % langtag
4340   (% language
4341     [a-z]{2,3}%
4342     ([a-z]{3}(-[a-z]{3}){0,2})?% extlang
4343     |[a-z]{4}% reserved for future use
4344     |[a-z]{5,8}% registered language subtag
4345   )%
4346   (-[a-z]{4})?% script
4347   (-([a-z]{2}|[0-9]{3}))?% region
4348   (-([a-z]{5,8}|[0-9][a-z0-9]{3}))% variant
4349   (-[0-9a-wyz](-[a-z0-9]{2,8})+)% extension
4350   (-x(-[a-z0-9]{1,8})+)% privateuse
4351 % privateuse
4352   |x-([a-z0-9]{1,8})+%
4353 % grandfathered/irregular
4354   |en-GB-oed%
4355   |i-(ami|bnn|default|enochian|hak|klinton|lux|
4356     mingo|navajo|pwn|tao|tay|tsu)%
4357   |sgn-(BE-FR|BE-NL|CH-DE)%
4358 % grandfathered/regular
4359   |art-lojban%
4360   |cel-gaulish%
4361   |no-(bok|nyn)%
4362   |zh-(guoyu|hakka|min|min-nan|xiang)%
4363 )%
4364 $%
4365 }{%

```

Test for unique extensions.

```

4366 \Hy@Match{-\@pdflang}{icase}{-[a-wyz0-9]-}{%
4367 \Hy@Match\@pdflang{icase}{~x-}{}%
4368 % remove privateuse
4369 \edef\Hy@temp{-\@pdflang}%
4370 \Hy@Match\Hy@temp{icase}{{%
4371   ~%
4372   (%)
4373   (-[a-wyz0-9]|-[a-z0-9]{2,8})%
4374   )%
4375   -x-%
4376   }{%
4377   \edef\Hy@temp{%
4378     \expandafter\strip@prefix\pdfastmatch1%
4379   }%
4380   }{%
4381   \Hy@Match\Hy@temp{icase}{{%
4382     (-[a-wyz0-9]-).*\ltx@backslashchar1%
4383   }{%
4384     \Hy@Warning{%
4385       Invalid language identifier '#1'\MessageBreak
4386       for option 'pdfang', because it violates\MessageBreak
4387       well-formedness defined in RFC 4646\MessageBreak
4388       by duplicate singleton subtags%
4389     }%
4390     \let\@pdfang\relax
4391   }{%
4392   }%

```

4393 }{}%

User-assigned country codes are forbidden in language tags (RFC 3066).

```
4394 \ifx\@pdflang\relax
4395 \else
4396 \Hy@Match\@pdflang{icase}{%
4397 ~%
4398 [a-zA-Z]{2}-%
4399 (%
4400 aa|AA|%
4401 [qQ][m-zA-Z]|%
4402 [xX][a-zA-Z]|%
4403 zz|ZZ%
4404 )%
4405 (-|$)%
4406 }{%
4407 \Hy@Warning{%
4408 Invalid language identifier '#1'\MessageBreak
4409 for option 'pdflang' because of invalid country code%
4410 \MessageBreak
4411 in second subtag (RFC 3066)%
4412 }%
4413 \let\@pdflang\relax
4414 }{}%
4415 \fi
4416 }{%
4417 \Hy@Warning{%
4418 Invalid language identifier '#1'\MessageBreak
4419 for option 'pdflang', because it violates\MessageBreak
4420 well-formedness defined in RFC 5646%
4421 }%
4422 \let\@pdflang\relax
4423 }%
4424 }{%
4425 \Hy@Warning{%
4426 Invalid language identifier '#1'\MessageBreak
4427 for option 'pdflang' (RFC 3066)%
4428 }%
4429 \let\@pdflang\relax
4430 }%
4431 \fi
4432 \fi
4433 }
4434 \define@key{Hyp}{pdfpagelabels}[true]{%
4435 \Hy@boolkey{pdfpagelabels}{#1}%
4436 }
4437 \define@key{Hyp}{pdfescapeform}[true]{%
4438 \Hy@boolkey{pdfescapeform}{#1}%
4439 }
```

Default values:

```
4440 \def\@linkbordercolor{1 0 0}
4441 \def\@urlbordercolor{0 1 1}
4442 \def\@menubordercolor{1 0 0}
4443 \def\@filebordercolor{0 .5 .5}
4444 \def\@runbordercolor{0 .7 .7}
4445 \def\@citebordercolor{0 1 0}
4446 \def\@pdfhighlight{/I}
```

```

4447 \let\@pdftitle\ltx@empty
4448 \let\@pdfauthor\ltx@empty
4449 \let\@pdfproducer\relax
4450 \def\@pdfcreator{LaTeX with hyperref package}
4451 \let\@pdfcreationdate\ltx@empty
4452 \let\@pdfmoddate\ltx@empty
4453 \let\@pdfsubject\ltx@empty
4454 \let\@pdfkeywords\ltx@empty
4455 \let\@pdftrapped\ltx@empty
4456 \let\@pdfpagescrop\ltx@empty
4457 \def\@pdfstartview{/Fit}
4458 \def\@pdfremotestartview{/Fit}
4459 \def\@pdfstartpage{1}
4460 \let\@pdfprintpagerange\ltx@empty
4461 \let\@pdflang\relax
4462 \let\PDF@SetupDoc\@empty
4463 \let\PDF@FinishDoc\@empty
4464 \let\phantomsection\@empty
4465 \let\special@paper\@empty
4466 \def\HyperDestNameFilter#1{#1}
4467 \Hy@AtBeginDocument{%
4468   \begingroup
4469     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4470     \dimen@=\x\relax
4471     \ifdim\dimen@>\z@
4472       \else
4473         \dimen@=11in\relax
4474         \Hy@WarningNoLine{%
4475           Height of page (\expandafter\string\x) %
4476           is invalid (\the\x),\MessageBreak
4477           using 11in%
4478         }%
4479       \fi
4480       \dimen@=0.99626401\dimen@
4481       \xdef\Hy@pageheight{\strip@pt\dimen@}%
4482     \endgroup
4483 }
4484 \def\HyInd@EncapChar{\|}

```

Allow the user to use `\ExecuteOptions` in the `cfg` file even though this package does not use the normal option mechanism. Use `\hyper@normalise` as a scratch macro, since it is going to be defined in a couple of lines anyway.

```

4485 \let\hyper@normalise\ExecuteOptions
4486 \let\ExecuteOptions\hypersetup
4487 \Hy@RestoreCatcodes
4488 \InputIfFileExists{hyperref.cfg}{-}{-}
4489 \Hy@SetCatcodes
4490 \let\ExecuteOptions\hyper@normalise
4491 \ifx\Hy@MaybeStopNow\relax
4492 \else
4493   \Hy@stoppedearlytrue
4494   \expandafter\Hy@MaybeStopNow
4495 \fi
4496 \Hy@stoppedearlyfalse

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the *keyval* package. This section was written by David Carlisle.

```

4497 \SetupKeyvalOptions{family=Hyp}

```

```

4498 \DeclareLocalOptions{%
4499   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4500 }

    Add option tex4ht if package tex4ht is loaded.
4501 \@ifpackagewith{hyperref}{tex4ht}{%
4502 }{%
4503   \@ifpackageloaded{tex4ht}{%
4504     \PassOptionsToPackage{tex4ht}{hyperref}%
4505   }{%
4506     \ltx@ifundefined{HCode}{%
4507     }{%
4508       \begingroup
4509       \def\Hy@pkg{tex4ht}%
4510       \def\Hy@temp@A#1\RequirePackage[#2]#3#4\Hy@NIL{%
4511         \def\Hy@param{#2#3}%
4512         \ifx\Hy@param\ltx@empty
4513           \expandafter\ltx@gobble
4514         \else
4515           \def\Hy@param{#3}%
4516           \ifx\Hy@param\Hy@pkg
4517             \PassOptionsToPackage{#2}{tex4ht}%
4518             \expandafter\expandafter\expandafter\@gobble
4519           \else
4520             \expandafter\expandafter\expandafter\ltx@firstofone
4521           \fi
4522         \fi
4523         {\Hy@temp@A#4\Hy@NIL}%
4524       }%
4525       \expandafter
4526       \Hy@temp@A\@documentclasshook\RequirePackage[]{}\Hy@NIL
4527     \endgroup
4528     \PassOptionsToPackage{tex4ht}{hyperref}%
4529   }%
4530 }%
4531 }

4532 \let\ReadBookmarks\relax
4533 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package xspace support

```

4534 \def\Hy@xspace@end{}
4535 \ltx@ifundefined{xspaceaddexceptions}{%
4536   \Hy@AtBeginDocument{%
4537     \ltx@ifundefined{xspaceaddexceptions}{%
4538     }{%
4539       \def\Hy@xspace@end{%
4540         \ltx@gobble{end for xspace}%
4541       }%
4542       \xspaceaddexceptions{%
4543         \Hy@xspace@end,\hyper@linkend,\hyper@anchorend
4544       }%
4545     }%
4546   }%
4547 }{%
4548   \def\Hy@xspace@end{%

```

```

4549 \ltx@gobble{end for xspace}%
4550 }%
4551 \xspaceaddections{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4552 }

```

15.2 Option draft

```

4553 \Hy@AtBeginDocument{%
4554 \ifHy@draft
4555 \let\hyper@@anchor\@gobble
4556 \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4557 \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4558 \def\hyper@anchorend{\Hy@xspace@end}%
4559 \let\hyper@linkstart\@gobbletwo
4560 \def\hyper@linkend{\Hy@xspace@end}%
4561 \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4562 \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4563 \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4564 \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4565 \let\PDF@SetupDoc\@empty
4566 \let\PDF@FinishDoc\@empty
4567 \let\@fifthoffive\@secondoftwo
4568 \let\@secondoffive\@secondoftwo
4569 \let\ReadBookmarks\relax
4570 \let\WriteBookmarks\relax
4571 \Hy@WarningNoLine{Draft mode on}%
4572 \fi
4573 \Hy@DisableOption{draft}%
4574 \Hy@DisableOption{nolinks}%
4575 \Hy@DisableOption{final}%
4576 }

```

15.3 PDF/A

```

4577 \Hy@DisableOption{pdfa}
4578 \ifHy@pdfa
4579 \kvsetkeys{Hyp}{pdfversion=1.4}%
4580 \Hy@DisableOption{pdfversion}%
4581 \def\Hy@Acrobatmenu#1#2{%
4582 \leavevmode
4583 \begingroup
4584 \edef\x{#1}%
4585 \@onelevel@sanitize\x
4586 \ifx\x\Hy@NextPage
4587 \let\y=Y%
4588 \else
4589 \ifx\x\Hy@PrevPage
4590 \let\y=Y%
4591 \else
4592 \ifx\x\Hy@FirstPage
4593 \let\y=Y%
4594 \else
4595 \ifx\x\Hy@LastPage
4596 \let\y=Y%
4597 \else
4598 \let\y=N%
4599 \fi
4600 \fi
4601 \fi

```

```

4602 \fi
4603 \expandafter\endgroup
4604 \ifx\y Y%
4605 \else
4606 \Hy@Error{%
4607 PDF/A: Named action ‘#1’ is not permitted%
4608 }\@ehc
4609 {#2}%
4610 \expandafter\@gobble
4611 \fi
4612 }%
4613 \def\Hy@temp#1{%
4614 \expandafter\def\csname Hy@#1\endcsname{#1}%
4615 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4616 }%
4617 \Hy@temp{NextPage}%
4618 \Hy@temp{PrevPage}%
4619 \Hy@temp{FirstPage}%
4620 \Hy@temp{LastPage}%
4621 \else
4622 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4623 \fi

```

15.4 Patch for babel’s \texttilde

Babel does not define \texttilde in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, \texttilde is defined in babel manner.

```

4624 \Hy@nextfalse
4625 \ltx@ifundefined{spanish@sh@}{}{\Hy@nexttrue}
4626 \ltx@ifundefined{galician@sh@}{}{\Hy@nexttrue}
4627 \ltx@ifundefined{estonian@sh@}{}{\Hy@nexttrue}
4628 \ifHy@next
4629 \let\texttilde\~%
4630 \fi

4631 \def\Hy@wrapper@babel#1#2{%
4632 \begingroup
4633 \Hy@safe@activetrue
4634 \set@display@protect
4635 \edef\x{#2}%
4636 \@onelevel@sanitize\x
4637 \toks@{#1}%
4638 \edef\x{\endgroup\the\toks@{\x}}%
4639 \x
4640 }
4641 \def\Hy@WrapperDef#1{%
4642 \begingroup
4643 \escapechar=\m@ne
4644 \xdef\Hy@gtemp{%
4645 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4646 }%
4647 \endgroup
4648 \edef#1{%
4649 \noexpand\Hy@wrapper@babel
4650 \expandafter\noexpand\Hy@gtemp
4651 }%
4652 \expandafter\def\Hy@gtemp

```



```

4653 }
4654 \ifHy@hyperfigures
4655 \Hy@Info{Hyper figures ON}%
4656 \else
4657 \Hy@Info{Hyper figures OFF}%
4658 \fi
4659 \ifHy@nesting
4660 \Hy@Info{Link nesting ON}%
4661 \else
4662 \Hy@Info{Link nesting OFF}%
4663 \fi
4664 \ifHy@hyperindex
4665 \Hy@Info{Hyper index ON}%
4666 \else
4667 \Hy@Info{Hyper index OFF}%
4668 \fi
4669 \ifHy@plainpages
4670 \Hy@Info{Plain pages ON}%
4671 \else
4672 \Hy@Info{Plain pages OFF}%
4673 \fi
4674 \ifHy@backref
4675 \Hy@Info{Backreferencing ON}%
4676 \else
4677 \Hy@Info{Backreferencing OFF}%
4678 \fi
4679 \ifHy@typexml
4680 \Hy@AtEndOfPackage{%
4681 \RequirePackage{color}%
4682 \RequirePackage{nameref}[2012/07/28]%
4683 }%
4684 \fi
4685 \Hy@DisableOption{typexml}
4686 \ifHy@implicit
4687 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4688 \else
4689 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4690 \def\MaybeStopEarly{%
4691 \Hy@Message{Stopped early}%
4692 \Hy@AtBeginDocument{%
4693 \PDF@FinishDoc
4694 \gdef\PDF@FinishDoc{}}%
4695 }%
4696 \endinput
4697 }%
4698 \Hy@AtBeginDocument{%
4699 \let\autoref\ref
4700 \let\autopageref\pageref
4701 \ifx\@pdfpagemode\@empty
4702 \gdef\@pdfpagemode{UseNone}%
4703 \fi
4704 \global\Hy@backreffalse
4705 }%
4706 \Hy@AtEndOfPackage{%
4707 \global\let\ReadBookmarks\relax
4708 \global\let\WriteBookmarks\relax
4709 }%

```

```

4710 \fi
4711 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```

4712 \Hy@AtEndOfPackage{%
4713   \@ifpackageloaded{tex4ht}{%
4714     \def\Hy@driver{htex4ht}%
4715     \Hy@texhttrue
4716   }{}%

```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```

4717   \ifx\Hy@driver\@empty
4718   \else
4719     \def\Hy@temp{hpdfTeX}%
4720     \ifpdf
4721       \ifx\Hy@driver\Hy@temp
4722       \else
4723         \Hy@WarningNoLine{%
4724           Wrong driver ‘\Hy@driver.def’;\MessageBreak
4725           pdfTeX is running in PDF mode.\MessageBreak
4726           Forcing driver ‘\Hy@temp.def’%
4727         }%
4728         \let\Hy@driver\Hy@temp
4729       \fi
4730     \else
4731       \ifx\Hy@driver\Hy@temp
4732       \Hy@WarningNoLine{%
4733         Wrong driver ‘\Hy@driver.def’;\MessageBreak
4734         pdfTeX is not running in PDF mode.\MessageBreak
4735         Using default driver%
4736       }%
4737       \let\Hy@driver\@empty
4738     \fi
4739   \fi
4740 \fi
4741 \ifHy@texht
4742 \else
4743   \ifx\Hy@driver\@empty
4744   \else
4745     \def\Hy@temp{hxetex}%
4746     \ifxetex
4747       \ifx\Hy@driver\Hy@temp
4748       \else
4749         \Hy@WarningNoLine{%
4750           Wrong driver ‘\Hy@driver.def’;\MessageBreak
4751           XeTeX is running.\MessageBreak
4752           Forcing driver ‘\Hy@temp.def’ for XeTeX%
4753         }%
4754         \let\Hy@driver\Hy@temp
4755       \fi
4756     \fi
4757   \fi
4758 \fi
4759 \ifx\Hy@driver\@empty
4760 \else
4761   \def\Hy@temp{hvtexhtm}%

```

```

4762 \ifvtexhtml
4763 \ifx\Hy@driver\Hy@temp
4764 \else
4765 \Hy@WarningNoLine{%
4766 Wrong driver '\Hy@driver.def';\MessageBreak
4767 VTeX is running in HTML mode.\MessageBreak
4768 Forcing driver '\Hy@temp.def'%
4769 }%
4770 \let\Hy@driver\Hy@temp
4771 \fi
4772 \else
4773 \ifx\Hy@driver\Hy@temp
4774 \Hy@WarningNoLine{%
4775 Wrong driver '\Hy@driver.def';\MessageBreak
4776 VTeX is not running in HTML mode.\MessageBreak
4777 Using default driver%
4778 }%
4779 \let\Hy@driver\@empty
4780 \fi
4781 \fi
4782 \fi

```

If the driver is not given, find the right driver or use the default driver.

```

4783 \let\HyOpt@DriverType\ltx@empty
4784 \ifx\HyOpt@CustomDriver\ltx@empty
4785 \ifx\Hy@driver\@empty
4786 \def\HyOpt@DriverType{ (autodetected)}%
4787 \providecommand*{\Hy@defaultdriver}{hypertex}%
4788 \ifpdf
4789 \ifx\pdfextension\@undefined
4790 \def\Hy@driver{hpdfTeX}%
4791 \else
4792 \def\Hy@driver{hluatex}%
4793 \fi
4794 \else
4795 \ifxetex
4796 \def\Hy@driver{hxetex}%
4797 \else
4798 \ifvtexhtml
4799 \def\Hy@driver{hvtexhtm}%
4800 \def\MaybeStopEarly{%
4801 \Hy@Message{Stopped early}%
4802 \Hy@AtBeginDocument{%
4803 \PDF@FinishDoc
4804 \gdef\PDF@FinishDoc{}}%
4805 }%
4806 \endinput
4807 }%
4808 \else
4809 \ifvtexpdf
4810 \def\Hy@driver{hvtex}%
4811 \else
4812 \ifvtexps
4813 \def\Hy@driver{hvtex}%
4814 \else
4815 \ifx\HyOpt@DriverFallback\ltx@empty
4816 \let\Hy@driver\Hy@defaultdriver
4817 \def\HyOpt@DriverType{ (default)}%

```

```

4818         \else
4819         \begingroup
4820         \toks@{\expandafter{\HyOpt@DriverFallback}}%
4821         \edef\x{\endgroup
4822         \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4823         }%
4824         \x
4825         \ifx\Hy@driver\ltx@empty
4826         \let\Hy@driver\Hy@defaultdriver
4827         \def\HyOpt@DriverType{ (default)}%
4828         \else
4829         \def\HyOpt@DriverType{ (fallback)}%
4830         \fi
4831     \fi
4832 \fi
4833 \fi
4834 \fi
4835 \fi
4836 \fi
4837 \ifx\Hy@driver\Hy@defaultdriver
4838 \def\Hy@temp{hdwind}%
4839 \ifx\Hy@temp\Hy@driver
4840 \kvsetkeys{Hyp}{colorlinks}%
4841 \PassOptionsToPackage{dwindo}{color}%
4842 \fi
4843 \fi
4844 \fi
4845 \else
4846 \def\HyOpt@DriverType{ (custom)}%
4847 \let\Hy@driver\HyOpt@CustomDriver
4848 \fi
4849 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4850 \chardef\Hy@VersionChecked=0 %
4851 \input{\Hy@driver.def}%
4852 \ifcase\Hy@VersionChecked
4853 \Hy@VersionCheck{\Hy@driver.def}%
4854 \fi
4855 \let\@unprocessedoptions\relax
4856 \Hy@RestoreCatcodes
4857 \Hy@DisableOption{tex4ht}%
4858 \Hy@DisableOption{pdftex}%
4859 \Hy@DisableOption{nativepdf}%
4860 \Hy@DisableOption{dvipdfm}%
4861 \Hy@DisableOption{dvipdfmx}%
4862 \Hy@DisableOption{dvipdfmx-outline-open}%
4863 \Hy@DisableOption{pdfmark}%
4864 \Hy@DisableOption{dvips}%
4865 \Hy@DisableOption{hypertex}%
4866 \Hy@DisableOption{vtex}%
4867 \Hy@DisableOption{vtexpdfmark}%
4868 \Hy@DisableOption{dviwindo}%
4869 \Hy@DisableOption{dvipsone}%
4870 \Hy@DisableOption{textures}%
4871 \Hy@DisableOption{latex2html}%
4872 \Hy@DisableOption{ps2pdf}%
4873 \Hy@DisableOption{xetex}%
4874 \Hy@DisableOption{driverfallback}%

```

```

4875 \Hy@DisableOption{customdriver}%
4876 \Hy@DisableOption{pdfversion}%
4877 }

```

Support for open outlines is enabled for XeTeX ≥ 0.9995 . I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

4878 \newif\ifHy@DvipdfmxOutlineOpen
4879 \ifxetex
4880 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4881 \else
4882 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4883 \Hy@DvipdfmxOutlineOpenttrue
4884 \fi
4885 \fi
4886 \begingroup\expandafter\expandafter\expandafter\endgroup
4887 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4888 \else
4889 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4890 \Hy@DvipdfmxOutlineOpenttrue
4891 \fi
4892 \fi

```

15.4.2 Bookmarks

```

4893 \def\WriteBookmarks{0}
4894 \def\@bookmarkopenstatus#1{%
4895 \ifHy@bookmarksopen

```

The purpose of the \@firstofone-number-space-construct is that no \relax will be inserted by TeX before the \else:

```

4896 \ifnum#1<\expandafter\@firstofone\expandafter
4897 \{\number\@bookmarksopenlevel\} % explicit space
4898 \else
4899 -%
4900 \fi
4901 \else
4902 -%
4903 \fi
4904 }
4905 \ifHy@bookmarks
4906 \Hy@Info{Bookmarks ON}%
4907 \ifx\@pdfpagemode\@empty
4908 \def\@pdfpagemode{UseOutlines}%
4909 \fi
4910 \else
4911 \let\@bookmarkopenstatus\ltx@gobble
4912 \Hy@Info{Bookmarks OFF}%
4913 \Hy@AtEndOfPackage{%
4914 \global\let\ReadBookmarks\relax
4915 \global\let\WriteBookmarks\relax
4916 }%
4917 \ifx\@pdfpagemode\@empty
4918 \def\@pdfpagemode{UseNone}%
4919 \fi
4920 \fi
4921 \Hy@DisableOption{bookmarks}

```

Add wrapper for setting standard catcodes (babel's shorthands).

```

4922 \def\Hy@CatcodeWrapper#1{%

```

```

4923 \let\Hy@endWrap\ltx@empty
4924 \def\TMP@EnsureCode##1##2{%
4925   \edef\Hy@endWrap{%
4926     \Hy@endWrap
4927     \catcode##1 \the\catcode##1\relax
4928   }%
4929   \catcode##1 ##2\relax
4930 }%
4931 \TMP@EnsureCode{10}{12}% ^^J
4932 \TMP@EnsureCode{33}{12}% !
4933 \TMP@EnsureCode{34}{12}% "
4934 \TMP@EnsureCode{36}{3}% $ (math)
4935 \TMP@EnsureCode{38}{4}% & (alignment)
4936 \TMP@EnsureCode{39}{12}% '
4937 \TMP@EnsureCode{40}{12}% (
4938 \TMP@EnsureCode{41}{12}% )
4939 \TMP@EnsureCode{42}{12}% *
4940 \TMP@EnsureCode{43}{12}% +
4941 \TMP@EnsureCode{44}{12}% ,
4942 \TMP@EnsureCode{45}{12}% -
4943 \TMP@EnsureCode{46}{12}% .
4944 \TMP@EnsureCode{47}{12}% /
4945 \TMP@EnsureCode{58}{12}% :
4946 \TMP@EnsureCode{59}{12}% ;
4947 \TMP@EnsureCode{60}{12}% <
4948 \TMP@EnsureCode{61}{12}% =
4949 \TMP@EnsureCode{62}{12}% >
4950 \TMP@EnsureCode{63}{12}% ?
4951 \TMP@EnsureCode{91}{12}% [
4952 \TMP@EnsureCode{93}{12}% ]
4953 \TMP@EnsureCode{94}{7}% ^ (superscript)
4954 \TMP@EnsureCode{95}{8}% _ (subscript)
4955 \TMP@EnsureCode{96}{12}% '
4956 \TMP@EnsureCode{124}{12}% |
4957 \TMP@EnsureCode{126}{13}% ~ (active)
4958 #1\relax
4959 \Hy@endWrap
4960 }

```

`\HyColor@UseColor` expects a macro as argument. It contains the color specification.

```

4961 \Hy@AtBeginDocument{%
4962   \ifHy@ocgcolorlinks
4963     \kvsetkeys{Hyp}{colorlinks}%
4964     \ifHy@pdfa
4965       \Hy@Warning{%
4966         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4967         using 'colorlinks' instead of 'ocgcolorlinks'%
4968       }%
4969       \Hy@ocgcolorlinksfalse
4970     \fi
4971   \fi
4972   \ifHy@ocgcolorlinks
4973   \else
4974     \Hy@DisableOption{ocgcolorlinks}%
4975   \fi
4976   \ifHy@colorlinks
4977     \def\@pdfborder{0 0 0}%

```

```

4978 \let\@pdfborderstyle\@empty
4979 \ifHy@typexml
4980 \else
4981   \Hy@CatcodeWrapper{%
4982     \RequirePackage{color}%
4983   }%
4984 \fi
4985 \def\Hy@colorlink#1{%
4986   \begingroup
4987   \HyColor@UseColor#1%
4988 }%
4989 \def\Hy@endcolorlink{\endgroup}%
4990 \Hy@Info{Link coloring ON}%
4991 \else
4992   \ifHy@frenchlinks
4993     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4994     \def\Hy@endcolorlink{\endgroup}%
4995     \Hy@Info{French linking ON}%
4996   \else
for grouping consistency:
4997     \def\Hy@colorlink#1{\begingroup}%
4998     \def\Hy@endcolorlink{\endgroup}%
4999     \Hy@Info{Link coloring OFF}%
5000   \fi
5001 \fi
5002 \Hy@DisableOption{colorlinks}%
5003 \Hy@DisableOption{frenchlinks}%
5004 \ifHy@texht
5005   \long\def\@firstoffive#1#2#3#4#5{#1}%
5006   \long\def\@secondoffive#1#2#3#4#5{#2}%
5007   \long\def\@thirdoffive#1#2#3#4#5{#3}%
5008   \long\def\@fourthoffive#1#2#3#4#5{#4}%
5009   \long\def\@fifthoffive#1#2#3#4#5{#5}%
5010   \providecommand*\@safe@activetrue{}%
5011   \providecommand*\@safe@activesfalse{}%
5012   \def\T@ref#1{%
5013     \Hy@safe@activetrue
5014     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
5015     \Hy@safe@activesfalse
5016   }%
5017   \def\T@pageref#1{%
5018     \Hy@safe@activetrue
5019     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
5020     \Hy@safe@activesfalse
5021   }%
5022 \else
5023   \ifHy@typexml
5024   \else
5025     \Hy@CatcodeWrapper{%
5026       \RequirePackage{nameref}[2012/07/28]%
5027     }%
5028   \fi
5029 \fi
5030 \DeclareRobustCommand\ref{%
5031   \@ifstar\@refstar\T@ref
5032 }%
5033 \DeclareRobustCommand\pageref{%

```

```

5034 \ifstar\@pagerefstar\T@pageref
5035 }%
5036 % \ifclassloaded{memoir}{%
5037 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
5038 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
5039 % }%
5040 % }\ltx@secondoftwo
5041 % {%
5042 % \DeclareRobustCommand*{\nameref}{%
5043 % \ifstar\@mem@titlerefno link\@mem@titleref
5044 % }%
5045 % }\ltx@secondoftwo
5046 \DeclareRobustCommand*{\nameref}{%
5047 \ifstar\@namerefstar\T@nameref
5048 }%
5049 % }%
5050 }
5051 \Hy@AtBeginDocument{%
5052 \ifHy@texht
5053 \else
5054 \Hy@CatcodeWrapper\ReadBookmarks
5055 \fi
5056 }
5057 \ifHy@backref
5058 \RequirePackage{backref}%
5059 \else
5060 \let\Hy@backout\@gobble
5061 \fi
5062 \Hy@DisableOption{backref}
5063 \Hy@DisableOption{pagebackref}
5064 \Hy@activeanchorfalse

```

16 User hypertext macros

We need to normalise all user commands taking a URL argument; Within the argument the following special definitions apply: `\#`, `\%`, `\~` produce `#`, `%`, `~` respectively. for consistency `\~` produces `~` as well. At the *top level only* ie not within the argument of another command, you can use `#` and `%` unescaped, to produce themselves. even if, say, `#` is entered as `#` it will be converted to `\#` so it does not die if written to an aux file etc. `\#` will write as `#` locally while making `\specials`.

```

5065 \begingroup
5066 \endlinechar=-1 %
5067 \catcode'\^^A=14 %
5068 \catcode'\^^M\active
5069 \catcode'\%\active
5070 \catcode'\#\active
5071 \catcode'\_\active
5072 \catcode'\$\active
5073 \catcode'\&\active
5074 \gdef\hyper@normalise{^^A
5075 \begingroup
5076 \catcode'\^^M\active
5077 \def^^M{ }^^A
5078 \catcode'\%\active
5079 \let%\@percentchar

```



```

5080 \let\%\@percentchar
5081 \catcode'\#\active
5082 \def#{\hyper@hash}^^A
5083 \def\#{\hyper@hash}^^A
5084 \@makeother\&^^A
5085 \edef&{\string&}^^A
5086 \edef\&{\string&}^^A
5087 \edef\textunderscore{\string_}^^A
5088 \let\_ \textunderscore
5089 \catcode'\_ \active
5090 \let\_ \textunderscore
5091 \let~\hyper@tilde
5092 \let~\hyper@tilde
5093 \let\textasciitilde\hyper@tilde
5094 \let\\\@backslashchar
5095 \edef$\string$}^^A
5096 \Hy@safe@activetrue
5097 \hyper@n@rmalise
5098 }^^A
5099 \catcode'\#=6 ^^A
5100 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
5101 \gdef\hyper@n@rmalise#1#2{^^A
5102 \def\Hy@tempa{#2}^^A
5103 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
5104 \ltx@ReturnAfterElseFi{^^A
5105 \hyper@@normalise{#1}^^A
5106 }^^A
5107 \else
5108 \ltx@ReturnAfterFi{^^A
5109 \hyper@@normalise{#1}{#2}^^A
5110 }^^A
5111 \fi
5112 }^^A
5113 \gdef\hyper@@normalise#1#2{^^A
5114 \edef\Hy@tempa{^^A
5115 \endgroup
5116 \noexpand#1{\Hy@RemovePercentCr#2%\@nil}^^A
5117 }^^A
5118 \Hy@tempa
5119 }^^A
5120 \gdef\Hy@RemovePercentCr#1%\@nil{^^A
5121 #1^^A
5122 \ifx\limits#2\limits
5123 \else
5124 \ltx@ReturnAfterFi{^^A
5125 \Hy@RemovePercentCr #2\@nil
5126 }^^A
5127 \fi
5128 }^^A
5129 \endgroup
5130 \providecommand*\hyper@chars{%
5131 \let\#\hyper@hash
5132 \let\%\@percentchar
5133 \Hy@safe@activetrue
5134 }

5135 \def\hyperlink#1#2{%
5136 \hyper@@link{}{#1}{#2}%

```

```

5137 }
5138 \def\Hy@VerboseLinkStart#1#2{%
5139   \ifHy@verbose
5140     \begingroup
5141       \Hy@safe@activetrue
5142       \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
5143       \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
5144       \xdef\Hy@VerboseGlobalTemp{%
5145         \Hy@VerboseGlobalTemp, %
5146         line \the\inputlineno
5147       }%
5148     \endgroup
5149     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
5150     \@onelevel@sanitize\Hy@VerboseLinkInfo
5151   \fi
5152 }
5153 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
5154 \def\Hy@VerboseLinkStop{%
5155   \ifHy@verbose
5156     \begingroup
5157       \edef\x{\endgroup
5158         \write\m@ne{%
5159           Package 'hyperref' Info: %
5160           End of reference \Hy@VerboseLinkInfo.%
5161         }%
5162       }%
5163     \x
5164   \fi
5165 }
5166 \def\Hy@VerboseAnchor#1{%
5167   \ifHy@verbose
5168     \begingroup
5169       \Hy@safe@activetrue
5170       \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
5171     \endgroup
5172   \fi
5173 }
5174 \def\Hy@AllowHyphens{%
5175   \relax
5176   \ifhmode
5177     \penalty\@M
5178     \hskip\z@skip
5179   \fi
5180 }
5181 \DeclareRobustCommand*{\href}[1][]{%
5182   \begingroup
5183     \setkeys{href}{#1}%
5184     \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
5185 }
5186 \def\Hy@href#1{%
5187   \hyper@normalise\href@
5188 }
5189 \begingroup
5190 \catcode'\$=6 %
5191 \catcode'\#=12 %
5192 \gdef\href@\$1{\expandafter\href@split$1##\}%

```

```

5193 \gdef\href@split$1#$$2#$$3\\$4{%
5194 \hyper@@link{$1}{$2}{$3}{$4}%
5195 \endgroup
5196 }%
5197 \endgroup

```

Option ‘page’.

```

5198 \define@key{href}{page}{%
5199 \def\Hy@href@page{#1}%
5200 }
5201 \let\Hy@href@page\@empty
5202 \newcount\c@Hy@tempcnt
5203 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
5204 \def\Hy@MakeRemoteAction{%
5205 \ifx\Hy@href@page\@empty
5206 \def\Hy@href@page{0}%
5207 \else
5208 \setcounter{Hy@tempcnt}{\Hy@href@page}%
5209 \ifnum\c@Hy@tempcnt<\@ne
5210 \Hy@Warning{%
5211 Invalid page number (\theHy@tempcnt)\MessageBreak
5212 for remote PDF file.\MessageBreak
5213 Using page 1%
5214 }%
5215 \def\Hy@href@page{0}%
5216 \else
5217 \global\advance\c@Hy@tempcnt\m@ne
5218 \edef\Hy@href@page{\theHy@tempcnt}%
5219 \fi
5220 \fi

```

If a next action is set, then also a new window should be opened. Otherwise AR reclaims that it closes the current file with discarding the next actions.

```

5221 \ifx\Hy@href@nextactionraw\@empty
5222 \else
5223 \Hy@pdfnewwindowsettrue
5224 \Hy@pdfnewwindowtrue
5225 \fi
5226 }

```

Option ‘pdfremotestartview’.

```

5227 \define@key{href}{pdfremotestartview}{%
5228 \setkeys{Hyp}{pdfremotestartview={#1}}%
5229 }

```

Option ‘pdfnewwindow’.

```

5230 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
5231 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

5232 \newif\ifHy@href@ismap
5233 \define@key{href}{ismap}[true]{%
5234 \ltx@ifundefined{Hy@href@ismap#1}{%
5235 \Hy@Error{%
5236 Invalid value (#1) for key ‘ismap’.\MessageBreak
5237 Permitted values are ‘true’ or ‘false’.\MessageBreak
5238 Ignoring ‘ismap’%
5239 }\@ehc
5240 }{%

```

```

5241 \csname Hy@href@ismap#1\endcsname
5242 }%
5243 }

```

Option ‘nextactionraw’.

```

5244 \let\Hy@href@nextactionraw\@empty
5245 \define@key{href}{nextactionraw}{%
5246 \edef\Hy@href@nextactionraw{#1}%
5247 \ifx\Hy@href@nextactionraw\@empty
5248 \else
5249 \Hy@Match\Hy@href@nextactionraw{}{%
5250 ~(\HyPat@ObjRef/|<<.*[/S[/.+>>|}%
5251 \[( ?\HyPat@ObjRef/|<<.*[/S[/.+>>)+ ?)]$}%
5252 }{}{%
5253 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
5254 \Hy@href@nextactionraw\MessageBreak
5255 The action is discarded%
5256 }%
5257 }%
5258 \ifx\Hy@href@nextactionraw\@empty
5259 \else
5260 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
5261 \fi
5262 \fi
5263 }
5264 \def\HyPat@ObjRef/{.+}

```

Load package `url.sty` and save the meaning of the original `\url` in `\nolinkurl`.

```

5265 \RequirePackage{url}
5266 \let\HyOrg@url\url
5267 \def\Hurl{\begingroup \Url}
5268 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
5269 \def\nolinkurl@#1{\Hurl{#1}}
5270 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
5271 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

5272 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
5273 \providecommand\hyper@image[2]{#2}

5274 \def\hypertarget#1#2{%
5275 \ifHy@nesting
5276 \hyper@@anchor{#1}{#2}%
5277 \else
5278 \hyper@@anchor{#1}{\relax}#2%
5279 \fi
5280 }

```

`\hyperref` is more complicated, as it includes the concept of a category of link, used to make the name. This is not really used in this package. `\hyperdef` sets up an anchor in the same way. They each have three parameters of category, linkname, and marked text, and `\hyperref` also has a first parameter of URL. If there is an optional first parameter to `\hyperdef`, it is the name of a \LaTeX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

5281 \DeclareRobustCommand*{\hyperref}{%
5282 \ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
5283 }
5284 \def\Hy@babelnormalise#1[#2]{%
5285 \begingroup

```

```

5286 \Hy@safe@activetrue
5287 \edef\Hy@tempa{%
5288 \endgroup
5289 \noexpand#1[{#2}]%
5290 }%
5291 \Hy@tempa
5292 }
5293 \def\@hyperref{\hyper@normalise\@hyperref}
5294 \def\@hyperref#1#2#3{%
5295 \edef\ref@one{\ifx\\#2\\else#2.\fi#3}%
5296 \expandafter\tryhyper@link\ref@one\{#1}%
5297 }
5298 \def\tryhyper@link#1\\#2{%
5299 \hyper@@link{#2}{#1}%
5300 }

5301 \def\hyperdef{\@ifnextchar[\label@hyperdef]{\@hyperdef}}
5302 \def\@hyperdef#1#2#3{% category, name, text
5303 \ifx\\#1\\%
5304 \def\Hy@AnchorName{#2}%
5305 \else
5306 \def\Hy@AnchorName{#1.#2}%
5307 \fi
5308 \ifHy@nesting
5309 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
5310 \else
5311 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
5312 \fi
5313 }

```

We also have a need to give a L^AT_EX *label* to a hyper reference, to ease the pain of referring to it later.

```

5314 \def\label@hyperref[#1]{%
5315 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
5316 }%
5317 \def\label@@hyperref#1#2#3{%
5318 \ifx#1\relax
5319 \protect\G@refundefinedtrue
5320 \@latex@warning{%
5321 Hyper reference ‘#2’ on page \thepage \space undefined%
5322 }%
5323 \begingroup
5324 #3%
5325 \endgroup
5326 \else
5327 \hyper@@link{\expandafter\@fifthoffive#1}%
5328 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
5329 \fi
5330 }
5331 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
5332 % anchor text
5333 \@bsphack
5334 \ifx\\#2\\%
5335 \def\Hy@AnchorName{#3}%
5336 \else
5337 \def\Hy@AnchorName{#2.#3}%
5338 \fi
5339 \if@filesw

```

```

5340 \protected@write\@auxout{}\{}%
5341 \string\newlabel{#1}\{}{}\{}{\Hy@AnchorName}\{}%
5342 }%
5343 \fi
5344 \@esphack
5345 \ifHy@nesting
5346 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
5347 \else
5348 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
5349 \fi
5350 }

```

16.1 Link box support for XeTeX

```

5351 \newdimen\XeTeXLinkMargin
5352 \setlength{\XeTeXLinkMargin}{2pt}
5353 \ifxetex
5354 \font\XeTeXLink@font=pzdr at 1sp\relax
5355 \newcommand*\XeTeXLink@space{%
5356 \begingroup
5357 \XeTeXLink@font
5358 \@xxxii
5359 \endgroup
5360 }%
5361 \newcommand{\XeTeXLinkBox}[1]{%
5362 \begingroup
5363 \leavevmode
5364 \sbox\z@{#1}%
5365 \begingroup
5366 \dimen@=\dp\z@
5367 \advance\dimen@\XeTeXLinkMargin
5368 \setbox\tw@=\llap{%
5369 \hb@xt@\XeTeXLinkMargin{%
5370 \lower\dimen@\hbox{\XeTeXLink@space}%
5371 \hss
5372 }%
5373 }%
5374 \dp\tw@=\dp\z@
5375 \ht\tw@=\ht\z@
5376 \copy\tw@
5377 \endgroup
5378 \copy\z@
5379 \dimen@=\ht\z@
5380 \advance\dimen@\XeTeXLinkMargin
5381 \setbox\tw@=\rlap{%
5382 \hb@xt@\XeTeXLinkMargin{%
5383 \hss
5384 \raise\dimen@\hbox{\XeTeXLink@space}%
5385 }%
5386 }%
5387 \dp\tw@=\dp\z@
5388 \ht\tw@=\ht\z@
5389 \copy\tw@
5390 \endgroup
5391 }%
5392 \else
5393 \newcommand*\XeTeXLinkBox}[1]{%

```

```

5394 \begingroup
5395 \leavevmode
5396 \sbox\z@{\#1}%
5397 \copy\z@
5398 \endgroup
5399 }%
5400 \fi

```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

5401 \def\hyper@link{\let\Hy@reserved@a\relax
5402 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
5403 }
5404 % #1: type
5405 % #2: URL
5406 % #3: destination name
5407 % #4: text
5408 \def\hyper@link@[#1]#2#3#4{%
5409 \ltx@ifempty{#4}{% link text
5410 \Hy@Warning{Suppressing empty link}%
5411 }{%
5412 \begingroup
5413 \protected@edef\Hy@tempa{#2}%
5414 \edef\Hy@tempb{#3}%
5415 \ifx\Hy@tempa\ltx@empty
5416 \ltx\Hy@tempb\ltx@empty
5417 \Hy@Warning{Suppressing link with empty target}%
5418 \toks@{%
5419 \endgroup
5420 \ltx@secondoftwo
5421 }%
5422 \else
5423 \toks@{%
5424 \endgroup
5425 \hyper@link{#1}%
5426 }%
5427 \fi
5428 \else
5429 \toks@{%
5430 \endgroup
5431 \expandafter\hyper@readexternallink#2\{\{#1}%
5432 }%
5433 \fi
5434 \Hy@safe@activesfalse
5435 \toks@\expandafter{%
5436 \the\expandafter\toks@
5437 \expandafter{\Hy@tempb}{#4}%
5438 }%
5439 \the\toks@
5440 }%
5441 }

```

The problem here is that the first (URL) parameter may be a local file: reference (in which case some browsers treat it differently) or a genuine URL, in which case

we'll have to activate a real Web browser. Note that a simple name is also a URL, as that is interpreted as a relative file name. We have to worry about # signs in a local file as well.

```

5442 \def\hyper@readexternallink#1\#2#3#4{%
5443   \begingroup
5444     \let\\\relax
5445   \expandafter\endgroup
5446   \expandafter\@hyper@@readexternallink#1\#{#2}{#3}{#4}%
5447 }
5448 \def\@hyper@@readexternallink#1\#2#3#4{%

```

Parameters are:

1. The URL or file name
2. The type
3. The internal name
4. The link string

We need to get the 1st parameter properly expanded, so we delimit the arguments rather than passing it inside a group.

```

5449   \@hyper@readexternallink{#2}{#3}{#4}#1::\#{#1}%
5450 }

```

Now (potentially), we are passed: 1) The link type 2) The internal name, 3) the link string, 4) the URL type (http, mailto, file etc), 5) the URL details 6) anything after a real : in the URL 7) the whole URL again

```

5451 \def\@pdftempwordfile{file}%
5452 \def\@pdftempwordrun{run}%
5453 \def\@hyper@readexternallink#1#2#3#4:#5:#6\\\#7{%

```

If there are no colons at all (#6 is blank), its a local file; if the URL type (#4) is blank, its probably a Mac filename, so treat it like a file: URL. The only flaw is if its a relative Mac path, with several colon-separated elements — then we lose. Such names must be prefixed with an explicit dvi:

```

5454   \ifx\\\#6\\\%
5455     \@hyper@linkfile file:#7\\\#{#3}{#2}{#7}%
5456   \else
5457     \ifx\\\#4\\\%
5458       \@hyper@linkfile file:#7\\\#{#3}{#2}{#7}%
5459     \else

```

If the URL type is 'file', pass it for local opening

```

5460     \def\@pdftempa{#4}%
5461     \ifx\@pdftempa\@pdftempwordfile
5462       \@hyper@linkfile#7\\\#{#3}{#2}{#7}%
5463     \else

```

if it starts 'run:', its to launch an application.

```

5464       \ifx\@pdftempa\@pdftempwordrun
5465         \ifHy@pdfa
5466           \Hy@Error{%
5467             PDF/A: Launch action is prohibited%
5468           }\@ehc
5469         \begingroup
5470         \leavevmode
5471         #2%

```



```

5472         \endgroup
5473     \else
5474         \@hyper@launch#7\{\#3\}{#2}%
5475     \fi
5476 \else

```

otherwise its a URL

```

5477         \hyper@linkurl{#3}{#7\ifx\#2\else\hyper@hash#2\fi}%
5478     \fi
5479 \fi
5480 \fi
5481 \fi
5482 }

```

By default, turn run: into file:

```

5483 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
5484 \hyper@linkurl{#2}{%
5485 \Hy@linkfileprefix
5486 #1%
5487 \ifx\#3\%
5488 \else
5489 \hyper@hash
5490 #3%
5491 \fi
5492 }%
5493 }

```

D P Story <story@uakron.edu> pointed out that relative paths starting .. fell over. Switched to using \filename@parse to solve this.

```

5494 \def\@hyper@linkfile file:#1\#2#3#4{%
5495 %file url,link string, name, original uri
5496 \filename@parse{#1}%
5497 \ifx\filename@ext\relax
5498 \edef\filename@ext{\XR@ext}%
5499 \fi
5500 \def\use@file{\filename@area\filename@base.\filename@ext}%
5501 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
5502 \hyper@linkfile{#2}{\use@file}{#3}%
5503 }{%
5504 \ifx\@baseurl\empty
5505 \hyper@linkurl{#2}{%
5506 #4\ifx\#3\else\hyper@hash#3\fi
5507 }%
5508 \else
5509 \hyper@linkurl{#2}{\use@file\ifx\#3\else\hyper@hash#3\fi}%
5510 \fi
5511 }%
5512 }

5513 \def\Hy@IfStringEndsWith#1#2{%
5514 \begingroup
5515 \edef\x{#1}%
5516 \@onelevel@sanitize\x
5517 \edef\x{.\x}%
5518 \edef\y{#2}%
5519 \@onelevel@sanitize\y
5520 \edef\y{.\y}%
5521 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
5522 \endgroup

```

```

5523 \ifx\relax##2\relax
5524 \expandafter\ltx@secondoftwo
5525 \else
5526 \expandafter\ltx@firstoftwo
5527 \fi
5528 }%
5529 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
5530 }

5531 \def\Hy@StringLocalhost{localhost}
5532 \@onelevel@sanitize\Hy@StringLocalhost
5533 \def\Hy@CleanupFile#1{%
5534 \edef#1{#1}%
5535 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
5536 }
5537 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
5538 \begingroup
5539 \toks@{\endgroup}%
5540 \def\x{#1}%
5541 \ifx\x\@empty
5542 \def\x{#2}%
5543 \ifx\x\@empty
5544 \toks@{\endgroup\def#5{/#3}}%
5545 \else
5546 \@onelevel@sanitize\x
5547 \ifx\x\Hy@StringLocalhost
5548 \toks@{\endgroup\def#5{/#3}}%
5549 \fi
5550 \fi
5551 \fi
5552 \the\toks@
5553 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

5554 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5555 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5556 \ifx\#1\%
5557 #2\Hy@Warning{Ignoring empty anchor}%
5558 \else
5559 \def\anchor@spot{#2#3}%
5560 \let\put@me@back\@empty
5561 \ifx\relax#2\relax
5562 \else
5563 \ifHy@nesting
5564 \else
5565 \ifcat a\noexpand#2\relax
5566 \else
5567 \ifcat 0\noexpand#2 \relax
5568 \else
5569 % \typeout{Anchor start is not alphanumeric %
5570 % on input line\the\inputlineno%
5571 % }%

```

```

5572         \let\anchor@spot\@empty
5573         \def\put@me@back{#2#3}%
5574     \fi
5575 \fi
5576 \fi
5577 \fi
5578 \ifHy@activeanchor
5579     \anchor@spot
5580 \else
5581     \hyper@anchor{#1}%
5582 \fi
5583 \expandafter\put@me@back
5584 \fi
5585 \let\anchor@spot\@empty
5586 }
5587 \let\anchor@spot\ltx@empty

```

18 Option ‘destlabel’

```

5588 \ifHy@destlabel

\hyper@newdestlabel

5589 \def\hyper@newdestlabel#1#2{%
5590     \begingroup
5591     \Hy@safe@activetrue
5592     \edef\x{\endgroup
5593         \noexpand\@newl@bel{HyDL}{#1}{#2}%
5594     }%
5595     \x
5596 }%

\hyper@destlabel@hook

5597 \providecommand*\hyper@destlabel@hook{}%

\Hy@DestRename

5598 \newcommand*\Hy@DestRename[2]{%
5599     \ltx@ifundefined{HyDL!#1}{%
5600         \begingroup
5601         \Hy@safe@activetrue
5602         \edef\dest@name{#1}%
5603         \edef\label@name{#2}%
5604         \hyper@destlabel@hook
5605         \Hy@IsNotEmpty{dest@name}{%
5606             \Hy@IsNotEmpty{label@name}{%
5607                 \global\expandafter
5608                 \let\csname HyDL!#1\endcsname\ltx@empty
5609                 \if@files
5610                     \protected@write\@auxout{}{%
5611                         \string\hyper@newdestlabel
5612                         {#1}%
5613                         {\label@name}%
5614                     }%
5615                 \fi
5616             }%
5617         }%
5618         \endgroup
5619     }{}%

```

```

5620 }%

\HyperDestRename
5621 \newcommand*{\HyperDestRename}[2]{%
5622   \AtBeginDocument{%
5623     \Hy@DestRename{#1}{#2}%
5624   }%
5625 }%
5626 \AtBeginDocument{%
5627   \let\HyperDestRename\Hy@DestRename
5628 }%

\Hy@IsNotEmpty
5629 \def\Hy@IsNotEmpty#1{%
5630   \ltx@ifundefined{#1}\ltx@gobble{%
5631     \expandafter\ifx\csname#1\endcsname\ltx@empty
5632     \expandafter\ltx@gobble
5633   \else
5634     \expandafter\ltx@firstofone
5635   \fi
5636 }%
5637 }%

5638 \ltx@GlobalAppendToMacro\label@hook{%
5639   \HyperDestRename\@currentHref\label@name
5640 }%

\HyperDestLabelReplace
5641 \def\HyperDestLabelReplace#1{%
5642   \ltx@ifundefined{HyDL@#1}{%
5643     #1%
5644   }{%
5645     \csname HyDL@#1\endcsname
5646   }%
5647 }%

\HyperDestNameFilter
5648 \let\HyperDestNameFilter\HyperDestLabelReplace

5649 \else

\hyper@newdestlabel
5650 \let\hyper@newdestlabel\ltx@gobbletwo

\HyperDestLabelReplace
5651 \let\HyperDestLabelReplace\ltx@firstofone

\HyperDestRename
@gobbletwo

5652 \fi
5653 \Hy@DisableOption{destlabel}

Provide a dummy default definition of \hyper@newdestlabel inside the .aux
files.
5654 \AddLineBeginAux{%
5655   \string\providecommand\string\hyper@newdestlabel[2]{}%
5656 }

```

19 Compatibility with the *L^AT_EX2html* package

Map our macro names on to Nikos', so that documents prepared for that system will work without change.

Note, however, that the whole complicated structure for segmenting documents is not supported; it is assumed that the user will load `html.sty` first, and then `hyperref.sty`, so that the definitions in `html.sty` take effect, and are then overridden in a few circumstances by this package.

```
5657 \let\htmladdimg\hyperimage
5658 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5659 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5660 \def\htmlref#1#2{% anchor text, label
5661   \label@hyperref[{#2}]{#1}%
5662 }
```

This is really too much. The *L^AT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```
5663 \def\@@latextohtmlX{%
5664   \let\hhyperref\hyperref
5665   \def\hyperref##1##2##3##4{% anchor text for HTML
5666     % text to print before label in print
5667     % label
5668     % post-label text in print
5669     ##2\ref{##4}##3%
5670   }%
5671 }
```

20 Forms creation

Allow for creation of PDF or HTML forms. The effects here are limited somewhat by the need to support both output formats, so it may not be as clever as something which only wants to make PDF forms.

I (Sebastian) could not have started this without the encouragement of T V Raman.

20.1 Field flags

The field flags are organized in a bit set.

```
5672 \RequirePackage{bitset}
```

Each flag has a option name, an `\if` switch, and a bit position. The default is always 'false', the flag is clear. This is also the default of the switch created by `\newif`.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```
\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
5673 \def\HyField@NewFlag#1#2{%
5674   \lowercase{\HyField@NewOption{#2}}%
5675   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5676 }
```

```

\HyField@NewFlagOnly
5677 \def\HyField@NewFlagOnly#1#2{%
5678   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5679 }

\HyField@NewOption #1: option name
5680 \def\HyField@NewOption#1{%
5681   \expandafter\newif\csname ifFld@#1\endcsname
5682   \define@key{Field}{#1}[true]{%
5683     \lowercase{\Field@boolkey{##1}}{#1}%
5684   }%
5685 }

\HyField@NewBitsetFlag Package 'bitset' uses zero based positions, the PDF specification starts with one.
#1: option
#2: PDF name
#3: type: F annot flags, Ff field flags
#4: PDF position
5686 \def\HyField@NewBitsetFlag#1#2#3#4{%
5687   \begingroup
5688     \count@=#4\relax
5689     \advance\count@\m@ne
5690     \def\x##1{%
5691       \endgroup
5692       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5693       \expandafter\ifx\csname HyField@#3@#1\endcsname\relax
5694         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5695           (\number#4) #2%
5696         }%
5697       \else
5698         \expandafter\edef\csname HyField@#3@#1\endcsname{%
5699           \csname HyField@#3@#1\endcsname
5700           /#2%
5701         }%
5702       \fi
5703     }%
5704     \expandafter\x\expandafter{\the\count@}%
5705 }

\HyField@UseFlag The bit set is HyField@#1
5706 \def\HyField@UseFlag#1#2{%
5707   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5708 }

\HyField@@UseFlag
5709 \def\HyField@@UseFlag#1#2{%
5710   \bitsetSetValue{HyField@#2}{%
5711     \csname HyField@#2@#1\endcsname
5712   }{%
5713     \csname ifFld@#1\endcsname 1\else 0\fi
5714   }%
5715 }

\HyField@SetFlag The bit set is HyField@#1
5716 \def\HyField@SetFlag#1#2{%
5717   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5718 }

```

```

\HyField@@SetFlag
5719 \def\HyField@@SetFlag#1#2{%
5720 \bitsetSetValue{HyField@#2}{%
5721 \csname HyField@#2@#1\endcsname
5722 }{1}%
5723 }

\HyField@PrintFlags
5724 \def\HyField@PrintFlags#1#2{%
5725 \ifHy@verbose
5726 \begingroup
5727 \let\Hy@temp\@empty
5728 \let\MessageBreak\relax
5729 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5730 \bitsetGetSetBitList{HyField@#1}\do{%
5731 \edef\Hy@temp{%
5732 \Hy@temp
5733 \csname HyField@#1@\x\endcsname\MessageBreak
5734 }%
5735 }%
5736 \edef\x{\endgroup
5737 \noexpand\Hy@Info{%
5738 Field flags: %
5739 \expandafter\ifx\@car#1\@nil S\else/\fi
5740 #1 %
5741 \bitsetGetDec{HyField@#1} %
5742 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5743 \Hy@temp
5744 for #2%
5745 }%
5746 }\x
5747 \fi
5748 }

```

20.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5749 \HyField@NewFlag{Ff}{ReadOnly}{1}
5750 \HyField@NewFlag{Ff}{Required}{2}
5751 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5752 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5753 \HyField@NewFlag{Ff}{Radio}{16}
5754 \HyField@NewFlag{Ff}{Pushbutton}{17}
5755 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5756 \HyField@NewFlag{Ff}{Multiline}{13}
5757 \HyField@NewFlag{Ff}{Password}{14}
5758 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5759 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5760 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5761 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5762 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5763 \HyField@NewFlag{Ff}{Combo}{18}

```

```

5764 \HyField@NewFlag{Ff}{Edit}{19}
5765 \HyField@NewFlag{Ff}{Sort}{20}
5766 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5767 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5768 \HyField@NewFlag{Ff}{CommitOnSelChange}{27}% PDF 1.5

```

Signature fields are not supported.

Until 6.76i hyperref uses field option ‘combo’ to set three flags ‘Combo’, ‘Edit’, and ‘Sort’. Option ‘popdown’ sets flag ‘Combo’ only.

```

5769 \newif\ifFld@popdown
5770 \define@key{Field}{popdown}{true}{%
5771 \lowercase{\Field@boolkey{#1}}{popdown}%
5772 }

```

Annotation flags. The form objects are widget annotations. There are two flags for readonly settings, the one in the annotation flags is ignored, instead the other in the field flags is used.

Flag **Print** is not much useful, because hyperref do not use the appearance entry of the annotations for most fields.

```

5773 \HyField@NewFlag{F}{Invisible}{1}
5774 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5775 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5776 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5777 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5778 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5779 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5780 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5781 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5782 \ifHy@pdfa
5783 \def\HyField@PDFAFflagWarning#1#2{%
5784 \Hy@Warning{%
5785 PDF/A: Annotation flag ‘#1’ must\MessageBreak
5786 be set to ‘#2’%
5787 }%
5788 }%
5789 \Fld@invisiblefalse
5790 \def\Fld@invisibletrue{%
5791 \HyField@PDFAFflagWarning{invisible}{false}%
5792 }%
5793 \Fld@hiddenfalse
5794 \def\Fld@hiddentrue{%
5795 \HyField@PDFAFflagWarning{hidden}{false}%
5796 }%
5797 \Fld@printtrue
5798 \def\Fld@printfalse{%
5799 \HyField@PDFAFflagWarning{print}{true}%
5800 }%
5801 \Fld@nozoomtrue
5802 \def\Fld@nozoomfalse{%
5803 \HyField@PDFAFflagWarning{nozoom}{true}%
5804 }%
5805 \Fld@norotatetrue
5806 \def\Fld@norotatefalse{%
5807 \HyField@PDFAFflagWarning{norotate}{true}%
5808 }%
5809 \Fld@noviewfalse
5810 \def\Fld@noviewtrue{%

```



```

5811 \HyField@PDFAFIWarning{noview}{false}%
5812 }%
5813 \fi

```

Submit flags. Flag 1 Include/Exclude is not supported, use option noexport instead.

```

5814 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5815 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5816 \HyField@NewFlag{Submit}{GetMethod}{4}
5817 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5818 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5819 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5820 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5821 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5822 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5823 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5824 \HyField@NewFlag{Submit}{ExclFKey}{12}
5825 \HyField@NewFlag{Submit}{EmbedForm}{14}

5826 \define@key{Field}{export}{%
5827 \lowercase{\def\Hy@temp{#1}}%
5828 \@ifundefined{Fld@export@\Hy@temp}{%
5829 \onelevel@sanitize\Hy@temp
5830 \Hy@Error{%
5831 Unknown export format '\Hy@temp'.\MessageBreak
5832 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5833 }\@ehc
5834 }{%
5835 \let\Fld@export\Hy@temp
5836 }%
5837 }
5838 \def\Fld@export{fdf}
5839 \@namedef{Fld@export@fdf}{0}%
5840 \@namedef{Fld@export@html}{1}%
5841 \@namedef{Fld@export@xfdf}{2}%
5842 \@namedef{Fld@export@pdf}{3}%

```

20.1.2 Set submit flags

\HyField@FlagsSubmit

```

5843 \def\HyField@FlagsSubmit{%
5844 \bitsetReset{HyField@Submit}%
5845 \ifcase\@nameuse{Fld@export@\Fld@export} %
5846 % FDF
5847 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5848 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5849 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5850 \HyField@UseFlag{Submit}{IncludeAnnotations}%
5851 \HyField@UseFlag{Submit}{CanonicalFormat}%
5852 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5853 \HyField@UseFlag{Submit}{ExclFKey}%
5854 \HyField@UseFlag{Submit}{EmbedForm}%
5855 \or % HTML
5856 \HyField@SetFlag{Submit}{ExportFormat}%
5857 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5858 \HyField@UseFlag{Submit}{GetMethod}%
5859 \HyField@UseFlag{Submit}{SubmitCoordinates}%
5860 \HyField@UseFlag{Submit}{CanonicalFormat}%

```

```

5861 \or % XFDF
5862   \HyField@SetFlag{Submit}{XFDF}%
5863   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5864   \HyField@UseFlag{Submit}{SubmitCoordinates}%
5865   \HyField@UseFlag{Submit}{CanonicalFormat}%
5866 \or % PDF
5867   \HyField@SetFlag{Submit}{SubmitPDF}%
5868   \HyField@UseFlag{Submit}{GetMethod}%
5869 \fi
5870 \HyField@PrintFlags{Submit}{submit button field}%
5871 \bitsetIsEmpty{HyField@Submit}{%
5872   \let\Fld@submitflags\tx@empty
5873 }{%
5874   \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5875 }%
5876 }

```

20.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5877 \def\HyField@FlagsAnnot#1{%
5878   \bitsetReset{HyField@F}%
5879   \HyField@UseFlag{F}{Invisible}%
5880   \HyField@UseFlag{F}{Hidden}%
5881   \HyField@UseFlag{F}{Print}%
5882   \HyField@UseFlag{F}{NoZoom}%
5883   \HyField@UseFlag{F}{NoRotate}%
5884   \HyField@UseFlag{F}{NoView}%
5885   \HyField@UseFlag{F}{Locked}%
5886   \HyField@UseFlag{F}{ToggleNoView}%
5887   \HyField@UseFlag{F}{LockedContents}%
5888   \HyField@PrintFlags{F}{#1}%
5889   \bitsetIsEmpty{HyField@F}{%
5890     \let\Fld@annotflags\tx@empty
5891   }{%
5892     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
5893   }%
5894 }

```

20.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5895 \def\HyField@FlagsPushButton{%
5896   \HyField@FlagsAnnot{push button field}%
5897   \bitsetReset{HyField@Ff}%
5898   \HyField@UseFlag{Ff}{ReadOnly}%
5899   \HyField@UseFlag{Ff}{Required}%
5900   \HyField@UseFlag{Ff}{NoExport}%
5901   \HyField@SetFlag{Ff}{Pushbutton}%
5902   \HyField@PrintFlags{Ff}{push button field}%
5903   \bitsetIsEmpty{HyField@Ff}{%
5904     \let\Fld@flags\tx@empty
5905   }{%
5906     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5907   }%
5908 }

```

20.1.5 Check box field

\HyField@FlagsCheckBox

```
5909 \def\HyField@FlagsCheckBox{%
5910   \HyField@FlagsAnnot{check box field}%
5911   \bitsetReset{HyField@Ff}%
5912   \HyField@UseFlag{Ff}{ReadOnly}%
5913   \HyField@UseFlag{Ff}{Required}%
5914   \HyField@UseFlag{Ff}{NoExport}%
5915   \HyField@PrintFlags{Ff}{check box field}%
5916   \bitsetIsEmpty{HyField@Ff}{%
5917     \let\Fld@flags\ltx@empty
5918   }{%
5919     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5920   }%
5921 }
```

20.1.6 Radio button field

\HyField@FlagsRadioButton

```
5922 \def\HyField@FlagsRadioButton{%
5923   \HyField@FlagsAnnot{radio button field}%
5924   \bitsetReset{HyField@Ff}%
5925   \HyField@UseFlag{Ff}{ReadOnly}%
5926   \HyField@UseFlag{Ff}{Required}%
5927   \HyField@UseFlag{Ff}{NoExport}%
5928   \HyField@UseFlag{Ff}{NoToggleToOff}%
5929   \HyField@SetFlag{Ff}{Radio}%
5930   \HyField@UseFlag{Ff}{RadiosInUnison}%
5931   \HyField@PrintFlags{Ff}{radio button field}%
5932   \bitsetIsEmpty{HyField@Ff}{%
5933     \let\Fld@flags\ltx@empty
5934   }{%
5935     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5936   }%
5937 }
```

20.1.7 Text fields

\HyField@FlagsText

```
5938 \def\HyField@FlagsText{%
5939   \HyField@FlagsAnnot{text field}%
5940   \bitsetReset{HyField@Ff}%
5941   \HyField@UseFlag{Ff}{ReadOnly}%
5942   \HyField@UseFlag{Ff}{Required}%
5943   \HyField@UseFlag{Ff}{NoExport}%
5944   \HyField@UseFlag{Ff}{Multiline}%
5945   \HyField@UseFlag{Ff}{Password}%
5946   \HyField@UseFlag{Ff}{FileSelect}%
5947   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5948   \HyField@UseFlag{Ff}{DoNotScroll}%
5949   \ifFld@comb
5950     \ifcase0\ifFld@multiline
5951       \else\ifFld@password
5952       \else\ifFld@fileselect
5953       \else 1\fi\fi\fi\relax
5954     \Hy@Error{%
```

```

5955     Field option 'comb' cannot used together with \MessageBreak
5956     'multiline', 'password', or 'fileselect'%
5957   }\@ehc
5958   \else
5959     \HyField@UseFlag{Ff}{Comb}%
5960   \fi
5961 \fi
5962 \HyField@UseFlag{Ff}{RichText}%
5963 \HyField@PrintFlags{Ff}{text field}%
5964 \bitsetIsEmpty{HyField@Ff}{%
5965   \let\Fld@flags\ltx@empty
5966 }{%
5967   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5968 }%
5969 }

```

20.1.8 Choice fields

\HyField@FlagsChoice

```

5970 \def\HyField@FlagsChoice{%
5971   \HyField@FlagsAnnot{choice field}%
5972   \bitsetReset{HyField@Ff}%
5973   \HyField@UseFlag{Ff}{ReadOnly}%
5974   \HyField@UseFlag{Ff}{Required}%
5975   \HyField@UseFlag{Ff}{NoExport}%
5976   \HyField@UseFlag{Ff}{Combo}%
5977   \ifFld@combo
5978     \HyField@UseFlag{Ff}{Edit}%
5979   \fi
5980   \HyField@UseFlag{Ff}{Sort}%
5981   \HyField@UseFlag{Ff}{MultiSelect}%
5982   \ifFld@combo
5983     \ifFld@edit
5984       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5985     \fi
5986   \fi
5987   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5988   \HyField@PrintFlags{Ff}{choice field}%
5989   \bitsetIsEmpty{HyField@Ff}{%
5990     \let\Fld@flags\ltx@empty
5991   }{%
5992     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5993   }%
5994 }

```

20.2 Choice field

\HyField@PDFChoices #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: \Fld@default, \Fld@value, \ifFld@multiselect

Result: \Fld@choices with entries: /Opt, /DV, /V, /I.

```

5995 \def\HyField@PDFChoices#1{%
5996   \begingroup
5997   \global\let\Fld@choices\ltx@empty
5998   \let\HyTmp@optlist\ltx@empty
5999   \let\HyTmp@optitem\relax

```

```

6000 \count@=0 %
6001 \kv@parse{#1}{%
6002   \Hy@pdfstringdef\kv@key\kv@key
6003   \ifx\kv@value\relax
6004     \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
6005       \xdef\Fld@choices{\Fld@choices(\kv@key)(\kv@key)}}%
6006     \else
6007       \xdef\Fld@choices{\Fld@choices(\kv@key)}%
6008     \fi
6009   \else
6010     \Hy@pdfstringdef\kv@value\kv@value
6011     \xdef\Fld@choices{\Fld@choices(\kv@value)(\kv@key)}}%
6012   \fi
6013 \edef\HyTmp@optlist{%
6014   \HyTmp@optlist
6015   \HyTmp@optitem{\the\count@}{\kv@key}0%
6016 }%
6017 \advance\count@ by 1 %
6018 \@gobbletwo
6019 }%
6020 \xdef\Fld@choices{/Opt[\Fld@choices]}%
6021 \ifFld@multiselect
6022   \HyField@@PDFChoices{DV}\Fld@default
6023   \HyField@@PDFChoices{V}\Fld@value
6024 \else
6025   \ifx\Fld@default\relax
6026   \else
6027     \pdfstringdef\Hy@gtemp\Fld@default
6028     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
6029   \fi
6030   \ifx\Fld@value\relax
6031   \else
6032     \pdfstringdef\Hy@gtemp\Fld@value
6033     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
6034   \fi
6035 \fi
6036 \endgroup
6037 }

```

\HyField@@PDFChoices

```

6038 \def\HyField@@PDFChoices#1#2{%
6039   \ifx#2\relax
6040   \else
6041     \count@=0 %
6042     \def\HyTmp@optitem##1##2##3{%
6043       \def\HyTmp@key{##2}%
6044       \ifx\HyTmp@key\Hy@gtemp
6045         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6046           \HyTmp@optlist
6047           \HyTmp@optitem{##1}{##2}1%
6048         }%
6049         \let\HyTmp@found=Y%
6050       \else
6051         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
6052           \HyTmp@optlist
6053           \HyTmp@optitem{##1}{##2}##3%
6054         }%
6055       \fi

```

```

6056 }%
6057 \expandafter\comma@parse\expandafter{#2}{%
6058 \pdfstringdef\Hy@gtemp\comma@entry
6059 \let\HyTmp@found=N %
6060 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
6061 \HyTmp@optlist
6062 \ifx\HyTmp@found Y%
6063 \advance\count@ by 1 %
6064 \else
6065 \@onelevel@sanitize\comma@entry
6066 \PackageWarning{hyperref}{%
6067 \string\ChoiceBox: Ignoring value '\comma@entry',%
6068 \MessageBreak
6069 it cannot be found in the choices%
6070 }%
6071 \fi
6072 \@gobble
6073 }%
6074 \def\HyTmp@optitem##1##2##3{%
6075 \ifnum##3=1 %
6076 (##2)%
6077 \fi
6078 }%
6079 \ifcase\count@
6080 \or
6081 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
6082 \else
6083 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
6084 \ifx#1V%
6085 \def\HyTmp@optitem##1##2##3{%
6086 \ifnum##3=1 %
6087 \@firstofone{ ##1}%
6088 \fi
6089 }%
6090 \edef\HyTmp@optlist{\HyTmp@optlist}%
6091 \xdef\Fld@choices{%
6092 \Fld@choices
6093 /I[\expandafter\@firstofone\HyTmp@optlist]%
6094 }%
6095 \fi
6096 \fi
6097 \fi
6098 }

```

20.3 Forms

\HyField@SetKeys

```

6099 \def\HyField@SetKeys{%
6100 \kvsetkeys{Field}%
6101 }

6102 \newif\ifFld@checked
6103 \newif\ifFld@disabled
6104 \Fld@checkedfalse
6105 \Fld@disabledfalse
6106 \newcount\Fld@menulength
6107 \newdimen\Field@Width

```

```

6108 \newdimen\Fld@charsize
6109 \Fld@charsize=10\p@
6110 \def\Fld@maxlen{0}
6111 \def\Fld@align{0}
6112 \def\Fld@color{0 0 0 rg}
6113 \def\Fld@bcolor{1 1 1}
6114 \def\Fld@bordercolor{1 0 0}
6115 \def\Fld@bordersep{1\p@}
6116 \def\Fld@borderwidth{1}
6117 \def\Fld@borderstyle{S}
6118 \def\Fld@cbsymbol{4}
6119 \def\Fld@radiosymbol{H}
6120 \def\Fld@rotation{0}
6121 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
6122 \def\endForm{\@endForm}
6123 \newif\ifForm@html
6124 \Form@htmlfalse
6125 \def\Form@boolkey#1#2{%
6126   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6127 }
6128 \define@key{Form}{action}{%
6129   \hyper@normalise\Hy@DefFormAction{#1}%
6130 }
6131 \def\Hy@DefFormAction{\def\Form@action}
6132 \def\enc@html{html}
6133 \define@key{Form}{encoding}{%
6134   \def\Hy@tempa{#1}%
6135   \ifx\Hy@tempa\enc@html
6136     \Form@htmltrue
6137     \def\Fld@export{html}%
6138   \else
6139     \Hy@Warning{%
6140       Form 'encoding' key with \MessageBreak
6141       unknown value '#1'%
6142     }%
6143     \Form@htmlfalse
6144   \fi
6145 }
6146 \define@key{Form}{method}{%
6147   \lowercase{\def\Hy@temp{#1}}%
6148   \@ifundefined{Form@method@\Hy@temp}{%
6149     \@onelevel@sanitize\Hy@temp
6150     \Hy@Error{%
6151       Unknown method '\Hy@temp'\MessageBreak
6152       Known values are 'post' and 'get'%
6153     }\@ehc
6154   }{%
6155     \let\Form@method\Hy@temp
6156     \ifcase\@nameuse{Form@method@\Hy@temp} %
6157       \Fld@getmethodfalse
6158     \else
6159       \Fld@getmethodtrue
6160     \fi
6161   }%
6162 }
6163 \def\Form@method{}
6164 \@namedef{Form@method@post}{0}

```

```

6165 \@namedef{Form@method@get}{1}
6166 \newif\ifHyField@NeedAppearances
6167 \def\HyField@NeedAppearancesfalse{%
6168   \global\let\ifHyField@NeedAppearances\iffalse
6169 }
6170 \def\HyField@NeedAppearancetrue{%
6171   \global\let\ifHyField@NeedAppearances\iftrue
6172 }
6173 \HyField@NeedAppearancetrue
6174 \define@key{Form}{NeedAppearances}[true]{%
6175   \edef\Hy@tempa{#1}%
6176   \ifx\Hy@tempa\Hy@true
6177     \HyField@NeedAppearancetrue
6178   \else
6179     \ifx\Hy@tempa\Hy@false
6180       \HyField@NeedAppearancesfalse
6181     \else
6182       \Hy@Error{%
6183         Unexpected value '\Hy@tempa'\MessageBreak
6184         of option 'NeedAppearances' instead of\MessageBreak
6185         'true' or 'false'%
6186       }\@ehc
6187     \fi
6188   \fi
6189 }
6190 \def\Field@boolkey#1#2{%
6191   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
6192 }
6193 \ifHy@texht
6194   \newtoks\Field@toks
6195   \Field@toks={ }%
6196   \def\Field@addtoks#1#2{%
6197     \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
6198     \@processme
6199   }%
6200 \else
6201   \def\Hy@WarnHTMLFieldOption#1{%
6202     \Hy@Warning{%
6203       HTML field option '#1'\MessageBreak
6204       is ignored%
6205     }%
6206   }%
6207 \fi
6208 \def\Fld@checkequals#1=#2=#3\\{%
6209   \def\@currDisplay{#1}%
6210   \ifx\\#2\\%
6211     \def\@currValue{#1}%
6212   \else
6213     \def\@currValue{#2}%
6214   \fi
6215 }
6216 \define@key{Field}{loc}{%
6217   \def\Fld@loc{#1}%
6218 }
6219 \define@key{Field}{checked}[true]{%
6220   \lowercase{\Field@boolkey{#1}}{checked}%
6221 }

```



```

6222 \define@key{Field}{disabled}[true]{%
6223   \lowercase{\Field@boolkey{#1}}{disabled}%
6224 }
6225 \ifHy@texht
6226   \define@key{Field}{accesskey}{%
6227     \Field@addtoks{accesskey}{#1}%
6228   }%
6229   \define@key{Field}{tabkey}{%
6230     \Field@addtoks{tabkey}{#1}%
6231   }%
6232 \else
6233   \define@key{Field}{accesskey}{%
6234     \Hy@WarnHTMLFieldOption{accesskey}%
6235   }%
6236   \define@key{Field}{tabkey}{%
6237     \Hy@WarnHTMLFieldOption{tabkey}%
6238   }%
6239 \fi
6240 \define@key{Field}{name}{%
6241   \def\Fld@name{#1}%
6242 }
6243 \let\Fld@altname\relax
6244 \define@key{Field}{altname}{%
6245   \def\Fld@altname{#1}%
6246 }
6247 \let\Fld@mappingname\relax
6248 \define@key{Field}{mappingname}{%
6249   \def\Fld@mappingname{#1}%
6250 }
6251 \define@key{Field}{width}{%
6252   \def\Fld@width{#1}%
6253   \Field@Width#1\setbox0=\hbox{m}%
6254 }
6255 \define@key{Field}{maxlen}{%
6256   \def\Fld@maxlen{#1}%
6257 }
6258 \define@key{Field}{menulength}{%
6259   \Fld@menulength=#1\relax
6260 }
6261 \define@key{Field}{height}{%
6262   \def\Fld@height{#1}%
6263 }
6264 \define@key{Field}{charsize}{%
6265   \setlength{\Fld@charsize}{#1}%
6266 }
6267 \define@key{Field}{borderwidth}{%
6268   \Hy@defaultbp\Fld@borderwidth{#1}%
6269 }
6270 \def\Hy@defaultbp#1#2{%
6271   \begingroup
6272   \afterassignment\Hy@defaultbpAux
6273   \dimen@=#2bp\relax{#1}{#2}%
6274 }
6275 \begingroup\expandafter\expandafter\expandafter\endgroup
6276 \expandafter\ifx\csname dimexpr\endcsname\relax
6277   \def\Hy@defaultbpAux#1\relax#2#3{%
6278     \ifx!#1!%

```

```

6279 \endgroup
6280 \def#2{#3}%
6281 \else
6282 \dimen@=.99626\dimen@
6283 \edef\x{\endgroup
6284 \def\noexpand#2{%
6285 \strip@pt\dimen@
6286 }%
6287 }\x
6288 \fi
6289 }%
6290 \else
6291 \def\Hy@defaultbpAux#1\relax#2#3{%
6292 \ifx!#1!%
6293 \endgroup
6294 \def#2{#3}%
6295 \else
6296 \edef\x{\endgroup
6297 \def\noexpand#2{%
6298 \strip@pt\dimexpr\dimen@*800/803\relax
6299 }%
6300 }\x
6301 \fi
6302 }%
6303 \fi
6304 \define@key{Field}{borderstyle}{%
6305 \let\Hy@temp\Fld@borderstyle
6306 \def\Fld@borderstyle{#1}%
6307 \Hy@Match\Fld@borderstyle}{}%
6308 ~[SDBIU]$%
6309 }-}{%
6310 \Hy@Warning{%
6311 Invalid value '@pdfborderstyle'\MessageBreak
6312 for option 'pdfborderstyle'. Valid values:\MessageBreak
6313 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
6314 \space\space I (Inset), U (Underline)\MessageBreak
6315 Option setting is ignored%
6316 }%
6317 \let\Fld@borderstyle\Hy@temp
6318 }%
6319 }
6320 \define@key{Field}{bordersep}{%
6321 \def\Fld@bordersep{#1}%
6322 }
6323 \define@key{Field}{default}{%
6324 \def\Fld@default{#1}%
6325 }
6326 \define@key{Field}{align}{%
6327 \def\Fld@align{#1}%
6328 }
6329 \define@key{Field}{value}{%
6330 \Hy@pdfstringdef\Fld@value{#1}%
6331 }
6332 \define@key{Field}{checkboxsymbol}{%
6333 \Fld@DingDef\Fld@cbsymbol{#1}%
6334 }
6335 \define@key{Field}{radiosymbol}{%

```

```

6336 \Fld@DingDef\Fld@radiosymbol{#1}%
6337 }
6338 \def\Fld@DingDef#1#2{%
6339 \let\Fld@temp\ltx@empty
6340 \Fld@@@DingDef#2\ding{}}\@nil
6341 \let#1\Fld@temp
6342 }
6343 \def\Fld@@@DingDef#1\ding#2#3\@nil{%
6344 \expandafter\def\expandafter\Fld@temp\expandafter{%
6345 \Fld@temp
6346 #1%
6347 }%
6348 \ifx\\#3\\%
6349 \expandafter\@gobble
6350 \else
6351 \begingroup
6352 \lccode'0=#2\relax
6353 \lowercase{\endgroup
6354 \expandafter\def\expandafter\Fld@temp\expandafter{%
6355 \Fld@temp
6356 0%
6357 }%
6358 }%
6359 \expandafter\@firstofone
6360 \fi
6361 {%
6362 \Fld@@@DingDef#3\@nil
6363 }%
6364 }

6365 \define@key{Field}{rotation}{%
6366 \def\Fld@rotation{#1}%
6367 }

6368 \define@key{Field}{backgroundcolor}{%
6369 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
6370 }
6371 \define@key{Field}{bordercolor}{%
6372 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
6373 }
6374 \define@key{Field}{color}{%
6375 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
6376 }

6377 \let\Fld@onclick@code\ltx@empty
6378 \let\Fld@format@code\ltx@empty
6379 \let\Fld@validate@code\ltx@empty
6380 \let\Fld@calculate@code\ltx@empty
6381 \let\Fld@keystroke@code\ltx@empty
6382 \let\Fld@onfocus@code\ltx@empty
6383 \let\Fld@onblur@code\ltx@empty
6384 \let\Fld@onmousedown@code\ltx@empty
6385 \let\Fld@onmouseup@code\ltx@empty
6386 \let\Fld@onenter@code\ltx@empty
6387 \let\Fld@onexit@code\ltx@empty
6388 \def\Hy@temp#1{%
6389 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
6390 }
6391 \def\Hy@@temp#1#2{%

```

```

6392 \ifHy@pdfa
6393   \define@key{Field}{#2}{%
6394     \Hy@Error{%
6395       PDF/A: Additional action '#2' is prohibited%
6396     }\@ehc
6397   }%
6398 \else
6399   \define@key{Field}{#2}{%
6400     \def#1{##1}%
6401   }%
6402 \fi
6403 }
6404 \Hy@temp{keystroke}
6405 \Hy@temp{format}
6406 \Hy@temp{validate}
6407 \Hy@temp{calculate}
6408 \Hy@temp{onfocus}
6409 \Hy@temp{onblur}
6410 \Hy@temp{onenter}
6411 \Hy@temp{onexit}

6412 \let\Fld@calculate@sortkey\ltx@empty
6413 \define@key{Field}{calculatesortkey}[1]{%
6414   \def\Fld@calculate@sortkey{#1}%
6415 }

6416 \ifHy@texht
6417   \def\Hy@temp#1{%
6418     \define@key{Field}{#1}{%
6419       \Field@addtoks{#1}{##1}%
6420     }%
6421   }%
6422 \else
6423   \def\Hy@temp#1{%
6424     \define@key{Field}{#1}{%
6425       \Hy@WarnHTMLFieldOption{#1}%
6426     }%
6427   }%
6428 \fi
6429 \Hy@temp{ondblclick}
6430 \Hy@temp{onmousedown}
6431 \Hy@temp{onmouseup}
6432 \Hy@temp{onmouseover}
6433 \Hy@temp{onmousemove}
6434 \Hy@temp{onmouseout}
6435 \Hy@temp{onkeydown}
6436 \Hy@temp{onkeyup}
6437 \Hy@temp{onselect}
6438 \Hy@temp{onchange}
6439 \Hy@temp{onkeypress}
6440 \ifHy@texht
6441   \define@key{Field}{onclick}{%
6442     \Field@addtoks{onclick}{#1}%
6443   }%
6444 \else
6445   \ifHy@pdfa
6446     \define@key{Field}{onclick}{%
6447       \Hy@Error{%
6448         PDF/A: Action 'onclick' is prohibited%

```

```

6449     }\@ehc
6450   }%
6451 \else
6452   \define@key{Field}{onclick}{%
6453     \def\Fld@onclick@code{#1}%
6454   }%
6455 \fi
6456 \fi

6457 \DeclareRobustCommand\TextField{%
6458   \@ifnextchar[{\@TextField}{\@TextField[]}%
6459 }
6460 \DeclareRobustCommand\ChoiceMenu{%
6461   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
6462 }
6463 \DeclareRobustCommand\CheckBox{%
6464   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
6465 }
6466 \DeclareRobustCommand\PushButton{%
6467   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
6468 }
6469 \DeclareRobustCommand\Gauge{%
6470   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
6471 }
6472 \DeclareRobustCommand\Submit{%
6473   \@ifnextchar[{\@Submit}{\@Submit[]}%
6474 }
6475 \DeclareRobustCommand\Reset{%
6476   \@ifnextchar[{\@Reset}{\@Reset[]}%
6477 }
6478 \def\LayoutTextField#1#2{% label, field
6479   #1 #2%
6480 }
6481 \def\LayoutChoiceField#1#2{% label, field
6482   #1 #2%
6483 }
6484 \def\LayoutCheckField#1#2{% label, field
6485   #1 #2%
6486 }
6487 \def\LayoutPushButtonField#1{% button
6488   #1%
6489 }
6490 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6491 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6492 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6493 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
6494 \def\MakeButtonField#1{%
6495   \sbox0{%
6496     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
6497   }%
6498   \@tempdima\ht0 %
6499   \advance\@tempdima by \Fld@borderwidth bp %
6500   \advance\@tempdima by \Fld@borderwidth bp %
6501   \ht0\@tempdima
6502   \@tempdima\dp0 %
6503   \advance\@tempdima by \Fld@borderwidth bp %
6504   \advance\@tempdima by \Fld@borderwidth bp %
6505   \dp0\@tempdima

```

```

6506 \box0\relax
6507 }
6508 \def\DefaultHeightofSubmit{14pt}
6509 \def\DefaultWidthofSubmit{2cm}
6510 \def\DefaultHeightofReset{14pt}
6511 \def\DefaultWidthofReset{2cm}
6512 \def\DefaultHeightofCheckBox{\baselineskip}
6513 \def\DefaultWidthofCheckBox{\baselineskip}
6514 \def\DefaultHeightofChoiceMenu{\baselineskip}
6515 \def\DefaultWidthofChoiceMenu{\baselineskip}
6516 \def\DefaultHeightofText{\baselineskip}
6517 \def\DefaultHeightofTextMultiline{4\baselineskip}
6518 \def\DefaultWidthofText{3cm}
6519 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
6520 \def\DefaultOptionsofReset{print,name=Reset,noexport}
6521 \def\DefaultOptionsofPushButton{print}
6522 \def\DefaultOptionsofCheckBox{print}
6523 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

6524 \def\DefaultOptionsofListBox{print}
6525 \def\DefaultOptionsofComboBox{print,edit,sort}
6526 \def\DefaultOptionsofPopdownBox{print}
6527 \def\DefaultOptionsofRadio{print,notoggletooff}

```

21 Setup

```

6528 \ifHy@hyperfigures
6529 \Hy@Info{Hyper figures ON}%
6530 \else
6531 \Hy@Info{Hyper figures OFF}%
6532 \fi
6533 \ifHy@nesting
6534 \Hy@Info{Link nesting ON}%
6535 \else
6536 \Hy@Info{Link nesting OFF}%
6537 \fi
6538 \ifHy@hyperindex
6539 \Hy@Info{Hyper index ON}%
6540 \else
6541 \Hy@Info{Hyper index OFF}%
6542 \fi
6543 \ifHy@backref
6544 \Hy@Info{backreferencing ON}%
6545 \else
6546 \Hy@Info{backreferencing OFF}%
6547 \fi
6548 \ifHy@colorlinks
6549 \Hy@Info{Link coloring ON}%
6550 \else
6551 \Hy@Info{Link coloring OFF}%
6552 \fi
6553 \ifHy@ocgcolorlinks
6554 \Hy@Info{Link coloring with OCG ON}%
6555 \else
6556 \Hy@Info{Link coloring with OCG OFF}%
6557 \fi

```

```

6558 \ifHy@pdfa
6559 \Hy@Info{PDF/A mode ON}%
6560 \else
6561 \Hy@Info{PDF/A mode OFF}%
6562 \fi

```

22 Low-level utility macros

We need unrestricted access to the #, ~ and " characters, so make them nice macros.

```

6563 \edef\hyper@hash{\string#}
6564 \edef\hyper@tilde{\string~}
6565 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

6566 \def\@currentHref{Doc-Start}
6567 \let\Hy@footnote@currentHref\@empty

```

We give the start of document a special label; this is used in backreferencing-by-section, to allow for cites before any sectioning commands. Set up PDF info.

```

6568 \Hy@AtBeginDocument{%
6569 \Hy@pdfstringtrue
6570 \PDF@SetupDoc
6571 \let\PDF@SetupDoc\@empty
6572 \Hy@DisableOption{pdfpagescrop}%
6573 \Hy@DisableOption{pdfpagemode}%
6574 \Hy@DisableOption{pdfnonfullscreenpagemode}%
6575 \Hy@DisableOption{pdfdirection}%
6576 \Hy@DisableOption{pdfviewarea}%
6577 \Hy@DisableOption{pdfviewclip}%
6578 \Hy@DisableOption{pdfprintarea}%
6579 \Hy@DisableOption{pdfprintclip}%
6580 \Hy@DisableOption{pdfprintscaling}%
6581 \Hy@DisableOption{pdfduplex}%
6582 \Hy@DisableOption{pdfpicktraybypdfsize}%
6583 \Hy@DisableOption{pdfprintpagerange}%
6584 \Hy@DisableOption{pdfnumcopies}%
6585 \Hy@DisableOption{pdfstartview}%
6586 \Hy@DisableOption{pdfstartpage}%
6587 \Hy@DisableOption{pdftoolbar}%
6588 \Hy@DisableOption{pdfmenubar}%
6589 \Hy@DisableOption{pdfwindowui}%
6590 \Hy@DisableOption{pdfwindow}%
6591 \Hy@DisableOption{pdfcenterwindow}%
6592 \Hy@DisableOption{pdfdisplaydoctitle}%
6593 \Hy@DisableOption{pdfpagelayout}%
6594 \Hy@DisableOption{pdflang}%
6595 \Hy@DisableOption{baseurl}%
6596 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
6597 \Hy@pdfstringfalse
6598 }

```

Ignore star from referencing macros:

```

6599 \LetLtxMacro\NoHy@OrgRef\ref
6600 \DeclareRobustCommand*{\ref}{%
6601 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6602 }
6603 \LetLtxMacro\NoHy@OrgPageRef\pageref

```

```

6604 \DeclareRobustCommand*\pageref}{%
6605   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6606 }

```

23 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hypertext functions doing anything. This is used, for instance, in the Elsevier classes, to stop `hyperref` playing havoc in the front matter.

```

6607 \def\NoHyper{%
6608   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6609   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
6610   \global\let\hyper@livelink\hyper@link
6611   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
6612   \let\hyper@anchor\ltx@gobble
6613   \let\hyper@anchorstart\ltx@gobble
6614   \def\hyper@anchorend{\Hy@xspace@end}%
6615   \let\hyper@linkstart\ltx@gobbletwo
6616   \def\hyper@linkend{\Hy@xspace@end}%
6617   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6618   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6619   \let\Hy@backout\@gobble
6620 }
6621 \def\stop@hyper{%
6622   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
6623   \let\Hy@backout\@gobble
6624   \let\hyper@@anchor\ltx@gobble
6625   \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
6626   \let\hyper@anchor\ltx@gobble
6627   \let\hyper@anchorstart\ltx@gobble
6628   \def\hyper@anchorend{\Hy@xspace@end}%
6629   \let\hyper@linkstart\ltx@gobbletwo
6630   \def\hyper@linkend{\Hy@xspace@end}%
6631   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
6632   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
6633 }
6634 \def\endNoHyper{%
6635   \global\let\hyper@link\hyper@livelink
6636 }
6637 \end{package}

```

24 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package `nohyperref` is a dummy package that defines some low level and some top-level commands. It is done for `jadetex`, which calls `hyperref` low-level commands, but it would also be useful with people using normal `hyperref`, who really do not want the package loaded at all.

Some low-level commands:

```

6638 \*nohyperref
6639 \RequirePackage{letltxmacro}[2008/06/13]
6640 \let\hyper@@anchor\@gobble
6641 \def\hyper@link##1##2##3{##3}%

```



```

6642 \let\hyper@anchorstart\@gobble
6643 \let\hyper@anchorend\@empty
6644 \let\hyper@linkstart\@gobbletwo
6645 \let\hyper@linkend\@empty
6646 \def\hyper@linkurl#1#2{#1}%
6647 \def\hyper@linkfile#1#2#3{#1}%
6648 \def\hyper@link@{#1}#2#3{#1}%
6649 \let\PDF@SetupDoc\@empty
6650 \let\PDF@FinishDoc\@empty
6651 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6652 \def\Acrobatmenu#1#2{\leavevmode#2}
6653 \let\pdfstringdefDisableCommands\@gobbletwo
6654 \let\texorpdfstring\@firstoftwo
6655 \let\pdfbookmark\@undefined
6656 \newcommand\pdfbookmark[3]{}
6657 \let\phantomsection\@empty
6658 \let\hypersetup\@gobble
6659 \let\hyperbaseurl\@gobble
6660 \newcommand*{\href}[3]{}
6661 \let\hyperdef\@gobbletwo
6662 \let\hyperlink\@gobble
6663 \let\hypertarget\@gobble
6664 \def\hyperref{%
6665   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6666 }
6667 \long\def\@gobbleopt[#1]{}
6668 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6669 \LetLtxMacro\NoHy@OrgRef\ref
6670 \DeclareRobustCommand*\ref{%
6671   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6672 }
6673 \LetLtxMacro\NoHy@OrgPageRef\pageref
6674 \DeclareRobustCommand*\pageref{%
6675   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6676 }
6677 \let\hyperref

```

25 The Mangling Of Aux and Toc Files

Some extra tests so that the hyperref package may be removed or added to a document without having to remove .aux and .toc files (this section is by David Carlisle) All the code is delayed to `\begin{document}`

```

6678 \*package
6679 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

6680 \if@filesw
6681   \ifHy@typexml
6682     \immediate\closeout\@mainaux
6683     \immediate\openout\@mainaux\jobname.aux\relax
6684     \immediate\write\@auxout{<relaxxml>\relax}%

```

```

6685 \fi
6686 \immediate\write\@auxout{%
6687 \string\providecommand\string\HyperFirstAtBeginDocument{%
6688 \string\AtBeginDocument}^^J%
6689 \string\HyperFirstAtBeginDocument{%
6690 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6691 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6692 \string\gdef\string\contentsline%
6693 \string#1\string#2\string#3\string#4{%
6694 \string\oldcontentsline%
6695 {\string#1}{\string#2}{\string#3}}^^J%
6696 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6697 \string\gdef\string\newlabel\string#1\string#2{%
6698 \string\newlabelxx{\string#1}\string#2}^^J%
6699 \string\gdef\string\newlabelxx%
6700 \string#1\string#2\string#3\string#4\string#5\string#6{%
6701 \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

6702 \string\AtEndDocument{%
6703 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6704 \string\let\string\contentsline\string\oldcontentsline^^J%
6705 \string\let\string\newlabel\string\oldnewlabel^^J%
6706 \string\fi%
6707 }^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

6708 \string\fi%
6709 }^^J%
6710 \string\global\string\let\string\hyper@last\relax^^J%
6711 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6712 }%
6713 \fi
6714 \let\HyperFirstAtBeginDocument\ltx@firstofone

```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

6715 \ifx\hyper@last\@undefined
6716 \def\@starttoc#1{%
6717 \begingroup
6718 \makeatletter
6719 \ltx@ifpackageloaded{parskip}{\parskip\z@}{}%
6720 \IfFileExists{\jobname.#1}{%
6721 \Hy@WarningNoLine{%
6722 old #1 file detected, not used; run LaTeX again%
6723 }%
6724 }{}%
6725 \if@filesw
6726 \expandafter\newwrite\csname tf@#1\endcsname
6727 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6728 \fi
6729 \@nobreakfalse
6730 \endgroup

```

```

6731 }%
6732 \def\newlabel#1#2{\@newlabel{#1}{#2}{-}{-}{-}}%
6733 \fi
6734 }

```

26 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the nd

```

6735 \ifHy@pdfusetitle
6736 \let\HyOrg@title\title
6737 \let\HyOrg@author\author
6738 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6739 \def\Hy@scanopttitle[#1]{%
6740 \gdef\Hy@title{#1}%
6741 \HyOrg@title{#1}%
6742 }%
6743 \def\Hy@scantitle#1{%
6744 \gdef\Hy@title{#1}%
6745 \HyOrg@title{#1}%
6746 }%
6747 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6748 \def\Hy@scanoptauthor[#1]{%
6749 \gdef\Hy@author{#1}%
6750 \HyOrg@author{#1}%
6751 }%
6752 \def\Hy@scanauthor#1{%
6753 \gdef\Hy@author{#1}%
6754 \HyOrg@author{#1}%
6755 }%

```

The case, that `or` or `re` given before `hyperref` is loaded, is much more complicate, because LaTeX initializes the macros `title` and `author` with LaTeX error and warning messages.

```

6756 \begingroup
6757 \def\process@me#1\@nil#2{%
6758 \expandafter\let\expandafter\x\csname @#2\endcsname
6759 \edef\y{\expandafter\strip@prefix\meaning\x}%
6760 \def\c##1#1##2\@nil{%
6761 \ifx\\##1\\%
6762 \else
6763 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6764 \expandafter{\x}%
6765 \fi
6766 }%
6767 \expandafter\c\y\relax#1\@nil
6768 }%
6769 \expandafter\process@me\string\@latex@\@nil{title}%
6770 \expandafter\process@me\string\@latex@\@nil{author}%
6771 \endgroup
6772 \fi
6773 \Hy@DisableOption{pdfusetitle}

```

Macro `\Hy@UseMaketitleInfos` is used in the driver files, before the information entries are used.

The newline macro `\newline` or `\\` is much more complicate. In the title a good replacement can be a space, but can be already a space after `\\` in the title

string. So this space is removed by scanning for the next non-empty argument.

In the macro `\author` the newline can perhaps separate the different authors, so the newline expands here to a comma with space.

The possible arguments such as space or the optional argument after the newline macros are not detected.

```

6774 \def\Hy@UseMaketitleString#1{%
6775   \ltx@ifundefined{Hy@#1}{-}{%
6776     \begingroup
6777       \let\Hy@saved@hook\pdfstringdefPreHook
6778       \pdfstringdefDisableCommands{%
6779         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6780         \let\newline\\%
6781       }%
6782       \expandafter\ifx\csname @pdf#1\endcsname\@empty
6783         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6784           \csname Hy@#1\endcsname\@empty
6785         }%
6786       \fi
6787       \global\let\pdfstringdefPreHook\Hy@saved@hook
6788     \endgroup
6789   }%
6790 }
6791 \def\Hy@newline@title#1{ #1}
6792 \def\Hy@newline@author#1{, #1}
6793 \def\Hy@UseMaketitleInfos{%
6794   \Hy@UseMaketitleString{title}%
6795   \Hy@UseMaketitleString{author}%
6796 }

```

27 Page numbers

This stuff is done by Heiko Oberdiek.

28 Every page

```

6797 \RequirePackage{atbegshi}[2007/09/09]
6798 \let\Hy@EveryPageHook\ltx@empty
6799 \let\Hy@EveryPageBoxHook\ltx@empty
6800 \let\Hy@FirstPageHook\ltx@empty
6801 \AtBeginShipout{%
6802   \Hy@EveryPageHook
6803   \ifx\Hy@EveryPageBoxHook\ltx@empty
6804     \else
6805       \setbox\AtBeginShipoutBox=\vbox{%
6806         \offinterlineskip
6807         \Hy@EveryPageBoxHook
6808         \box\AtBeginShipoutBox
6809       }%
6810     \fi
6811 }
6812 \ltx@iffileloaded{hpdftex.def}{%
6813   \AtBeginShipout{%
6814     \Hy@FirstPageHook
6815     \global\let\Hy@FirstPageHook\ltx@empty
6816   }%

```

```

6817 }{%
6818   \AtBeginShipoutFirst{%
6819     \Hy@FirstPageHook
6820   }%
6821 }
6822 \g@addto@macro\Hy@FirstPageHook{%
6823   \PDF@FinishDoc
6824   \global\let\PDF@FinishDoc\ltx@empty
6825 }

```

28.1 PDF /PageLabels

Internal macros of this module are marked with `\HyPL@`.

```

6826 \ifHy@pdfpagelabels
6827   \begingroup\expandafter\expandafter\expandafter\endgroup
6828   \expandafter\ifx\csname thepage\endcsname\relax
6829     \Hy@pdfpagelabelsfalse
6830     \Hy@WarningNoLine{%
6831       Option 'pdfpagelabels' is turned off\MessageBreak
6832       because \string\thepage\space is undefined%
6833     }%
6834     \csname fi\endcsname
6835     \csname iffalse\expandafter\endcsname
6836     \fi

```

`\thispdfpagelabel` The command `\thispdfpagelabel` allows to label a special page without the redefinition of `\thepage` for the page.

```

6837 \def\thispdfpagelabel#1{%
6838   \gdef\HyPL@thisLabel{#1}%
6839 }%
6840 \global\let\HyPL@thisLabel\relax

```

`\HyPL@Labels` The page labels are collected in `\HyPL@Labels` and set at the end of the document.

```

6841 \let\HyPL@Labels\ltx@empty

```

`\Hy@abspage` We have to know the the absolute page number and introduce a new counter for that.

```

6842 \newcount\Hy@abspage
6843 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

6844 \def\HyPL@LastType{init}%
6845 \def\HyPL@LastNumber{0}%
6846 \let\HyPL@LastPrefix\ltx@empty

```

Definitions for the PDF names of the \LaTeX pendants.

```

6847 \def\HyPL@arabic{D}%
6848 \def\HyPL@Roman{R}%
6849 \def\HyPL@roman{r}%
6850 \def\HyPL@Alph{A}%
6851 \def\HyPL@alph{a}%
6852 \let\HyPL@SlidesSetPage\ltx@empty
6853 \ltx@ifclassloaded{slides}{%
6854   \def\HyPL@SlidesSetPage{%
6855     \advance\c@page\ltx@one
6856     \ifnum\value{page}>\ltx@one
6857       \protected@edef\HyPL@SlidesOptionalPage{%

```

```

6858     \Hy@SlidesFormatOptionalPage{\thepage}%
6859   }%
6860 \else
6861   \let\HyPL@SlidesOptionalPage\ltx@empty
6862 \fi
6863 \advance\c@page-\ltx@one
6864 \def\HyPL@page{%
6865   \csname the\Hy@SlidesPage\endcsname
6866   \HyPL@SlidesOptionalPage
6867 }%
6868 }%
6869 }{}%

```

`\HyPL@EveryPage` If a page is shipout and the page number is known, `\HyPL@EveryPage` has to be called. It stores the current page label.

```

6870 \def\HyPL@EveryPage{%
6871   \begingroup
6872   \ifx\HyPL@thisLabel\relax
6873     \let\HyPL@page\thepage
6874     \HyPL@SlidesSetPage
6875   \else
6876     \let\HyPL@page\HyPL@thisLabel
6877     \global\let\HyPL@thisLabel\relax
6878   \fi
6879   \let\HyPL@Type\relax
6880   \ifnum\c@page>0 %
6881     \ifx\HyPL@SlidesSetPage\ltx@empty
6882       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6883     \fi
6884   \fi
6885   \let\Hy@temp Y%
6886   \ifx\HyPL@Type\HyPL@LastType
6887   \else
6888     \let\Hy@temp N%
6889   \fi
6890   \ifx\HyPL@Type\relax
6891     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6892   \else
6893     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6894   \fi
6895   \ifx\HyPL@Prefix\HyPL@LastPrefix
6896   \else
6897     \let\Hy@temp N%
6898   \fi
6899   \if Y\Hy@temp
6900     \advance\c@page by -1 %
6901     \ifnum\HyPL@LastNumber=\the\c@page\relax
6902     \else
6903       \let\Hy@temp N%
6904     \fi
6905     \Hy@StepCount\c@page
6906   \fi
6907   \if N\Hy@temp
6908     \ifx\HyPL@Type\relax
6909       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6910     \else
6911       \HyPL@StorePageLabel{%

```

```

6912     \ifx\HyPL@Prefix\@empty
6913     \else
6914       /P(\HyPL@Prefix)%
6915     \fi
6916     /S/\csname HyPL\HyPL@Type\endcsname
6917     \ifnum\the\c@page=1 %
6918     \else
6919       \space/St \the\c@page
6920     \fi
6921   }%
6922 \fi
6923 \fi
6924 \xdef\HyPL@LastNumber{\the\c@page}%
6925 \global\let\HyPL@LastType\HyPL@Type
6926 \global\let\HyPL@LastPrefix\HyPL@Prefix
6927 \endgroup
6928 \Hy@GlobalStepCount\Hy@abspage
6929 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

6930 \def\HyPL@CheckThePage#1\@nil{%
6931   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6932 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e.g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

6933 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6934   \def\Hy@tempa{#4}%
6935   \def\Hy@tempb{\csname\endcsname\c@page}%
6936   \ifx\Hy@tempa\Hy@tempb
6937     \expandafter\ifx\csname HyPL#3\endcsname\relax
6938     \else
6939       \def\HyPL@Type{#3}%
6940       \def\HyPL@Prefix{#2}%
6941     \fi
6942   \else
6943     \begingroup
6944     \let\Hy@next\endgroup
6945     \let\HyPL@found\@undefined
6946     \def\arabic{\HyPL@Format{arabic}}%
6947     \def\Roman{\HyPL@Format{Roman}}%
6948     \def\roman{\HyPL@Format{roman}}%
6949     \def\Alph{\HyPL@Format{Alph}}%
6950     \def\alph{\HyPL@Format{alph}}%
6951     \protected@edef\Hy@temp{#1}%
6952     \ifx\HyPL@found\relax
6953       \toks@{\expandafter{\Hy@temp}}%
6954       \edef\Hy@next{\endgroup
6955         \noexpand\HyPL@@@CheckThePage\the\toks@
6956         \noexpand\HyPL@found\relax\noexpand\@nil
6957       }%
6958     \fi
6959     \Hy@next
6960 \fi

```

6961 }%

`\HyPL@Format` The help macro `\HyPL@Format` is executed while a `\protected@edef` in the second check method of `\HyPL@@@CheckPage`. The first occurrences of, for example, `\arabic{page}` is marked by `\HyPL@found` that is also defined by `\csname`.

```

6962 \def\HyPL@Format#1#2{%
6963   \ifx\HyPL@found\@undefined
6964     \expandafter\ifx\csname c@#2\endcsname\c@page
6965       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6966     \else
6967       \expandafter\noexpand\csname#1\endcsname{#2}%
6968     \fi
6969   \else
6970     \expandafter\noexpand\csname#1\endcsname{#2}%
6971   \fi
6972 }%
```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```

6973 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6974   \def\Hy@tempa{#3}%
6975   \def\Hy@tempb{\HyPL@found\relax}%
6976   \ifx\Hy@tempa\Hy@tempb
6977     \def\HyPL@Type{#2}%
6978     \def\HyPL@Prefix{#1}%
6979   \fi
6980 }%
```

`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```

6981 \providecommand*\HyPL@StorePageLabel}[1]{}%
```

`\HyPL@Useless` The `/PageLabels` entry does not make sense, if the absolute page numbers and the page labels are the same. Then `\HyPL@Labels` has the meaning of `\HyPL@Useless`.

```

6982 \def\HyPL@Useless{0<</S/D>>}%
6983 \@onelevel@sanitize\HyPL@Useless
```

`\HyPL@SetPageLabels` The page labels are written to the PDF catalogue. The command `\Hy@PutCatalog` is defined in the driver files.

```

6984 \def\HyPL@SetPageLabels{%
6985   \@onelevel@sanitize\HyPL@Labels
6986   \ifx\HyPL@Labels\@empty
6987   \else
6988     \ifx\HyPL@Labels\HyPL@Useless
6989     \else
6990       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6991     \fi
6992   \fi
6993 }%
```

```

6994 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6995 \fi
```

Option ‘pdfpagelabels’ has been used and is now disabled.

```

6996 \Hy@DisableOption{pdfpagelabels}
6997 \</package>
```


28.1.1 pdfTeX and VTeX

Because of pdfTeX's `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
6998 <*pdfTeX>
6999 \pdf@ifdraftmode{%
7000   \let\Hy@PutCatalog\ltx@gobble
7001 }{%
7002   \let\Hy@PutCatalog\pdfcatalog
7003 }
7004 </pdfTeX>
```

The code for VTeX is more complicate, because it does not allow the direct access to the `/Catalog` object. The command scans its argument and looks for a `/PageLabels` entry.

VTeX 6.59g is the first version, that implements `\special{!pdfpagelabels...}`. For this version `\VTeXversion` reports 660.

```
7005 <*vTeX>
7006 \providecommand*\XR@ext}{pdf}
7007 \edef\Hy@VTeXversion{%
7008   \ifx\VTeXversion\@undefined
7009     \z@
7010   \else
7011     \ifx\VTeXversion\relax
7012       \z@
7013     \else
7014       \VTeXversion
7015     \fi
7016   \fi
7017 }
7018 \begingroup
7019   \ifnum\Hy@VTeXversion<660 %
7020     \gdef\Hy@PutCatalog#1{%
7021       \Hy@WarningNoLine{%
7022         VTeX 6.59g or above required for pdfpagelabels%
7023       }%
7024     }%
7025   \else
7026     \gdef\Hy@PutCatalog#1{%
7027       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
7028     }%
7029     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
7030       \ifx\#2\%
7031         \else
7032           \immediate\special{!pdfpagelabels #2}%
7033         \fi
7034       }%
7035     \fi
7036 \endgroup
7037 </vTeX>

7038 <*pdfTeX | vTeX>
```

`\HyPL@StorePageLabel` This macro adds the entry `#1` to `\HyPL@Labels`.

```
7039 \ifHy@pdfpagelabels
7040   \def\HyPL@StorePageLabel#1{%
```

```

7041 \toks@\expandafter{\HyPL@Labels}%
7042 \xdef\HyPL@Labels{%
7043 \the\toks@
7044 \the\Hy@abspage<<#1>>%
7045 }%
7046 }%

```

Package atveryend is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

7047 \RequirePackage{atveryend}[2009/12/07]%
7048 \AtVeryEndDocument{%
7049 \HyPL@SetPageLabels
7050 }%

7051 \fi
7052 </pdfTeX | vTeX>

```

28.1.2 xetex

```

7053 < *xetex >
7054 \HyPsd@LoadUnicode
7055 \Hy@unicodetrue
7056 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
7057 \else
7058 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
7059 \fi
7060 \HyPsd@LoadStringEncoding
7061 \define@key{Hyp}{unicode}[true]{%
7062 \Hy@boolkey{unicode}{#1}%
7063 \ifHy@unicode
7064 \else
7065 \Hy@Warning{%
7066 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
7067 option setting 'unicode=false'%
7068 }%
7069 \Hy@unicodetrue
7070 \fi
7071 }
7072 \define@key{Hyp}{pdfencoding}{%
7073 \edef\HyPsd@temp{#1}%
7074 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
7075 \let\HyPsd@pdfencoding\HyPsd@temp
7076 \else
7077 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
7078 \let\HyPsd@pdfencoding\HyPsd@temp
7079 \else
7080 \Hy@Warning{%
7081 XeTeX driver only supports\MessageBreak
7082 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
7083 setting 'pdfencoding=\HyPsd@temp'%
7084 }%
7085 \fi
7086 \fi
7087 }
7088 \let\HyXeTeX@CheckUnicode\relax
7089 </xetex>

```

28.1.3 pdfmarkbase, dvipdfm, xetex

```

7090 <*pdfmarkbase>
7091 \begingroup
7092 \ifundefined{headerps@out}{-}{%
7093   \toks@ \expandafter{\Hy@FirstPageHook}%
7094   \xdef\Hy@FirstPageHook{%
7095     \noexpand\headerps@out{%
7096       systemdict /pdfmark known%
7097       {%
7098         userdict /?pdfmark systemdict /exec get put%
7099       }{%
7100         userdict /?pdfmark systemdict /pop get put %
7101         userdict /pdfmark systemdict /cleartomark get put%
7102       }%
7103       ifelse%
7104     }%
7105     \the\toks@
7106   }%
7107 }%
7108 \endgroup
7109 </pdfmarkbase>

```

\Hy@PutCatalog

```

7110 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview <<#1>>}}
7111 <*pdfmarkbase>
7112 \def\Hy@PutCatalog#1{%
7113   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} <<#1>>}}%
7114 }
7115 </pdfmarkbase>

7116 <*pdfmarkbase | dvipdfm | xetex>
7117 \ifHy@pdfpagelabels

```

\HyPL@StorePageLabel This macro writes a string to the .aux file.

```

7118 \def\HyPL@StorePageLabel#1{%
7119   \if@files
7120     \begingroup
7121     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
7122     \immediate\write\@mainaux{%
7123       \string\HyPL@Entry{\Hy@tempa}%
7124     }%
7125     \endgroup
7126   \fi
7127 }%

```

Write a dummy definition of \HyPL@Entry for the case, that the next run is done without hyperref. A marker for the rerun warning is set and the /PageLabels is written.

```

7128 \Hy@AtBeginDocument{%
7129   \if@files
7130     \immediate\write\@mainaux{%
7131       \string\providecommand\string*\string\HyPL@Entry[1]{}%
7132     }%
7133   \fi
7134   \ifx\HyPL@Labels\@empty
7135     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
7136   \else

```

```

7137 \HyPL@SetPageLabels
7138 \fi
7139 \let\HyPL@Entry\@gobble
7140 }%

\HyPL@Entry
7141 \def\HyPL@Entry#1{%
7142 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
7143 \HyPL@Labels
7144 #1%
7145 }%
7146 }%

7147 \fi
7148 </pdfmarkbase | dvipdfm | xetex>

7149 <*package>

7150 \ifx\MaybeStopEarly\relax
7151 \else
7152 \Hy@stoppedeearlytrue
7153 \expandafter\MaybeStopEarly
7154 \fi
7155 \Hy@stoppedeearlyfalse

```

29 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in `\label`. This will fail badly if `\theH<name>` does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent `\theH<name>` for every `\the<name>`. We do make a trap to make `\theH<name>` be the same as `\arabic{<name>}`, if `\theH<name>` is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up `\@currentlabel`? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like `subeqn` will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for `\part` and `\chapter`.

Start with a fallback for equations

```

7156 \def\Hy@CounterExists#1{%
7157 \begingroup\expandafter\expandafter\expandafter\endgroup
7158 \expandafter\ifx\csname c@#1\endcsname\relax
7159 \expandafter\@gobble
7160 \else
7161 \begingroup\expandafter\expandafter\expandafter\endgroup
7162 \expandafter\ifx\csname the#1\endcsname\relax
7163 \expandafter\expandafter\expandafter\@gobble
7164 \else
7165 \expandafter\expandafter\expandafter\@firstofone
7166 \fi

```

```

7167 \fi
7168 }
7169 \Hy@CounterExists{section}{%
7170 \providecommand\theHequation{\theHsection.\arabic{equation}}}%
7171 }
7172 \Hy@CounterExists{part}{%
7173 \providecommand\theHpart{\arabic{part}}}%
7174 }
7175 \ltx@ifundefined{thechapter}{%
7176 \providecommand\theHsection {\arabic{section}}}%
7177 \providecommand\theHfigure {\arabic{figure}}}%
7178 \providecommand\theHtable {\arabic{table}}}%
7179 }{%
7180 \providecommand\theHchapter {\arabic{chapter}}}%
7181 \providecommand\theHfigure {\theHchapter.\arabic{figure}}}%
7182 \providecommand\theHtable {\theHchapter.\arabic{table}}}%
7183 \providecommand\theHsection {\theHchapter.\arabic{section}}}%
7184 }
7185 \providecommand\theHsubsection {\theHsection.\arabic{subsection}}
7186 \providecommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
7187 \providecommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
7188 \providecommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
7189 \providecommand\theHtheorem {\theHsection.\arabic{theorem}}
7190 \providecommand\theHthm {\theHsection.\arabic{thm}}

```

Thanks to Greta Meyer (gbd@pop.cwru.edu) for making me realize that enumeration starts at 0 for every list! But `\item` occurs inside `\trivlist`, so check if its a real `\item` before incrementing counters.

```

7191 \let\H@item\item
7192 \newcounter{Item}
7193 \def\theHItem{\arabic{Item}}
7194 \def\item{%
7195 \@hyper@itemfalse
7196 \if@nmbrrlist\@hyper@itemtrue\fi
7197 \H@item
7198 }
7199 \providecommand\theHenumi {\theHItem}
7200 \providecommand\theHenumii {\theHItem}
7201 \providecommand\theHenumiii {\theHItem}
7202 \providecommand\theHenumiv {\theHItem}
7203 \providecommand\theHHfootnote {\arabic{Hfootnote}}
7204 \providecommand\theHmpfootnote{\arabic{mpfootnote}}
7205 \@ifundefined{theHHmpfootnote}{%
7206 \let\theHHmpfootnote\theHHfootnote
7207 }{}

```

Tanmoy asked for this default handling of undefined `\theH<name>` situations. It really isn't clear what would be ideal, whether to turn off hyperizing of unknown elements, to pick up the textual definition of the counter, or to default it to something like `\arabic{name}`. We take the latter course, slightly worriedly.

```

7208 \let\H@refstepcounter\refstepcounter
7209 \edef\name@of@eq{equation}%
7210 \edef\name@of@slide{slide}%

```

We do not want the handler for `\refstepcounter` to cut in during the processing of `\item` (we handle that separately), so we provide a bypass conditional.

```

7211 \newif\if@hyper@item
7212 \newif\if@skiphyperref

```

```

7213 \@hyper@itemfalse
7214 \@skiphyperrfalse
7215 \def\refstepcounter#1{%
7216   \ifHy@pdfstring
7217   \else
7218     \H@refstepcounter{#1}%
7219     \edef\This@name{#1}%
7220     \ifx\This@name\name@of@slide
7221     \else
7222       \if@skiphyperr
7223       \else
7224         \if@hyper@item
7225         \stepcounter{Item}%
7226         \hyper@refstepcounter{Item}%
7227         \@hyper@itemfalse
7228       \else
7229         \hyper@refstepcounter{#1}%
7230       \fi
7231     \fi
7232   \fi
7233 \fi
7234 }
7235 \let\Hy@saved@refstepcounter\refstepcounter

```

AMS \LaTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

7236 \@ifpackageloaded{amsmath}{-}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

7237 \def\hyper@refstepcounter#1{%
7238   \edef\This@name{#1}%
7239   \ifx\This@name\name@of@eq
7240   \@ifundefined{theHequation}{%
7241     \make@stripped@name{\theequation}%
7242     \let\theHequation\newname
7243   }{%
7244   \fi
7245   \HyCnt@ProvideTheHCounter{#1}%
7246   \hyper@makecurrent{#1}%
7247   \ifmeasuring@
7248   \else
7249     \Hy@raisedlink{%
7250       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7251     }%
7252   \fi
7253 }

```

`\Hy@ProvideTheHCounter` `\theH<counter>` is not set for counters that are defined before ‘hyperref’ is loaded. In `\cl@ckpt`, the clear counter list of the artificial counter `@ckpt`, \LaTeX remembers the defined counters (needed for `\include`). We check the clear counter lists, whether our counter is present. If we found it, then we add the parent counter value to `\theH<counter>`. The `\@elt` list is used in sanitized form for the comparison, because the list might contain other stuff than `\@elts`. Also it simplifies the implementation, because \LaTeX , substring search `\in@` can be used.

```

7254 \def\HyCnt@ProvideTheHCounter#1{%
7255   \@ifundefined{theH#1}{%

```

```

7256 \expandafter\def\csname theH#1\endcsname{%
7257 \def\Hy@temp{\@elt{#1}}%
7258 \ltx@onelevel@sanitize\Hy@temp
7259 \let\HyOrg@elt\@elt
7260 \edef\@elt{%
7261 \noexpand\HyCnt@LookForParentCounter
7262 \expandafter\noexpand\csname theH#1\endcsname
7263 }%
7264 \cl@@ckpt
7265 \let\@elt\HyOrg@elt
7266 \expandafter
7267 \ltx@LocalAppendToMacro\csname theH#1\expandafter\endcsname
7268 \expandafter{%
7269 \expandafter\@arabic\csname c@#1\endcsname
7270 }%
7271 }{}%
7272 }

```

\Hy@LookForParentCounter

```

7273 \def\HyCnt@LookForParentCounter#1#2{%
7274 \expandafter\let\expandafter\Hy@temp@A\csname cl@#2\endcsname
7275 \ltx@ifundefined{cl@#2}{%
7276 }{%
7277 \ltx@onelevel@sanitize\Hy@temp@A
7278 \edef\Hy@temp@A{%
7279 \noexpand\in@{\Hy@temp}{\Hy@temp@A}%
7280 }\Hy@temp@A
7281 \ifin@
7282 \ltx@ifundefined{theH#2}{%
7283 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7284 \expandafter{%
7285 \expandafter\@arabic\csname c@#2\endcsname.%
7286 }%
7287 }{%
7288 \expandafter\ltx@LocalAppendToMacro\expandafter#1%
7289 \expandafter{%
7290 \csname theH#2\endcsname.%
7291 }%
7292 }%
7293 \fi
7294 }%
7295 }

```

After `\appendix` “chapter” (or “section” for classes without chapter) should be replaced by “appendix” to get `\autoref` work. Macro `\Hy@chapapp` contains the current valid name like `\@chapapp`, which cannot be used, because this string depends on the current language.

The “french” package defines counter `\thechapter` by `\newcounterchapter`, if `\ifundefinedchapter`.

```

7296 \begingroup\expandafter\expandafter\expandafter\endgroup
7297 \expandafter\ifx\csname chapter\endcsname\relax
7298 \def\Hy@chapterstring{section}%
7299 \else
7300 \def\Hy@chapterstring{chapter}%
7301 \fi
7302 \def\Hy@appendixstring{appendix}
7303 \def\Hy@chapapp{\Hy@chapterstring}

```

```

7304 \ltx@ifundefined{appendix}{%
7305 }{%
7306 \let\HyOrg@appendix\appendix
7307 \def\Hy@AlphNoErr#1{%
7308 \ifnum\value{#1}>26 %
7309 Alph\number\value{#1}%
7310 \else
7311 \ifnum\value{#1}<1 %
7312 Alph\number\value{#1}%
7313 \else
7314 \Alph{#1}%
7315 \fi
7316 \fi
7317 }%
7318 \def\appendix{%
7319 \ltx@ifundefined{chapter}{%
7320 \gdef\theHsection{\Hy@AlphNoErr{section}}}%
7321 }{%
7322 \gdef\theHchapter{\Hy@AlphNoErr{chapter}}}%
7323 }%
7324 \xdef\Hy@chapapp{\Hy@appendixstring}%
7325 \HyOrg@appendix
7326 }%
7327 }

```

\Hy@Test@alph

```

7328 \def\Hy@Test@alph#1{%
7329 \ifcase#1\or
7330 a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
7331 k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
7332 u\or v\or w\or x\or y\or z%
7333 \else
7334 \@ctrerr
7335 \fi
7336 }

```

\Hy@Test@Alph

```

7337 \def\Hy@Test@Alph#1{%
7338 \ifcase#1\or
7339 A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
7340 K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
7341 U\or V\or W\or X\or Y\or Z%
7342 \else
7343 \@ctrerr
7344 \fi
7345 }

```

\hyper@makecurrent Because of Babel mucking around, nullify \textlatin when making names. And \@number because of babel's lrbabel.def.

```

7346 \def\hyper@makecurrent#1{%
7347 \begingroup
7348 \Hy@safe@activetrue
7349 \edef\Hy@param{#1}%
7350 \ifx\Hy@param\Hy@chapterstring
7351 \let\Hy@param\Hy@chapapp
7352 \fi
7353 \ifHy@hypertextnames

```



```

7354 \let\@number\@firstofone
7355 \def\@fnsymbol##1{fnsymbol\number##1}%
7356 \def\@arabic##1{\number##1}%
7357 \ifx\@alph\Hy@Test@alph
7358 \else
7359 \def\@alph{alph\number}%
7360 \fi
7361 \ifx\@Alph\Hy@Test@Alph
7362 \else
7363 \def\@Alph{Alph\number}%
7364 \fi
7365 \ifHy@naturalnames
7366 \let\textlatin\@firstofone
7367 \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
7368 \else
7369 \xdef\HyperGlobalCurrentHref{%
7370 \csname
7371 the%
7372 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
7373 #1%
7374 \endcsname
7375 }%
7376 \fi
7377 \xdef\HyperGlobalCurrentHref{%
7378 \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
7379 }%
7380 \else
7381 \Hy@GlobalStepCount\Hy@linkcounter
7382 \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
7383 \fi
7384 \endgroup
7385 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7386 \ifHy@localanchorname
7387 \let\@currentHref\HyperLocalCurrentHref
7388 \else
7389 \global\let\@currentHref\HyperGlobalCurrentHref
7390 \fi
7391 }

```

\Hy@MakeCurrentHref

```

7392 \def\Hy@MakeCurrentHref#1{%
7393 \edef\HyperLocalCurrentHref{#1}%
7394 \@onelevel@sanitize\HyperLocalCurrentHref
7395 \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
7396 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
7397 \ifHy@localanchorname
7398 \let\@currentHref\HyperLocalCurrentHref
7399 \else
7400 \global\let\@currentHref\HyperGlobalCurrentHref
7401 \fi
7402 }

```

\Hy@MakeCurrentHrefAuto

```

7403 \def\Hy@MakeCurrentHrefAuto#1{%
7404 \Hy@GlobalStepCount\Hy@linkcounter
7405 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
7406 }

```



```

7449         \ifHy@pageanchor page.\Hy@temp\fi}{}}%
7450     }%
7451 \endgroup
7452 \fi
7453 \addtocounter{page}{1}%
7454 }%
7455 \@ifclassloaded{revtex4}{%
7456 \begingroup
7457 \toks@{\expandafter{\lastpage@putlabel}}%
7458 \edef\x{\endgroup
7459 \def\noexpand\lastpage@putlabel{%
7460 \noexpand\stepcounter{page}%
7461 \the\toks@
7462 \noexpand\addtocounter{page}\noexpand\m@ne
7463 }%
7464 }%
7465 \x
7466 }{}%
7467 }{}%
7468 }
7469 \</package>
7470 \<*check>
7471 \checkpackage{lastpage}[1994/06/25]
7472 \checkcommand\def\lastpage@putlabel{%
7473 \addtocounter{page}{-1}%
7474 \immediate\write\@auxout{%
7475 \string\newlabel{LastPage}{{}\{\thepage}}}%
7476 }%
7477 \addtocounter{page}{1}%
7478 }
7479 \</check>
7480 \<*package>

```

31 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

7481 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
7482 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

32 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```

7483 \@ifpackageloaded{titlesec}{%
7484 \def\ttl@Hy@steplink#1{%
7485 \Hy@MakeCurrentHrefAuto{#1*}%
7486 \edef\ttl@Hy@saveanchor{%
7487 \noexpand\Hy@raisedlink{%
7488 \noexpand\hyper@anchorstart{\@currentHref}%
7489 \noexpand\hyper@anchorend
7490 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
7491 \noexpand\ttl@Hy@PatchSaveWrite
7492 }%

```

```

7493 }%
7494 }%
7495 \def\ttl@Hy@PatchSaveWrite{%
7496   \begingroup
7497   \toks@{\expandafter\ttl@savewrite}%
7498   \edef\x{\endgroup
7499     \def\noexpand\ttl@savewrite{%
7500       \let\noexpand\@currentHref
7501       \noexpand\ttl@Hy@SavedCurrentHref
7502       \the\toks@
7503     }%
7504   }%
7505   \x
7506 }%
7507 \def\ttl@Hy@refstepcounter#1{%
7508   \let\ttl@b\Hy@raisedlink
7509   \def\Hy@raisedlink##1{%
7510     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
7511   }%
7512   \refstepcounter{#1}%
7513   \let\Hy@raisedlink\ttl@b
7514 }%
7515 }{}

Package titletoc support:
7516 \ifpackageloaded{titletoc}{%
7517   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
7518 }{}

```

33 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```

7519 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
7520 \ifpackageloaded{varioref}{%
7521   \def\vref@pagenum#1#2{%
7522     \@ifundefined{r@#2}{%
7523       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
7524     }{}%
7525     \edef#1{\getpagerefnumber{#2}}%
7526   }%
7527 }{}

```

Package varioref redefines `\refstepcounter`, thus it needs fixing, if the package is loaded *after* `hyperref`.

```

7528 \def\Hy@varioref@refstepcounter#1{%
7529   \stepcounter{#1}%
7530   \protected@edef\@currentlabel{%
7531     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
7532   }%
7533 }
7534 \AtBeginDocument{%
7535   \ifx\refstepcounter\Hy@varioref@refstepcounter
7536     \let\H@refstepcounter\refstepcounter
7537     \let\refstepcounter\Hy@saved@refstepcounter
7538   \fi
7539 }

```

34 Package longtable support

Sometimes the anchor of the longtable goes to the previous page. Thus the following patch separates the anchor setting and counter incrementation by hyperref's `\refstepcounter` and the anchor setting is moved after `\vskip\LTpre`.

Patch of `\LT@array`: replace `\refstepcounter` by the original `\H@refstepcounter` without anchor generation

```

7540 \ifpackageloaded{longtable}{%
7541   \begingroup
7542   \def\y{\LT@array}%
7543   \@ifundefined{scr@LT@array}{%
7544     \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}{%
7545     }\def\y{\scr@LT@array}}%
7546   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
7547     \expandafter\endgroup
7548     \expandafter\def\y[##1]##2{%
7549       \H@refstepcounter{#1}%
7550       \hyper@makecurrent{table}%
7551       \let\Hy@LT@currentHref\@currentHref
7552       #2\@sharp###4%
7553     }%
7554   }%
7555   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

Patch of `\LT@start`: add anchor before first line after `\vskip\LTpre`

```

7556 \begingroup
7557   \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
7558   \endgroup
7559   \def\LT@start{%
7560     #1%
7561     \ifvoid\LT@foot#2\fi
7562     \let\@currentHref\Hy@LT@currentHref
7563     \Hy@raisedlink{%
7564       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7565     }%
7566     #3%
7567   }%
7568 }%
7569 \expandafter\x\LT@start\@nil
7570 }{}

```

35 Equations

We want to make the whole equation a target anchor. Overload equation, temporarily reverting to original `\refstepcounter`. If, however, it is in AMS math, we do not do anything, as the tag mechanism is used there (see section 42). The exception is that we move the equation incrementation inside the math environment to avoid specials outside and a wrong vertical spacing of equation environments.

```

7571 \let\new@refstepcounter\refstepcounter
7572 \let\H@equation\equation
7573 \let\H@endequation\endequation
7574 \@ifpackageloaded{amsmath}{%
7575   \long\def\Hy@temp{%
7576     \incr@eqnum
7577     \mathdisplay@push

```

```

7578 \st@rredfalse \global\@eqnswtrue
7579 \mathdisplay{equation}%
7580 }%
7581 \ifx\Hy@temp\equation
7582 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
7583 \csname iftrue\endcsname
7584 \else
7585 \long\def\equation{%
7586 \mathdisplay@push
7587 \st@rredfalse \global\@eqnswtrue
7588 \mathdisplay{equation}%
7589 \incr@eqnum
7590 }%
7591 \fi
7592 \fi
7593 }{%
7594 \def\equation{%
7595 \let\refstepcounter\H@refstepcounter
7596 \H@equation
7597 \@ifundefined{theHequation}{%
7598 \make@stripped@name{\theequation}%
7599 \let\theHequation\newname
7600 }{}%
7601 \hyper@makecurrent{equation}%

```

`\mathopen` is needed in case the equation starts with an unary minus, for example.

```

7602 \mathopen{%
7603 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
7604 }%
7605 \let\refstepcounter\new@refstepcounter
7606 }%
7607 \def\endequation{%
7608 \ifx\Hy@raisedlink\ltx@empty
7609 \hyper@anchorend
7610 \else
7611 \mathclose{\Hy@raisedlink{\hyper@anchorend}}}%
7612 \fi
7613 \H@endequation
7614 }%
7615 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

7616 \newif\if@eqnstar
7617 \@eqnstarfalse
7618 \let\H@eqnarray\eqnarray
7619 \let\H@endeqnarray\endeqnarray
7620 \def\eqnarray{%
7621 \let\Hy@reserved@a\relax
7622 \def\@currentHref{}%
7623 \H@eqnarray
7624 \if@eqnstar
7625 \else
7626 \ifx\\\@currentHref\\%
7627 \else

```

```

7628 \ifundefined{theHequation}{%
7629 \make@stripped@name{\theequation}%
7630 \let\theHequation\newname
7631 }{}%
7632 \hyper@makecurrent{equation}%
7633 \mathopen{%
7634 \Hy@raisedlink{%
7635 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7636 }%
7637 }%
7638 \fi
7639 \fi
7640 }
7641 \def\endeqnarray{%
7642 \H@endeqnarray
7643 }

```

This is quite heavy-handed, but it works for now. If its an `eqnarray*` we need to disable the hyperref actions. There may well be a cleaner way to trap this. Bill Moss found this.

```

7644 \@namedef{eqnarray*}{%
7645 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
7646 }
7647 \@namedef{endeqnarray*}{%
7648 \nonumber\endeqnarray\@eqnstarfalse
7649 }

```

Then again, we have the *subeqnarray* package. Tanmoy provided some code for this:

```

7650 \ltx@ifundefined{subeqnarray}{}{%
7651 \let\H@subeqnarray\subeqnarray
7652 \let\H@endsubeqnarray\endsubeqnarray
7653 \def\subeqnarray{%
7654 \let\Hy@reserved@a\relax
7655 \H@subeqnarray
7656 \@ifundefined{theHequation}{%
7657 \make@stripped@name{\theequation}%
7658 \let\theHequation\newname
7659 }{}%
7660 \hyper@makecurrent{equation}%
7661 \hyper@anchorstart{\@currentHref}\hyper@anchorend
7662 }%
7663 \def\endsubeqnarray{%
7664 \H@endsubeqnarray
7665 }%
7666 \providecommand\theHsubequation{\theHequation\alph{subequation}}%
7667 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

7668 \def\make@stripped@name#1{%
7669 \begingroup
7670 \escapechar\m@ne
7671 \global\let\newname\@empty
7672 \protected@edef\Hy@tempa{#1}%
7673 \edef\@tempb{%
7674 \noexpand\@tfor\noexpand\Hy@tempa:=%
7675 \expandafter\strip@prefix\meaning\Hy@tempa

```

```

7676 }%
7677 \@tempb\do{%
7678   \if{\Hy@tempa\else
7679     \if{\Hy@tempa\else
7680       \xdef\newname{\newname\Hy@tempa}%
7681     \fi
7682   \fi
7683 }%
7684 \endgroup
7685 }

```

Support for amsmath's subequations:

```

7686 \begingroup\expandafter\expandafter\expandafter\endgroup
7687 \expandafter\ifx\csname subequations\endcsname\relax
7688 \else
7689   \let\HyOrg@subequations\subequations
7690   \def\subequations{%
7691     \stepcounter{equation}%
7692     \protected@edef\theHparentequation{%
7693       \ifundefined{theHequation}\theequation\theHequation
7694     }%
7695     \addtocounter{equation}{-1}%
7696     \HyOrg@subequations
7697     \def\theHequation{\theHparentequation\alph{equation}}%
7698     \ignorespaces
7699   }%
7700 \fi

```

Support for package `amsthm` (Daniel Müllner): also `cleveref`.

```

7701 \Hy@AtBeginDocument{%
7702   \@ifpackageloaded{cleveref}{%
7703     \let\Hy@savedthm\@thm
7704     \def\@thm{\ifhmode\unskip\fi\Hy@savedthm}%
7705   }{%
7706     \@ifpackageloaded{amsthm}{%

```

Class `amsbook` uses a different definition of `\@thm`, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent % indent
\thm@headfont{\scshape}% heading font small caps

7707 \def\Hy@temp#1#2#3{%
7708   \ifhmode\unskip\unskip\par\fi
7709   \normalfont
7710   \trivlist
7711   \let\thmheadnl\relax
7712   \let\thm@swap\@gobble
7713   \let\thm@indent\indent % indent
7714   \thm@headfont{\scshape}% heading font small caps
7715   \thm@notefont{\fontseries\mddefault\upshape}%
7716   \thm@headpunct{.}% add period after heading
7717   \thm@headsep 5p@ plus\p@ minus\p@\relax
7718   \thm@space@setup
7719   #1% style overrides
7720   \@topsep \thm@preskip % used by thm head
7721   \@topsepadd \thm@postskip % used by \@endparenv
7722   \def\@tempa{#2}\ifx\@empty\@tempa
7723     \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
7724   \else

```



```

7725 \refstepcounter{#2}%
7726 \def\@tempa{%
7727   \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7728 }%
7729 \fi
7730 \@tempa
7731 }%
7732 \ifx\Hy@temp\@thm
7733 \def\@thm#1#2#3{%
7734   \ifhmode
7735     \unskip\unskip\par
7736   \fi
7737   \normalfont
7738   \trivlist
7739   \let\thmheadnl\relax
7740   \let\thm@swap\@gobble
7741   \let\thm@indent\indent % indent
7742   \thm@headfont{\scshape}% heading font small caps
7743   \thm@notefont{\fontseries\mddefault\upshape}%
7744   \thm@headpunct{.}% add period after heading
7745   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7746   \thm@space@setup
7747   #1% style overrides
7748   \@topsep \thm@preskip % used by thm head
7749   \@topsepadd \thm@postskip % used by \@endparenv
7750   \def\dth@counter{#2}%
7751   \ifx\@empty\dth@counter
7752     \def\@tempa{%
7753       \@oparg{\@begintheorem{#3}{}}[]%
7754     }%
7755   \else
7756     \H@refstepcounter{#2}%
7757     \hyper@makecurrent{#2}%
7758     \let\Hy@dth@currentHref\@currentHref
7759     \def\@tempa{%
7760       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
7761     }%
7762   \fi
7763   \@tempa
7764 }%
7765 \else
7766 \def\@thm#1#2#3{%
7767   \ifhmode
7768     \unskip\unskip\par
7769   \fi
7770   \normalfont
7771   \trivlist
7772   \let\thmheadnl\relax
7773   \let\thm@swap\@gobble
7774   \thm@notefont{\fontseries\mddefault\upshape}%
7775   \thm@headpunct{.}% add period after heading
7776   \thm@headsep 5\p@ plus\p@ minus\p@\relax
7777   \thm@space@setup
7778   #1% style overrides
7779   \@topsep \thm@preskip % used by thm head
7780   \@topsepadd \thm@postskip % used by \@endparenv
7781   \def\dth@counter{#2}%

```

```

7782 \ifx\@empty\dth@counter
7783 \def\@tempa{%
7784 \@oparg{\@begintheorem{#3}{}}{}%
7785 }%
7786 \else
7787 \H@refstepcounter{#2}%
7788 \hyper@makecurrent{#2}%
7789 \let\Hy@dth@currentHref\@currentHref
7790 \def\@tempa{%
7791 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7792 }%
7793 \fi
7794 \@tempa
7795 }%
7796 \fi
7797 \dth@everypar={%
7798 \@minipagefalse
7799 \global\@newlistfalse
7800 \@noparitemfalse
7801 \if@inlabel
7802 \global\@inlabelfalse
7803 \begingroup
7804 \setbox\z@\lastbox
7805 \ifvoid\z@
7806 \kern-\itemindent
7807 \fi
7808 \endgroup
7809 \ifx\@empty\dth@counter
7810 \else
7811 \Hy@raisedlink{%
7812 \hyper@anchorstart{%
7813 \ifundefined{Hy@dth@currentHref}%
7814 \@currentHref\Hy@dth@currentHref
7815 }\hyper@anchorend
7816 }%
7817 \fi
7818 \unhbox\@labels
7819 \fi
7820 \if@nobreak
7821 \@nobreakfalse \clubpenalty\@M
7822 \else
7823 \clubpenalty\@clubpenalty \everypar{}%
7824 \fi
7825 }%
7826 }%

```

non `amsthm` case, remove final space on line before a theorem for githib issue 11.

```

7827 {%
7828 \let\Hy@savethm\@thm
7829 \def\@thm{\ifhmode\unskip\fi\Hy@savethm}%
7830 }%
7831 }%
7832 }

```

36 Footnotes

The footnote mark is a hypertext link, and the text is a target. We separately number the footnotes sequentially through the text, separately from whatever labels the text assigns. Too hard to keep track of markers otherwise. If the raw forms `\footnotemark` and `\footnotetext` are used, force them to use un-hyper original.

```

7833 \ifHy@hyperfootnotes
7834   \newcounter{Hfootnote}%
7835   \let\H@@@footnotetext\@footnotetext
7836   \let\H@@@footnotemark\@footnotemark
7837   \def\@xfootnotenext[#1]{%
7838     \begingroup
7839       \csname c@\@mpfn\endcsname #1\relax
7840       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7841     \endgroup
7842     \ifx\@footnotetext\@mpfootnotetext
7843       \expandafter\H@@@mpfootnotetext
7844     \else
7845       \expandafter\H@@@footnotetext
7846     \fi
7847   }%
7848   \def\@xfootnotemark[#1]{%
7849     \begingroup
7850       \c@footnote #1\relax
7851       \unrestored@protected@xdef\@thefnmark{\thefnmark}%
7852     \endgroup
7853     \H@@@footnotemark
7854   }%
7855   \let\H@@@mpfootnotetext\@mpfootnotetext
7856   \long\def\@mpfootnotetext#1{%
7857     \H@@@mpfootnotetext{%
7858       \ifHy@nesting
7859         \expandafter\ltx@firstoftwo
7860       \else
7861         \expandafter\ltx@secondoftwo
7862       \fi
7863     }%
7864     \expandafter\hyper@@@anchor\expandafter{%
7865       \Hy@footnote@currentHref
7866     }{#1}%
7867   }{%
7868     \Hy@raisedlink{%
7869       \expandafter\hyper@@@anchor\expandafter{%
7870         \Hy@footnote@currentHref
7871       }{\relax}%
7872     }#1%
7873   }%
7874 }%
7875 }%
7876 \long\def\@footnotetext#1{%
7877   \H@@@footnotetext{%
7878     \ifHy@nesting
7879       \expandafter\ltx@firstoftwo
7880     \else
7881       \expandafter\ltx@secondoftwo
7882     \fi

```

```

7883 {%
7884   \expandafter\hyper@@anchor\expandafter{%
7885     \Hy@footnote@currentHref
7886   }{#1}%
7887 }{%
7888   \Hy@raisedlink{%
7889     \expandafter\hyper@@anchor\expandafter{%
7890       \Hy@footnote@currentHref
7891     }\relax}%
7892 }%
7893 \let\@currentHref\Hy@footnote@currentHref
7894 \let\@currentlabelname\@empty
7895 #1%
7896 }%
7897 }%
7898 }%

```

Redefine `\@footnotemark`, borrowing its code (at the cost of getting out of sync with `latex.ltx`), to take advantage of its white space and hyphenation fudges. If we just overload it, we can get variant documents (the word before the footnote is treated differently). Thanks to David Carlisle and Brian Ripley for confusing and helping me on this.

```

7899 \def\@footnotemark{%
7900   \leavevmode
7901   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
7902   \stepcounter{Hfootnote}%
7903   \global\let\Hy@saved@currentHref\@currentHref
7904   \hyper@makecurrent{Hfootnote}%
7905   \global\let\Hy@footnote@currentHref\@currentHref
7906   \global\let\@currentHref\Hy@saved@currentHref
7907   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7908   \@makefnmark
7909   \hyper@linkend
7910   \ifhmode\spacefactor\x@sf\fi
7911   \relax
7912 }%

```

`Tabularx` causes footnote problems, disable the linking if that is loaded. Since v6.82i footnotes are only disabled inside the environment ‘`tabularx`’.

```

7913 \@ifpackageloaded{tabularx}{%
7914   \let\HyOrg@TX@endtabularx\TX@endtabularx
7915   \def\Hy@tabularx@hook{%
7916     \let\@footnotetext\H@@footnotetext
7917     \let\@footnotemark\H@@footnotemark
7918     \let\@mpfootnotetext\H@@mpfootnotetext
7919   }%
7920   \begingroup
7921     \toks@\expandafter{\TX@endtabularx}%
7922     \xdef\Hy@gtemp{%
7923       \noexpand\Hy@tabularx@hook
7924       \the\toks@
7925     }%
7926   \endgroup
7927   \let\TX@endtabularx\Hy@gtemp
7928 }{}%

```

Support for footnotes in `p` columns of `longtable`. Here `\footnote` commands are splitted into `\footnotemark` and a call of `\footnotetext` with the optional

argument, that is not supported by hyperref. The result is a link by `\footnotemark` without valid anchor

```

7929 \ifpackageloaded{longtable}{%
7930   \CheckCommand*{\LT@p@ftntext}[1]{%
7931     \edef\@tempa{%
7932       \the\LT@p@ftn
7933       \noexpand\footnotetext[\the\c@footnote]%
7934     }%
7935     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7936   }%
7937   \long\def\LT@p@ftntext#1{%
7938     \edef\@tempa{%
7939       \the\LT@p@ftn
7940       \begingroup
7941         \noexpand\c@footnote=\the\c@footnote\relax
7942         \noexpand\protected@xdef\noexpand\@thefnmark{%
7943           \noexpand\thempfn
7944         }%
7945         \noexpand\Hy@LT@footnotetext{%
7946           \Hy@footnote@currentHref
7947         }%
7948       }%
7949       \global\LT@p@ftn\expandafter{%
7950         \@tempa{#1}%
7951       \endgroup
7952     }%
7953   }%
7954   \long\def\Hy@LT@footnotetext#1#2{%
7955     \H@@@footnotetext{%
7956       \ifHy@nesting
7957         \hyper@@@anchor{#1}{#2}%
7958       \else
7959         \Hy@raisedlink{%
7960           \hyper@@@anchor{#1}{\relax}%
7961         }%
7962         \def\@currentHref{#1}%
7963         \let\@currentlabelname\@empty
7964         #2%
7965       \fi
7966     }%
7967   }%
7968 }{}%
```

Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

7969 \ifpackageloaded{fancyvrb}{%
7970   \def\V@@@footnotetext{%
7971     \insert\footins\bgroup
7972     \csname reset@font\endcsname
7973     \footnotesize
7974     \interlinepenalty\interfootnotelinepenalty
7975     \splittopskip\footnotesep
7976     \splitmaxdepth\dp\strutbox
7977     \floatingpenalty \@MM
7978     \hsize\columnwidth
7979     \@parboxrestore
7980     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7981     \@makefnmark}%
7982   \rule{\z@}{\footnotesep}%

```

```

7983 \bgroup
7984 \aftergroup\V@@@footnotetext
7985 \Hy@raisedlink{%
7986   \expandafter\hyper@@anchor\expandafter{%
7987     \Hy@footnote@currentHref
7988   }\relax}%
7989 }%
7990 \let\@currentHref\Hy@footnote@currentHref
7991 \let\@currentlabelname\@empty
7992 \ignorespaces
7993 }%
7994 }{}%

```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

7995 \def\Hy@temp#1{%
7996   \begingroup
7997   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7998   \endgroup
7999   \@footnotemark
8000 }%
8001 \ifx\Hy@temp\footref
8002   \def\footref#1{%
8003     \begingroup
8004     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
8005     \endgroup
8006     \H@@@footnotemark
8007   }%
8008 \fi

```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

8009 \let\HyOrg@maketitle\maketitle
8010 \def\maketitle{%
8011   \let\Hy@saved@footnotemark\@footnotemark
8012   \let\Hy@saved@footnotetext\@footnotetext
8013   \let\@footnotemark\H@@@footnotemark
8014   \let\@footnotetext\H@@@footnotetext
8015   \@ifnextchar[\Hy@maketitle@optarg{% ]
8016     \HyOrg@maketitle
8017     \Hy@maketitle@end
8018   }%
8019 }%
8020 \def\Hy@maketitle@optarg[#1]{%
8021   \HyOrg@maketitle[{#1}]%
8022   \Hy@maketitle@end
8023 }%
8024 \def\Hy@maketitle@end{%
8025   \ifx\@footnotemark\H@@@footnotemark
8026     \let\@footnotemark\Hy@saved@footnotemark
8027   \fi
8028   \ifx\@footnotetext\H@@@footnotetext
8029     \let\@footnotetext\Hy@saved@footnotetext
8030   \fi
8031 }%

```

`\realfootnote` Does anyone remember the function and purpose of `\realfootnote`?

```

8032 \def\realfootnote{%
8033   \ifnextchar[\@xfootnote{%
8034     \stepcounter{\@mpfn}%
8035     \protected@xdef\@thefnmark{\thempfn}%
8036     \H@@footnotemark\H@@footnotetext
8037   }%
8038 }%

8039 \fi
8040 \Hy@DisableOption{hyperfootnotes}

8041 \</package>
8042 \< *check>
8043 \checklatex
8044 \checkcommand\def\@xfootnotenext[#1]{%
8045   \begingroup
8046     \csname c@\@mpfn\endcsname #1\relax
8047     \unrestored@protected@xdef\@thefnmark{\thempfn}%
8048   \endgroup
8049   \@footnotetext
8050 }
8051 \checkcommand\def\@xfootnotemark[#1]{%
8052   \begingroup
8053     \c@footnote #1\relax
8054     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
8055   \endgroup
8056   \@footnotemark
8057 }
8058 \checkcommand\def\@footnotemark{%
8059   \leavevmode
8060   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
8061   \@makefnmark
8062   \ifhmode\spacefactor\@x@sf\fi
8063   \relax
8064 }
8065 \</check>
8066 \< *package>

```

37 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

8067 \def\caption{%
8068   \ifx\@capytype\@undefined
8069     \@latex@error{\noexpand\caption outside float}\@ehd
8070     \expandafter\@gobble
8071   \else
8072     \H@refstepcounter\@capytype
8073     \let\Hy@tempa\@caption
8074     \@ifundefined{float@caption}{%
8075       }{%
8076         \expandafter\ifx\csname @float@c@\@capytype\endcsname
8077           \float@caption
8078         \let\Hy@tempa\Hy@float@caption
8079       }
8080     }%
8081     \expandafter\@firstofone

```

```

8082 \fi
8083 {\@dblarg{\Hy@tempa\@captype}}%
8084 }
8085 \long\def\@caption#1[#2]#3{%
8086 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8087 \csname iftrue\endcsname
8088 \global\let\@currentHref\hc@currentHref
8089 \else
8090 \hyper@makecurrent{\@captype}%
8091 \fi
8092 \@ifundefined{NR@gettitle}{%
8093 \def\@currentlabelname{#2}%
8094 }{%
8095 \NR@gettitle{#2}%
8096 }%
8097 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
8098 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
8099 }%
8100 \begingroup
8101 \@parboxrestore
8102 \if@minipage
8103 \@setminipage
8104 \fi
8105 \normalsize
8106 \expandafter\ifx\csname if@capstart\expandafter\endcsname
8107 \csname iftrue\endcsname
8108 \global\@capstartfalse
8109 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
8110 \else
8111 \@makecaption{\csname fnum@#1\endcsname}{%
8112 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

8113 \ifHy@nesting
8114 \expandafter\hyper@@@anchor\expandafter{\@currentHref}{#3}%
8115 \else
8116 \Hy@raisedlink{%
8117 \expandafter\hyper@@@anchor\expandafter{%
8118 \@currentHref
8119 }\relax}%
8120 }%
8121 #3%
8122 \fi
8123 }%
8124 \fi
8125 \par
8126 \endgroup
8127 }

```

Compatibility with float.sty: anchor setting at the top of the float, if the float is controlled by float.sty. Several `\caption` commands inside one float are not supported.

`\HyNew@float@makebox` is introduced as feature request of Axel Sommerfeldt to make the life easier for his package ‘caption’.

```

8128 \let\Hy@float@caption\@caption
8129 \newcommand{\HyNew@float@makebox}[1]{%
8130 \HyOrg@float@makebox{%
8131 #1\relax

```



```

8132 \ifx\Hy@float@currentHref\@undefined
8133 \else
8134 \expandafter\hyper@@anchor\expandafter{%
8135 \Hy@float@currentHref
8136 }{\relax}%
8137 \global\let\Hy@float@currentHref\@undefined
8138 \fi
8139 }%
8140 }%
8141 \@ifpackageloaded{float}{%
8142 \def\Hy@float@caption{%
8143 \ifx\Hy@float@currentHref\@undefined
8144 \hyper@makecurrent{\@capttype}%
8145 \global\let\Hy@float@currentHref\@currentHref
8146 \else
8147 \let\@currentHref\Hy@float@currentHref
8148 \fi
8149 \float@caption
8150 }%
8151 \let\HyOrg@float@makebox\float@makebox
8152 \let\float@makebox\HyNew@float@makebox
8153 }{}
8154 \</package>
8155 \< *check>
8156 \checklatex[1999/06/01 - 2000/06/01]
8157 \checkcommand\def\caption{%
8158 \ifx\@capttype\@undefined
8159 \@latex@error{\noexpand\caption outside float}\@ehd
8160 \expandafter\@gobble
8161 \else
8162 \refstepcounter\@capttype
8163 \expandafter\@firstofone
8164 \fi
8165 {\@dblarg{\@caption\@capttype}}}%
8166 }
8167 \checkcommand\long\def\@caption#1[#2]#3{%
8168 \par
8169 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
8170 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
8171 }%
8172 \begingroup
8173 \@parboxrestore
8174 \if@minipage
8175 \@setminipage
8176 \fi
8177 \normalsize
8178 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
8179 \endgroup
8180 }
8181 \</check>
8182 \< *package>

```

38 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly

into the .aux file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, lets make an attempt to get *natbib* right, because thats a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

8183 \def\hyper@natlinkstart#1{%
8184   \Hy@backout{#1}%
8185   \hyper@linkstart{cite}{cite.#1}%
8186   \def\hyper@nat@current{#1}%
8187 }
8188 \def\hyper@natlinkend{%
8189   \hyper@linkend
8190 }
8191 \def\hyper@natlinkbreak#1#2{%
8192   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
8193 }
8194 \def\hyper@natanchorstart#1{%
8195   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
8196 }
8197 \def\hyper@natanchorend{\hyper@anchorend}

```

Do not play games if we have *natbib* support. Macro `extra@binfo` added for *chapterbib* support. *Chapterbib* also wants `\@extra@binfo` in the hyper-link, but since the link tag is not expanded immediately, we use `\@extra@b@citeb`, so cites in a chapter will link to the bibliography in that chapter.

```

8198 \ltx@ifundefined{NAT@parse}{%
8199   \providecommand*\@extra@binfo{}%
8200   \providecommand*\@extra@b@citeb{}%
8201   \def\bibcite#1#2{%
8202     \@newl@bel{b}{#1\@extra@binfo}{%
8203       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
8204     }%
8205   }%
8206   \gdef\@extra@binfo{}%

```

Package *babel* redefines `\bibcite` with macro `\bbl@cite@choice`. It needs to be overwritten to avoid the warning “Label(s) may have changed.”.

```

8207 \let\Hy@bibcite\bibcite
8208 \begingroup
8209   \@ifundefined{bbl@cite@choice}{}{%
8210     \g@addto@macro\bbl@cite@choice{%
8211       \let\bibcite\Hy@bibcite
8212     }%
8213   }%
8214 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of *RevTeX*.

```

8215 \providecommand*\@BIBLABEL{\@biblabel}%
8216 \def\@bibitem[#1]#2{%
8217   \@skiphyperrreftrue
8218   \H@item[%
8219     \ifx\Hy@raisedlink\@empty
8220       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
8221       \@BIBLABEL{#1}%
8222     \hyper@anchorend
8223   \else
8224     \Hy@raisedlink{%

```

```

8225     \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
8226     }%
8227     \@BIBLABEL{#1}%
8228     \fi
8229     \hfill
8230   ]%
8231   \@skiphyperreffalse
8232   \if@filesw
8233     \begingroup
8234     \let\protect\noexpand
8235     \immediate\write\@auxout{%
8236       \string\bibcite{#2}{#1}%
8237     }%
8238     \endgroup
8239   \fi
8240   \ignorespaces
8241 }%

```

Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

8242 \def\@bibitem#1{%
8243   \@skiphyperrefftrue\H@item\@skiphyperreffalse
8244   \Hy@raisedlink{%
8245     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
8246   }%
8247   \if@filesw
8248     \begingroup
8249     \let\protect\noexpand
8250     \immediate\write\@auxout{%
8251       \string\bibcite{#1}{\the\value{\@listctr}}%
8252     }%
8253     \endgroup
8254   \fi
8255   \ignorespaces
8256 }%
8257 }{}

8258 \</package>
8259 \<*check>
8260 \checklatex
8261 \checkcommand\def\@lbibitem[#1]#2{%
8262   \item[\@biblabel{#1}\hfill]%
8263   \if@filesw
8264     {%
8265       \let\protect\noexpand
8266       \immediate\write\@auxout{%
8267         \string\bibcite{#2}{#1}%
8268       }%
8269     }%
8270   \fi
8271   \ignorespaces
8272 }
8273 \checkcommand\def\@bibitem#1{%
8274   \item
8275   \if@filesw
8276     \immediate\write\@auxout{%
8277       \string\bibcite{#1}{\the\value{\@listctr}}%
8278     }%

```

```

8279 \fi
8280 \ignorespaces
8281 }
8282 </check>
8283 <*package>

```

Revtex (bless its little heart) takes over `\bibcite` and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

8284 \ifclassloaded{revtex}{%
8285 \Hy@Info{*** compatibility with revtex **** }%
8286 \def\revtex@checking#1#2{%
8287 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
8288 \expandafter\def\csname b@#1\endcsname{#2}%
8289 \@SetMaxRnhefLabel{#1}%
8290 \expandafter\let\csname b@#1\endcsname\T@temp
8291 }%

```

Tanmoy provided this replacement for CITE_X. Lord knows what it does. For chapterbib added: `extra@b@citeb`

```

8292 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
8293 \providecommand*\@extra@b@citeb{}%
8294 \def\CITE[#1]#2{%
8295 \let\@citea\@empty
8296 \leavevmode
8297 \unskip
8298 $\{ %
8299 \scriptstyle
8300 \@CITE{%
8301 \@for\@citeb:=#2\do{%
8302 \@citea
8303 \def\@citea{,\penalty\@m\ }%
8304 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8305 \if@filesw
8306 \immediate\write\@auxout{\string\citation{\@citeb}}%
8307 \fi
8308 \@ifundefined{b@\@citeb\extra@b@citeb}{%
8309 \mbox{\reset@font\bfseries ?}%
8310 \G@refundefinedtrue
8311 \@latex@warning{%
8312 Citation ‘\@citeb’ on page \thepage \space undefined%
8313 }%
8314 }{%
8315 {\csname b@\@citeb\@extra@b@citeb\endcsname}%
8316 }%
8317 }%
8318 }{#1}%
8319 }$%
8320 }%

```

No, life is too short. I am not going to understand the Revtex `\@collapse` macro, I shall just restore the original behaviour of `\@citex`; sigh. This is SO vile.

```

8321 \def\@citex[#1]#2{%
8322 \let\@citea\@empty
8323 \@cite{%
8324 \@for\@citeb:=#2\do{%
8325 \@citea
8326 \def\@citea{,\penalty\@m\ }%

```

```

8327 \edef\@citeb{\expandafter\@firstofone\@citeb}%
8328 \if@filesw
8329 \immediate\write\@auxout{\string\citation{\@citeb}}}%
8330 \fi
8331 \ifundefined{b@\@citeb\@extra@b@citeb}{%
8332 \mbox{\reset@font\bfseries ?}%
8333 \G@refundefinedtrue
8334 \@latex@warning{%
8335 Citation '\@citeb' on page \thepage \space undefined%
8336 }%
8337 }%
8338 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
8339 }%
8340 }%
8341 }{#1}%
8342 }%
8343 }{}

```

38.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects `pdfTeX`, then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

8344 \@ifpackageloaded{harvard}{%
8345 \Hy@AtBeginDocument{%
8346 \Hy@Info{*** compatibility with harvard **** }%
8347 \Hy@raiselinksfalse
8348 \def\harvardcite#1#2#3#4{%
8349 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
8350 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
8351 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
8352 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
8353 }%
8354 \def\HAR@citetoaux#1{%
8355 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
8356 \ifHy@backref
8357 \ifx\@empty\@currentlabel
8358 \else
8359 \@bsphack
8360 \if@filesw
8361 \protected@write\@auxout{}{%
8362 \string\@writefile{brf}{%
8363 \string\backcite{#1}{%
8364 {\thepage}{\@currentlabel}{\@currentHref}%
8365 }%
8366 }%
8367 }%
8368 \fi
8369 \@esphack
8370 \fi
8371 \fi
8372 }%

```

```

8373 \def\harvarditem{%
8374   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}}%
8375 }%
8376 \def\@harvarditem[#1]#2#3#4#5\par{%
8377   \item[]%
8378   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
8379   \if@filesw
8380     \begingroup
8381       \def\protect##1{\string ##1\space}%
8382       \ifthenelse{\equal{#1}{\null}}{%
8383         {\def\next{{#4}{#2}{#2}{#3}}}%
8384         {\def\next{{#4}{#2}{#1}{#3}}}%
8385       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
8386     \endgroup
8387   \fi
8388   \protect\hspace*{-\labelwidth}%
8389   \protect\hspace*{-\labelsep}%
8390   \ignorespaces
8391   #5%
8392   \ifHy@backref
8393     \newblock
8394     \backref{\csname br@#4\endcsname}%
8395   \fi
8396   \par
8397 }%

```

\HAR@checkcitations Package hyperref has added \hyper@@link, so the original test \HAR@checkcitations will fail every time and always will appear the “Changed labels” warning. So we have to redefine \Har@checkcitations:

```

8398 \long\def\HAR@checkcitations#1#2#3#4{%
8399   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
8400   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
8401     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
8402     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
8403       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
8404       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
8405         \else
8406           \@tempswatrue
8407         \fi
8408       \else
8409         \@tempswatrue
8410       \fi
8411     \else
8412       \@tempswatrue
8413     \fi
8414   }%
8415 }%

8416 }{}

```

38.2 Package chicago

The links by \citeN and \shortciteN should include the closing parentheses.

```

8417 \@ifpackageloaded{chicago}{%

```

\citeN

```

8418   \def\citeN{%

```

```

8419 \def\@citeseppen{-1000}%
8420 \def\@cite##1##2{##1}%
8421 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
8422 \@citedata@opt
8423 }%

\shortciteN
8424 \def\shortciteN{%
8425 \def\@citeseppen{-1000}%
8426 \def\@cite##1##2{##1}%
8427 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
8428 \@citedata@opt
8429 }%

\@citedata@opt
8430 \def\@citedata@opt{%
8431 \let\@cite@opt\@empty
8432 \@ifnextchar [{%
8433 \@tempswatrue
8434 \@citedatax@opt
8435 }{%
8436 \@tempswafalse
8437 \@citedatax[]%
8438 }%
8439 }%

\@citedatax@opt
8440 \def\@citedatax@opt[#1]{%
8441 \def\@cite@opt{, #1}%
8442 \@citedatax[{#1}]%
8443 }%

8444 }{}

```

39 Page numbers

The last page should not contain a /Dur key, because there is no page after the last page. Therefore at the last page there should be a command `\hypersetup{pdfpageduration={}}`. This can be set with `\AtEndDocument`, but it can be too late, if the last page is already finished, or too early, if lots of float pages will follow. Therefore currently nothing is done by hyperref.

This where we supply a destination for each page.

```

8445 \ltx@ifclassloaded{slides}{%
8446 \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
8447 \def\Hy@PageAnchorSlidesPlain{%
8448 \advance\c@page\ltx@one
8449 \edef\Hy@TempPageAnchor{%
8450 \noexpand\hyper@@@anchor{%
8451 page.\the\c@slide.\the\c@overlay.\the\c@note%
8452 \ifnum\c@page=\ltx@one
8453 \else
8454 .\the\c@page
8455 \fi
8456 }%
8457 }%
8458 \advance\c@page-\ltx@one

```

```

8459 }%
8460 \def\Hy@PageAnchorSlide{%
8461   \advance\c@page\ltx@one
8462   \ifnum\c@page>\ltx@one
8463     \ltx@ifundefined{theHpage}{%
8464       \protected@edef\Hy@TheSlideOptionalPage{%
8465         \Hy@SlidesFormatOptionalPage{thepage}%
8466       }%
8467     }{%
8468       \protected@edef\Hy@TheSlideOptionalPage{%
8469         \Hy@SlidesFormatOptionalPage{theHpage}%
8470       }%
8471     }%
8472   \else
8473     \def\Hy@TheSlideOptionalPage{}%
8474   \fi
8475   \advance\c@page-\ltx@one
8476   \pdfstringdef\@the@H@page{%
8477     \csname
8478       the%
8479       \ltx@ifundefined{theH\Hy@SlidesPage}{H}%
8480       \Hy@SlidesPage
8481     \endcsname
8482     \Hy@TheSlideOptionalPage
8483   }%
8484   \ltx@gobblethree
8485 }%
8486 \def\Hy@SlidesPage{slide}%
8487 \g@addto@macro\slide{%
8488   \def\Hy@SlidesPage{slide}%
8489 }%
8490 \g@addto@macro\overlay{%
8491   \def\Hy@SlidesPage{overlay}%
8492 }%
8493 \g@addto@macro\note{%
8494   \def\Hy@SlidesPage{note}%
8495 }%
8496 }{%
8497   \def\Hy@PageAnchorSlidesPlain{}%
8498   \def\Hy@PageAnchorSlide{}%
8499 }
8500 \def\Hy@EveryPageAnchor{%
8501   \Hy@DistillerDestFix
8502   \ifHy@pageanchor
8503     \ifHy@hypertextnames
8504       \ifHy@plainpages
8505         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
8506         \Hy@PageAnchorSlidesPlain
8507       \else
8508         \begingroup
8509           \let\@number\@firstofone
8510           \Hy@unicodedefalse
8511           \Hy@PageAnchorSlide
8512           \pdfstringdef\@the@H@page{\thepage}%
8513         \endgroup
8514         \EdefUnescapeString\@the@H@page{\@the@H@page}%
8515         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%

```



```

8516 \fi
8517 \else
8518 \Hy@GlobalStepCount\Hy@pagecounter
8519 \def\Hy@TempPageAnchor{%
8520 \hyper@@anchor{page.\the\Hy@pagecounter}%
8521 }%
8522 \fi
8523 \vbox to 0pt{%
8524 \kern\voffset
8525 \kern\topmargin
8526 \kern-1bp\relax
8527 \hbox to 0pt{%
8528 \kern\hoffset
8529 \kern\ifodd\value{page}%
8530 \oddsidemargin
8531 \else
8532 \evensidemargin
8533 \fi
8534 \kern-1bp\relax
8535 \Hy@TempPageAnchor\relax
8536 \hss
8537 }%
8538 \vss
8539 }%
8540 \fi
8541 }
8542 \g@addto@macro\Hy@EveryPageBoxHook{%
8543 \Hy@EveryPageAnchor
8544 }

```

40 Table of contents

TV Raman noticed that people who add arbitrary material into the TOC generate a bad or null link. We avoid that by checking if the current destination is empty. But if ‘the most recent destination’ is not what you expect, you will be in trouble.

```

8545 \def\addcontentsline#1#2#3{% toc extension, type, tag
8546 \begingroup
8547 \let\label\@gobble
8548 \ifx\@currentHref\@empty
8549 \Hy@Warning{%
8550 No destination for bookmark of \string\addcontentsline,%
8551 \MessageBreak destination is added%
8552 }%
8553 \phantomsection
8554 \fi
8555 \expandafter\ifx\csname toplevel@#2\endcsname\relax
8556 \begingroup
8557 \def\Hy@tempa{#1}%
8558 \ifx\Hy@tempa\Hy@bookmarkstype
8559 \Hy@WarningNoLine{%
8560 bookmark level for unknown #2 defaults to 0%
8561 }%
8562 \else
8563 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
8564 \fi
8565 \endgroup

```

```

8566 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
8567 \fi
8568 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
8569 \Hy@writebookmark{\csname the#2\endcsname}%
8570 {#3}%
8571 {\@currentHref}%
8572 {\Hy@toplevel}%
8573 {#1}%
8574 \ifHy@verbose
8575 \begingroup
8576 \def\Hy@tempa{#3}%
8577 \@onelevel@sanitize\Hy@tempa
8578 \let\temp@online\on@line
8579 \let\on@line\@empty
8580 \Hy@Info{%
8581 bookmark\temp@online:\MessageBreak
8582 thecounter {\csname the#2\endcsname}\MessageBreak
8583 text {\Hy@tempa}\MessageBreak
8584 reference {\@currentHref}\MessageBreak
8585 toplevel {\Hy@toplevel}\MessageBreak
8586 type {#1}%
8587 }%
8588 \endgroup
8589 \fi
8590 \addtocontents{#1}{%
8591 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
8592 }%
8593 \endgroup
8594 }

```

\contentsline The page number might be empty. In this case the link for the page number is suppressed to avoid little link boxes.

```

8595 \def\contentsline#1#2#3#4{%
8596 \begingroup
8597 \Hy@safe@activetrue
8598 \edef\x{\endgroup
8599 \def\noexpand\Hy@tocdestname{#4}%
8600 }\x
8601 \ifx\Hy@tocdestname\ltx@empty
8602 \csname l@#1\endcsname{#2}{#3}%
8603 \else
8604 \ifcase\Hy@linktoc % none
8605 \csname l@#1\endcsname{#2}{#3}%
8606 \or % section
8607 \csname l@#1\endcsname{%
8608 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8609 }{#3}%
8610 \or % page
8611 \def\Hy@temp{#3}%
8612 \ifx\Hy@temp\ltx@empty
8613 \csname l@#1\endcsname{#2}{#3}%
8614 \else
8615 \csname l@#1\endcsname{{#2}}{%
8616 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8617 }%
8618 \fi
8619 \else % all

```

```

8620 \def\Hy@temp{#3}%
8621 \ifx\Hy@temp\ltx@empty
8622 \csname l@#1\endcsname{%
8623 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8624 }{}%
8625 \else
8626 \csname l@#1\endcsname{%
8627 \hyper@linkstart{link}{\Hy@tocdestname}{#2}\hyper@linkend
8628 }{}%
8629 \hyper@linkstart{link}{\Hy@tocdestname}{#3}\hyper@linkend
8630 }%
8631 \fi
8632 \fi
8633 \fi
8634 }

8635 \end{package}
8636 \end{check}
8637 \checklatex
8638 \checkcommand\def\addcontentsline#1#2#3{%
8639 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
8640 }
8641 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
8642 \end{check}
8643 \end{package}

```

41 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

8644 \let\H@definecounter\@definecounter
8645 \def\@definecounter#1{%
8646 \H@definecounter{#1}%
8647 \expandafter\gdef\csname theH#1\endcsname{\arabic{#1}}%
8648 }

```

But what if they have used the optional argument to e.g. `\newtheorem` to determine when the numbering is reset? OK, we'll trap that too.

```

8649 \let\H@newctr\@newctr
8650 \def\@newctr#1[#2]{%
8651 \H@newctr#1[#2]%
8652 \expandafter\gdef\csname theH#1\endcsname{%
8653 \csname the\@ifundefined{theH#2}{}{H}#2\endcsname.\arabic{#1}}%
8654 }%
8655 }

```

42 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```

8656 \ifpackageloaded{amsmath}{%

```

```

8657 \def\Hy@make@anchor{%
8658   \Hy@MakeCurrentHrefAuto{AMS}%
8659   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
8660 }%
8661 \def\Hy@make@df@tag@@#1{%
8662   \gdef\df@tag{%
8663     \maketag@@@{\Hy@make@anchor#1}%
8664     \def\@currentlabel{#1}%
8665   }%
8666 }%
8667 \def\Hy@make@df@tag@@@#1{%
8668   \gdef\df@tag{%
8669     \tagform@{\Hy@make@anchor#1}%
8670     \toks@{\exp{\p@equation{#1}}}%
8671     \edef\@currentlabel{the\toks@}%
8672   }%
8673 }%
8674 \let\HyOrg@make@df@tag@@\make@df@tag@@
8675 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
8676 \let\make@df@tag@@\Hy@make@df@tag@@
8677 \let\make@df@tag@@@\Hy@make@df@tag@@@
8678 }{}

```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

8679 \@ifpackagewith{hyperref}{pdftex}{%
8680   \let\H@seteqlabel\@seteqlabel
8681   \def\@seteqlabel#1{%
8682     \H@seteqlabel{#1}%
8683     \xdef\@currentHref{AMS.the\Hy@linkcounter}%
8684     \Hy@raisedlink{%
8685       \hyper@anchorstart{\@currentHref}\hyper@anchorend
8686     }%
8687   }%
8688 }{}

```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```

\let\H@tagform@\tagform@
\def\tagform@#1{%
  \maketag@@@{\hyper@@anchor{\@currentHref}%
    {\ignorespaces#1\unskip}}}%
}
\def\eqref#1{\textup{\H@tagform@\ref{#1}}}

```

42.1 `\@addtoreset` and `\numberwithin` patches

`\@addtoreset` puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command `\theHcounter` is redefined in order to add the parent counter.

```

8689 \let\HyOrg@addtoreset\@addtoreset
8690 \def\@addtoreset#1#2{%
8691   \HyOrg@addtoreset{#1}{#2}%
8692   \expandafter\xdef\csname theH#1\endcsname{%
8693     \expandafter\noexpand
8694     \csname the\@ifundefined{theH#2}{H#2}\endcsname

```

```

8695 .\noexpand\the\noexpand\value{#1}%
8696 }%
8697 }

```

\numberwithin A appropriate definition of hyperref’s companion counter (\theH...) is added for correct link names.

```

8698 \</package>
8699 \< *check>
8700 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
8701 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
8702   \ifundefined{c@#2}{\@nocounterr{#2}}{%
8703     \ifundefined{c@#3}{\@nocnterr{#3}}{%
8704       \@addtoreset{#2}{#3}%
8705       \xp\xdef\csname the#2\endcsname{%
8706         \xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8707       }%
8708     }%
8709   }%
8710 }%
8711 \</check>
8712 \< *package>
8713 \ifpackageloaded{amsmath}{%
8714   \ifpackagelater{amsmath}{1999/12/14}{%
8715     \renewcommand*\numberwithin[3][\arabic]{%
8716       \ifundefined{c@#2}{\@nocounterr{#2}}{%
8717         \ifundefined{c@#3}{\@nocnterr{#3}}{%
8718           \HyOrg@addtoreset{#2}{#3}%
8719           \xp\xdef\csname the#2\endcsname{%
8720             \xp\@nx\csname the#3\endcsname.\@nx#1{#2}%
8721           }%
8722           \xp\xdef\csname theH#2\endcsname{%
8723             \xp\@nx
8724             \csname the\ifundefined{theH#3}{H#3\endcsname
8725             .\@nx#1{#2}%
8726           }%
8727         }%
8728       }%
8729     }%
8730   }{%
8731     \Hy@WarningNoLine{%
8732       \string\numberwithin\space of package ‘amsmath’ %
8733       only fixed\MessageBreak
8734       for version 2000/06/06 v2.12 or newer%
8735     }%
8736   }%
8737 }{}

```

43 Included figures

Simply intercept the low level graphics package macro.

```

8738 \ifHy@hyperfigures
8739   \let\Hy@Gin@setfile\Gin@setfile
8740   \def\Gin@setfile#1#2#3{%
8741     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
8742   }%
8743 \fi

```

8744 \Hy@DisableOption{hyperfigures}

44 hyperindex entries

Internal command names are prefixed with \HyInd@.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the | feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the | specifier for something like boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```

8745 \ifHy@hyperindex
8746 \def\HyInd@ParenLeft{({}%
8747 \def\HyInd@ParenRight{)}}%
8748 \def\hyperindexformat#1#2{%
8749 \let\HyOrg@hyperpage\hyperpage
8750 \let\hyperpage\@firstofone
8751 #1{\HyOrg@hyperpage{#2}}}%
8752 \let\hyperpage\HyOrg@hyperpage
8753 }%
8754 \Hy@nextfalse
8755 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
8756 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
8757 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
8758 \begingroup
8759 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
8760 \lccode'\|/\|=\|\\relax
8761 \lowercase{\endgroup
8762 \ifHy@next
8763 \let\HyInd@org@wrindex\@wrindex
8764 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2|\\}%
8765 \def\HyInd@@wrindex#1#2|#3|#4\\{%
8766 \ifx\\#3\\%
8767 \HyInd@org@wrindex{#1}{#2|hyperpage}%
8768 \else
8769 \HyInd@@@wrindex{#1}{#2}#3\\%
8770 \fi
8771 }%
8772 \def\HyInd@@@wrindex#1#2#3#4\\{%
8773 \def\Hy@temp@A{#3}%
8774 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8775 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8776 \relax
8777 \HyInd@org@wrindex{#1}{%
8778 #2|hyperindexformat{/#3#4}%
8779 }%
8780 \else
8781 \ifx\\#4\\%
8782 \ifx\Hy@temp@A\HyInd@ParenRight
8783 \HyInd@org@wrindex{#1}{#2|#3}%
8784 \else
8785 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8786 \fi

```

```

8787 \else
8788 \HyInd@org@wrindex{#1}{%
8789 #2|#3hyperindexformat{/#4}%
8790 }%
8791 \fi
8792 \fi
8793 }%
8794 \else
8795 \def\@wrindex#1{\@wrindex#1||\}%
8796 \def\@wrindex#1|#2|#3\{\%
8797 \if@files
8798 \ifx\#2\%
8799 \protected@write\@indexfile{\%
8800 \string\indexentry{#1|hyperpage}{\thepage}%
8801 }%
8802 \else
8803 \HyInd@@@wrindex{#1}#2\%
8804 \fi
8805 \fi
8806 \endgroup
8807 \esphack
8808 }%
8809 \def\HyInd@@@wrindex#1#2#3\{\%
8810 \def\Hy@temp@A{#2}%
8811 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8812 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8813 \relax
8814 \protected@write\@indexfile{\%
8815 \string\indexentry{\%
8816 #1|hyperindexformat{/#2#3}%
8817 }{\thepage}%
8818 }%
8819 \else
8820 \ifx\#3\%
8821 \ifx\Hy@temp@A\HyInd@ParenRight
8822 \HyInd@DefKey{#1}%
8823 \ltx@ifundefined{HyInd@(\HyInd@key)}{\%
8824 \let\Hy@temp\ltx@empty
8825 }{\%
8826 \expandafter\let\expandafter\Hy@temp
8827 \csname HyInd@(\HyInd@key)\endcsname
8828 }%
8829 \protected@write\@indexfile{\%
8830 \string\indexentry{#1|#2\Hy@temp}{\thepage}%
8831 }%
8832 \else
8833 \protected@write\@indexfile{\%
8834 \string\indexentry{#1|#2hyperpage}{\thepage}%
8835 }%
8836 \HyInd@DefKey{#1}%
8837 \expandafter
8838 \gdef\csname HyInd@(\HyInd@key)\endcsname{\%
8839 hyperpage%
8840 }%
8841 \fi
8842 \else
8843 \protected@write\@indexfile{\%

```

```

8844         \string\indexentry{%
8845             #1|#2hyperindexformat{/#3}%
8846         }\thepage}%
8847     }%
8848     \ifx\Hy@temp@A\HyInd@ParenLeft
8849         \HyInd@DefKey{#1}%
8850         \expandafter
8851         \gdef\csname HyInd@(\HyInd@key)\endcsname{%
8852             hyperindexformat{/#3}%
8853         }%
8854     \fi
8855 \fi
8856 \fi
8857 }%
8858 \def\HyInd@DefKey#1{%
8859     \begingroup
8860     \let\protect\@unexpandable@protect
8861     \edef\Hy@temp{#1}%
8862     \ltx@onelevel@sanitize\Hy@temp
8863     \global\let\HyInd@key\Hy@temp
8864     \endgroup
8865 }%
8866 \fi
8867 }%
8868 \fi
8869 \Hy@DisableOption{hyperindex}
8870 \Hy@DisableOption{encap}

```

`\nohyperpage` The definition of `\nohyperpage` is just a precaution. It is used to mark code that does not belong to a page number, but `\nohyperpage` is never executed.

```

8871 \def\nohyperpage#1{#1}

```

This again is quite flaky, but allow for the common situation of a page range separated by en-rule. We split this into two different hyperlinked pages.

```

8872 \def\hyperpage#1{%
8873     \HyInd@hyperpage#1\nohyperpage{}\@nil
8874 }
8875 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8876     \HyInd@@hyperpage{#1}%
8877     #2%
8878     \def\Hy@temp{#3}%
8879     \ifx\Hy@temp\@empty
8880     \else
8881         \ltx@ReturnAfterFi{%
8882             \HyInd@hyperpage#3\@nil
8883         }%
8884     \fi
8885 }
8886 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8887 \def\@hyperpage#1--#2--#3\{\%
8888     \ifx\#2\%
8889         \@commahyperpage{#1}%
8890     \else
8891         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8892     \fi
8893 }
8894 \def\@commahyperpage#1{\@commahyperpage#1, \}

```



```

8895 \def\@@commahyperpage#1, #2,#3\\{%
8896   \ifx\\#2\\%
8897     \HyInd@pagelink{#1}%
8898   \else
8899     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8900   \fi
8901 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

8902 \def\HyInd@pagelink#1{%
8903   \begingroup
8904     \toks@={}%
8905     \HyInd@removespaces#1 \@nil
8906   \endgroup
8907 }
8908 \def\HyInd@removespaces#1 #2\@nil{%
8909   \toks@=\expandafter{\the\toks@#1}%
8910   \ifx\\#2\\%
8911     \edef\x{\the\toks@}%
8912     \ifx\x\@empty
8913       \else
8914         \hyperlink{page.\the\toks@}{\the\toks@}%
8915       \fi
8916     \else
8917       \ltx@ReturnAfterFi{%
8918         \HyInd@removespaces#2\@nil
8919       }%
8920     \fi
8921 }

```

45 Compatibility with foiltex

```

8922 \@ifclassloaded{foils}{%
8923   \providecommand*\ext@table{lot}%
8924   \providecommand*\ext@figure{lof}%
8925 }{}

```

46 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (denis.girou@idris.fr).

```

8926 \@ifclassloaded{seminar}{%
8927   \Hy@seminarslidestrue
8928   \providecommand\theHslide{\arabic{slide}}}%
8929 }{}
8930 \Hy@seminarslidesfalse
8931 }
8932 \@ifpackageloaded{slidesec}{%
8933   \providecommand\theHslidesection {\arabic{slidesection}}}%
8934   \providecommand\theHslidesubsection{%
8935     \theHslidesection.\arabic{slidesubsection}}%
8936   }%
8937   \def\slide@heading[#1]#2{%
8938     \H@refstepcounter{slidesection}%
8939     \@addtoreset{slidesubsection}{slidesection}%

```

```

8940 \addtocontents{los}{%
8941 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8942 {\@SCTR}{slideheading.\theslidesection}%
8943 }%
8944 \def\Hy@tempa{#2}%
8945 \ifx\Hy@tempa\@empty
8946 \else
8947 {%
8948 \edef\@currentlabel{%
8949 \csname p@slidesection\endcsname\theslidesection
8950 }%
8951 \makeslideheading{#2}%
8952 }%
8953 \fi
8954 \gdef\theslideheading{#1}%
8955 \gdef\theslidesubheading{}%
8956 \ifHy@bookmarksnumbered
8957 \def\Hy@slidetitle{\theslidesection\space #1}%
8958 \else
8959 \def\Hy@slidetitle{#1}%
8960 \fi
8961 \ifHy@hypertextnames
8962 \ifHy@naturalnames
8963 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8964 \Hy@writebookmark
8965 {\theslidesection}%
8966 {\Hy@slidetitle}%
8967 {slideheading.\theslidesection}%
8968 {1}%
8969 {toc}%
8970 \else
8971 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8972 \Hy@writebookmark
8973 {\theslidesection}%
8974 {\Hy@slidetitle}%
8975 {slideheading.\theHslidesection}%
8976 {1}%
8977 {toc}%
8978 \fi
8979 \else
8980 \Hy@GlobalStepCount\Hy@linkcounter
8981 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8982 \Hy@writebookmark
8983 {\theslidesection}%
8984 {\Hy@slidetitle}%
8985 {slideheading.\the\Hy@linkcounter}%
8986 {1}%
8987 {toc}%
8988 \fi
8989 }%
8990 \def\slide@subheading[#1]#2{%
8991 \H@refstepcounter{slidesubsection}%
8992 \addtocontents{los}{%
8993 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8994 {\@SCTR}{slideheading.\theslidesubsection}%
8995 }%
8996 \def\Hy@tempa{#2}%

```

```

8997 \ifx\Hy@tempa\@empty
8998 \else
8999 {%
9000 \edef\@currentlabel{%
9001 \csname p@slidesubsection\endcsname\theslidesubsection
9002 }%
9003 \makeslidesubheading{#2}%
9004 }%
9005 \fi
9006 \gdef\theslidesubheading{#1}%
9007 \ifHy@bookmarksnumbered
9008 \def\Hy@slidetitle{\theslidesubsection\space #1}%
9009 \else
9010 \def\Hy@slidetitle{#1}%
9011 \fi
9012 \ifHy@hypertextnames
9013 \ifHy@naturalnames
9014 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
9015 \Hy@writebookmark
9016 {\theslidesubsection}%
9017 {\Hy@slidetitle}%
9018 {slideheading.\theslidesubsection}%
9019 {2}%
9020 {toc}%
9021 \else
9022 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
9023 \Hy@writebookmark
9024 {\theslidesubsection}%
9025 {\Hy@slidetitle}%
9026 {slideheading.\theHslidesubsection}%
9027 {2}%
9028 {toc}%
9029 \fi
9030 \else
9031 \Hy@GlobalStepCount\Hy@linkcounter
9032 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
9033 \Hy@writebookmark
9034 {\theslidesubsection}%
9035 {\Hy@slidetitle}%
9036 {slideheading.\the\Hy@linkcounter}%
9037 {1}%
9038 {toc}%
9039 \fi
9040 }%
9041 \providecommand*\listslidenamename{List of Slides}%
9042 \def\listofslides{%
9043 \section*{%
9044 \listslidenamename
9045 \@mkboth{%
9046 \expandafter\MakeUppercase\listslidenamename
9047 }{%
9048 \expandafter\MakeUppercase\listslidenamename
9049 }%
9050 }%
9051 \def\l@slide##1##2##3##4{%
9052 \slide@undottedcline{%
9053 \slidenumberline{##3}{\hyperlink{##4}{##2}}%

```

```

9054     }{}%
9055 }%
9056 \let\l@subslide\l@slide
9057 \@startlos
9058 }%
9059 \def\slide@contents{%
9060   \def\l@slide##1##2##3##4{%
9061     \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
9062   }%
9063   \let\l@subslide\@gobblefour
9064   \@startlos
9065 }%
9066 \def\Slide@contents{%
9067   \def\l@slide##1##2##3##4{%
9068     \ifcase\lslide@flag
9069       \message{##1 ** \the\c@slidesection}%
9070       \ifnum##1>\c@slidesection
9071         \def\lslide@flag{1}%
9072         {%
9073           \large
9074           \slide@cline{%
9075             \slidenumberline{$\Rightarrow\bullet$}%
9076             {\hyperlink{##4}{##2}}%
9077           }{##3}%
9078         }%
9079       \else
9080         {%
9081           \large
9082           \slide@cline{%
9083             \slidenumberline{$\surd\;\bullet$}%
9084             {\hyperlink{##4}{##2}}%
9085           }{##3}%
9086         }%
9087       \fi
9088     \or
9089     \def\lslide@flag{2}%
9090     {%
9091       \large
9092       \slide@cline{%
9093         \slidenumberline{$\bullet$}%
9094         {\hyperlink{##4}{##2}}%
9095       }{##3}%
9096     }%
9097     \or
9098     {%
9099       \large
9100       \slide@cline{%
9101         \slidenumberline{$\bullet$}%
9102         {\hyperlink{##4}{##2}}%
9103       }{##3}%
9104     }%
9105     \fi
9106   }%
9107   \def\l@subslide##1##2##3##4{%
9108     \ifnum\lslide@flag=1 %
9109       \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
9110     \fi

```

```

9111 }%
9112 \def\lslide@flag{0}%
9113 \startlos
9114 }%
9115 }{}

```

This breaks TeX4ht, so leave it to last. Emend `\@setref` to put out a hypertext link as well as its normal text (which is used as an anchor). (`\endinput` have to be on the same line like `\fi`, or you have to use `\expandafter` before.)

```

9116 \ifHy@texht
9117 \expandafter\endinput
9118 \fi
9119 \let\real@setref\@setref
9120 \def\@setref#1#2#3{% csname, extract group, refname
9121 \ifx#1\relax
9122 \protect\G@refundefinedtrue
9123 \nfss@text{\reset@font\bfseries ??}%
9124 \@latex@warning{%
9125 Reference ‘#3’ on page \thepage \space undefined%
9126 }%
9127 \else
9128 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
9129 \fi
9130 }

```

`\Hy@setref@link` extracts the reference information entries, because `\hyper@@link` does not expand arguments for the automatic link type detection.

```

9131 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
9132 \begingroup
9133 \toks0={\hyper@@link{#5}{#4}}%
9134 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
9135 \edef\x{\endgroup
9136 \the\toks0 {\the\toks1 }%
9137 }%
9138 \x
9139 }
9140 \def\@pagesetref#1#2#3{% csname, extract macro, ref
9141 \ifx#1\relax
9142 \protect\G@refundefinedtrue
9143 \nfss@text{\reset@font\bfseries ??}%
9144 \@latex@warning{%
9145 Reference ‘#3’ on page \thepage \space undefined%
9146 }%
9147 \else
9148 \protect\hyper@@link
9149 {\expandafter\@fifthoffive#1}%
9150 {page.\expandafter\@secondoffive#1}%
9151 {\expandafter\@secondoffive#1}%
9152 \fi
9153 }
9154 </package>
9155 <*check>
9156 \checklatex
9157 \checkcommand\def\@setref#1#2#3{%
9158 \ifx#1\relax
9159 \protect\G@refundefinedtrue
9160 \nfss@text{\reset@font\bfseries ??}%
9161 \@latex@warning{%

```

```

9162     Reference '#3' on page \thepage\space undefined%
9163   }%
9164   \else
9165     \expandafter#2#1\null
9166   \fi
9167 }
9168 </check>
9169 <*package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

9170 \def\HyRef@StarSetRef#1{%
9171   \begingroup
9172   \Hy@safe@activetrue
9173   \edef\x{#1}%
9174   \@onelevel@sanitize\x
9175   \edef\x{\endgroup
9176     \noexpand\HyRef@@StarSetRef
9177     \expandafter\noexpand\csname r@\x\endcsname{\x}%
9178   }%
9179   \x
9180 }
9181 \def\HyRef@@StarSetRef#1#2#3{%
9182   \ifx#1\@undefined
9183     \let#1\relax
9184   \fi
9185   \real@setref#1#3{#2}%
9186 }
9187 \def\@refstar#1{%
9188   \HyRef@StarSetRef{#1}\@firstoffive
9189 }
9190 \def\@pagerefstar#1{%
9191   \HyRef@StarSetRef{#1}\@secondoffive
9192 }
9193 \def\@namerefstar#1{%
9194   \HyRef@StarSetRef{#1}\@thirdoffive
9195 }
9196 \Hy@AtBeginDocument{%
9197   \ifpackageloaded{varioref}{%
9198     \def\@Refstar#1{%
9199       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
9200     }%
9201     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
9202       \MakeUppercase#1%
9203     }%
9204     \DeclareRobustCommand*\Ref{#1}{%
9205       \@ifstar\@Refstar\HyRef@Ref
9206     }%
9207     \def\HyRef@Ref#1{%
9208       \hyperref[{#1}]{\Ref*{#1}}%
9209     }%
9210     \def\Vr@f#1{%
9211       \leavevmode\unskip\vref@space
9212       \hyperref[{#1}]{%
9213         \Ref*{#1}%
9214       }%
9215       \let\vref@space\nobreakspace
9216       \@vpageref\unskip{#1}%
9217     }%

```

```

9217 }%
9218 \def\vr@f#1{%
9219 \leavevmode\unskip\href@space
9220 \begingroup
9221 \let\T@pageref\@pagerefstar
9222 \hyperref[#1]{%
9223 \ref*{#1}%
9224 \vpageref\unskip]{#1}%
9225 }%
9226 \endgroup
9227 }%
9228 }{}%
9229 }
9230 \DeclareRobustCommand*\autopageref{%
9231 \ifstar{%
9232 \HyRef@autopagerefname\pageref*%
9233 }\HyRef@autopageref
9234 }
9235 \def\HyRef@autopageref#1{%
9236 \hyperref[#1]{\HyRef@autopagerefname\pageref*{#1}}%
9237 }
9238 \def\HyRef@autopagerefname{%
9239 \ltx@ifundefined{pageautorefname}{%
9240 \ltx@ifundefined{pagename}{%
9241 \Hy@Warning{No autoref name for 'page'}%
9242 }{%
9243 \pagename\nobreakspace
9244 }%
9245 }{}%
9246 \pageautorefname\nobreakspace
9247 }%
9248 }

```

\leavevmode is added to make package wrapfigure happy, if \autoref starts a paragraph.

```

9249 \DeclareRobustCommand*\autoref{%
9250 \leavevmode
9251 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
9252 }
9253 \def\HyRef@autoref#1#2{%
9254 \begingroup
9255 \Hy@safe@activetrue
9256 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
9257 \endgroup
9258 }
9259 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
9260 \HyRef@ShowKeysRef{#2}%
9261 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
9262 \edef\HyRef@thisref{%
9263 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9264 }%
9265 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
9266 \Hy@safe@activesfalse
9267 #3{%
9268 \expandafter\@fifthoffive#1\@empty\@empty\@empty
9269 }{}%
9270 \expandafter\@fourthoffive#1\@empty\@empty\@empty
9271 }{}%

```

```

9272 \HyRef@currentHtag
9273 \expandafter\@firstoffive#1\@empty\@empty\@empty
9274 \null
9275 }%
9276 \else
9277 \protect\G@refundefinedtrue
9278 \nfss@text{\reset@font\bfseries ??}%
9279 \@latex@warning{%
9280 Reference '#2' on page \thepage\space undefined%
9281 }%
9282 \fi
9283 }
9284 \def\HyRef@testreftype#1.#2\{\%
9285 \ltx@ifundefined{#1autorefname}\%
9286 \ltx@ifundefined{#1name}\%
9287 \HyRef@StripStar#1\*\@nil{#1}%
9288 \ltx@ifundefined{\HyRef@name autorefname}\%
9289 \ltx@ifundefined{\HyRef@name name}\%
9290 \def\HyRef@currentHtag{\%
9291 \Hy@Warning{No autoref name for '#1'}%
9292 }%
9293 \edef\HyRef@currentHtag{\%
9294 \expandafter\noexpand\csname\HyRef@name name\endcsname
9295 \noexpand~%
9296 }%
9297 }%
9298 }{\%
9299 \edef\HyRef@currentHtag{\%
9300 \expandafter\noexpand
9301 \csname\HyRef@name autorefname\endcsname
9302 \noexpand~%
9303 }%
9304 }%
9305 }{\%
9306 \edef\HyRef@currentHtag{\%
9307 \expandafter\noexpand\csname#1name\endcsname
9308 \noexpand~%
9309 }%
9310 }%
9311 }{\%
9312 \edef\HyRef@currentHtag{\%
9313 \expandafter\noexpand\csname#1autorefname\endcsname
9314 \noexpand~%
9315 }%
9316 }%
9317 }
9318 \def\HyRef@StripStar#1*\@nil#3{\%
9319 \def\HyRef@name{#2}%
9320 \ifx\HyRef@name\HyRef@CaseStar
9321 \def\HyRef@name{#1}%
9322 \else
9323 \def\HyRef@name{#3}%
9324 \fi
9325 }
9326 \def\HyRef@CaseStar{*\\}
9327 \def\HyRef@currentHtag{}

```

Support for package `showkeys`.

`\HyRef@ShowKeysRef`

```

9328 \let\HyRef@ShowKeysRef\@gobble
9329 \def\HyRef@ShowKeysInit{%
9330   \begingroup\expandafter\expandafter\expandafter\endgroup
9331   \expandafter\ifx\csname SK@@label\endcsname\relax
9332   \else
9333     \ifx\SK@ref\@empty
9334     \else
9335       \def\HyRef@ShowKeysRef{%
9336         \SK@\SK@@ref
9337       }%
9338     \fi
9339   \fi
9340 }
9341 \@ifpackageloaded{showkeys}{%
9342   \HyRef@ShowKeysInit
9343 }{%
9344   \Hy@AtBeginDocument{%
9345     \@ifpackageloaded{showkeys}{%
9346       \HyRef@ShowKeysInit
9347     }{}%
9348   }%
9349 }

```

Defaults for the names that `\autoref` uses.

```

9350 \providecommand*\AMSautorefname{\equationautorefname}
9351 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
9352 \providecommand*\Itemautorefname{\itemautorefname}
9353 \providecommand*\itemautorefname{item}
9354 \providecommand*\equationautorefname{Equation}
9355 \providecommand*\footnoteautorefname{footnote}
9356 \providecommand*\itemautorefname{item}
9357 \providecommand*\figureautorefname{Figure}
9358 \providecommand*\tableautorefname{Table}
9359 \providecommand*\partautorefname{Part}
9360 \providecommand*\appendixautorefname{Appendix}
9361 \providecommand*\chapterautorefname{chapter}
9362 \providecommand*\sectionautorefname{section}
9363 \providecommand*\subsectionautorefname{subsection}
9364 \providecommand*\subsubsectionautorefname{subsubsection}
9365 \providecommand*\paragraphautorefname{paragraph}
9366 \providecommand*\subparagraphautorefname{subparagraph}
9367 \providecommand*\FancyVerbLineautorefname{line}
9368 \providecommand*\theoremautorefname{Theorem}
9369 \providecommand*\pageautorefname{page}
9370 \</package>

```

47 Configuration files

47.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdfTeX offers `\pdfescapestring`.

```

9371 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
9372 \begingroup\expandafter\expandafter\expandafter\endgroup
9373 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
9374 \begingroup
9375   \catcode'\| =0 %
9376   \@makeother\| %
9377   \@firstofone{ \endgroup
9378   | def\Hy@pstringdef#1#2{%
9379     | begingroup
9380     | edef~{\string~}%
9381     | xdef\Hy@gtemp{#2}%
9382     | endgroup
9383     | let#1|\Hy@gtemp
9384     | @onelevel@sanitize#1%
9385     | edef#1{|expandafter|\Hy@ExchangeBackslash#1|\@nil}%
9386     | edef#1{|expandafter|\Hy@ExchangeLeftParenthesis#1(|@nil}%
9387     | edef#1{|expandafter|\Hy@ExchangeRightParenthesis#1)|@nil}%
9388   }%
9389   | def\Hy@ExchangeBackslash#1\#2|\@nil{%
9390     #1%
9391     | ifx\#2\| %
9392     | else
9393       \| %
9394       | ltx@ReturnAfterFi{%
9395         |\Hy@ExchangeBackslash#2|\@nil
9396       }%
9397     | fi
9398   }%
9399 }%
9400 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
9401   #1%
9402   \ifx\#2\| %
9403   \else
9404     \@backslashchar(%
9405     \ltx@ReturnAfterFi{%
9406       |\Hy@ExchangeLeftParenthesis#2\@nil
9407     }%
9408   \fi
9409 }%
9410 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
9411   #1%
9412   \ifx\#2\| %
9413   \else
9414     \@backslashchar)%
9415     \ltx@ReturnAfterFi{%
9416       |\Hy@ExchangeRightParenthesis#2\@nil
9417     }%
9418   \fi
9419 }%
9420 \else
9421 \def\Hy@pstringdef#1#2{%
9422   \begingroup
9423   \edef~{\string~}%
9424   \xdef\Hy@gtemp{\pdfescapestring{#2}}%

```

```

9425 \endgroup
9426 \let#1\Hy@gtemp
9427 }%
9428 \fi
9429 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

47.2 pdfTeX

```

9430 <*pdfTeX>
9431 \providecommand*\XR@ext}{pdf}
9432 \Hy@setbreaklinks{true}
9433 \def\HyPat@ObjRef{%
9434   [0-9]*[1-9][0-9]* 0 R%
9435 }

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option pdfversion.

- pdfT_EX 1.10a, 2003-01-16: \pdfoptionpdfminorversion
- pdfT_EX 1.30, 2005-08-081: \pdfminorversion

```

9436 \let\Hy@pdfminorversion\relax
9437 \begingroup\expandafter\expandafter\expandafter\endgroup
9438 \expandafter\ifx\csname pdfminorversion\endcsname\relax
9439   \begingroup\expandafter\expandafter\expandafter\endgroup
9440   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
9441     \else
9442       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
9443     \fi
9444   \else
9445     \def\Hy@pdfminorversion{\pdfminorversion}%
9446   \fi
9447 \@@ifundefined{Hy@pdfminorversion}{%
9448   \PackageInfo{hyperref}{%
9449     PDF version is not set, because pdfTeX is too old (<1.10a)%
9450   }%
9451 }{%
9452   \ifHy@ocgcolorlinks
9453     \ifnum\Hy@pdfminorversion<5 %
9454       \kvsetkeys{Hyp}{pdfversion=1.5}%
9455     \fi
9456   \fi
9457   \ifHy@setpdfversion
9458     \ifnum\Hy@pdfversion<5 %
9459       \ltx@ifundefined{pdfobjcompresslevel}{%
9460         }{%
9461           \ifHy@verbose
9462             \Hy@InfoNoLine{%
9463               PDF object streams are disabled, because they are%
9464               \MessageBreak
9465               not supported in requested PDF version %
9466               1.\Hy@pdfversion
9467             }%
9468           \fi
9469           \pdfobjcompresslevel=\ltx@zero
9470         }%

```

```

9471 \fi
9472 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
9473 \else
9474 \let\Hy@temp\ltx@empty
9475 \def\Hy@temp@A#1#2{%
9476 \ifnum#1>\ltx@zero
9477 \edef\Hy@temp{%
9478 \Hy@temp
9479 \space\space
9480 \the#1\space #2%
9481 \ifnum#1=\ltx@one\else s\fi
9482 \MessageBreak
9483 }%
9484 \fi
9485 }%
9486 \Hy@temp@A\pdflastobj{PDF object}%
9487 \Hy@temp@A\pdflastxform{form XObject}%
9488 \Hy@temp@A\pdflastximage{image XObject}%
9489 \Hy@temp@A\pdflastannot{annotation}%
9490 \ltx@ifundefined{pdflastlink}{%
9491 }{%
9492 \Hy@temp@A\pdflastlink{link}%
9493 }%
9494 \ifx\Hy@temp\ltx@empty
9495 \Hy@pdfminorversion=\Hy@pdfversion\relax
9496 \else
9497 \let\Hy@temp@A\ltx@empty
9498 \ifnum\Hy@pdfversion=4 %
9499 \IfFileExists{pdf14.sty}{%
9500 \def\Hy@temp@A{%
9501 \MessageBreak
9502 Or \string\RequirePackage{pdf14} can be used%
9503 \MessageBreak
9504 before \string\documentclass\space as shortcut%
9505 }%
9506 }{}%
9507 \fi
9508 \Hy@WarningNoLine{%
9509 The PDF version number could not be set,\MessageBreak
9510 because some PDF objects are already written:%
9511 \MessageBreak
9512 \Hy@temp
9513 The version should be set as early as possible:%
9514 \MessageBreak
9515 \space\space
9516 \expandafter\string\Hy@pdfminorversion=\Hy@pdfversion
9517 \string\relax
9518 \ifnum\Hy@pdfversion<5 %
9519 \ltx@ifundefined{pdfobjcompresslevel}{%
9520 }{%
9521 \MessageBreak
9522 \space\space
9523 \string\pdfobjcompresslevel=0\string\relax
9524 }%
9525 \fi
9526 \Hy@temp@A
9527 }%

```

```

9528 \fi
9529 \fi
9530 \PackageInfo{hyperref}{%
9531 \expandafter\string\Hy@pdfminorversion
9532 :=\number\Hy@pdfversion\space
9533 }%
9534 \fi
9535 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
9536 }
9537 \Hy@DisableOption{pdfversion}%
9538 \ifHy@ocgcolorlinks
9539 \pdf@ifdraftmode{}{%
9540 \immediate\pdfobj{%
9541 <<%
9542 /Type/OCG%
9543 /Name(View)%
9544 /Usage<<%
9545 /Print<<%
9546 /PrintState/OFF%
9547 >>%
9548 /View<<%
9549 /ViewState/ON%
9550 >>%
9551 >>%
9552 >>%
9553 }%
9554 \edef\OBJ@OCG@view{\the\pdfflastobj\space 0 R}%
9555 \immediate\pdfobj{%
9556 <<%
9557 /Type/OCG%
9558 /Name(Print)%
9559 /Usage<<%
9560 /Print<<%
9561 /PrintState/ON%
9562 >>%
9563 /View<<%
9564 /ViewState/OFF%
9565 >>%
9566 >>%
9567 >>%
9568 }%
9569 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
9570 \immediate\pdfobj{%
9571 [%
9572 \OBJ@OCG@view\space\OBJ@OCG@print
9573 ]%
9574 }%
9575 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
9576 \pdfcatalog{%
9577 /OCProperties<<%
9578 /OCGs \OBJ@OCGs
9579 /D<<%
9580 /OFF[\OBJ@OCG@print]%
9581 /AS[%
9582 <<%
9583 /Event/View%
9584 /OCGs \OBJ@OCGs

```

```

9585         /Category[/View]%
9586     >>%
9587     <<%
9588         /Event/Print%
9589         /OCGs \OBJ@OCGs
9590         /Category[/Print]%
9591     >>%
9592     <<%
9593         /Event/Export%
9594         /OCGs \OBJ@OCGs
9595         /Category[/Print]%
9596     >>%
9597     ]%
9598     >>%
9599     >>%
9600 }%
9601 \begingroup
9602 \edef\x{\endgroup
9603 \pdfpageresources{%
9604 \the\pdfpageresources
9605 /Properties<<%
9606 /OCView \OBJ@OCG@view
9607 /OCPrint \OBJ@OCG@print
9608 >>%
9609 }%
9610 }%
9611 \x
9612 }%
9613 \Hy@AtBeginDocument{%
9614 \def\Hy@colorlink#1{%
9615 \begingroup
9616 \ifHy@ocgcolorlinks
9617 \def\Hy@ocgcolor{#1}%
9618 \setbox0=\hbox\bgroup\color@begingroup
9619 \else
9620 \HyColor@UseColor#1%
9621 \fi
9622 }%
9623 \def\Hy@endcolorlink{%
9624 \ifHy@ocgcolorlinks
9625 \color@endgroup\egroup
9626 \mbox{%
9627 \pdfliteral page{/OC/OCPrint BDC}%
9628 \rlap{\copy0}%
9629 \pdfliteral page{EMC/OC/OCView BDC}%
9630 \begingroup
9631 \expandafter\HyColor@UseColor\Hy@ocgcolor
9632 \box0 %
9633 \endgroup
9634 \pdfliteral page{EMC}%
9635 }%
9636 \fi
9637 \endgroup
9638 }%
9639 }%
9640 \else
9641 \Hy@DisableOption{ocgcolorlinks}%

```

9642 \fi

First, allow for some changes and additions to pdftex syntax:

```
9643 \def\setpdfinkmargin#1{%
9644   \begingroup
9645     \setlength{\dimen@}{#1}%
9646   \expandafter\endgroup
9647   \expandafter\pdfinkmargin\the\dimen@\relax
9648 }
9649 \ifx\pdfstartlink\@undefined% less than version 14
9650   \let\pdfstartlink\pdfannotlink
9651   \let\pdfinkmargin\@tempdima
9652   \let\pdfxform\pdfform
9653   \let\pdfastxform\pdfastform
9654   \let\pdfrefxform\pdfrefform
9655 \else
9656   \pdfinkmargin1pt %
9657 \fi
```

First set up the default linking

```
9658 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
9659 \Hy@WrapperDef\new@pdfink#1{%
9660   \ifhmode
9661     \@savsf\spacefactor
9662   \fi
9663   \Hy@SaveLastskip
9664   \Hy@VerboseAnchor{#1}%
9665   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9666   \Hy@DestName\Hy@pstringDest\@pdfview
9667   \Hy@RestoreLastskip
9668   \ifhmode
9669     \spacefactor\@savsf
9670   \fi
9671 }
9672 \let\pdf@endanchor\@empty
```

`\Hy@DestName` Wrap the call of `\pdfdest` name in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```
9673 \def\Hy@DestName#1#2{%
9674   \pdfdest name{#1}#2\relax
9675 }
```

Now the links; the interesting part here is the set of attributes which define how the link looks. We probably want to add a border and color it, but there are other choices. This directly translates to PDF code, so consult the manual for how to change this. We will add an interface at some point.

```
9676 \providecommand*\@pdfborder{0 0 1}
9677 \providecommand*\@pdfborderstyle{}
9678 \def\Hy@undefinedname{UNDEFINED}
9679 \def\find@pdfink#1#2{%
9680   \leavevmode
9681   \protected@edef\Hy@testname{#2}%
9682   \ifx\Hy@testname\@empty
9683     \Hy@Warning{%
9684       Empty destination name,\MessageBreak
9685       using '\Hy@undefinedname'%

```

```

9686 }%
9687 \let\Hy@testname\Hy@undefinedname
9688 \else
9689 \Hy@pstringdef\Hy@testname{%
9690 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
9691 }%
9692 \fi
9693 \Hy@StartlinkName{%
9694 \ifHy@pdfa /F 4\fi
9695 \Hy@setpdfborder
9696 \ifx\@pdfhighlight\@empty
9697 \else
9698 /H\@pdfhighlight
9699 \fi
9700 \ifx\CurrentBorderColor\relax
9701 \else
9702 /C[\CurrentBorderColor]%
9703 \fi
9704 }\Hy@testname
9705 \expandafter\Hy@colorlink\csname @#1color\endcsname
9706 }
9707 \def\Hy@StartlinkName#1#2{%
9708 \pdfstartlink attr{#1}goto name{#2}\relax
9709 }
9710 \def\close@pdfink{%
9711 \Hy@endcolorlink
9712 \Hy@VerboseLinkStop
9713 \pdfendlink
9714 }
9715 \def\hyper@anchor#1{%
9716 \new@pdfink{#1}\anchor@spot\pdf@endanchor
9717 }
9718 \def\hyper@anchorstart#1{%
9719 \new@pdfink{#1}%
9720 \Hy@activeanchortrue
9721 }
9722 \def\hyper@anchorend{%
9723 \pdf@endanchor
9724 \Hy@activeanchorfalse
9725 }
9726 \def\hyper@linkstart#1#2{%
9727 \Hy@VerboseLinkStart{#1}{#2}%
9728 \ltx@ifundefined{@#1bordercolor}{%
9729 \let\CurrentBorderColor\relax
9730 }{%
9731 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9732 }%
9733 \find@pdfink{#1}{#2}%
9734 }
9735 \def\hyper@linkend{\close@pdfink}
9736 \def\hyper@link#1#2#3{%
9737 \Hy@VerboseLinkStart{#1}{#2}%
9738 \ltx@ifundefined{@#1bordercolor}{%
9739 \let\CurrentBorderColor\relax
9740 }{%
9741 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9742 }%

```



```

9743 \find@pdfink{#1}{#2}#3\Hy@xspace@end
9744 \close@pdfink
9745 }
9746 \let\CurrentBorderColor\@linkbordercolor
9747 \def\hyper@linkurl#1#2{%
9748 \begingroup
9749 \Hy@pstringdef\Hy@pstringURI{#2}%
9750 \hyper@chars
9751 \leavevmode
9752 \pdfstartlink
9753 attr{%
9754 \Hy@setpdfborder
9755 \ifx\@pdfhighlight\@empty
9756 \else
9757 /H\@pdfhighlight
9758 \fi
9759 \ifx\@urlbordercolor\relax
9760 \else
9761 /C[\@urlbordercolor]%
9762 \fi
9763 }%
9764 user{%
9765 /Subtype/Link%
9766 \ifHy@pdfa /F 4\fi
9767 /A<<%
9768 /Type/Action%
9769 /S/URI%
9770 /URI(\Hy@pstringURI)%
9771 \ifHy@href@ismap
9772 /IsMap true%
9773 \fi
9774 \Hy@href@nextactionraw
9775 >>%
9776 }%
9777 \relax
9778 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9779 \close@pdfink
9780 \endgroup
9781 }
9782 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
9783 \begingroup
9784 \def\Hy@pstringF{#2}%
9785 \Hy@CleanupFile\Hy@pstringF
9786 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9787 \Hy@pstringdef\Hy@pstringD{#3}%
9788 \Hy@MakeRemoteAction
9789 \leavevmode
9790 \pdfstartlink
9791 attr{%
9792 \Hy@setpdfborder
9793 \ifx\@pdfhighlight\@empty
9794 \else
9795 /H\@pdfhighlight
9796 \fi
9797 \ifx\@filebordercolor\relax
9798 \else
9799 /C[\@filebordercolor]%

```

```

9800      \fi
9801    }%
9802    user {%
9803      /Subtype/Link%
9804      \ifHy@pdfa /F 4\fi
9805      /A<<%
9806      /F(\Hy@pstringF)%
9807      /S/GoToR%
9808      \Hy@SetNewWindow

```

If #3 is empty, page 0; if its a number, Page number, otherwise a named destination.

```

\afterassignment\xxx\count@=0\foo!%

```

```

\def\xxx#1{%
  \ifx\xxx#1\xxx
    foo was an integer
  \else
    it wasnt
  \fi}

```

```

9809      \ifx\#3\%
9810      /D[\Hy@href@page\@pdfremotestartview]%
9811    \else
9812      /D(\Hy@pstringD)%
9813    \fi
9814    \Hy@href@nextactionraw
9815    >>%
9816  }%
9817  \relax
9818  \Hy@colorlink\@filecolor#1\Hy@xspace@end
9819  \close@pdfink
9820 \endgroup
9821 }
9822 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9823 \begingroup
9824   \Hy@pstringdef\Hy@pstringF{#1}%
9825   \Hy@pstringdef\Hy@pstringP{#3}%
9826   \leavevmode
9827   \pdfstartlink
9828   attr{%
9829     \Hy@setpdfborder
9830     \ifx\@pdfhighlight\@empty
9831     \else
9832       /H\@pdfhighlight
9833     \fi
9834     \ifx\@runbordercolor\relax
9835     \else
9836       /C[\@runbordercolor]%
9837     \fi
9838   }%
9839   user {%
9840     /Subtype/Link%
9841     \ifHy@pdfa /F 4\fi
9842     /A<<%
9843     /F(\Hy@pstringF)%
9844     /S/Launch%

```

```

9845 \Hy@SetNewWindow
9846 \ifx\|#3\%
9847 \else
9848 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9849 \fi
9850 \Hy@href@nextactionraw
9851 >>%
9852 }%
9853 \relax
9854 \Hy@colorlink\@runcolor#2\Hy@xspace@end
9855 \close@pdflink
9856 \endgroup
9857 }

```

\@pdfproducer

```

9858 \ifx\@pdfproducer\relax
9859 \begingroup\expandafter\expandafter\expandafter\endgroup
9860 \expandafter\ifx\csname luatexversion\endcsname\relax
9861 \def\@pdfproducer{pdfTeX}%
9862 \ifx\TeXversion\@undefined
9863 \else
9864 \ifx\TeXversion\relax
9865 \else
9866 \ifnum\TeXversion>0 %
9867 \def\@pdfproducer{pdfTeX}%
9868 \fi
9869 \fi
9870 \fi
9871 \ifx\pdfTeXversion\@undefined
9872 \else
9873 \ifnum\pdfTeXversion<100 %
9874 \edef\@pdfproducer{%
9875 \@pdfproducer
9876 \the\pdfTeXversion.\pdfTeXrevision
9877 }%
9878 \else
9879 \ifnum\pdfTeXversion<130 %
9880 \edef\@pdfproducer{%
9881 \@pdfproducer-%
9882 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9883 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
9884 \pdfTeXrevision
9885 }%
9886 \else
9887 \ifnum\pdfTeXversion<140 %
9888 \else
9889 \def\@pdfproducer{pdfTeX}%
9890 \fi
9891 \edef\@pdfproducer{%
9892 \@pdfproducer-%
9893 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9894 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9895 \pdfTeXrevision
9896 }%
9897 \fi
9898 \fi
9899 \fi

```

```

9900 \else
9901 \begingroup
9902 \count@=\luatexversion
9903 \divide\count@ by 100 %
9904 \edef\x{\the\count@}%
9905 \count@=-\x\relax
9906 \multiply\count@ by 100 %
9907 \advance\count@ by \luatexversion
9908 \edef\x{\endgroup
9909 \def\noexpand\@pdfproducer{%
9910 LuaTeX-\x.\the\count@.\luatexrevision
9911 }%
9912 }%
9913 \x
9914 \fi
9915 \fi

```

\PDF@SetupDox

```

9916 \def\PDF@SetupDoc{%
9917 \ifx\@pdfpagescrop\@empty
9918 \else
9919 \edef\process@me{%
9920 \pdfpagesattr={%
9921 /CropBox[\@pdfpagescrop]%
9922 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9923 \else
9924 ^^J\the\pdfpagesattr
9925 \fi
9926 }%
9927 }%
9928 \process@me
9929 \fi
9930 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9931 \pdfcatalog{%
9932 /PageMode/\@pdfpagemode
9933 \ifx\@baseurl\@empty
9934 \else
9935 /URI<</Base(\Hy@pstringB)>>%
9936 \fi
9937 }%
9938 \ifx\@pdfstartpage\@empty
9939 \else
9940 \ifx\@pdfstartview\@empty
9941 \else
9942 openaction goto page\@pdfstartpage{\@pdfstartview}%
9943 \fi
9944 \fi
9945 \edef\Hy@temp{%
9946 \ifHy@pdftoolbar\else /HideToolbar true\fi
9947 \ifHy@pdfmenubar\else /HideMenubar true\fi
9948 \ifHy@pdfwindowui\else /HideWindowUI true\fi
9949 \ifHy@pdffitwindow /FitWindow true\fi
9950 \ifHy@pdfcenterwindow /CenterWindow true\fi
9951 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
9952 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9953 \Hy@UseNameKey{Direction}\@pdfdirection
9954 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9955 \Hy@UseNameKey{ViewClip}\@pdfviewclip

```

```

9956 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9957 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9958 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9959 \Hy@UseNameKey{Duplex}\@pdfduplex
9960 \ifx\@pdfpicktraybypdfsize\@empty
9961 \else
9962 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9963 \fi
9964 \ifx\@pdfprintpagerange\@empty
9965 \else
9966 /PrintPageRange[\@pdfprintpagerange]%
9967 \fi
9968 \ifx\@pdfnumcopies\@empty
9969 \else
9970 /NumCopies \@pdfnumcopies
9971 \fi
9972 }%
9973 \pdfcatalog{%
9974 \ifx\Hy@temp\@empty
9975 \else
9976 /ViewerPreferences<<\Hy@temp>>%
9977 \fi
9978 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9979 \ifx\@pdflang\relax
9980 \else
9981 /Lang(\@pdflang)%
9982 \fi
9983 }%
9984 }

```

\PDF@FinishDoc

```

9985 \def\PDF@FinishDoc{%
9986 \pdf@ifdraftmode{ }{%
9987 \Hy@UseMaketitleInfos
9988 \HyInfo@GenerateAddons
9989 \pdfinfo{%
9990 /Author(\@pdfauthor)%
9991 /Title(\@pdftitle)%
9992 /Subject(\@pdfsubject)%
9993 /Creator(\@pdfcreator)%
9994 \ifx\@pdfcreationdate\@empty
9995 \else
9996 /CreationDate(\@pdfcreationdate)%
9997 \fi
9998 \ifx\@pdfmoddate\@empty
9999 \else
10000 /ModDate(\@pdfmoddate)%
10001 \fi
10002 \ifx\@pdfproducer\relax
10003 \else
10004 /Producer(\@pdfproducer)%
10005 \fi
10006 /Keywords(\@pdfkeywords)%
10007 \ifx\@pdftrapped\@empty
10008 \else
10009 /Trapped/\@pdftrapped
10010 \fi
10011 \HyInfo@Addons

```

```

10012 }%
10013 }%
10014 \Hy@DisableOption{pdfauthor}%
10015 \Hy@DisableOption{pdftitle}%
10016 \Hy@DisableOption{pdfsubject}%
10017 \Hy@DisableOption{pdfcreator}%
10018 \Hy@DisableOption{pdfcreationdate}%
10019 \Hy@DisableOption{pdfmoddate}%
10020 \Hy@DisableOption{pdfproducer}%
10021 \Hy@DisableOption{pdfkeywords}%
10022 \Hy@DisableOption{pdftrapped}%
10023 \Hy@DisableOption{pdfinfo}%
10024 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

10025 \def\hyper@pagetransition{%
10026   \ifx\@pdfpagetransition\relax
10027   \else
10028     \expandafter\Hy@RemoveTransPageAttr
10029     \the\pdfpageattr^^J/Trans{}}>>\END
10030   \ifx\@pdfpagetransition\@empty
10031   \else
10032     \edef\@processme{%
10033       \global\pdfpageattr{%
10034         \the\pdfpageattr
10035         ^^J/Trans << /S /\@pdfpagetransition\space >>%
10036       }%
10037     }%
10038     \@processme
10039   \fi
10040 \fi
10041 }

```

`\Hy@RemoveTransPageAttr` Macro `\Hy@RemoveTransPageAttr` removes a `/Trans` entry from `\pdfpageattr`. It is called with the end marker `^^J/Trans{}}>>\END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument #2 and shows, whether the parameter text catches a really `/Trans` object or the end marker.

```

10042 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
10043   \ifx\#2\%
10044     \global\pdfpageattr{#1}%
10045   \else
10046     \Hy@RemoveTransPageAttr#1#4\END
10047   \fi
10048 }

```

`\hyper@pageduration` `\@pdfpageduration` is initialized with `\relax`. So it indicates, if option `pdfpageduration` is used. First previous `/Dur` entries are removed. If a new `/Dur` key exists, it is appended to `\pdfpageattr`.

```

10049 \def\hyper@pageduration{%
10050   \ifx\@pdfpageduration\relax
10051   \else
10052     \expandafter
10053     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END

```

```

10054 \ifx\@pdfpageduration\@empty
10055 \else
10056 \edef\@processme{%
10057 \global\pdfpageattr{%
10058 \the\pdfpageattr
10059 ^^J/Dur \@pdfpageduration\space
10060 }%
10061 }%
10062 \@processme
10063 \fi
10064 \fi
10065 }

```

`\Hy@RemoveDurPageAttr` Macro `\Hy@RemoveDurPageAttr` removes a `/Dur` entry from `\pdfpageattr`. It is called with the end marker `^^J/Dur{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Dur` object or the end marker.

```

10066 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
10067 \ifx\#2\%
10068 \global\pdfpageattr{#1}%
10069 \else
10070 \Hy@RemoveDurPageAttr#1#4\END
10071 \fi
10072 }

```

`\hyper@pagehidden` The boolean value of the key `/Hid` is stored in switch `\ifHy@pdfpagehidden`. First previous `/Hid` entries are removed, then the new one is appended, if the value is true (the PDF default is false).

```

10073 \def\hyper@pagehidden{%
10074 \ifHy@useHidKey
10075 \expandafter
10076 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
10077 \ifHy@pdfpagehidden
10078 \edef\@processme{%
10079 \global\pdfpageattr{%
10080 \the\pdfpageattr
10081 ^^J/Hid true % SPACE
10082 }%
10083 }%
10084 \@processme
10085 \fi
10086 \fi
10087 }

```

`\Hy@RemoveHidPageAttr` Macro `\Hy@RemoveHidPageAttr` removes a `/Hid` entry from `\pdfpageattr`. It is called with the end marker `^^J/Hid{} \END`. The trick is the empty group that does not appear in legal `\pdfpageattr` code. It appears in argument `#2` and shows, whether the parameter text catches a really `/Hid` object or the end marker.

```

10088 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
10089 \ifx\#2\%
10090 \global\pdfpageattr{#1}%
10091 \else
10092 \Hy@RemoveHidPageAttr#1#4\END
10093 \fi
10094 }

```

```

10095 \pdf@ifdraftmode{}{%

```

```

10096 \g@addto@macro\Hy@EveryPageHook{%
10097   \hyper@pagetransition
10098   \hyper@pageduration
10099   \hyper@pagehidden
10100 }%
10101 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

10102 </pdfTeX>
10103 <*pdfTeX | xetex>
10104 \Hy@AtBeginDocument{%
10105   \ifHy@setpagesize
10106     \expandafter\@firstofone
10107   \else
10108     \expandafter\@gobble
10109   \fi
10110 }%
10111 \ifclassloaded{seminar}{%
10112 *pdfTeX>
10113   \setlength{\pdfhorigin}{1truein}%
10114   \setlength{\pdfvorigin}{1truein}%
10115 </pdfTeX>
10116   \ifportrait
10117     \ifdim\paperwidth=\z@
10118     \else
10119       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
10120     \fi
10121     \ifdim\paperheight=\z@
10122     \else
10123       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
10124     \fi
10125   \else
10126     \ifdim\paperheight=\z@
10127     \else
10128       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
10129     \fi
10130     \ifdim\paperwidth=\z@
10131     \else
10132       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
10133     \fi
10134   \fi
10135 }{%
10136 \ltx@ifundefined{stockwidth}{%
10137   \ifdim\paperwidth>\z@
10138     \setlength{\pdfpagewidth}{\paperwidth}%
10139   \fi
10140   \ifdim\paperheight>\z@
10141     \setlength{\pdfpageheight}{\paperheight}%
10142   \fi
10143 }{%
10144   \ifdim\stockwidth>\z@
10145     \setlength{\pdfpagewidth}{\stockwidth}%
10146   \fi
10147   \ifdim\stockheight>\z@
10148     \setlength{\pdfpageheight}{\stockheight}%
10149   \fi
10150 }%

```



```

10151 }%
10152 }%
10153 \Hy@DisableOption{setpagesize}%
10154 }
10155 </pdfTeX | xetex>
10156 <*pdfTeX>
10157 \def\Acrobatmenu#1#2{%
10158 \Hy@Acrobatmenu{#1}{#2}{%
10159 \leavevmode
10160 \EdefEscapeName\Hy@temp@menu{#1}%
10161 \pdfstartlink
10162 attr{%
10163 \Hy@setpdfborder
10164 \ifx\@pdfhighlight\@empty
10165 \else
10166 /H\@pdfhighlight
10167 \fi
10168 \ifx\@menubordercolor\relax
10169 \else
10170 /C[\@menubordercolor]%
10171 \fi
10172 }%
10173 user{%
10174 /Subtype/Link%
10175 \ifHy@pdfa /F 4\fi
10176 /A<<%
10177 /S/Named%
10178 /N/\Hy@temp@menu
10179 \Hy@href@nextactionraw
10180 >>%
10181 }%
10182 \relax
10183 \Hy@colorlink\@menucolor#2%
10184 \close@pdflink
10185 }%
10186 }

```

47.2.1 Fix for problem with different nesting levels

\AtBeginShipoutFirst adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands \pdfstartlink and \pdfendlink, if a link is broken across the first and second output page.

The problem could be fixed by replacing \AtBeginShipoutFirst, because the box layer is not necessary for pdfTeX—no \specials need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also \AtBeginShipoutFirst could be invoked independently from hyperref.

Since version 2011/10/05 v1.16 of package 'atbegshi' \AtBeginShipoutFirst does not add a additional box layer.

```

10187 \def\Hy@FixNotFirstPage{%
10188 \gdef\Hy@FixNotFirstPage{%
10189 \setbox\AtBeginShipoutBox=\hbox{%
10190 \copy\AtBeginShipoutBox
10191 }%
10192 }%
10193 }
10194 \ltx@ifpackagelater{atbegshi}{2011/10/05}{%

```

```

10195 }{%
10196 \AtBeginShipout{\Hy@FixNotFirstPage}%
10197 }
10198 </pdfTeX>

```

47.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \special commands:

```

href: html:<a href = "href_string">

name: html:<a name = "name_string">

end: html:</a>

image: html:<img src = "href_string">

base_name: html:<base href = "href_string">

```

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form href="#name_string" with the *name_string* identical to the one in the name command) or as part of a URL (of the form URL#name_string). Here *href_string* is a valid URL or local identifier, while name_string could be any string at all: the only caveat is that ‘’ characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

10199 <*hypertex>
10200 \providecommand*{\XR@ext}{dvi}
10201 \let\PDF@FinishDoc\ltz@empty
10202 \def\PDF@SetupDoc{%
10203 \ifx\@baseurl\@empty
10204 \else
10205 \special{html:<base href="\@baseurl">}%
10206 \fi
10207 }
10208 \Hy@WrapperDef\hyper@anchor#1{%
10209 \Hy@SaveLastskip
10210 \Hy@VerboseAnchor{#1}%
10211 \begingroup
10212 \let\protect=\string
10213 \hyper@chars
10214 \special{html:<a name=%
10215 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%

```

```

10216 \endgroup
10217 \Hy@activeanchortrue
10218 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10219 \special{html:</a>}%
10220 \Hy@activeanchorfalse
10221 \Hy@RestoreLastskip
10222 }
10223 \Hy@WrapperDef\hyper@anchorstart#1{%
10224 \Hy@SaveLastskip
10225 \Hy@VerboseAnchor{#1}%
10226 \begingroup
10227 \hyper@chars
10228 \special{html:<a name=%
10229 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10230 \endgroup
10231 \Hy@activeanchortrue
10232 }
10233 \def\hyper@anchorend{%
10234 \special{html:</a>}%
10235 \Hy@activeanchorfalse
10236 \Hy@RestoreLastskip
10237 }
10238 \def\@urltype{url}
10239 \def\hyper@linkstart#1#2{%
10240 \Hy@VerboseLinkStart{#1}{#2}%
10241 \expandafter\Hy@colorlink\csname @#1color\endcsname
10242 \def\Hy@tempa{#1}%
10243 \ifx\Hy@tempa\@urltype
10244 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10245 \else
10246 \begingroup
10247 \hyper@chars
10248 \special{html:<a href=%
10249 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10250 \endgroup
10251 \fi
10252 }
10253 \def\hyper@linkend{%
10254 \special{html:</a>}%
10255 \Hy@endcolorlink
10256 }
10257 \def\hyper@linkfile#1#2#3{%
10258 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
10259 }
10260 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX . I do not know.

```

10261 \leavevmode
10262 \ifHy@raiselinks
10263 \Hy@SaveSpaceFactor
10264 \Hy@SaveSavedSpaceFactor
10265 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10266 \Hy@RestoreSavedSpaceFactor
10267 \@linkdim\dp\@tempboxa
10268 \lower\@linkdim\hbox{%
10269 \hyper@chars

```

```

10270 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10271 }%
10272 \Hy@colorlink\@urlcolor
10273 \Hy@RestoreSpaceFactor
10274 #1%
10275 \Hy@SaveSpaceFactor
10276 \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvilhs processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

10277 \advance\@linkdim by -6.5\p@
10278 \raise\@linkdim\hbox{\special{html:</a>}}%
10279 \Hy@endcolorlink
10280 \Hy@RestoreSpaceFactor
10281 \else
10282 \begingroup
10283 \hyper@chars
10284 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10285 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
10286 \special{html:</a>}}%
10287 \Hy@endcolorlink
10288 \endgroup
10289 \fi
10290 }

```

Very poor implementation of `\hyper@link` without considering `#1`.

```

10291 \def\hyper@link#1#2#3{%
10292 \Hy@VerboseLinkStart{#1}{#2}%
10293 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
10294 }

10295 \def\hyper@image#1#2{%
10296 \begingroup
10297 \hyper@chars
10298 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10299 \endgroup
10300 }
10301 </hypertex>
10302 <*dviwindo>

```

47.4 dviwindo

[This was developed by David Carlisle]. Within a file `dviwindo` hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable) `Dviwindo` could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the `hypertex` cfg. For `dviwindo`, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by `\baselineskip` high is used.

```

10303 \providecommand*\XR@ext{\dvi}
10304 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
10305 \Hy@WrapperDef\hyper@anchor#1{%

```

```

10306 \Hy@SaveLastskip
10307 \Hy@VerboseAnchor{#1}%
10308 \begingroup
10309 \let\protect=\string
10310 \special{mark: #1}%
10311 \endgroup
10312 \Hy@activeanchortrue
10313 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10314 \Hy@activeanchorfalse
10315 \Hy@RestoreLastskip
10316 }
10317 \Hy@WrapperDef\hyper@anchorstart#1{%
10318 \Hy@SaveLastskip
10319 \Hy@VerboseAnchor{#1}%
10320 \special{mark: #1}%
10321 \Hy@activeanchortrue
10322 }
10323 \def\hyper@anchorend{%
10324 \Hy@activeanchorfalse
10325 \Hy@RestoreLastskip
10326 }
10327 \def\hyper@linkstart#1#2{%
10328 \Hy@VerboseLinkStart{#1}{#2}%
10329 \expandafter\Hy@colorlink\csname @#1color\endcsname
10330 \special{button: %
10331 10000000 %
10332 \number\baselineskip\space
10333 #2%
10334 }%
10335 }
10336 \def\hyper@linkend{%
10337 \Hy@endcolorlink
10338 }
10339 \def\hyper@link#1#2#3{%
10340 \Hy@VerboseLinkStart{#1}{#2}%
10341 \leavevmode
10342 \ifHy@raiselinks
10343 \Hy@SaveSpaceFactor
10344 \Hy@SaveSavedSpaceFactor
10345 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
10346 \Hy@RestoreSavedSpaceFactor
10347 \@linkdim\dp\@tempboxa
10348 \lower\@linkdim\hbox{%
10349 \special{button: %
10350 \number\wd\@tempboxa\space
10351 \number\ht\@tempboxa\space
10352 #2%
10353 }%
10354 \expandafter\Hy@colorlink\csname @#1color\endcsname
10355 \Hy@RestoreSpaceFactor
10356 #3\Hy@xspace@end
10357 \Hy@SaveSpaceFactor
10358 \Hy@endcolorlink
10359 }%
10360 \@linkdim\ht\@tempboxa
10361 \advance\@linkdim by -6.5\p@
10362 \raise\@linkdim\hbox{}}%

```

```

10363 \Hy@RestoreSpaceFactor
10364 \else
10365 \special{button: %
10366 \number\wd\@tempboxa\space
10367 \number\ht\@tempboxa\space
10368 #2%
10369 }%
10370 \expandafter\Hy@colorlink\csname @#1color\endcsname
10371 #3\Hy@xspace@end
10372 \Hy@endcolorlink
10373 \fi
10374 }
10375 \def\hyper@linkurl#1#2{%
10376 \begingroup
10377 \hyper@chars
10378 \leavevmode
10379 \ifHy@raiselinks
10380 \Hy@SaveSpaceFactor
10381 \Hy@SaveSavedSpaceFactor
10382 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10383 \Hy@RestoreSavedSpaceFactor
10384 \@linkdim\dp\@tempboxa
10385 \lower\@linkdim\hbox{%
10386 \special{button: %
10387 \number\wd\@tempboxa\space
10388 \number\ht\@tempboxa\space
10389 launch: \wwwbrowser\space
10390 #2%
10391 }%
10392 \Hy@colorlink\@urlcolor
10393 \Hy@RestoreSpaceFactor
10394 #1\Hy@xspace@end
10395 \Hy@SaveSpaceFactor
10396 \Hy@endcolorlink
10397 }%
10398 \@linkdim\ht\@tempboxa
10399 \advance\@linkdim by -6.5\p@
10400 \raise\@linkdim\hbox{}}%
10401 \Hy@RestoreSpaceFactor
10402 \else
10403 \special{button: %
10404 \number\wd\@tempboxa\space
10405 \number\ht\@tempboxa\space
10406 launch: \wwwbrowser\space
10407 #2%
10408 }%
10409 \Hy@colorlink\@urlcolor
10410 #1\Hy@xspace@end
10411 \Hy@endcolorlink
10412 \fi
10413 \endgroup
10414 }
10415 \def\hyper@linkfile#1#2#3{%
10416 \begingroup
10417 \hyper@chars
10418 \leavevmode
10419 \ifHy@raiselinks

```

```

10420 \Hy@SaveSpaceFactor
10421 \Hy@SaveSavedSpaceFactor
10422 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
10423 \Hy@RestoreSavedSpaceFactor
10424 \@linkdim\dp\@tempboxa
10425 \lower\@linkdim\hbox{%
10426 \special{button: %
10427 \number\wd\@tempboxa\space
10428 \number\ht\@tempboxa\space
10429 #3,%
10430 file: #2%
10431 }%
10432 \Hy@colorlink\@filecolor
10433 \Hy@RestoreSpaceFactor
10434 #1\Hy@xspace@end
10435 \Hy@SaveSpaceFactor
10436 \Hy@endcolorlink
10437 }%
10438 \@linkdim\ht\@tempboxa
10439 \advance\@linkdim by -6.5\p@
10440 \raise\@linkdim\hbox{}%
10441 \Hy@RestoreSpaceFactor
10442 \else
10443 \special{button: %
10444 \number\wd\@tempboxa\space
10445 \number\ht\@tempboxa\space
10446 #3,%
10447 file: #2%
10448 }%
10449 \Hy@colorlink\@filecolor
10450 #1\Hy@xspace@end
10451 \Hy@endcolorlink
10452 \fi
10453 \endgroup
10454 }
10455 \ifx\@pdfproducer\relax
10456 \def\@pdfproducer{dviwindo + Distiller}%
10457 \fi
10458 \HyInfo@AddonUnsupportedtrue
10459 \def\PDF@FinishDoc{%
10460 \Hy@UseMaketitleInfos
10461 \HyInfo@TrappedUnsupported
10462 \special{PDF: Keywords \@pdfkeywords}%
10463 \special{PDF: Title \@pdftitle}%
10464 \special{PDF: Creator \@pdfcreator}%
10465 \ifx\@pdfcreationdate\@empty
10466 \else
10467 \special{PDF: CreationDate \@pdfcreationdate}%
10468 \fi
10469 \ifx\@pdfmoddate\@empty
10470 \else
10471 \special{PDF: ModDate \@pdfmoddate}%
10472 \fi
10473 \special{PDF: Author \@pdfauthor}%
10474 \ifx\@pdfproducer\relax
10475 \else
10476 \special{PDF: Producer \@pdfproducer}%

```

```

10477 \fi
10478 \special{PDF: Subject \@pdfsubject}%
10479 \Hy@DisableOption{pdfauthor}%
10480 \Hy@DisableOption{pdftitle}%
10481 \Hy@DisableOption{pdfsubject}%
10482 \Hy@DisableOption{pdfcreator}%
10483 \Hy@DisableOption{pdfcreationdate}%
10484 \Hy@DisableOption{pdfmoddate}%
10485 \Hy@DisableOption{pdfproducer}%
10486 \Hy@DisableOption{pdfkeywords}%
10487 \Hy@DisableOption{pdftrapped}%
10488 \Hy@DisableOption{pdfinfo}%
10489 }
10490 \def\PDF@SetupDoc{%
10491 \ifx\@baseurl\@empty
10492 \else
10493 \special{PDF: Base \@baseurl}%
10494 \fi
10495 \ifx\@pdfpagescrop\@empty\else
10496 \special{PDF: BBox \@pdfpagescrop}%
10497 \fi
10498 \def\Hy@temp{}%
10499 \ifx\@pdfstartpage\@empty
10500 \else
10501 \ifx\@pdfstartview\@empty
10502 \else
10503 \edef\Hy@temp{%
10504 ,Page=\@pdfstartpage
10505 ,View=\@pdfstartview
10506 }%
10507 \fi
10508 \fi
10509 \edef\Hy@temp{%
10510 \noexpand\pdfmark{%
10511 pdfmark=/DOCVIEW,%
10512 PageMode=/\@pdfpagemode
10513 \Hy@temp
10514 }%
10515 }%
10516 \Hy@temp
10517 \ifx\@pdfpagescrop\@empty
10518 \else
10519 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10520 \fi
10521 \edef\Hy@temp{%
10522 \ifHy@pdftoolbar\else /HideToolbar true\fi
10523 \ifHy@pdfmenubar\else /HideMenubar true\fi
10524 \ifHy@pdfwindowui\else /HideWindowUI true\fi
10525 \ifHy@pdfwindow /FitWindow true\fi
10526 \ifHy@pdfcenterwindow /CenterWindow true\fi
10527 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10528 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10529 \Hy@UseNameKey{Direction}\@pdfdirection
10530 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10531 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10532 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10533 \Hy@UseNameKey{PrintClip}\@pdfprintclip

```



```

10534 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10535 \Hy@UseNameKey{Duplex}\@pdfduplex
10536 \ifx\@pdfpicktraybypdfsize\@empty
10537 \else
10538 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10539 \fi
10540 \ifx\@pdfprintpagerange\@empty
10541 \else
10542 /PrintPageRange[\@pdfprintpagerange]%
10543 \fi
10544 \ifx\@pdfnumcopies\@empty
10545 \else
10546 /NumCopies \@pdfnumcopies
10547 \fi
10548 }%
10549 \pdfmark{pdfmark=/PUT,%
10550 Raw={%
10551 \string{Catalog\string}<<%
10552 \ifx\Hy@temp\@empty
10553 \else
10554 /ViewerPreferences<<\Hy@temp>>%
10555 \fi
10556 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10557 \ifx\@pdflang\relax
10558 \else
10559 /Lang(\@pdflang)%
10560 \fi
10561 >>%
10562 }%
10563 }%
10564 }
10565 </dviwindo>
10566 <*\dvipdfm|xetex>

```

47.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

10567 \providecommand*\XR@ext}{pdf}
10568 \Hy@setbreaklinks{true}
10569 \def\HyPat@ObjRef{%
10570 @[\^ ]+}%
10571 }
10572 \newsavebox{\pdfm@box}
10573 \def\@pdfm@mark#1{\special{pdf:#1}}
10574 \Hy@WrapperDef\@pdfm@dest#1{%
10575 \Hy@SaveLastskip
10576 \Hy@VerboseAnchor{#1}%
10577 \begingroup
10578 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10579 \def\x{XYZ}%
10580 \ifx\x\@pdfview
10581 \def\x{XYZ @xpos @ypos null}%
10582 \else
10583 \def\x{FitH}%
10584 \ifx\x\@pdfview
10585 \def\x{FitH @ypos}%
10586 \else

```

```

10587 \def\x{FitBH}%
10588 \ifx\x\@pdfview
10589 \def\x{FitBH @ypos}%
10590 \else
10591 \def\x{FitV}%
10592 \ifx\x\@pdfview
10593 \def\x{FitV @xpos}%
10594 \else
10595 \def\x{FitBV}%
10596 \ifx\x\@pdfview
10597 \def\x{FitBV @xpos}%
10598 \else
10599 \def\x{Fit}%
10600 \ifx\x\@pdfview
10601 \let\x\@pdfview
10602 \else
10603 \def\x{FitB}%
10604 \ifx\x\@pdfview
10605 \let\x\@pdfview
10606 \else
10607 \def\x{FitR}%
10608 \ifx\x\@pdfview
10609 \Hy@Warning{'pdfview=FitR' is not supported}%
10610 \def\x{XYZ @xpos @ypos null}%
10611 \else
10612 \@onelevel@sanitize\@pdfview
10613 \Hy@Warning{%
10614   Unknown value '\@pdfview' for pdfview%
10615 }%
10616 \def\x{XYZ @xpos @ypos null}%
10617 \fi
10618 \fi
10619 \fi
10620 \fi
10621 \fi
10622 \fi
10623 \fi
10624 \fi
10625 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
10626 \endgroup
10627 \Hy@RestoreLastskip
10628 }
10629 \providecommand*\@pdfview{XYZ}
10630 \providecommand*\@pdfborder{0 0 1}
10631 \providecommand*\@pdfborderstyle{}
10632 \def\hyper@anchor#1{%
10633 \@pdfm@dest{#1}%
10634 }
10635 \def\hyper@anchorstart#1{%
10636 \Hy@activeanchortrue
10637 \@pdfm@dest{#1}%
10638 }
10639 \def\hyper@anchorend{%
10640 \Hy@activeanchorfalse
10641 }
10642 \newcounter{Hy@AnnotLevel}
10643 \ifHy@ocgcolorlinks

```

```

10644 \def\OBJ@OCG@view{@OCG@view}%
10645 \@pdfm@mark{%
10646   obj \OBJ@OCG@view <<%
10647     /Type/OCG%
10648     /Name(View)%
10649     /Usage<<%
10650     /Print<<%
10651     /PrintState/OFF%
10652     >>%
10653     /View<<%
10654     /ViewState/ON%
10655     >>%
10656     >>%
10657     >>%
10658   }%
10659 \@pdfm@mark{close \OBJ@OCG@view}%
10660 \def\OBJ@OCG@print{@OCG@print}%
10661 \@pdfm@mark{%
10662   obj \OBJ@OCG@print <<%
10663     /Type/OCG%
10664     /Name(Print)%
10665     /Usage<<%
10666     /Print<<%
10667     /PrintState/ON%
10668     >>%
10669     /View<<%
10670     /ViewState/OFF%
10671     >>%
10672     >>%
10673     >>%
10674   }%
10675 \@pdfm@mark{close \OBJ@OCG@print}%
10676 \def\OBJ@OCGs{@OCGs}%
10677 \@pdfm@mark{%
10678   obj \OBJ@OCGs [%
10679     \OBJ@OCG@view\space\OBJ@OCG@print
10680   ]%
10681 }%
10682 \@pdfm@mark{close \OBJ@OCGs}%
10683 \@pdfm@mark{%
10684   put @catalog <<%
10685     /OCProperties<<%
10686     /OCGs \OBJ@OCGs
10687     /D<<%
10688     /OFF[\OBJ@OCG@print]%
10689     /AS[%
10690       <<%
10691         /Event/View%
10692         /OCGs \OBJ@OCGs
10693         /Category[/View]%
10694       >>%
10695       <<%
10696         /Event/Print%
10697         /OCGs \OBJ@OCGs
10698         /Category[/Print]%
10699       >>%
10700       <<%

```

```

10701         /Event/Export%
10702         /OCGs \OBJ@OCGs
10703         /Category[/Print]%
10704     >>%
10705     ]%
10706     >>%
10707     >>%
10708     >>%
10709 }%
10710 \AtBeginShipout{%
10711     \setbox\AtBeginShipoutBox=\hbox{%
10712         \copy\AtBeginShipoutBox
10713         \@pdfm@mark{%
10714             put @resources <<%
10715                 /Properties<<%
10716                 /OCView \OBJ@OCG@view
10717                 /OCPrint \OBJ@OCG@print
10718             >>%
10719             >>%
10720         }%
10721     }%
10722 }%
10723 \Hy@AtBeginDocument{%
10724     \def\Hy@colorlink#1{%
10725         \begingroup
10726         \ifHy@ocgcolorlinks
10727             \def\Hy@ocgcolor{#1}%
10728             \setbox0=\hbox\bgroup\color@begingroup
10729         \else
10730             \HyColor@UseColor#1%
10731         \fi
10732     }%
10733     \def\Hy@endcolorlink{%
10734         \ifHy@ocgcolorlinks
10735             \color@endgroup\egroup
10736             \mbox{%
10737                 \@pdfm@mark{content /OC/OCPrint BDC}%
10738                 \rlap{\copy0}%
10739                 \@pdfm@mark{content EMC/OC/OCView BDC}%
10740             \begingroup
10741                 \expandafter\HyColor@UseColor\Hy@ocgcolor
10742                 \box0 %
10743             \endgroup
10744             \@pdfm@mark{content EMC}%
10745         }%
10746         \fi
10747     \endgroup
10748 }%
10749 }%
10750 \else
10751     \Hy@DisableOption{ocgcolorlinks}%
10752 \fi

```

Use primitive counter arithmetic here to avoid amsmath redefining \stepcounter (github issue/13)

```

10753 \def\Hy@BeginAnnot#1{%
10754     \global\advance\c@Hy@AnnotLevel\@ne
10755     \ifnum\c@Hy@AnnotLevel=\@ne

```

```

10756   #1%
10757   \fi
10758 }
10759 \def\Hy@endAnnot{%
10760   \ifnum\value{Hy@AnnotLevel}=\@ne
10761     \Hy@endcolorlink
10762     \@pdfm@mark{eann}%
10763   \fi
10764   \global\advance\c@Hy@AnnotLevel\m@ne
10765 }

10766 \def\Hy@undefinedname{UNDEFINED}
10767 \def\hyper@linkstart#1#2{%
10768   \Hy@VerboseLinkStart{#1}{#2}%
10769   \leavevmode
10770   \Hy@BeginAnnot{%
10771     \protected@edef\Hy@testname{#2}%
10772     \ifx\Hy@testname\@empty
10773       \Hy@Warning{%
10774         Empty destination name,\MessageBreak
10775         using '\Hy@undefinedname'%
10776       }%
10777       \let\Hy@testname\Hy@undefinedname
10778     \else
10779       \Hy@pstringdef\Hy@testname{%
10780         \expandafter\HyperDestNameFilter\expandafter{%
10781           \Hy@testname
10782         }%
10783       }%
10784     \fi
10785     \@pdfm@mark{%
10786       bann<<%
10787       /Type/Annot%
10788       /Subtype/Link%
10789       \ifHy@pdfa /F 4\fi
10790       \Hy@setpdfborder
10791       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
10792       \else
10793         /C[\csname @#1bordercolor\endcsname]%
10794       \fi
10795       /A<<%
10796       /S/GoTo%
10797       /D(\Hy@testname)%
10798       \Hy@href@nextactionraw
10799       >>%
10800     >>%
10801   }%
10802   \expandafter\Hy@colorlink\csname @#1color\endcsname
10803 }%
10804 }
10805 \def\hyper@linkend{\Hy@endAnnot}%
10806 \def\hyper@link#1#2#3{%
10807   \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
10808 }
10809 \def\hyper@linkfile#1#2#3{%
10810   \leavevmode
10811   \Hy@BeginAnnot{%
10812     \def\Hy@pstringF{#2}%

```

```

10813 \Hy@CleanupFile\Hy@pstringF
10814 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
10815 \Hy@pstringdef\Hy@pstringD{#3}%
10816 \Hy@MakeRemoteAction
10817 \@pdfm@mark{%
10818   bann<<%
10819     /Type/Annot%
10820     /Subtype/Link%
10821     \ifHy@pdfa /F 4\fi
10822     \Hy@setpdfborder
10823     \ifx\@filebordercolor\relax
10824     \else
10825       /C[\@filebordercolor]%
10826     \fi
10827     /A<<%
10828     /S/GoToR%
10829     /F(\Hy@pstringF)%
10830     /D%
10831     \ifx\#3\%
10832       [\Hy@href@page\@pdfremotestartview]%
10833     \else
10834       (\Hy@pstringD)%
10835     \fi
10836     \Hy@SetNewWindow
10837     \Hy@href@nextactionraw
10838   >>%
10839   >>%
10840   }%
10841   \Hy@colorlink\@filecolor
10842 }%
10843 #1\Hy@xspace@end
10844 \Hy@endAnnot
10845 }
10846 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
10847   \leavevmode
10848   \Hy@BeginAnnot{%
10849     \Hy@pstringdef\Hy@pstringF{#1}%
10850     \Hy@pstringdef\Hy@pstringP{#3}%
10851     \@pdfm@mark{%
10852       bann<<%
10853         /Type/Annot%
10854         /Subtype/Link%
10855         \ifHy@pdfa /F 4\fi
10856         \Hy@setpdfborder
10857         \ifx\@runbordercolor\relax
10858         \else
10859           /C[\@runbordercolor]%
10860         \fi
10861         /A<<%
10862         /F(\Hy@pstringF)%
10863         /S/Launch%
10864         \Hy@SetNewWindow
10865         \ifx\#3\%
10866         \else
10867           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10868         \fi
10869         \Hy@href@nextactionraw

```

```

10870     >>%
10871     >>%
10872     }%
10873     \Hy@colorlink\@runcolor
10874     }%
10875     #2\Hy@xspace@end
10876     \Hy@EndAnnot
10877 }
10878 \def\hyper@linkurl#1#2{%
10879     \leavevmode
10880     \Hy@BeginAnnot{%
10881         \Hy@pstringdef\Hy@pstringURI{#2}%
10882         \@pdfm@mark{%
10883             bann<<%
10884             /Type/Annot%
10885             /Subtype/Link%
10886             \ifHy@pdfa /F 4\fi
10887             \Hy@setpdfborder
10888             \ifx\@urlbordercolor\relax
10889                 \else
10890                 /C[\@urlbordercolor]%
10891             \fi
10892             /A<<%
10893             /S/URI%
10894             /URI(\Hy@pstringURI)%
10895             \ifHy@href@ismap
10896             /IsMap true%
10897             \fi
10898             \Hy@href@nextactionraw
10899         >>%
10900         >>%
10901         }%
10902         \Hy@colorlink\@urlcolor
10903     }%
10904     #1\Hy@xspace@end
10905     \Hy@EndAnnot
10906 }
10907 \def\Acrobatmenu#1#2{%
10908     \Hy@Acrobatmenu{#1}{#2}{%
10909         \Hy@BeginAnnot{%
10910             \EdefEscapeName\Hy@temp@menu{#1}%
10911             \@pdfm@mark{%
10912                 bann<<%
10913                 /Type/Annot%
10914                 /Subtype/Link%
10915                 \ifHy@pdfa /F 4\fi
10916                 \Hy@setpdfborder
10917                 \ifx\@menubordercolor\relax
10918                     \else
10919                     /C[\@menubordercolor]%
10920                 \fi
10921                 /A<<%
10922                 /S/Named%
10923                 /N/\Hy@temp@menu
10924                 \Hy@href@nextactionraw
10925             >>%
10926             >>%

```

```

10927 }%
10928 \Hy@colorlink\@menucolor
10929 }%
10930 #2\Hy@xspace@end
10931 \Hy@endAnnot
10932 }%
10933 }
10934 \ifx\@pdfproducer\relax
10935 \def\@pdfproducer{dvipdfm}%

```

Detect XeTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

10936 \begingroup\expandafter\expandafter\expandafter\endgroup
10937 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10938 \else
10939 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10940 \fi
10941 \fi
10942 \def\PDF@FinishDoc{%
10943 \Hy@UseMaketitleInfos
10944 \HyInfo@GenerateAddons
10945 \@pdfm@mark{%
10946 docinfo<<%
10947 /Title(\@pdftitle)%
10948 /Subject(\@pdfsubject)%
10949 /Creator(\@pdfcreator)%
10950 \ifx\@pdfcreationdate\@empty
10951 \else
10952 /CreationDate(\@pdfcreationdate)%
10953 \fi
10954 \ifx\@pdfmoddate\@empty
10955 \else
10956 /ModDate(\@pdfmoddate)%
10957 \fi
10958 /Author(\@pdfauthor)%
10959 \ifx\@pdfproducer\relax
10960 \else
10961 /Producer(\@pdfproducer)%
10962 \fi
10963 /Keywords(\@pdfkeywords)%
10964 \ifx\@pdftrapped\@empty
10965 \else
10966 /Trapped/\@pdftrapped
10967 \fi
10968 \HyInfo@Addons
10969 >>%
10970 }%
10971 \Hy@DisableOption{pdfauthor}%
10972 \Hy@DisableOption{pdftitle}%
10973 \Hy@DisableOption{pdfsubject}%
10974 \Hy@DisableOption{pdfcreator}%
10975 \Hy@DisableOption{pdfcreationdate}%
10976 \Hy@DisableOption{pdfmoddate}%
10977 \Hy@DisableOption{pdfproducer}%
10978 \Hy@DisableOption{pdfkeywords}%
10979 \Hy@DisableOption{pdftrapped}%
10980 \Hy@DisableOption{pdfinfo}%
10981 }

```



```

10982 \def\PDF@SetupDoc{%
10983   \edef\Hy@temp{%
10984     \ifHy@pdftoolbar\else /HideToolbar true\fi
10985     \ifHy@pdfmenubar\else /HideMenubar true\fi
10986     \ifHy@pdfwindowui\else /HideWindowUI true\fi
10987     \ifHy@pdfwindow /FitWindow true\fi
10988     \ifHy@pdfcenterwindow /CenterWindow true\fi
10989     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
10990     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10991     \Hy@UseNameKey{Direction}\@pdfdirection
10992     \Hy@UseNameKey{ViewArea}\@pdfviewarea
10993     \Hy@UseNameKey{ViewClip}\@pdfviewclip
10994     \Hy@UseNameKey{PrintArea}\@pdfprintarea
10995     \Hy@UseNameKey{PrintClip}\@pdfprintclip
10996     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10997     \Hy@UseNameKey{Duplex}\@pdfduplex
10998     \ifx\@pdfpicktraybypdfsize\@empty
10999     \else
11000       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11001     \fi
11002     \ifx\@pdfprintpagerange\@empty
11003     \else
11004       /PrintPageRange[\@pdfprintpagerange]%
11005     \fi
11006     \ifx\@pdfnumcopies\@empty
11007     \else
11008       /NumCopies \@pdfnumcopies
11009     \fi
11010   }%
11011   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11012   \@pdfm@mark{%
11013     docview<<%
11014     \ifx\@pdfstartpage\@empty
11015     \else
11016     \ifx\@pdfstartview\@empty
11017     \else
11018       /OpenAction[@page\@pdfstartpage\@pdfstartview]%
11019     \fi
11020     \fi
11021     \ifx\@baseurl\@empty
11022     \else
11023       /URI<</Base(\Hy@pstringB)>>%
11024     \fi
11025     /PageMode/\@pdfpagemode
11026     \ifx\Hy@temp\@empty
11027     \else
11028       /ViewerPreferences<<\Hy@temp>>%
11029     \fi
11030     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11031     \ifx\@pdflang\relax
11032     \else
11033       /Lang(\@pdflang)%
11034     \fi
11035   >>%
11036 }%
11037 \ifx\@pdfpagescrop\@empty
11038 \else

```

```

11039 \pdfmark{put @pages <</CropBox[\@pdfpagescrop]>>}}%
11040 \fi
11041 }
11042 </dvipdfm | xetex>
11043 < *dvipdfm | xetex>

```

\hyper@pagetransition

```

11044 \def\hyper@pagetransition{%
11045 \ifx\@pdfpagetransition\relax
11046 \else
11047 \ifx\@pdfpagetransition\empty
11048 \else
11049 \special{pdf:put @thispage %
11050 <</Trans<</S/\@pdfpagetransition>>>>%
11051 }%
11052 \fi
11053 \fi
11054 }

```

\hyper@pageduration

```

11055 \def\hyper@pageduration{%
11056 \ifx\@pdfpageduration\relax
11057 \else
11058 \ifx\@pdfpageduration\empty
11059 \else
11060 \special{pdf:put @thispage %
11061 <</Dur \@pdfpageduration>>>>%
11062 }%
11063 \fi
11064 \fi
11065 }

```

\hyper@pagehidden

```

11066 \def\hyper@pagehidden{%
11067 \ifHy@useHidKey
11068 \special{pdf:put @thispage %
11069 <</Hid \ifHy@pdfpagehidden true\else false\fi>>>>%
11070 }%
11071 \fi
11072 }

11073 \g@addto@macro\Hy@EveryPageBoxHook{%
11074 \hyper@pagetransition
11075 \hyper@pageduration
11076 \hyper@pagehidden
11077 }

11078 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method \pdfpagewidth and \pdfpageheight for setting the paper size.

```

11079 < *dvipdfm>
11080 \AtBeginShipoutFirst{%
11081 \ifHy@setpagesize
11082 \begingroup
11083 \@ifundefined{stockwidth}{%
11084 \ifdim\paperwidth>\z@
11085 \ifdim\paperheight>\z@

```

```

11086         \special{papersize=\the\paperwidth,\the\paperheight}%
11087     \fi
11088 \fi
11089 }{%
11090     \ifdim\stockwidth>\z@
11091     \ifdim\stockheight>\z@
11092         \special{papersize=\the\stockwidth,\the\stockheight}%
11093     \fi
11094 \fi
11095 }%
11096 \endgroup
11097 \fi
11098 \Hy@DisableOption{setpagesize}%
11099 }
11100 </dvipdfm>

```

47.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

11101 <*vtexhtml>
11102 \providecommand*\XR@ext\{htm}
11103 \RequirePackage{vtexhtml}
11104 \newif\if@Localurl
11105 \let\PDF@FinishDoc\ltx@empty
11106 \def\PDF@SetupDoc{%
11107     \ifx\@baseurl\@empty
11108     \else
11109         \special{!direct <base href="\@baseurl">}%
11110     \fi
11111 }
11112 \def\@urltype{url}
11113 \def\hyper@link#1#2#3{%
11114     \Hy@VerboseLinkStart{#1}{#2}%
11115     \leavevmode
11116     \special{!direct <a href=%
11117         \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
11118     #3\Hy@xspace@end
11119     \special{!direct </a>}%
11120 }
11121 \def\hyper@linkurl#1#2{%
11122     \begingroup
11123     \hyper@chars
11124     \leavevmode
11125     \MathBSuppress=1\relax
11126     \special{!direct <a href=%
11127         \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
11128     #1\Hy@xspace@end
11129     \MathBSuppress=0\relax
11130     \special{!direct </a>}%
11131 \endgroup
11132 }
11133 \def\hyper@linkfile#1#2#3{%
11134     \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11135 }
11136 \def\hyper@linkstart#1#2{%
11137     \Hy@VerboseLinkStart{#1}{#2}%

```

```

11138 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
11139 \@Localurltrue
11140 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
11141 \else
11142 \@Localurlfalse
11143 \begingroup
11144 \hyper@chars
11145 \special{!aref \HyperDestNameFilter{#2}}%
11146 \endgroup
11147 \fi
11148 }
11149 \def\hyper@linkend{%
11150 \if@Localurl
11151 \special{!endaref}%
11152 \else
11153 \special{!direct </a>}%
11154 \fi
11155 }
11156 \Hy@WrapperDef\hyper@anchorstart#1{%
11157 \Hy@SaveLastskip
11158 \Hy@VerboseAnchor{#1}%
11159 \begingroup
11160 \hyper@chars
11161 \special{!aname #1}%
11162 \special{!direct <a name=%
11163 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11164 \endgroup
11165 \Hy@activeanchortrue
11166 }
11167 \def\hyper@anchorend{%
11168 \special{!direct </a>}%
11169 \Hy@activeanchorfalse
11170 \Hy@RestoreLastskip
11171 }
11172 \Hy@WrapperDef\hyper@anchor#1{%
11173 \Hy@SaveLastskip
11174 \Hy@VerboseAnchor{#1}%
11175 \begingroup
11176 \let\protect=\string
11177 \hyper@chars
11178 \leavevmode
11179 \special{!aname #1}%
11180 \special{!direct <a name=%
11181 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11182 \endgroup
11183 \Hy@activeanchortrue
11184 \bgroup\anchor@spot\egroup
11185 \special{!direct </a>}%
11186 \Hy@activeanchorfalse
11187 \Hy@RestoreLastskip
11188 }
11189 \def\@Form[#1]{%
11190 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11191 }
11192 \let\@endForm\ltx@empty
11193 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11194 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%

```

```

11195 }
11196 \def\@TextField[#1]#2{% parameters, label
11197 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
11198 }
11199 \def\@CheckBox[#1]#2{% parameters, label
11200 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
11201 }
11202 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11203 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
11204 }
11205 \def\@PushButton[#1]#2{% parameters, label
11206 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
11207 }
11208 \def\@Reset[#1]#2{%
11209 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11210 }
11211 \def\@Submit[#1]#2{%
11212 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
11213 }
11214 \</vtexhtml>
11215 \<*vtex>

```

VTeX version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

11216 \ifx\mediaheight\@undefined
11217 \else
11218 \ifx\mediaheight\relax
11219 \else
11220 \ifHy@setpagesize
11221 \providecommand*\VTeXInitMediaSize{%
11222 \ltx@ifundefined{stockwidth}{%
11223 \ifdim\paperheight>0pt %
11224 \setlength\mediaheight\paperheight
11225 \fi
11226 \ifdim\paperheight>0pt %
11227 \setlength\mediawidth\paperwidth
11228 \fi
11229 }{%
11230 \ifdim\stockheight>0pt %
11231 \setlength\mediaheight\stockheight
11232 \fi
11233 \ifdim\stockwidth>0pt %
11234 \setlength\mediawidth\stockwidth
11235 \fi
11236 }%
11237 }%
11238 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
11239 \fi
11240 \Hy@DisableOption{setpagesize}%
11241 \fi
11242 \fi

```

Older versions of VTeX require `xyz` in lower case.

```

11243 \providecommand*\@pdfview{xyz}
11244 \providecommand*\@pdfborder{0 0 1}
11245 \providecommand*\@pdfborderstyle{}
11246 \let\CurrentBorderColor\@linkbordercolor

```

```

11247 \Hy@WrapperDef\hyper@anchor#1{%
11248   \Hy@SaveLastskip
11249   \Hy@VerboseAnchor{#1}%
11250   \begingroup
11251     \let\protect=\string
11252     \hyper@chars
11253     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11254   \endgroup
11255   \Hy@activeanchortrue
11256   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11257   \Hy@activeanchorfalse
11258   \Hy@RestoreLastskip
11259 }
11260 \Hy@WrapperDef\hyper@anchorstart#1{%
11261   \Hy@SaveLastskip
11262   \Hy@VerboseAnchor{#1}%
11263   \begingroup
11264     \hyper@chars
11265     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
11266   \endgroup
11267   \Hy@activeanchortrue
11268 }
11269 \def\hyper@anchorend{%
11270   \Hy@activeanchorfalse
11271   \Hy@RestoreLastskip
11272 }
11273 \def\@urltype{url}
11274 \def\Hy@undefinedname{UNDEFINED}
11275 \def\hyper@linkstart#1#2{%
11276   \Hy@VerboseLinkStart{#1}{#2}%
11277   \Hy@pstringdef\Hy@pstringURI{#2}%
11278   \expandafter\Hy@colorlink\csname @#1color\endcsname
11279   \ltx@ifundefined{#1bordercolor}{%
11280     \let\CurrentBorderColor\relax
11281   }{%
11282     \edef\CurrentBorderColor{%
11283       \csname @#1bordercolor\endcsname
11284     }%
11285   }%
11286   \def\Hy@tempa{#1}%
11287   \ifx\Hy@tempa\@urltype
11288     \special{!%
11289       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11290       \ifHy@href@ismap
11291         /IsMap true%
11292       \fi
11293       \Hy@href@nextactionraw
11294       >,%
11295       a=<%
11296       \ifHy@pdfa /F 4\fi
11297       \Hy@setpdfborder
11298       \ifx\CurrentBorderColor\relax
11299         \else
11300           /C [\CurrentBorderColor]%
11301         \fi
11302       >%
11303     }%

```

```

11304 \else
11305   \protected@edef\Hy@testname{#2}%
11306   \ifx\Hy@testname\@empty
11307     \Hy@Warning{%
11308       Empty destination name,\MessageBreak
11309       using '\Hy@undefinedname'%
11310     }%
11311     \let\Hy@testname\Hy@undefinedname
11312   \fi
11313   \special{!%
11314     aref \expandafter\HyperDestNameFilter
11315     \expandafter{\Hy@testname};%
11316     a=<%
11317     \ifHy@pdfa /F 4\fi
11318     \Hy@setpdfborder
11319     \ifx\CurrentBorderColor\relax
11320       \else
11321       /C [\CurrentBorderColor]%
11322     \fi
11323     >%
11324   }%
11325 \fi
11326 }
11327 \def\hyper@linkend{%
11328   \special{!endaref}%
11329   \Hy@endcolorlink
11330 }
11331 \def\hyper@linkfile#1#2#3{%
11332   \leavevmode
11333   \def\Hy@pstringF{#2}%
11334   \Hy@CleanupFile\Hy@pstringF
11335   \special{!%
11336     aref <%
11337     \ifnum\Hy@VTeXversion>753 \ifHy@pdfnewwindow n\fi\fi
11338     f=\Hy@pstringF>#3;%
11339     a=<%
11340     \ifHy@pdfa /F 4\fi
11341     \Hy@setpdfborder
11342     \ifx\@filebordercolor\relax
11343       \else
11344       /C [\@filebordercolor]%
11345     \fi
11346     >%
11347   }%
11348   \Hy@colorlink\@filecolor
11349   #1\Hy@xspace@end
11350   \Hy@endcolorlink
11351   \special{!endaref}%
11352 }
11353 \def\hyper@linkurl#1#2{%
11354   \begingroup
11355   \Hy@pstringdef\Hy@pstringURI{#2}%
11356   \hyper@chars
11357   \leavevmode
11358   \special{!%
11359     aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
11360     \ifHy@href@ismap

```

```

11361      /IsMap true%
11362      \fi
11363      \Hy@href@nextactionraw
11364      >;%
11365      a=<%
11366      \ifHy@pdfa /F 4\fi
11367      \Hy@setpdfborder
11368      \ifx\@urlbordercolor\relax
11369      \else
11370      /C [\@urlbordercolor]%
11371      \fi
11372      >%
11373      }%
11374      \Hy@colorlink\@urlcolor
11375      #1\Hy@xspace@end
11376      \Hy@endcolorlink
11377      \special{!endaref}%
11378      \endgroup
11379      }
11380      \def\hyper@link#1#2#3{%
11381      \Hy@VerboseLinkStart{#1}{#2}%
11382      \ltx@ifundefined{#1bordercolor}{%
11383      \let\CurrentBorderColor\relax
11384      }{%
11385      \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
11386      }%
11387      \leavevmode
11388      \protected@edef\Hy@testname{#2}%
11389      \ifx\Hy@testname\@empty
11390      \Hy@Warning{%
11391      Empty destination name,\MessageBreak
11392      using '\Hy@undefinedname'%
11393      }%
11394      \let\Hy@testname\Hy@undefinedname
11395      \fi
11396      \special{!%
11397      aref \expandafter\HyperDestNameFilter
11398      \expandafter{\Hy@testname};%
11399      a=<%
11400      \ifHy@pdfa /F 4\fi
11401      \Hy@setpdfborder
11402      \ifx\CurrentBorderColor\relax
11403      \else
11404      /C [\CurrentBorderColor]%
11405      \fi
11406      >%
11407      }%
11408      \expandafter
11409      \Hy@colorlink\csname @#1color\endcsname
11410      #3\Hy@xspace@end
11411      \Hy@endcolorlink
11412      \special{!endaref}%
11413      }
11414      \def\hyper@image#1#2{%
11415      \hyper@linkurl{#2}{#1}%
11416      }
11417      \def\@hyper@launch run:#1\#2#3{%

```



```

11418 \Hy@pstringdef\Hy@pstringF{#1}%
11419 \Hy@pstringdef\Hy@pstringP{#3}%
11420 \leavevmode
11421 \special{!aref %
11422   <u=%
11423     /Type/Action%
11424     /S/Launch%
11425     /F(\Hy@pstringF)%
11426     \Hy@SetNewWindow
11427     \ifx\#3\%
11428     \else
11429     /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
11430     \fi
11431     \Hy@href@nextactionraw
11432   >:%
11433   a=<%
11434     \ifHy@pdfa /F 4\fi
11435     \Hy@setpdfborder
11436     \ifx\@runbordercolor\relax
11437     \else
11438     /C[\@runbordercolor]%
11439     \fi
11440   >%
11441 }%
11442 \Hy@colorlink\@runcolor
11443   #2\Hy@xspace@end
11444 \Hy@endcolorlink
11445 \special{!endaref}%
11446 }
11447 \def\Acrobatmenu#1#2{%
11448   \EdefEscapeName\Hy@temp@menu{#1}%
11449   \Hy@Acrobatmenu{#1}{#2}{%
11450     \special{!%
11451       aref <u=/S /Named /N /\Hy@temp@menu>;%
11452       a=<%
11453         \ifHy@pdfa /F 4\fi
11454         \Hy@setpdfborder
11455         \ifx\@menubordercolor\relax
11456         \else
11457         /C[\@menubordercolor]%
11458         \fi
11459       >%
11460     }%
11461     \Hy@colorlink\@menucolor
11462     #2\Hy@xspace@end
11463     \Hy@endcolorlink
11464     \special{!endaref}%
11465   }%
11466 }

```

The following code (transition effects) is made by Alex Kostin.
The code below makes sense for VTeX 7.02 or later.
Please never use \@ifundefined{VTeXversion}{..}{..} *globally*.

```

11467 \ifnum\Hy@VTeXversion<702 %
11468 \else
11469   \def\hyper@pagetransition{%
11470     \ifx\@pdfpagetransition\relax
11471     \else

```

```
11472 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```
11473 \else
```

```
11474 \hvtex@parse@trans\@pdfpagetransition
```

```
11475 \fi
```

```
11476 \fi
```

```
11477 }%
```

I have to write an “honest” parser to convert raw PDF code into VT_{EX} \special.
(AVK)

Syntax of VT_{EX} \special{!trans <transition_effect>}:

```
<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                      <Dissolve_effect> | <Glitter_effect> |
                      <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>
```

Transition codes:

```
11478 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
11479 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
11480 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
11481 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
11482 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
11483 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
11484 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
11485 \def\hvtex@par@dimension{/Dm}%
11486 \def\hvtex@par@direction{/Di}%
11487 \def\hvtex@par@duration{/D}%
11488 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
11489 \def\hvtex@gettoken{%
11490 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
11491 }%
```

Notice that tokens in the input buffer must be space delimited.

```
11492 \def\hvtex@gettoken@#1 #2\@nil{%
11493 \edef\hvtex@token{#1}%
11494 \edef\hvtex@buffer{#2}%
11495 }%
11496 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
11497 \let\hvtex@trans@code\@empty
11498 \let\hvtex@param@dimension\@empty
```

```

11499 \let\hvtex@param@direction\@empty
11500 \let\hvtex@param@duration\@empty
11501 \let\hvtex@param@motion\@empty
11502 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

11503 \hvtex@gettoken
11504 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

11505 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

11506 \else
11507 \hvtex@gettoken
11508 \fi
11509 \fi
11510 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

11511 \hvtex@trans@params
11512 }%

```

Reentrant macro to parse optional parameters.

```

11513 \def\hvtex@trans@params{%
11514 \ifx\hvtex@buffer\@empty
11515 \else
11516 \hvtex@gettoken
11517 \let\hvtex@trans@par\hvtex@token
11518 \ifx\hvtex@buffer\@empty
11519 \else
11520 \hvtex@gettoken
11521 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_TE_X special takes it in milliseconds.

```

11522 \let\hvtex@param@duration\hvtex@token
11523 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

11524 \expandafter\edef\expandafter\hvtex@param@motion
11525 \expandafter{\expandafter\@gobble\hvtex@token}%
11526 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

11527 \expandafter\edef\expandafter\hvtex@param@dimension
11528 \expandafter{\expandafter\@gobble\hvtex@token}%
11529 \else \ifx\hvtex@trans@par\hvtex@par@direction

```

Valid values for /Di are 0, 270, 315 (the Glitter effect) or 0, 90, 180, 270 (the Wipe effect).

```

11530 \let\hvtex@param@direction\hvtex@token
11531 \fi\fi\fi\fi
11532 \fi
11533 \fi
11534 \ifx\hvtex@buffer\@empty
11535 \let\next\hvtex@produce@trans
11536 \else
11537 \let\next\hvtex@trans@params
11538 \fi
11539 \next
11540 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

11541 \def\hvtex@produce@trans{%
11542 \let\vtex@trans@special\@empty
11543 \if S\hvtex@trans@code
11544 \edef\vtex@trans@special{\hvtex@trans@code
11545 \hvtex@param@dimension\hvtex@param@motion}%
11546 \else\if B\hvtex@trans@code
11547 \edef\vtex@trans@special{%
11548 \hvtex@trans@code\hvtex@param@dimension
11549 }%
11550 \else\if X\hvtex@trans@code
11551 \edef\vtex@trans@special{%
11552 \hvtex@trans@code\hvtex@param@motion
11553 }%
11554 \else\if W\hvtex@trans@code
11555 \edef\vtex@trans@special{%
11556 \hvtex@trans@code\hvtex@param@direction
11557 }%
11558 \else\if D\hvtex@trans@code
11559 \let\vtex@trans@special\hvtex@trans@code
11560 \else\if R\hvtex@trans@code
11561 \let\vtex@trans@special\hvtex@trans@code
11562 \else\if G\hvtex@trans@code
11563 \edef\vtex@trans@special{%
11564 \hvtex@trans@code\hvtex@param@direction
11565 }%
11566 \fi\fi\fi\fi\fi\fi
11567 \ifx\vtex@trans@special\@empty
11568 \else
11569 \ifx\hvtex@param@duration\@empty
11570 \else
11571 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

11572 \multiply\dimen@\@m
11573 \edef\vtex@trans@special{%
11574 \vtex@trans@special,\strip@pt\dimen@
11575 }%
11576 \fi

```

And all the mess is just for this.

```

11577 \special{!trans \vtex@trans@special}%
11578 \fi
11579 }%

11580 \def\hyper@pageduration{%
11581 \ifx\@pdfpageduration\relax
11582 \else
11583 \ifx\@pdfpageduration\@empty
11584 \special{!duration-}%
11585 \else
11586 \special{!duration \@pdfpageduration}%
11587 \fi
11588 \fi
11589 }%
11590 \def\hyper@pagehidden{%
11591 \ifHy@useHidKey

```

```

11592     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
11593   \fi
11594 }%
11595 \g@addto@macro\Hy@EveryPageBoxHook{%
11596   \hyper@pagetransition
11597   \hyper@pageduration
11598   \hyper@pagehidden
11599 }%
11600 \fi

```

Caution: In opposite to the other drivers, the argument of `\special{!onopen #1}` is a reference name. The VTeX's postscript mode will work with a version higher than 7.0x.

The command `\VTeXOS` is defined since version 7.45. Magic values encode the operating system:

- 1: WinTel
- 2: Linux
- 3: OS/2
- 4: MacOS
- 5: MacOS/X

```

11601 \ifx\@pdfproducer\relax
11602   \def\@pdfproducer{VTeX}%
11603   \ifnum\Hy@VTeXversion>\z@
11604     \count@\VTeXversion
11605     \divide\count@ 100 %
11606     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
11607     \multiply\count@ -100 %
11608     \advance\count@\VTeXversion
11609     \edef\@pdfproducer{%
11610       \@pdfproducer
11611       .\ifnum\count@<10 0\fi\the\count@
11612       \ifx\VTeXOS\@undefined\else
11613         \ifnum\VTeXOS>0 %
11614           \ifnum\VTeXOS<6 %
11615             \space(
11616             \ifcase\VTeXOS
11617             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
11618             \fi
11619           )%
11620         \fi
11621       \fi
11622     \fi
11623     ,\space
11624     \ifnum\OpMode=\@ne PDF\else PS\fi
11625     \space backend%
11626     \ifx\gexmode\@undefined\else
11627       \ifnum\gexmode>\z@\space with GeX\fi
11628     \fi
11629   }%
11630 \fi
11631 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<<.>>> (yuck; no choice).

```

11632 \def\PDF@SetupDoc{%
11633   \ifx\@pdfpagescrop\@empty
11634   \else
11635     \special{!pdfinfo b=<\@pdfpagescrop>}%
11636   \fi
11637   \ifx\@pdfstartpage\@empty
11638   \else
11639     \ifx\@pdfstartview\@empty
11640     \else
11641       \special{!onopen Page\@pdfstartpage}%
11642     \fi
11643   \fi
11644   \special{!pdfinfo p=</\@pdfpagemode>}%
11645   \ifx\@baseurl\@empty
11646   \else
11647     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
11648   \fi
11649   \special{!pdfinfo v=<<<%
11650     \ifHy@pdftoolbar\else /HideToolbar true\fi
11651     \ifHy@pdfmenubar\else /HideMenubar true\fi
11652     \ifHy@pdfwindowui\else /HideWindowUI true\fi
11653     \ifHy@pdffitwindow /FitWindow true\fi
11654     \ifHy@pdfcenterwindow /CenterWindow true\fi
11655     \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
11656     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11657     \Hy@UseNameKey{Direction}\@pdfdirection
11658     \Hy@UseNameKey{ViewArea}\@pdfviewarea
11659     \Hy@UseNameKey{ViewClip}\@pdfviewclip
11660     \Hy@UseNameKey{PrintArea}\@pdfprintarea
11661     \Hy@UseNameKey{PrintClip}\@pdfprintclip
11662     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11663     \Hy@UseNameKey{Duplex}\@pdfduplex
11664     \ifx\@pdfpicktraybypdfsize\@empty
11665     \else
11666       /PickTrayByPDFSize \@pdfpicktraybypdfsize
11667     \fi
11668     \ifx\@pdfprintpagerange\@empty
11669     \else
11670       /PrintPageRange[\@pdfprintpagerange]%
11671     \fi
11672     \ifx\@pdfnumcopies\@empty
11673     \else
11674       /NumCopies \@pdfnumcopies

```

```

11675 \fi
11676 >>>}%
11677 \ifx\@pdfpagelayout\@empty
11678 \else
11679 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
11680 \fi
11681 }%
11682 \HyInfo@AddonUnsupportedtrue
11683 \define@key{Hyp}{pdfcreationdate}{%
11684 \Hy@Warning{%
11685 VTeX does not support pdfcreationdate.\MessageBreak
11686 Therefore its setting is ignored%
11687 }%
11688 }
11689 \define@key{Hyp}{pdfmoddate}{%
11690 \Hy@Warning{%
11691 VTeX does not support pdfmoddate.\MessageBreak
11692 Therefore its setting is ignored%
11693 }%
11694 }
11695 \def\PDF@FinishDoc{%
11696 \Hy@UseMaketitleInfos
11697 \HyInfo@TrappedUnsupported
11698 \special{!pdfinfo a=<\@pdfauthor>}%
11699 \special{!pdfinfo t=<\@pdftitle>}%
11700 \special{!pdfinfo s=<\@pdfsubject>}%
11701 \special{!pdfinfo c=<\@pdfcreator>}%
11702 \ifx\@pdfproducer\relax
11703 \else
11704 \special{!pdfinfo r=<\@pdfproducer>}%
11705 \fi
11706 \special{!pdfinfo k=<\@pdfkeywords>}%
11707 \Hy@DisableOption{pdfauthor}%
11708 \Hy@DisableOption{pdftitle}%
11709 \Hy@DisableOption{pdfsubject}%
11710 \Hy@DisableOption{pdfcreator}%
11711 \Hy@DisableOption{pdfcreationdate}%
11712 \Hy@DisableOption{pdfmoddate}%
11713 \Hy@DisableOption{pdfproducer}%
11714 \Hy@DisableOption{pdfkeywords}%
11715 \Hy@DisableOption{pdftrapped}%
11716 \Hy@DisableOption{pdfinfo}%
11717 }
11718 </vtex>

```

47.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

11719 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
11720 <package>\providecommand*{\Hy@DistillerDestFix}{%
11721 <*pdfmark | dviwindo>
11722 \def\Hy@DistillerDestFix{%
11723 \begingroup
11724 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

11725 \ifnum \@ifundefined{OpMode}{0}{%
11726 \ifundefined{gexmode}{0}{%
11727 \ifnum\gexmode>0 \OpMode\else 0\fi
11728 }>1 %
11729 \def\x##1{%
11730 \immediate\special{!=##1}%
11731 }%
11732 \fi
11733 \x{%
11734 /product where{%
11735 pop %
11736 product(Distiller)search{%
11737 pop pop pop %
11738 version(.)search{%
11739 exch pop exch pop%
11740 (3011)eq{%
11741 gsave %
11742 newpath 0 0 moveto closepath clip%
11743 /Courier findfont 10 scalefont setfont %
11744 72 72 moveto(.)show %
11745 grestore%
11746 }if%
11747 }{pop}ifelse%
11748 }{pop}ifelse%
11749 }if%
11750 }%
11751 \endgroup
11752 }
11753 </pdfmark | dviwindo>

```

47.8 Direct pdfmark support

Drivers that load pdfmark.def have to provide the correct macro definitions of

```

\@pdfproducer for document information
\literalps@out PostScript output
\headerps@out PostScript output that goes in the header area

```

and the correct definitions of the following PostScript procedures:

```

H.S      start of anchor, link or rect
#1 H.A   end of anchor, argument=baselineskip in pt
#1 H.L   end of link, argument=baselineskip in pt
H.R      end of rect
H.B      raw rect code

```

```

11754 <*pdfmark>
11755 \Hy@breaklinks@unsupported
11756 \def\HyPat@ObjRef{%

```



```

11757 \[{}+}%
11758 }
11759 \Hy@WrapperDef\hyper@anchor#1{%
11760 \Hy@SaveLastskip
11761 \Hy@VerboseAnchor{#1}%
11762 \begingroup
11763 \pdfmark[\anchor@spot]{%
11764 pdfmark=/DEST,%
11765 linktype=anchor,%
11766 View=/\@pdfview \@pdfviewparams,%
11767 DestAnchor={#1}%
11768 }%
11769 \endgroup
11770 \Hy@RestoreLastskip
11771 }
11772 \ltx@ifundefined{hyper@anchorstart}{\endinput}
11773 \Hy@WrapperDef\hyper@anchorstart#1{%
11774 \Hy@SaveLastskip
11775 \Hy@VerboseAnchor{#1}%
11776 \literalps@out{H.S}%
11777 \Hy@AllowHyphens
11778 \xdef\hyper@currentanchor{#1}%
11779 \Hy@activeanchortrue
11780 }
11781 \def\hyper@anchorend{%
11782 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
11783 \pdfmark{%
11784 pdfmark=/DEST,%
11785 linktype=anchor,%
11786 View=/\@pdfview \@pdfviewparams,%
11787 DestAnchor=\hyper@currentanchor,%
11788 }%
11789 \Hy@activeanchorfalse
11790 \Hy@RestoreLastskip
11791 }
11792 \def\hyper@linkstart#1#2{%
11793 \Hy@VerboseLinkStart{#1}{#2}%
11794 \ifHy@breaklinks
11795 \else
11796 \leavevmode
11797 \ifmmode
11798 \def\Hy@LinkMath{$}%
11799 \else
11800 \let\Hy@LinkMath\ltx@empty
11801 \fi
11802 \Hy@SaveSpaceFactor
11803 \hbox\bgroup
11804 \Hy@RestoreSpaceFactor
11805 \Hy@LinkMath
11806 \fi
11807 \expandafter\Hy@colorlink\csname @#1color\endcsname
11808 \literalps@out{H.S}%
11809 \Hy@AllowHyphens
11810 \xdef\hyper@currentanchor{#2}%
11811 \gdef\hyper@currentlinktype{#1}%
11812 }
11813 \def\hyper@linkend{%

```

```

11814 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
11815 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
11816   \let\Hy@tempcolor\relax
11817 }{%
11818   \edef\Hy@tempcolor{%
11819     \csname @\hyper@currentlinktype bordercolor\endcsname
11820   }%
11821 }%
11822 \pdfmark{%
11823   pdfmark=/ANN,%
11824   linktype=link,%
11825   Subtype=/Link,%
11826   PDFAFlags=4,%
11827   Dest=\hyper@currentanchor,%
11828   AcroHighlight=\@pdfhighlight,%
11829   Border=\@pdfborder,%
11830   BorderStyle=\@pdfborderstyle,%
11831   Color=\Hy@tempcolor,%
11832   Raw=H.B%
11833 }%
11834 \Hy@endcolorlink
11835 \ifHy@breaklinks
11836 \else
11837   \Hy@LinkMath
11838   \Hy@SaveSpaceFactor
11839   \egroup
11840   \Hy@RestoreSpaceFactor
11841 \fi
11842 }

```

We have to allow for `\baselineskip` having an optional stretch and shrink (you meet this in slide packages, for instance), so we need to strip off the junk. David Carlisle, of course, wrote this bit of code.

```

11843 \begingroup
11844 \catcode'P=12 %
11845 \catcode'T=12 %
11846 \lowercase{\endgroup
11847 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
11848 }
11849 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

11850 \def\hyper@pagetransition{%
11851   \ifx\@pdfpagetransition\relax
11852   \else
11853     \ifx\@pdfpagetransition\@empty
11854       % 1. Does an old entry have to be deleted?
11855       % 2. If 1=yes, how to delete?
11856     \else
11857       \pdfmark{%
11858         pdfmark=/PUT,%
11859         Raw={%
11860           \string{ThisPage\string}%
11861           <</Trans << /S /\@pdfpagetransition\space >> >>%
11862         }%
11863       }%
11864     \fi

```

```

11865 \fi
11866 }

```

\hyper@pageduration

```

11867 \def\hyper@pageduration{%
11868 \ifx\@pdfpageduration\relax
11869 \else
11870 \ifx\@pdfpageduration\@empty
11871 % 1. Does an old entry have to be deleted?
11872 % 2. If 1=yes, how to delete?
11873 \else
11874 \pdfmark{%
11875 pdfmark=/PUT,%
11876 Raw={%
11877 \string{ThisPage\string}%
11878 <</Dur \@pdfpageduration>>%
11879 }%
11880 }%
11881 \fi
11882 \fi
11883 }

```

\hyper@pagehidden

```

11884 \def\hyper@pagehidden{%
11885 \ifHy@useHidKey
11886 \pdfmark{%
11887 pdfmark=/PUT,%
11888 Raw={%
11889 \string{ThisPage\string}%
11890 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
11891 }%
11892 }%
11893 \fi
11894 }

```

```

11895 \g@addto@macro\Hy@EveryPageBoxHook{%
11896 \hyper@pagetransition
11897 \hyper@pageduration
11898 \hyper@pagehidden
11899 }

11900 \def\hyper@image#1#2{%
11901 \hyper@linkurl{#2}{#1}%
11902 }

11903 \def\Hy@undefinedname{UNDEFINED}
11904 \def\hyper@link#1#2#3{%
11905 \Hy@VerboseLinkStart{#1}{#2}%
11906 \ltx@ifundefined{@#1bordercolor}{%
11907 \let\Hy@tempcolor\relax
11908 }{%
11909 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
11910 }%
11911 \begingroup
11912 \protected@edef\Hy@testname{#2}%
11913 \ifx\Hy@testname\@empty
11914 \Hy@Warning{%
11915 Empty destination name,\MessageBreak
11916 using '\Hy@undefinedname'%

```

```

11917 }%
11918 \let\Hy@testname\Hy@undefinedname
11919 \fi
11920 \pdfmark[#{3}]{%
11921   Color=\Hy@tempcolor,%
11922   linktype={#1},%
11923   AcroHighlight=\@pdfhighlight,%
11924   Border=\@pdfborder,%
11925   BorderStyle=\@pdfborderstyle,%
11926   pdfmark=/ANN,%
11927   Subtype=/Link,%
11928   PDFAFlags=4,%
11929   Dest=\Hy@testname
11930 }%
11931 \endgroup
11932 }
11933 \newtoks\pdf@docset
11934 \def\PDF@FinishDoc{%
11935   \Hy@UseMaketitleInfos
11936   \HyInfo@GenerateAddons
11937   \let\Hy@temp\@empty
11938   \ifx\@pdfcreationdate\@empty
11939   \else
11940     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
11941   \fi
11942   \ifx\@pdfmoddate\@empty
11943   \else
11944     \expandafter\def\expandafter\Hy@temp\expandafter{%
11945       \Hy@temp
11946       ModDate=\@pdfmoddate,%
11947     }%
11948   \fi
11949   \ifx\@pdfproducer\relax
11950   \else
11951     \expandafter\def\expandafter\Hy@temp\expandafter{%
11952       \Hy@temp
11953       Producer=\@pdfproducer,%
11954     }%
11955   \fi
11956   \expandafter
11957   \pdfmark\expandafter{%
11958     \Hy@temp
11959     pdfmark=/DOCINFO,%
11960     Title=\@pdftitle,%
11961     Subject=\@pdfsubject,%
11962     Creator=\@pdfcreator,%
11963     Author=\@pdfauthor,%
11964     Keywords=\@pdfkeywords,%
11965     Trapped=\@pdftrapped
11966   }%
11967   \ifx\HyInfo@Addons\@empty
11968   \else
11969     \pdfmark{%
11970       pdfmark=/DOCINFO,%
11971       Raw={\HyInfo@Addons}%
11972     }%
11973   \fi

```

```

11974 \Hy@DisableOption{pdfauthor}%
11975 \Hy@DisableOption{pdftitle}%
11976 \Hy@DisableOption{pdfsubject}%
11977 \Hy@DisableOption{pdfcreator}%
11978 \Hy@DisableOption{pdfcreationdate}%
11979 \Hy@DisableOption{pdfmoddate}%
11980 \Hy@DisableOption{pdfproducer}%
11981 \Hy@DisableOption{pdfkeywords}%
11982 \Hy@DisableOption{pdftrapped}%
11983 \Hy@DisableOption{pdfinfo}%
11984 }
11985 \def\PDF@SetupDoc{%
11986 \def\Hy@temp{}%
11987 \ifx\@pdfstartpage\@empty
11988 \else
11989 \ifx\@pdfstartview\@empty
11990 \else
11991 \edef\Hy@temp{%
11992 ,Page=\@pdfstartpage
11993 ,View=\@pdfstartview
11994 }%
11995 \fi
11996 \fi
11997 \edef\Hy@temp{%
11998 \noexpand\pdfmark{%
11999 pdfmark=/DOCVIEW,%
12000 PageMode=/\@pdfpagemode
12001 \Hy@temp
12002 }%
12003 }%
12004 \Hy@temp
12005 \ifx\@pdfpagescrop\@empty
12006 \else
12007 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12008 \fi
12009 \edef\Hy@temp{%
12010 \ifHy@pdftoolbar\else /HideToolbar true\fi
12011 \ifHy@pdfmenubar\else /HideMenubar true\fi
12012 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12013 \ifHy@pdffitwindow /FitWindow true\fi
12014 \ifHy@pdfcenterwindow /CenterWindow true\fi
12015 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12016 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12017 \Hy@UseNameKey{Direction}\@pdfdirection
12018 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12019 \Hy@UseNameKey{ViewClip}\@pdfviewclip
12020 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12021 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12022 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12023 \Hy@UseNameKey{Duplex}\@pdfduplex
12024 \ifx\@pdfpicktraybypdfsize\@empty
12025 \else
12026 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12027 \fi
12028 \ifx\@pdfprintpagerange\@empty
12029 \else
12030 /PrintPageRange[\@pdfprintpagerange]%

```

```

12031 \fi
12032 \ifx\@pdfnumcopies\@empty
12033 \else
12034 /NumCopies \@pdfnumcopies
12035 \fi
12036 }%
12037 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12038 \pdfmark{%
12039 pdfmark=/PUT,%
12040 Raw={%
12041 \string{Catalog\string}<<%
12042 \ifx\Hy@temp\@empty
12043 \else
12044 /ViewerPreferences<<\Hy@temp>>%
12045 \fi
12046 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12047 \ifx\@pdflang\relax
12048 \else
12049 /Lang(\@pdflang)%
12050 \fi
12051 \ifx\@baseurl\@empty
12052 \else
12053 /URI<</Base(\Hy@pstringB)>>%
12054 \fi
12055 >>%
12056 }%
12057 }%
12058 }
12059 \pdfmark
12060 \pdfmarkbase

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

12061 \newif\ifHy@pdfmarkerror
12062 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
12063 \def\pdfmark@[#1]#2{%
12064 \Hy@pdfmarkerrorfalse
12065 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
12066 \@processme
12067 \let\pdf@type\relax
12068 \let\pdf@objdef\ltx@empty
12069 \kvsetkeys{PDF}{#2}%
12070 \ifHy@pdfmarkerror
12071 \else
12072 \ifx\pdf@type\relax
12073 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
12074 \ifx\#1\%
12075 \else
12076 \pdf@rect{#1}%
12077 \fi
12078 \else
12079 \ifx\#1\%
12080 \literalps@out{%

```

```

12081 [%
12082 \ifx\pdf@objdef\ltx@empty
12083 \else
12084 /_objdef\string{\pdf@objdef\string}%
12085 \fi
12086 \the\pdf@toks\space\pdf@type\space pdfmark%
12087 }%
12088 \else
12089 \ltx@ifundefined{@\pdf@linktype color}{%
12090 \Hy@colorlink\@linkcolor
12091 }{%
12092 \expandafter\Hy@colorlink
12093 \csname @\pdf@linktype color\endcsname
12094 }%
12095 \pdf@rect{#1}%
12096 \literalps@out{%
12097 [%
12098 \ifx\pdf@objdef\ltx@empty
12099 \else
12100 /_objdef\string{\pdf@objdef\string}%
12101 \fi
12102 \the\pdf@toks\space\pdf@type\space pdfmark%
12103 }%
12104 \Hy@endcolorlink
12105 \fi
12106 \fi
12107 \fi
12108 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

12109 \newsavebox{\pdf@box}
12110 \providecommand*{\Hy@setouterhbox}{\sbox}
12111 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
12112 \def\Hy@DEST{/DEST}
12113 \def\pdf@rect#1{%
12114 \begingroup
12115 \chardef\x=1 %
12116 \def\Hy@temp{#1}%
12117 \ifx\Hy@temp\ltx@empty
12118 \chardef\x=0 %
12119 \else
12120 \def\y{\anchor@spot}%
12121 \ifx\Hy@temp\y
12122 \def\y{\relax}%
12123 \ifx\anchor@spot\y
12124 \chardef\x=0 %

```

```

12125     \fi
12126     \fi
12127     \fi
12128 \expandafter\endgroup
12129 \ifcase\x
12130   \literalps@out{H.S}%
12131   \literalps@out{H.R}%
12132 \else
12133   \leavevmode
12134   \Hy@SaveSpaceFactor
12135   \ifmmode
12136     \def\Hy@LinkMath{$}%
12137   \else
12138     \let\Hy@LinkMath\ltx@empty
12139   \fi
12140   \ifHy@breaklinks
12141     \Hy@setouterhbox\pdf@box{%
12142       \Hy@RestoreSpaceFactor
12143       \Hy@LinkMath
12144       \Hy@AllowHyphens#1\Hy@xspace@end
12145       \Hy@LinkMath
12146       \Hy@SaveSpaceFactor
12147     }%
12148   \else
12149     \sbox\pdf@box{%
12150       \Hy@RestoreSpaceFactor
12151       \Hy@LinkMath
12152       #1\Hy@xspace@end
12153       \Hy@LinkMath
12154       \Hy@SaveSpaceFactor
12155     }%
12156   \fi
12157   \dimen@ \ht\pdf@box
12158   \ifdim\dp\pdf@box=\z@
12159     \literalps@out{H.S}%
12160   \else
12161     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
12162   \fi

```

If the text has to be horizontal mode stuff then just unbox the saved box like this, which saves executing it twice, which can mess up counters etc (thanks DPC...).

```

12163   \ifHy@breaklinks
12164     \ifhmode
12165       \Hy@breaklinksunhbox\pdf@box
12166     \else
12167       \box\pdf@box
12168     \fi
12169   \else
12170     \expandafter\box\pdf@box
12171   \fi

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

\ifHy@breaklinks#1\else\box\pdf@box\fi
\ifHy@breaklinks{#1}\else\box\pdf@box\fi

12172   \ifdim\dimen@=\z@
12173     \literalps@out{H.R}%

```



```

12174 \else
12175 \raise\dimen@\hbox{\literalps@out{H.R}}%
12176 \fi
12177 \Hy@RestoreSpaceFactor
12178 \fi
12179 \ifx\pdf@type\Hy@DEST
12180 \else
12181 \pdf@addtoksx{H.B}%
12182 \fi
12183 }

```

All the supplied material is stored in a token list; since I do not feel sure I quite understand these, things may not work as expected with expansion. We'll have to experiment.

```

12184 \newtoks\pdf@toks
12185 \newtoks\pdf@defaulttoks
12186 \pdf@defaulttoks={}%
12187 \def\pdf@addtoks#1#2{%
12188 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
12189 \@processme
12190 }
12191 \def\pdf@addtoksx#1{%
12192 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
12193 \@processme
12194 }
12195 \def\PDFdefaults#1{%
12196 \pdf@defaulttoks={#1}%
12197 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

12198 % what is the type of pdfmark?
12199 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
12200 % what is the link type?
12201 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
12202 \def\pdf@linktype{link}
12203 % named object?
12204 \define@key{PDF}{objdef}{\edef\pdf@objdef{#1}}
12205 \let\pdf@objdef\ltx@empty
12206 % parameter is a stream of PDF
12207 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
12208 % parameter is a name
12209 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
12210 % parameter is a array
12211 \define@key{PDF}{Border}{%
12212 \edef\Hy@temp{#1}%
12213 \ifx\Hy@temp\@empty
12214 \else
12215 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
12216 \fi
12217 }
12218 \let\Hy@BorderArrayPatch\@empty
12219 % parameter is a dictionary
12220 \define@key{PDF}{BorderStyle}{%
12221 \edef\Hy@temp{#1}%
12222 \ifx\Hy@temp\@empty
12223 \else
12224 \pdf@addtoks{<<#1>>}{BS}%
12225 \fi

```

```

12226 }
12227 % parameter is a array
12228 \define@key{PDF}{Color}{%
12229   \ifx\relax#1\relax
12230   \else
12231     \pdf@addtoks{[#1]}{Color}% hash-ok
12232   \fi
12233 }
12234 % parameter is a string
12235 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
12236 % parameter is a integer
12237 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
12238 % parameter is a array
12239 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
12240 % parameter is a string
12241 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
12242 % parameter is a string or file
12243 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
12244 % parameter is a destination
12245 \define@key{PDF}{Dest}{%
12246   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12247   \ifx\Hy@pstringDest\@empty
12248     \Hy@pdfmarkerrortrue
12249     \Hy@Warning{Destination with empty name ignored}%
12250   \else
12251     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12252   \fi
12253 }
12254 \define@key{PDF}{DestAnchor}{%
12255   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
12256   \ifx\Hy@pstringDest\@empty
12257     \Hy@pdfmarkerrortrue
12258     \Hy@Warning{Destination with empty name ignored}%
12259   \else
12260     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
12261   \fi
12262 }
12263 % parameter is a string
12264 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
12265 % parameter is a string
12266 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
12267 % parameter is a int
12268 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
12269 \define@key{PDF}{PDFAFlags}{%
12270   \ifHy@pdfa
12271     \pdf@addtoks{#1}{F}%
12272   \fi
12273 }
12274 % parameter is a name
12275 \define@key{PDF}{AcroHighlight}{%
12276   \begingroup
12277     \edef\x{#1}%
12278     \expandafter\endgroup\ifx\x\@empty
12279     \else
12280       \pdf@addtoks{#1}{H}%
12281     \fi
12282 }

```

```

12283 % parameter is a string
12284 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
12285 % parameter is a string
12286 \define@key{PDF}{MacFile}{\pdf@addtoks{[#1]}{MacFile}}
12287 % parameter is a string
12288 \define@key{PDF}{ModDate}{\pdf@addtoks{[#1]}{ModDate}}
12289 % parameter is a string
12290 \define@key{PDF}{Op}{\pdf@addtoks{[#1]}{Op}}
12291 % parameter is a Boolean
12292 \define@key{PDF}{Open}{\pdf@addtoks{[#1]}{Open}}
12293 % parameter is a integer or name
12294 \define@key{PDF}{Page}{\pdf@addtoks{[#1]}{Page}}
12295 % parameter is a name
12296 \define@key{PDF}{PageMode}{\pdf@addtoks{[#1]}{PageMode}}
12297 % parameter is a string
12298 \define@key{PDF}{Params}{\pdf@addtoks{[#1]}{Params}}
12299 % parameter is a array
12300 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
12301 % parameter is a integer
12302 \define@key{PDF}{SrcPg}{\pdf@addtoks{[#1]}{SrcPg}}
12303 % parameter is a name
12304 \define@key{PDF}{Subtype}{\pdf@addtoks{[#1]}{Subtype}}
12305 % parameter is a string
12306 \define@key{PDF}{Title}{\pdf@addtoks{[#1]}{Title}}
12307 % parameter is a string
12308 \define@key{PDF}{Unix}{\pdf@addtoks{[#1]}{Unix}}
12309 % parameter is a string
12310 \define@key{PDF}{UnixFile}{\pdf@addtoks{[#1]}{UnixFile}}
12311 % parameter is an array
12312 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
12313 % parameter is a string
12314 \define@key{PDF}{WinFile}{\pdf@addtoks{[#1]}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

12315 \define@key{PDF}{Author}{\pdf@addtoks{[#1]}{Author}}
12316 \define@key{PDF}{Creator}{\pdf@addtoks{[#1]}{Creator}}
12317 \define@key{PDF}{CreationDate}{\pdf@addtoks{[#1]}{CreationDate}}
12318 \define@key{PDF}{ModDate}{\pdf@addtoks{[#1]}{ModDate}}
12319 \define@key{PDF}{Producer}{\pdf@addtoks{[#1]}{Producer}}
12320 \define@key{PDF}{Subject}{\pdf@addtoks{[#1]}{Subject}}
12321 \define@key{PDF}{Keywords}{\pdf@addtoks{[#1]}{Keywords}}
12322 \define@key{PDF}{ModDate}{\pdf@addtoks{[#1]}{ModDate}}
12323 \define@key{PDF}{Base}{\pdf@addtoks{[#1]}{Base}}
12324 \define@key{PDF}{URI}{\pdf@addtoks{[#1]}{URI}}
12325 \define@key{PDF}{Trapped}{%
12326   \edef\Hy@temp{#1}%
12327   \ifx\Hy@temp\@empty
12328     \else
12329       \pdf@addtoks{/#1}{Trapped}%
12330     \fi
12331 }
12332
12333 </pdfmarkbase>
12334 <*pdfmark>
12335 \def\Acrobatmenu#1#2{%
12336   \EdefEscapeName\Hy@temp@menu{#1}%
12337   \Hy@Acrobatmenu{#1}{#2}{%
12338     \pdfmark{[#2]}{%

```

```

12339     linktype=menu,%
12340     pdfmark=/ANN,%
12341     AcroHighlight=\@pdfhighlight,%
12342     Border=\@pdfborder,%
12343     BorderStyle=\@pdfborderstyle,%
12344     Color=\@menubordercolor,%
12345     Action={<</Subtype/Named/N/\Hy@temp@menu>>},%
12346     Subtype=/Link,%
12347     PDFAFlags=4%
12348 }%
12349 }%
12350 }

```

And now for some useful examples:

```

12351 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}%
12352 \def\PDFNextPage@[#1]#2{%
12353   \pdfmark[#{#2}]{%
12354     #1,%
12355     Border=\@pdfborder,%
12356     BorderStyle=\@pdfborderstyle,%
12357     Color=.2 .1 .5,%
12358     pdfmark=/ANN,%
12359     Subtype=/Link,%
12360     PDFAFlags=4,%
12361     Page=/Next%
12362   }%
12363 }
12364 \def\PDFPreviousPage{%
12365   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
12366 }
12367 \def\PDFPreviousPage@[#1]#2{%
12368   \pdfmark[#{#2}]{%
12369     #1,%
12370     Border=\@pdfborder,%
12371     BorderStyle=\@pdfborderstyle,%
12372     Color=.4 .4 .1,%
12373     pdfmark=/ANN,%
12374     Subtype=/Link,%
12375     PDFAFlags=4,%
12376     Page=/Prev%
12377   }%
12378 }
12379 \def\PDFOpen#1{%
12380   \pdfmark{#1,pdfmark=/DOCVIEW}%
12381 }

```

This will only work if you use Distiller 2.1 or higher.

```

12382 \def\hyper@linkurl#1#2{%
12383   \begingroup
12384     \Hy@pstringdef\Hy@pstringURI{#2}%
12385     \hyper@chars
12386     \leavevmode
12387     \pdfmark[#{#1}]{%
12388       pdfmark=/ANN,%
12389       linktype=url,%
12390       AcroHighlight=\@pdfhighlight,%
12391       Border=\@pdfborder,%
12392       BorderStyle=\@pdfborderstyle,%

```

```

12393     Color=\@urlbordercolor,%
12394     Action={<<%
12395         /Subtype/URI%
12396         /URI(\Hy@pstringURI)%
12397         \ifHy@href@ismap
12398         /IsMap true%
12399         \fi
12400     >>},%
12401     Subtype=/Link,%
12402     PDFAFlags=4%
12403 }%
12404 \endgroup
12405 }
12406 \def\hyper@linkfile#1#2#3{%
12407 \begingroup
12408 \def\Hy@pstringF{#2}%
12409 \Hy@CleanupFile\Hy@pstringF
12410 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
12411 \Hy@pstringdef\Hy@pstringD{#3}%
12412 \Hy@MakeRemoteAction
12413 \leavevmode
12414 \pdfmark[{#1}]{%
12415     pdfmark=/ANN,%
12416     Subtype=/Link,%
12417     PDFAFlags=4,%
12418     AcroHighlight=\@pdfhighlight,%
12419     Border=\@pdfborder,%
12420     BorderStyle=\@pdfborderstyle,%
12421     linktype=file,%
12422     Color=\@filebordercolor,%
12423     Action={%
12424         <<%
12425         /S/GoToR%
12426         \Hy@SetNewWindow
12427         /F(\Hy@pstringF)%
12428         /D%
12429         \ifx\\#3\\%
12430             [\Hy@href@page\@pdfremotestartview]%
12431         \else
12432             (\Hy@pstringD)cvn%
12433         \fi
12434         \Hy@href@nextactionraw
12435         >>%
12436     }%
12437 }%
12438 \endgroup
12439 }
12440 \def\@hyper@launch run:#1\\#2#3{%
12441 \begingroup
12442 \Hy@pstringdef\Hy@pstringF{#1}%
12443 \Hy@pstringdef\Hy@pstringP{#3}%
12444 \leavevmode
12445 \pdfmark[{#2}]{%
12446     pdfmark=/ANN,%
12447     Subtype=/Link,%
12448     PDFAFlags=4,%
12449     AcroHighlight=\@pdfhighlight,%

```

```

12450   Border=\@pdfborder,%
12451   BorderStyle=\@pdfborderstyle,%
12452   linktype=run,%
12453   Color=\@runbordercolor,%
12454   Action={%
12455     <<%
12456       /S/Launch%
12457       \Hy@SetNewWindow
12458       /F(\Hy@pstringF)%
12459       \ifx\#3\%
12460       \else
12461         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
12462       \fi
12463       \Hy@href@nextactionraw
12464     >>%
12465   }%
12466 }%
12467 \endgroup
12468 }
12469 </pdfmark>

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

47.9 Rokicki's dvips

dvips thinks in 10ths of a big point, its coordinate space is resolution dependent, and its *y* axis starts at the top of the page. Other drivers can and will be different!

The work is done in SDict, because we add in some header definitions in a moment.

```

12470 < *dvips>
12471 \providecommand*\XR@ext\{pdf}
12472 \let\Hy@raisedlink\ltx@empty
12473 \def\litalps@out#1{\special{ps:SDict begin #1 end}}%
12474 \def\headerps@out#1{\special{! #1}}%
12475 \input{pdfmark.def}%
12476 \ifx\@pdfproducer\relax
12477   \def\@pdfproducer{dvips + Distiller}%
12478 \fi
12479 \providecommand*\@pdfborder{0 0 1}
12480 \providecommand*\@pdfborderstyle{}
12481 \providecommand*\@pdfview{XYZ}
12482 \providecommand*\@pdfviewparams{ H.V}
12483 \def\Hy@BorderArrayPatch{BorderArrayPatch}
12484 \g@addto@macro\Hy@FirstPageHook{%
12485   \headerps@out{%

```

Unless I am going mad, this *appears* to be the relationship between the default coordinate system (PDF), and dvips;

```

/DvipsToPDF { .01383701 div Resolution div } def
/PDFToDvips { .01383701 mul Resolution mul } def

```

the latter's coordinates are resolution dependent, but what that .01383701 is, who knows? well, almost everyone except me, I expect...And yes, Maarten Gelderman <mgelderman@econ.vu.nl> points out that its 1/72.27 (the number of points to an inch, big points to inch is 1/72). This also suggests that the code would be

more understandable (and exact) if 0.013 div would be replaced by 72.27 mul, so here we go. If this isn't right, I'll revert it.

```
12486 /DvipsToPDF{72.27 mul Resolution div} def%
12487 /PDFToDvips{72.27 div Resolution mul} def%
12488 /BPToDvips{72 div Resolution mul}def%
```

The values inside the /Boder array are not taken literally, but interpreted by ghostscript using the resolution of the dvi driver. I don't know how other distiller programs behaves in this manner.

```
12489 /BorderArrayPatch{%
12490   [exch{%
12491     dup dup type/integertype eq exch type/realtype eq or%
12492     {BPToDvips}if%
12493   }forall]%
12494 }def%
```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```
12495 /HyperBorder {1 PDFToDvips} def%
12496 /H.V {pdf@hoff pdf@voff null} def%
12497 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%
```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates

```
12498 /H.S {%
12499   currentpoint %
12500   HyperBorder add /pdf@lly exch def %
12501   dup DvipsToPDF 72 add /pdf@hoff exch def %
12502   HyperBorder sub /pdf@llx exch def%
12503 } def%
```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```
12504 /H.L {%
12505   2 sub dup%
12506   /HyperBasePt exch def %
12507   PDFToDvips /HyperBaseDvips exch def %
12508   currentpoint %
12509   HyperBaseDvips sub /pdf@ury exch def%
12510   /pdf@urx exch def%
12511 } def%
12512 /H.A {%
12513   H.L %
12514 % |pdf@voff| = the distance from the top of the page to a point
12515 % |\baselineskip| above the current point in PDF coordinates
12516   currentpoint exch pop %
12517   vsize 72 sub exch DvipsToPDF %
12518   HyperBasePt sub % baseline skip
12519   sub /pdf@voff exch def%
12520 } def%
12521 /H.R {%
12522   currentpoint %
12523   HyperBorder sub /pdf@ury exch def %
```

```

12524   HyperBorder add /pdf@urx exch def %
12525 % | /pdf@voff| = the distance from the top of the page to the current point, in
12526 % PDF coordinates
12527   currentpoint exch pop vsize 72 sub %
12528   exch DvipsToPDF sub /pdf@voff exch def%
12529 } def%
12530 }%
12531 }
12532 \AtBeginShipoutFirst{%
12533   \ifHy@setpagesize
12534   \begingroup
12535     \@ifundefined{stockwidth}{%
12536       \ifdim\paperwidth>\z@
12537       \ifdim\paperheight>\z@
12538         \special{papersize=\the\paperwidth,\the\paperheight}%
12539       \fi
12540     }%
12541     \ifdim\stockwidth>\z@
12542     \ifdim\stockheight>\z@
12543       \special{papersize=\the\stockwidth,\the\stockheight}%
12544     \fi
12545   }%
12546   \endgroup
12547 }%
12548 \fi
12549 \Hy@DisableOption{setpagesize}%
12550 }
12551 }
12552 \def\setpdfinkmargin#1{%
12553   \begingroup
12554     \setlength{\dimen@}{#1}%
12555     \literalps@out{%
12556       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12557     }%
12558   \endgroup
12559 }
12560 </dvips>

```

47.10 VTeX's vtexpdfmark driver

This part is derived from the dvips (many names reflect this).

The origin seems to be the same as TeX's origin, 1 in from the left and 1 in downwards from the top. The direction of the y axis is downwards, the opposite of the dvips case. Units seems to be pt or bp.

```

12561 (*vtexpdfmark)
12562 \providecommand*\XR@ext}{pdf}
12563 \let\Hy@raisedlink\ltx@empty
12564 \def\literalps@out#1{\special{pS:#1}}%
12565 \def\headerps@out#1{\immediate\special{pS:#1}}%
12566 \input{pdfmark.def}%
12567 \ifx\@pdfproducer\relax
12568   \ifnum\OpMode=\@ne
12569     \def\@pdfproducer{VTeX}%
12570   \else
12571     \def\@pdfproducer{VTeX + Distiller}%
12572   \fi

```



```

12573 \fi
12574 \providecommand*\@pdfborder{0 0 1}
12575 \providecommand*\@pdfborderstyle{}
12576 \providecommand*\@pdfview{XYZ}
12577 \providecommand*\@pdfviewparams{ H.V}

12578 \g@addto@macro\Hy@FirstPageHook{%
12579   \headerps@out{%
12580     /vsize {\Hy@pageheight} def%

```

The rectangle around the links starts off *exactly* the size of the box; we will to make it slightly bigger, 1 point on all sides.

```

12581   /HyperBorder {1} def%
12582   /H.V {pdf@hoff pdf@voff null} def%
12583   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

12584   /H.S {%
12585     currentpoint %
12586     HyperBorder sub%
12587     /pdf@lly exch def %
12588     dup 72 add /pdf@hoff exch def %
12589     HyperBorder sub%
12590     /pdf@llx exch def%
12591   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12592   /H.L {%
12593     2 sub%
12594     /HyperBasePt exch def %
12595     currentpoint %
12596     HyperBasePt add HyperBorder add%
12597     /pdf@ury exch def %
12598     HyperBorder add%
12599     /pdf@urx exch def%
12600   } def%
12601   /H.A {%
12602     H.L %
12603     currentpoint exch pop %
12604     vsize 72 sub exch %
12605     HyperBasePt add add%
12606     /pdf@voff exch def%
12607   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

12608   /H.R {%
12609     currentpoint %
12610     HyperBorder add%
12611     /pdf@ury exch def %
12612     HyperBorder add%
12613     /pdf@urx exch def %
12614     currentpoint exch pop vsize 72 sub add%
12615     /pdf@voff exch def%
12616   } def%
12617 }%
12618 }

```

```

12619 \def\setpdfinkmargin#1{%
12620   \begingroup
12621     \setlength{\dimen@}{#1}%
12622     \literalps@out{%
12623       /HyperBorder{\strip@pt\dimen@}def%
12624     }%
12625   \endgroup
12626 }
12627 </vtxpdfmark>

```

47.11 Textures

```

12628 <*textures>
12629 \providecommand*\XR@ext}{pdf}

```

At the suggestion of Jacques Distler (distler@golem.ph.utexas.edu), try to derive a suitable driver for Textures. This was initially a copy of dvips, with some guesses about Textures behaviour. Ross Moore (ross@maths.mq.edu.au) has added modifications for better compatibility, and to support use of pdfmark.

Start by defining a macro that expands to the end-of-line character. This will be used to format the appearance of PostScript code, to enhance readability, and avoid excessively long lines which might otherwise become broken to bad places.

`\Hy@ps@CR` The macro `\Hy@ps@CR` contains the end-of-line character.

```

12630 \begingroup
12631   \obeylines %
12632   \gdef\Hy@ps@CR{\noexpand
12633   }%
12634 \endgroup %

```

Textures has two types of `\special` command for inserting PostScript code directly into the dvi output. The ‘postscript’ way preserves TeX’s idea of where on the page the `\special` occurred, but it wraps the contents with a `save-restore` pair, and adjusts the user-space coordinate system for local drawing commands. The ‘rawpostscript’ way simply inserts code, without regard for the location on the page.

Thus, to put arbitrary PostScript coding at a fixed location requires using *both* `\special` constructions. It works by pushing the device-space coordinates onto the operand stack, where they can be used to transform back to the correct user-space coordinates for the whole page, within a ‘rawpostscript’ `\special`.

```

12635 \def\literalps@out#1{%
12636   \special{postscript 0 0 transform}%
12637   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
12638 }%
12639 %

```

The ‘prepostscript’ is a 3rd kind of `\special`, used for inserting definitions into the dictionaries, before page-building begins. These are to be available for use on all pages.

```

12640 \def\headerps@out#1{%
12641   \special{%
12642     prepostscript TeXdict begin\Hy@ps@CR
12643     #1\Hy@ps@CR
12644     end%
12645   }%
12646 }%
12647 %

```

To correctly support the `pdfmark` method, for embedding PDF definitions with `.ps` files in a non-intrusive way, an appropriate definition needs to be made *before* the file `pdfmark.def` is read. Other parameters are best set afterwards.

```

12648 \g@addto@macro\Hy@FirstPageHook{%
12649   \headerps@out{%
12650     /betterpdfmark {%
12651       systemdict begin %
12652         dup /BP eq%
12653         {cleartomark gsave nulldevice []%
12654          {dup /EP eq%
12655           {cleartomark cleartomark grestore}%
12656           {cleartomark}%
12657           ifelse%
12658         }ifelse %
12659       end%
12660     }def\Hy@ps@CR
12661     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
12662   }% end of \headerps@out
12663 }% end of \AtBeginShipoutFirst
12664 %
12665 \input{pdfmark.def}%
12666 %
12667 \ifx\@pdfproducer\relax
12668   \def\@pdfproducer{Textures + Distiller}%
12669 \fi
12670 \providecommand*\@pdfborder{0 0 1}
12671 \providecommand*\@pdfborderstyle{}
12672 \providecommand*\@pdfview{XYZ}
12673 \providecommand*\@pdfviewparams{ H.V}
12674 %

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx pdf@lly pdf@urx pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff pdf@voff` which are the PDF page offsets. The `Rect` pair are called at the LL and UR corners of a box known to `TEX`.

```

12675 \Hy@AtBeginDocument{%
12676   \headerps@out{%

```

`Textures` lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

12677   /vsize {\Hy@pageheight} def%
12678   /DvipsToPDF {} def%
12679   /PDFToDvips {} def%
12680   /BPToDvips {} def%
12681   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
12682   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
12683   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
12684   /H.S {%
12685     currentpoint %
12686     HyperBorder add /pdf@lly exch def %
12687     dup DvipsToPDF 72 add /pdf@hoff exch def %
12688     HyperBorder sub /pdf@llx exch def%
12689   } def\Hy@ps@CR
12690   /H.L {%
12691     2 sub %
12692     PDFToDvips /HyperBase exch def %

```

```

12693     currentpoint %
12694     HyperBase sub /pdf@ury exch def%
12695     /pdf@urx exch def%
12696   } def\Hy@ps@CR
12697   /H.A {%
12698     H.L %
12699     currentpoint exch pop %
12700     vsize 72 sub exch DvipsToPDF %
12701     HyperBase sub % baseline skip
12702     sub /pdf@voff exch def%
12703   } def\Hy@ps@CR
12704   /H.R {%
12705     currentpoint %
12706     HyperBorder sub /pdf@ury exch def %
12707     HyperBorder add /pdf@urx exch def %
12708     currentpoint exch pop vsize 72 sub %
12709     exch DvipsToPDF sub /pdf@voff exch def%
12710   } def\Hy@ps@CR
12711 }%
12712 }

12713 \def\setpdfinkmargin#1{%
12714   \begingroup
12715     \setlength{\dimen@}{#1}%
12716     \literalps@out{%
12717       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
12718     }%
12719   \endgroup
12720 }

12721 \Hy@AtBeginDocument{%
12722   \ifHy@colorlinks
12723     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
12724   \fi
12725 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.

```

12726 \expandafter\let\expandafter\keepPDF@SetupDoc
12727   \csname PDF@SetupDoc\endcsname
12728 \def\PDF@SetupDoc{%
12729   \ifx\@baseurl\@empty
12730   \else
12731     \special{html:<base href="\@baseurl">}%
12732   \fi
12733   \keepPDF@SetupDoc
12734 }

12735 \Hy@WrapperDef\hyper@anchor#1{%
12736   \Hy@SaveLastskip
12737   \Hy@VerboseAnchor{#1}%
12738   \begingroup
12739     \let\protect=\string
12740     \special{html:<a name=%
12741       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12742   \endgroup
12743   \Hy@activeanchortrue
12744   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12745   \special{html:</a>}%

```

```

12746 \Hy@activeanchorfalse
12747 \Hy@RestoreLastskip
12748 }
12749 \Hy@WrapperDef\hyper@anchorstart#1{%
12750 \Hy@SaveLastskip
12751 \Hy@VerboseAnchor{#1}%
12752 \begingroup
12753 \hyper@chars
12754 \special{html:<a name=%
12755 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12756 \endgroup
12757 \Hy@activeanchortrue
12758 }
12759 \def\hyper@anchorend{%
12760 \special{html:</a>}%
12761 \Hy@activeanchorfalse
12762 \Hy@RestoreLastskip
12763 }
12764 \def\@urltype{url}
12765 \def\hyper@linkstart#1#2{%
12766 \Hy@VerboseLinkStart{#1}{#2}%
12767 \expandafter\Hy@colorlink\csname @#1color\endcsname
12768 \def\Hy@tempa{#1}%
12769 \ifx\Hy@tempa\@urltype
12770 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12771 \else
12772 \begingroup
12773 \hyper@chars
12774 \special{%
12775 html:<a href=%
12776 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
12777 }%
12778 \endgroup
12779 \fi
12780 }
12781 \def\hyper@linkend{%
12782 \special{html:</a>}%
12783 \Hy@endcolorlink
12784 }
12785 \def\hyper@linkfile#1#2#3{%
12786 \hyper@linkurl{#1}{%
12787 \Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi
12788 }%
12789 }
12790 \def\hyper@linkurl#1#2{%
12791 \leavevmode
12792 \ifHy@raiselinks
12793 \Hy@SaveSpaceFactor
12794 \Hy@SaveSavedSpaceFactor
12795 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12796 \Hy@RestoreSavedSpaceFactor
12797 \@linkdim\dp\@tempboxa
12798 \lower\@linkdim\hbox{%
12799 \hyper@chars
12800 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12801 }%
12802 \Hy@colorlink\@urlcolor

```

```

12803 \Hy@RestoreSpaceFactor
12804 #1\Hy@xspace@end
12805 \Hy@SaveSpaceFactor
12806 \@linkdim\ht\@tempboxa
12807 \advance\@linkdim by -6.5\p@
12808 \raise\@linkdim\hbox{\special{html:</a>}}%
12809 \Hy@endcolorlink
12810 \Hy@RestoreSpaceFactor
12811 \else
12812 \begingroup
12813 \hyper@chars
12814 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
12815 \Hy@colorlink\@urlcolor#1\Hy@xspace@end
12816 \special{html:</a>}%
12817 \Hy@endcolorlink
12818 \endgroup
12819 \fi
12820 }

```

Very poor implementation of \hyper@link without considering #1.

```

12821 \def\hyper@link#1#2#3{%
12822 \Hy@VerboseLinkStart{#1}{#2}%
12823 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
12824 }
12825 \def\hyper@image#1#2{%
12826 \begingroup
12827 \hyper@chars
12828 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
12829 \endgroup
12830 }
12831 </textures>

```

47.12 dvipsone

```

12832 % \subsection{dvipsone driver}
12833 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
12834 % |\special| commands.
12835 <*dvipsone>
12836 \providecommand*\XR@ext}{pdf}
12837 \let\Hy@raisedlink\ltx@empty
12838 \providecommand*\@pdfborder{0 0 1}
12839 \providecommand*\@pdfborderstyle{}
12840 \def\literalps@out#1{\special{ps:#1}}%
12841 \def\headerps@out#1{\special{headertext=#1}}%
12842 \input{pdfmark.def}%
12843 \ifx\@pdfproducer\relax
12844 \def\@pdfproducer{dvipsone + Distiller}%
12845 \fi
12846 \HyInfo@AddonUnsupportedtrue
12847 \def\PDF@FinishDoc{%
12848 \Hy@UseMaketitleInfos
12849 \HyInfo@TrappedUnsupported
12850 \special{PDF: Keywords \@pdfkeywords}%
12851 \special{PDF: Title \@pdftitle}%
12852 \special{PDF: Creator \@pdfcreator}%
12853 \ifx\@pdfcreationdate\@empty
12854 \else
12855 \special{PDF: CreationDate \@pdfcreationdate}%

```

```

12856 \fi
12857 \ifx\@pdfmoddate\@empty
12858 \else
12859 \special{PDF: ModDate \@pdfmoddate}%
12860 \fi
12861 \special{PDF: Author \@pdfauthor}%
12862 \ifx\@pdfproducer\relax
12863 \else
12864 \special{PDF: Producer \@pdfproducer}%
12865 \fi
12866 \special{PDF: Subject \@pdfsubject}%
12867 \Hy@DisableOption{pdfauthor}%
12868 \Hy@DisableOption{pdftitle}%
12869 \Hy@DisableOption{pdfsubject}%
12870 \Hy@DisableOption{pdfcreator}%
12871 \Hy@DisableOption{pdfcreationdate}%
12872 \Hy@DisableOption{pdfmoddate}%
12873 \Hy@DisableOption{pdfproducer}%
12874 \Hy@DisableOption{pdfkeywords}%
12875 \Hy@DisableOption{pdftrapped}%
12876 \Hy@DisableOption{pdfinfo}%
12877 }
12878 \def\PDF@SetupDoc{%
12879 \def\Hy@temp{}%
12880 \ifx\@pdfstartpage\@empty
12881 \else
12882 \ifx\@pdfstartview\@empty
12883 \else
12884 \edef\Hy@temp{%
12885 ,Page=\@pdfstartpage
12886 ,View=\@pdfstartview
12887 }%
12888 \fi
12889 \fi
12890 \edef\Hy@temp{%
12891 \noexpand\pdfmark{%
12892 pdfmark=/DOCVIEW,%
12893 PageMode=/\@pdfpagemode
12894 \Hy@temp
12895 }%
12896 }%
12897 \Hy@temp
12898 \ifx\@pdfpagescrop\@empty
12899 \else
12900 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
12901 \fi
12902 \edef\Hy@temp{%
12903 \ifHy@pdftoolbar\else /HideToolbar true\fi
12904 \ifHy@pdfmenubar\else /HideMenubar true\fi
12905 \ifHy@pdfwindowui\else /HideWindowUI true\fi
12906 \ifHy@pdffitwindow /FitWindow true\fi
12907 \ifHy@pdfcenterwindow /CenterWindow true\fi
12908 \ifHy@pdfdisplaydoctitle /DisplayDocTitle true\fi
12909 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
12910 \Hy@UseNameKey{Direction}\@pdfdirection
12911 \Hy@UseNameKey{ViewArea}\@pdfviewarea
12912 \Hy@UseNameKey{ViewClip}\@pdfviewclip

```

```

12913 \Hy@UseNameKey{PrintArea}\@pdfprintarea
12914 \Hy@UseNameKey{PrintClip}\@pdfprintclip
12915 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
12916 \Hy@UseNameKey{Duplex}\@pdfduplex
12917 \ifx\@pdfpicktraybypdfsize\@empty
12918 \else
12919 /PickTrayByPDFSize \@pdfpicktraybypdfsize
12920 \fi
12921 \ifx\@pdfprintpagerange\@empty
12922 \else
12923 /PrintPageRange[\@pdfprintpagerange]%
12924 \fi
12925 \ifx\@pdfnumcopies\@empty
12926 \else
12927 /NumCopies \@pdfnumcopies
12928 \fi
12929 }%
12930 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
12931 \pdfmark{%
12932 pdfmark=/PUT,%
12933 Raw={%
12934 \string{Catalog\string}<<%
12935 \ifx\Hy@temp\@empty
12936 \else
12937 /ViewerPreferences<<\Hy@temp>>%
12938 \fi
12939 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
12940 \ifx\@pdflang\relax
12941 \else
12942 /Lang(\@pdflang)%
12943 \fi
12944 \ifx\@baseurl\@empty
12945 \else
12946 /URI<</Base(\Hy@pstringB)>>%
12947 \fi
12948 >>%
12949 }%
12950 }%
12951 }
12952 \providecommand*\@pdfview{XYZ}
12953 \providecommand*\@pdfviewparams{ %
12954 gsave revscl currentpoint grestore %
12955 72 add exch pop null exch null%
12956 }
12957 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called `pdf@llx` `pdf@lly` `pdf@urx` `pdf@ury`, which are the coordinates of the bounding rectangle of the link, and `pdf@hoff` `pdf@voff` which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

12958 \g@addto@macro\Hy@FirstPageHook{%
12959 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

12960 /DvipsToPDF { 65781 div } def%
12961 /PDFToDvips { 65781 mul } def%
12962 /BPToDvips{65781 mul}def%

```



```

12963 /HyperBorder { 1 PDFToDvips } def%
12964 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%
The values inside the /Boder array are not taken literally, but interpreted by
ghostscript using the resolution of the dvi driver. I don't know how other distiller
programs behaves in this manner.
12965 /BorderArrayPatch{%
12966   [exch{%
12967     dup dup type/integertype eq exch type/realtype eq or%
12968     {BPToDvips}if%
12969   }forall]%
12970 }def%
12971 /H.S {%
12972   currentpoint %
12973   HyperBorder add /pdf@lly exch def %
12974   dup DvipsToPDF 72 add /pdf@hoff exch def %
12975   HyperBorder sub /pdf@llx exch def%
12976 } def%
12977 /H.L {%
12978   2 sub %
12979   PDFToDvips /HyperBase exch def %
12980   currentpoint %
12981   HyperBase sub /pdf@ury exch def%
12982   /pdf@urx exch def%
12983 } def%
12984 /H.A {%
12985   H.L %
12986   currentpoint exch pop %
12987   HyperBase sub % baseline skip
12988   DvipsToPDF /pdf@voff exch def%
12989 } def%
12990 /H.R {%
12991   currentpoint %
12992   HyperBorder sub /pdf@ury exch def %
12993   HyperBorder add /pdf@urx exch def %
12994   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12995 } def%
12996 }%
12997 }
12998 \def\setpdfinkmargin#1{%
12999   \begingroup
13000     \setlength{\dimen@}{#1}%
13001     \literalps@out{%
13002       /HyperBorder{\strip@pt\dimen@\space PDFToDvips}def%
13003     }%
13004   \endgroup
13005 }
13006 </dvipsone>

```

47.13 TeX4ht

```

13007 (*tex4ht)
13008 \providecommand*\XR@ext>{html}
13009 \let\Hy@raisedlink\ltx@empty
13010 \@ifpackageloaded{tex4ht}{%
13011   \Hy@InfoNoLine{tex4ht is already loaded}%
13012 }{%
13013   \RequirePackage[hTeX4ht]{tex4ht}%

```

```

13014 }
13015 \hyperlinkfileprefix{}
13016 \let\PDF@FinishDoc\ltx@empty
13017 \def\PDF@SetupDoc{%
13018   \ifx\@baseurl\@empty
13019     \else
13020       \special{t4ht=<base href="\@baseurl">}%
13021     \fi
13022 }
13023 \Hy@WrapperDef\hyper@anchor#1{%
13024   \Hy@SaveLastskip
13025   \Hy@VerboseAnchor{#1}%
13026   \begingroup
13027     \let\protect=\string
13028     \special{t4ht=<a name=%
13029       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13030   \endgroup
13031   \Hy@activeanchortrue
13032   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
13033   \special{t4ht=</a>}%
13034   \Hy@activeanchorfalse
13035   \Hy@RestoreLastskip
13036 }
13037 \Hy@WrapperDef\hyper@anchorstart#1{%
13038   \Hy@SaveLastskip
13039   \Hy@VerboseAnchor{#1}%
13040   \begingroup
13041     \hyper@chars\special{t4ht=<a name=%
13042       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
13043   \endgroup
13044   \Hy@activeanchortrue
13045 }
13046 \def\hyper@anchorend{%
13047   \special{t4ht=</a>}%
13048   \Hy@activeanchorfalse
13049   \Hy@RestoreLastskip
13050 }
13051 \def\@urltype{url}
13052 \def\hyper@linkstart#1#2{%
13053   \Hy@VerboseLinkStart{#1}{#2}%
13054   \expandafter\Hy@colorlink\csname @#1color\endcsname
13055   \def\Hy@tempa{#1}%
13056   \ifx\Hy@tempa\@urltype
13057     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13058   \else
13059     \begingroup
13060       \hyper@chars
13061       \special{t4ht=<a href=%
13062         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
13063     \endgroup
13064   \fi
13065 }
13066 \def\hyper@linkend{%
13067   \special{t4ht=</a>}%
13068   \Hy@endcolorlink
13069 }
13070 \def\hyper@linkfile#1#2#3{%

```

```

13071 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
13072 }
13073 \def\hyper@linkurl#1#2{%
13074 \leavevmode
13075 \ifHy@raiselinks
13076 \Hy@SaveSpaceFactor
13077 \Hy@SaveSavedSpaceFactor
13078 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
13079 \Hy@RestoreSavedSpaceFactor
13080 \@linkdim\dp\@tempboxa
13081 \lower\@linkdim\hbox{%
13082 \begingroup
13083 \hyper@chars
13084 \special{%
13085 t4ht=<a href=\hyper@quote#2\hyper@quote>%
13086 }%
13087 \endgroup
13088 }%
13089 \Hy@colorlink\@urlcolor
13090 \Hy@RestoreSpaceFactor
13091 #1\Hy@xspace@end
13092 \Hy@SaveSpaceFactor
13093 \Hy@endcolorlink
13094 \@linkdim\ht\@tempboxa
13095 \advance\@linkdim by -6.5\p@
13096 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
13097 \Hy@RestoreSpaceFactor
13098 \else
13099 \begingroup
13100 \hyper@chars
13101 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
13102 \Hy@colorlink\@urlcolor
13103 #1\Hy@xspace@end
13104 \Hy@endcolorlink
13105 \special{t4ht=</a>}%
13106 \endgroup
13107 \fi
13108 }

```

Poor implementation of \hyper@link without considering #1.

```

13109 \def\hyper@link#1#2#3{%
13110 \Hy@VerboseLinkStart{#1}{#2}%
13111 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
13112 }
13113 \def\hyper@image#1#2{%
13114 \begingroup
13115 \hyper@chars
13116 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
13117 \endgroup
13118 }
13119 \let\autoref\ref
13120 \ifx \rEFLiNK \UnDef
13121 \def\rEFLiNK #1#2{#2}%
13122 \fi
13123 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

13124 \AtBeginDocument{%
13125 \expandafter

```

```

13126 \let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
13127 \expandafter\def\csname Make:Label\endcsname#1#2{%
13128   \ifhmode
13129     \Hy@SaveSpaceFactor
13130   \else
13131     \global\Hy@SavedSpaceFactor=1000 %
13132   \fi
13133   \Hy@OrgMakeLabel{#1}{%
13134     \Hy@RestoreSpaceFactor
13135     #2\Hy@xspace@end%
13136     \Hy@SaveSpaceFactor
13137   }%
13138   \Hy@RestoreSpaceFactor
13139 }%
13140 }
13141 \</tex4ht>
13142 \<*tex4htcfg>
13143 \IfFileExists{\jobname.cfg}{\endinput}{}
13144 \Preamble{html}
13145   \begin{document}%
13146 \EndPreamble
13147 \def\TeX{TeX}
13148 \def\OMEGA{\Omega}
13149 \def\LaTeX{\LaTeX}
13150 \def\LaTeXe{\LaTeX2e}
13151 \def\TeXe{\TeX}
13152 \def\MF{Metafont}
13153 \def\MP{MetaPost}
13154 \</tex4htcfg>

```

48 Driver-specific form support

48.1 pdfmarks

```

13155 \<*pdfmark>
13156 \long\def\@Form[#1]{%
13157   \g@addto@macro\Hy@FirstPageHook{%
13158     \headerps@out{%
13159 [%
13160   /_objdef{pdfDocEncoding}%
13161   /type/dict%
13162 /OBJ pdfmark%
13163 [%
13164   {pdfDocEncoding}%
13165   <<%
13166     /Type/Encoding%
13167     /Differences[%
13168       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
13169       /tilde %
13170       39/quotesingle %
13171       96/grave %
13172       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13173       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13174       /quotedblbase/quotedblleft/quotedblright/quoteleft%
13175       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
13176       /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13177       164/currency %
13178       166/brokenbar %

```

13179 168/dieresis/copyright/ordfeminine %
13180 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13181 /twosuperior/threesuperior/acute/mu %
13182 183/periodcentered/cedilla/onesuperior/ordmasculine %
13183 188/onequarter/onehalf/threequarters %
13184 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13185 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13186 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13187 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13188 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13189 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13190 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13191 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13192 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
13193 /ucircumflex/udieresis/yacute/thorn/ydieresis%
13194]%
13195 >>%
13196 /PUT pdfmark%
13197 [%
13198 /_objdef{ZaDb}%
13199 /type/dict%
13200 /OBJ pdfmark%
13201 [%
13202 {ZaDb}%
13203 <<%
13204 /Type/Font%
13205 /Subtype/Type1%
13206 /Name/ZaDb%
13207 /BaseFont/ZapfDingbats%
13208 >>%
13209 /PUT pdfmark%
13210 [%
13211 /_objdef{Helv}%
13212 /type/dict%
13213 /OBJ pdfmark%
13214 [%
13215 {Helv}%
13216 <<%
13217 /Type/Font%
13218 /Subtype/Type1%
13219 /Name/Helv%
13220 /BaseFont/Helvetica%
13221 /Encoding{pdfDocEncoding}%
13222 >>%
13223 /PUT pdfmark%
13224 [%
13225 /_objdef{aform}%
13226 /type/dict%
13227 /OBJ pdfmark%
13228 [%
13229 /_objdef{afields}%
13230 /type/array%
13231 /OBJ pdfmark%
13232 [%
13233 /_objdef{corder}%
13234 /type/array%
13235 /OBJ pdfmark%

```

13236 {%
13237 [%
13238   /BBox[0 0 100 100]%
13239   /_objdef{Check}%
13240 /BP pdfmark %
13241 1 0 0 setrgbcolor%
13242 /ZapfDingbats 80 selectfont %
13243 20 20 moveto%
13244 (4)show%
13245 [/EP pdfmark%
13246 [%
13247   /BBox[0 0 100 100]%
13248   /_objdef{Cross}%
13249 /BP pdfmark %
13250 1 0 0 setrgbcolor%
13251 /ZapfDingbats 80 selectfont %
13252 20 20 moveto%
13253 (8)show%
13254 [/EP pdfmark%
13255 [%
13256   /BBox[0 0 250 100]%
13257   /_objdef{Submit}%
13258 /BP pdfmark %
13259 0.6 setgray %
13260 0 0 250 100 rectfill %
13261 1 setgray %
13262 2 2 moveto %
13263 2 98 lineto %
13264 248 98 lineto %
13265 246 96 lineto %
13266 4 96 lineto %
13267 4 4 lineto %
13268 fill %
13269 0.34 setgray %
13270 248 98 moveto %
13271 248 2 lineto %
13272 2 2 lineto %
13273 4 4 lineto %
13274 246 4 lineto %
13275 246 96 lineto %
13276 fill%
13277 /Helvetica 76 selectfont %
13278 0 setgray %
13279 8 22.5 moveto%
13280 (Submit)show%
13281 [/EP pdfmark%
13282 [%
13283   /BBox[0 0 250 100]%
13284   /_objdef{SubmitP}%
13285 /BP pdfmark %
13286 0.6 setgray %
13287 0 0 250 100 rectfill %
13288 0.34 setgray %
13289 2 2 moveto %
13290 2 98 lineto %
13291 248 98 lineto %
13292 246 96 lineto %

```

```

13293 4 96 lineto %
13294 4 4 lineto %
13295 fill %
13296 1 setgray %
13297 248 98 moveto %
13298 248 2 lineto %
13299 2 2 lineto %
13300 4 4 lineto %
13301 246 4 lineto %
13302 246 96 lineto %
13303 fill%
13304 /Helvetica 76 selectfont %
13305 0 setgray %
13306 10 20.5 moveto%
13307 (Submit)show%
13308 [/EP pdfmark%
13309 } ?pdfmark%
13310 [%
13311 {aform}%
13312 <<%
13313 /Fields{afields}%
13314 /DR<<%
13315 /Font<<%
13316 /ZaDb{ZaDb}%
13317 /Helv{Helv}%
13318 >>%
13319 >>%
13320 /DA(/Helv 10 Tf 0 g)%
13321 /CO{corder}%
13322 \ifHy@pdfa
13323 \else
13324 \ifHyField@NeedAppearances
13325 /NeedAppearances true%
13326 \fi
13327 \fi
13328 >>%
13329 /PUT pdfmark%
13330 [%
13331 {Catalog}%
13332 <<%
13333 /AcroForm{aform}%
13334 >>%
13335 /PUT pdfmark%
13336 }}%
13337 \kvsetkeys{Form}{#1}%
13338 }
13339 \let\@endForm\ltx@empty
13340 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13341 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
13342 }

13343 \newcount\HyField@AnnotCount
13344 \HyField@AnnotCount=\z@
13345 \def\HyField@AdvanceAnnotCount{%
13346 \global\advance\HyField@AnnotCount\@ne
13347 }
13348 \def\HyField@TheAnnotCount{%
13349 \the\HyField@AnnotCount

```

```

13350 }
13351 \edef\Fld@pageobjref{/P\string{ThisPage\string}}
13352 \def\HyField@AddToFields#1{%
13353   \pdfmark{%
13354     pdfmark=/APPEND,%
13355     Raw={%
13356       \string{afields\string}%
13357       \string{#1\HyField@TheAnnotCount\string}%
13358     }%
13359   }%
13360   \ifx\Fld@calculate@code\ltx@empty
13361   \else
13362     \pdfmark{%
13363       pdfmark=/APPEND,%
13364       Raw={%
13365         \string{corder\string}%
13366         \string{#1\HyField@TheAnnotCount\string}%
13367       }%
13368     }%
13369   \fi
13370 }
13371 \def\@TextField[#1]#2{% parameters, label
13372   \def\Fld@name{#2}%
13373   \let\Fld@default\ltx@empty
13374   \let\Fld@value\@empty
13375   \def\Fld@width{\DefaultWidthofText}%
13376   \def\Fld@height{%
13377     \ifFld@multiline
13378       \DefaultHeightofTextMultiline
13379     \else
13380       \DefaultHeightofText
13381     \fi
13382   }%
13383   \begingroup
13384     \expandafter\HyField@SetKeys\expandafter{%
13385       \DefaultOptionsofText,#1%
13386     }%
13387     \HyField@FlagsText
13388     \ifFld@hidden\def\Fld@width{1sp}\fi
13389     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13390     \HyField@AdvanceAnnotCount
13391     \LayoutTextField{#2}{%
13392       \leavevmode
13393       \Hy@escapeform\PDFForm@Text
13394       \pdfmark{\MakeTextField{\Fld@width}{\Fld@height}}{%
13395         pdfmark=/ANN,%
13396         objdef=text\HyField@TheAnnotCount,%
13397         Raw={\PDFForm@Text}%
13398       }%
13399     }%
13400     \HyField@AddToFields{text}%
13401   \endgroup
13402 }
13403 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13404   \def\Fld@name{#2}%
13405   \let\Fld@default\relax

```



```

13406 \let\Fld@value\relax
13407 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13408 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13409 \begingroup
13410 \Fld@menulength=0 %
13411 \@tempdima\z@
13412 \@for\@curropt:=#3\do{%
13413 \expandafter\Fld@checkequals\@curropt==\%
13414 \Hy@StepCount\Fld@menulength
13415 \settowidth{\@tempdimb}{\@currDisplay}%
13416 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13417 }%
13418 \advance\@tempdima by 15\p@
13419 \begingroup
13420 \HyField@SetKeys{#1}%
13421 \edef\x{\endgroup
13422 \noexpand\expandafter
13423 \noexpand\HyField@SetKeys
13424 \noexpand\expandafter{%
13425 \expandafter\noexpand\curname DefaultOptionsof%
13426 \ifFld@radio
13427 Radio%
13428 \else
13429 \ifFld@combo
13430 \ifFld@popdown
13431 PopdownBox%
13432 \else
13433 ComboBox%
13434 \fi
13435 \else
13436 ListBox%
13437 \fi
13438 \fi
13439 \endcurname
13440 }%
13441 }\x
13442 \HyField@SetKeys{#1}%
13443 \ifFld@hidden\def\Fld@width{1sp}\fi
13444 \ifx\Fld@value\relax
13445 \let\Fld@value\Fld@default
13446 \fi
13447 \LayoutChoiceField{#2}{%
13448 \ifFld@radio
13449 \HyField@FlagsRadioButton
13450 \@@Radio{#3}%
13451 \else
13452 \begingroup
13453 \HyField@FlagsChoice
13454 \ifdim\Fld@width<\@tempdima
13455 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13456 \edef\Fld@width{\the\@tempdima}%
13457 \fi
13458 \ifFld@combo
13459 \else
13460 \@tempdima=\the\Fld@menulength\Fld@charsize
13461 \advance\@tempdima by \Fld@borderwidth bp %
13462 \advance\@tempdima by \Fld@borderwidth bp %

```

```

13463         \edef\Fld@height{\the\@tempdima}%
13464         \fi
13465         \@@ListBox{#3}%
13466     \endgroup
13467 \fi
13468 }%
13469 \endgroup
13470 }
13471 \def\@@Radio#1{%
13472     \Fld@listcount=0 %
13473     \EdefEscapeName\Fld@default{\Fld@default}%
13474     \@for\@curropt:=#1\do{%
13475         \expandafter\Fld@checkequals\@curropt==\%
13476         \EdefEscapeName\@currValue{\@currValue}%
13477         \Hy@StepCount\Fld@listcount
13478         \@currDisplay\space
13479         \Hy@escapeform\PDFForm@Radio
13480         \ifnum\Fld@listcount=1 %
13481             \HyField@AdvanceAnnotCount
13482             \fi
13483         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
13484             pdfmark=/ANN,%
13485             objdef=\ifnum\Fld@listcount=1 radio\HyField@TheAnnotCount\fi,%
13486             Raw={%
13487                 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
13488             }%
13489         } % deliberate space between radio buttons
13490         \ifnum\Fld@listcount=1 %
13491             \HyField@AddToFields{radio}%
13492         \fi
13493     }%
13494 }
13495 \newcount\Fld@listcount
13496 \def\@@ListBox#1{%
13497     \HyField@PDFChoices{#1}%
13498     \Hy@escapeform\PDFForm@List
13499     \HyField@AdvanceAnnotCount
13500     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
13501         pdfmark=/ANN,%
13502         objdef=list\HyField@TheAnnotCount,%
13503         Raw={\PDFForm@List}%
13504     }%
13505     \HyField@AddToFields{list}%
13506 }
13507 \def\@PushButton[#1]#2{% parameters, label
13508     \def\Fld@name{#2}%
13509     \begingroup
13510         \expandafter\HyField@SetKeys\expandafter{%
13511             \DefaultOptionsofPushButton,#1%
13512         }%
13513     \ifHy@pdfa
13514         \Hy@Error{%
13515             PDF/A: Push button with JavaScript is prohibited%
13516         }\@ehc
13517     \LayoutPushButtonField{%
13518         \leavevmode
13519         \MakeButtonField{#2}%

```

```

13520 }%
13521 \else
13522 \HyField@FlagsPushButton
13523 \ifFld@hidden\def\Fld@width{1sp}\fi
13524 \HyField@AdvanceAnnotCount
13525 \LayoutPushButtonField{%
13526 \leavevmode
13527 \Hy@escapeform\PDFForm@Push
13528 \pdfmark[\MakeButtonField{#2}]{%
13529 pdfmark=/ANN,%
13530 objdef=push\HyField@TheAnnotCount,%
13531 Raw={\PDFForm@Push}%
13532 }%
13533 }%
13534 \HyField@AddToFields{push}%
13535 \fi
13536 \endgroup
13537 }
13538 \def\@Submit[#1]#2{%
13539 \def\Fld@width{\DefaultWidthofSubmit}%
13540 \def\Fld@height{\DefaultHeightofSubmit}%
13541 \begingroup
13542 \expandafter\HyField@SetKeys\expandafter{%
13543 \DefaultOptionsofSubmit,#1%
13544 }%
13545 \HyField@FlagsPushButton
13546 \HyField@FlagsSubmit
13547 \ifFld@hidden\def\Fld@width{1sp}\fi
13548 \Hy@escapeform\PDFForm@Submit
13549 \HyField@AdvanceAnnotCount
13550 \pdfmark[\MakeButtonField{#2}]{%
13551 pdfmark=/ANN,%
13552 objdef=submit\HyField@TheAnnotCount,%
13553 Raw={\PDFForm@Submit /AP<</N{Submit}/D{SubmitP}>>}}%
13554 }%
13555 \HyField@AddToFields{submit}%
13556 \endgroup
13557 }
13558 \def\@Reset[#1]#2{%
13559 \def\Fld@width{\DefaultWidthofReset}%
13560 \def\Fld@height{\DefaultHeightofReset}%
13561 \begingroup
13562 \expandafter\HyField@SetKeys\expandafter{%
13563 \DefaultOptionsofReset,#1%
13564 }%
13565 \leavevmode
13566 \ifHy@pdfa
13567 \Hy@Error{%
13568 PDF/A: Reset action is prohibited%
13569 }\@ehc
13570 \MakeButtonField{#2}%
13571 \else
13572 \HyField@FlagsPushButton
13573 \ifFld@hidden\def\Fld@width{1sp}\fi
13574 \Hy@escapeform\PDFForm@Reset
13575 \HyField@AdvanceAnnotCount
13576 \pdfmark[\MakeButtonField{#2}]{%

```

```

13577 pdfmark=/ANN,%
13578 objdef=reset\HyField@TheAnnotCount,%
13579 Raw={\PDFForm@Reset}%
13580 }%
13581 \HyField@AddToFields{reset}%
13582 \fi
13583 \endgroup
13584 }%
13585 \def\@CheckBox[#1]#2{% parameters, label
13586 \def\Fld@name{#2}%
13587 \def\Fld@default{0}%
13588 \begingroup
13589 \def\Fld@width{\DefaultWidthofCheckBox}%
13590 \def\Fld@height{\DefaultHeightofCheckBox}%
13591 \expandafter\HyField@SetKeys\expandafter{%
13592 \DefaultOptionsofCheckBox,#1%
13593 }%
13594 \HyField@FlagsCheckBox
13595 \ifFld@hidden\def\Fld@width{1sp}\fi
13596 \HyField@AdvanceAnnotCount
13597 \LayoutCheckField{#2}{%
13598 \leavevmode
13599 \Hy@escapeform\PDFForm@Check
13600 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
13601 pdfmark=/ANN,%
13602 objdef=check\HyField@TheAnnotCount,%
13603 Raw={\PDFForm@Check}%
13604 }%
13605 }%
13606 \HyField@AddToFields{check}%
13607 \endgroup
13608 }
13609 \pdfmark

```

48.2 HyperTeX

```

13610 \def\@Form[#1]{%
13611 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13612 }
13613 \let\@endForm\ltx@empty
13614 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13615 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
13616 }
13617 \def\@TextField[#1]#2{% parameters, label
13618 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
13619 }
13620 \def\@CheckBox[#1]#2{% parameters, label
13621 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
13622 }
13623 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13624 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
13625 }
13626 \def\@PushButton[#1]#2{% parameters, label
13627 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
13628 }
13629 \def\@Reset[#1]#2{%
13630 \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13631 }

```

```

13632 }
13633 \def\@Submit[#1]#2{%
13634   \Hy@Message{Sorry, HyperTeX does not support FORMs}%
13635 }
13636 \</hypertex>

```

48.3 TeX4ht

```

13637 \*tex4ht
13638 \def\@Form[#1]{%
13639   \kvsetkeys{Form}{#1}%
13640   \HCode{<form action="\Form@action" method="\Form@method">}%
13641 }
13642 \def\@endForm{\HCode{</form>}}
13643 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13644   \Hy@Message{Sorry, TeX4ht does not support gauges}%
13645 }
13646 \def\@TextField[#1]#2{% parameters, label
13647   \let\Hy@reserved@a\@empty
13648   \def\Fld@name{#2}%
13649   \let\Fld@default\ltx@empty
13650   \bgroup
13651     \Field@toks={ }%
13652     \kvsetkeys{Field}{#1}%
13653     \HCode{<label for="\Fld@name">#2</label>}%
13654     \ifFld@password
13655       \@@PasswordField
13656     \else
13657       \@@TextField
13658     \fi
13659   \egroup
13660 }
13661 \def\@@PasswordField{%
13662   \HCode{%
13663     <input type="password" %
13664     id="\Fld@name" %
13665     name="\Fld@name" %
13666     \ifFld@hidden type="hidden" \fi
13667     value="\Fld@default" %
13668     \the\Field@toks
13669   >%
13670 }%
13671 }
13672 \def\@@TextField{%
13673   \ifFld@multiline
13674     \HCode{<textarea %
13675       \ifFld@readonly readonly \fi
13676       id="\Fld@name" %
13677       name="\Fld@name" %
13678       \ifFld@hidden type="hidden" \fi
13679       \the\Field@toks>%
13680   }%
13681   \Fld@default
13682   \HCode{</textarea>}%
13683 \else
13684   \HCode{<input type="text" %
13685     \ifFld@readonly readonly \fi
13686     id="\Fld@name" %

```

```

13687     name="\Fld@name" %
13688     \ifFld@hidden type="hidden" \fi
13689     value="\Fld@default" %
13690     \the\Field@toks>%
13691 }%
13692 \fi
13693 }
13694 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13695 \def\Fld@name{#2}%
13696 \let\Fld@default\ltx@empty
13697 \let\Hy@reserved@a\relax
13698 \begingroup
13699 \expandafter\Fld@findlength#3\\%
13700 \Field@toks={ }%
13701 \kvsetkeys{Field}{#1}%
13702 #2%
13703 \ifFld@radio
13704 \expandafter\@@Radio#3\\%
13705 \else
13706 \expandafter\@@Menu#3\\%
13707 \fi
13708 \endgroup
13709 }
13710 \def\Fld@findlength#1\\{%
13711 \Fld@menulength=0 %
13712 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
13713 }
13714 \def\@@Menu#1\\{%
13715 \HCode{<select size="\the\Fld@menulength" %
13716     name="\Fld@name" %
13717     \the\Field@toks>%
13718 }%
13719 \@for\@curropt:=#1\do{%
13720 \expandafter\Fld@checkequals\@curropt==\\%
13721 \HCode{<option %
13722     \ifx\@curropt\Fld@default selected \fi
13723     value="\@currValue">\@currDisplay</option>%
13724 }%
13725 }%
13726 \HCode{</select>}%
13727 }
13728 \def\@@Radio#1\\{%
13729 \@for\@curropt:=#1\do{%
13730 \expandafter\Fld@checkequals\@curropt==\\%
13731 \HCode{<input type="radio" %
13732     \ifx\@curropt\Fld@default checked \fi
13733     name="\Fld@name" %
13734     value="\@currValue" %
13735     \the\Field@toks>%
13736 }%
13737 \@currDisplay
13738 }%
13739 }
13740 \def\@PushButton[#1]#2{% parameters, label
13741 \def\Fld@name{#2}%
13742 \bgroup
13743 \Field@toks={ }%

```

```

13744 \kvsetkeys{Field}{#1}%
13745 \HCode{<input type="button" %
13746   name="\Fld@name" %
13747   value="#2" %
13748   \the\Fld@toks>%
13749 }%
13750 \HCode{</button>}%
13751 \egroup
13752 }
13753 \def\@Submit[#1]#2{%
13754 \HCode{<button type="submit">#2</button>}%
13755 }
13756 \def\@Reset[#1]#2{%
13757 \HCode{<button type="reset">#2</button>}%
13758 }
13759 \def\@CheckBox[#1]#2{% parameters, label
13760 \let\Hy@reserved@a\@empty
13761 \def\Fld@name{#2}%
13762 \def\Fld@default{0}%
13763 \bgroup
13764 \Field@toks={ }%
13765 \kvsetkeys{Field}{#1}%
13766 \HCode{<input type="checkbox" %
13767   \ifFld@checked checked \fi
13768   \ifFld@disabled disabled \fi
13769   \ifFld@readonly readonly \fi
13770   name="\Fld@name" %
13771   \ifFld@hidden type="hidden" \fi
13772   value="\Fld@default" %
13773   \the\Fld@toks>%
13774   #2%
13775 }%
13776 \egroup
13777 }
13778 </tex4ht>

```

48.4 pdfTeX

```

13779 <*pdfTeX>
13780 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13781 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
13782 }
13783 \def\MakeFieldObject#1#2{\sbox0{#1}%
13784 \immediate\pdfxform0 %
13785 \expandafter\edef\csname #2Object\endcsname{%
13786 \the\pdfastxform\space 0 R%
13787 }%
13788 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
13789 }%
13790 \let\HyField@afields\ltx@empty
13791 \let\HyField@cofields\ltx@empty
13792 \begingroup\expandafter\expandafter\expandafter\endgroup
13793 \expandafter\ifx\csname pdfastlink\endcsname\relax
13794 \let\HyField@AddToFields\relax
13795 \PackageInfo{hyperref}{%
13796   You need pdfTeX 1.40.0 for setting the /Fields entry.%
13797   \MessageBreak
13798   Adobe Reader/Acrobat accepts an empty /Field array,%

```

```

13799 \MessageBreak
13800 but other PDF viewers might complain%
13801 }%
13802 \else
13803 \let\HyField@AuxAddToFields\ltx@gobble
13804 \let\HyField@AuxAddToCoFields\ltx@gobbletwo
13805 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%

```

Insertion sort for calculation field list. In case of equal sort keys (for example, if ‘calculatesortkey’ is not used at all) the keys keep document calling order.

```

13806 \def\HyField@ABD@AuxAddToCoFields#1#2{%
13807 \begingroup
13808 \Hy@safe@activetrue
13809 \let\ltx@secondoftwo\relax
13810 \ifx\HyField@cofields\ltx@empty
13811 \xdef\HyField@cofields{%
13812 \ltx@secondoftwo{#1}{ #2 0 R}%
13813 }%
13814 \else
13815 \let\ltx@secondoftwo\relax
13816 \def\HyField@AddCoField##1##2##3{%
13817 \ifx##1\ltx@empty
13818 \ltx@secondoftwo{#1}{ #2 0 R}%
13819 \expandafter\ltx@gobble
13820 \else
13821 \ifnum\pdfstrcmp{##2}{#1}>\ltx@zero
13822 \ltx@secondoftwo{#1}{ #2 0 R}%
13823 \ltx@secondoftwo{##2}{##3}%
13824 \expandafter\expandafter\expandafter\ltx@gobble
13825 \else
13826 \ltx@secondoftwo{##2}{##3}%
13827 \fi
13828 \fi
13829 \HyField@AddCoField
13830 }%
13831 \xdef\HyField@cofields{%
13832 \expandafter\HyField@AddCoField
13833 \HyField@cofields\ltx@empty\ltx@empty\ltx@empty
13834 }%
13835 \fi
13836 \endgroup
13837 }%
13838 \Hy@AtBeginDocument{%
13839 \if@files
13840 \immediate\write\@mainaux{%
13841 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
13842 }%
13843 \immediate\write\@mainaux{%
13844 \string\providecommand\string\HyField@AuxAddToCoFields[2]{}%
13845 }%
13846 \fi
13847 \let\HyField@AfterAuxOpen\@firstofone
13848 \def\HyField@AuxAddToFields#1{%
13849 \xdef\HyField@afields{%
13850 \ifx\HyField@afields\@empty
13851 \else
13852 \HyField@afields
13853 \space

```



```

13854     \fi
13855     #1 0 R%
13856   }%
13857 }%
13858 \let\HyField@AuxAddToCoFields\HyField@ABD@AuxAddToCoFields
13859 }%
13860 \def\HyField@AddToFields{%
13861   \expandafter\HyField@@AddToFields\expandafter{%
13862     \the\pdfastlink
13863   }%
13864   \ifx\Fld@calculate@code\ltx@empty
13865   \else
13866     \begingroup
13867     \Hy@safe@activetrue
13868     \edef\Hy@temp{%
13869       \endgroup
13870       \if@filesw
13871         \write\@mainaux{%
13872           \string\HyField@AuxAddToCoFields{%
13873             \Fld@calculate@sortkey
13874           }{%
13875             \the\pdfastlink
13876           }%
13877         }%
13878       \fi
13879     }%
13880     \Hy@temp
13881   \fi
13882 }%
13883 \def\HyField@@AddToFields#1{%
13884   \HyField@AfterAuxOpen{%
13885     \if@filesw
13886       \write\@mainaux{%
13887         \string\HyField@AuxAddToFields{#1}%
13888       }%
13889     \fi
13890   }%
13891 }%
13892 \fi
13893 \def\@Form[#1]{%
13894   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13895   \kvsetkeys{Form}{#1}%
13896   \pdf@ifdraftmode{}{%
13897     \Hy@FormObjects
13898     \ifnum\pdfTeXversion>13 %
13899       \pdfrefobj\OBJ@pdfdocencoding
13900       \pdfrefobj\OBJ@ZaDb
13901       \pdfrefobj\OBJ@Helv
13902     \fi
13903     \AtVeryEndDocument{%
13904       \immediate\pdfobj{%
13905         <<%
13906           /Fields[\HyField@afields]%
13907           \ifx\HyField@cofields\ltx@empty
13908           \else
13909             /CO[\romannumeral-'\Q\HyField@cofields]%
13910           \fi

```

```

13911      /DR<<%
13912      /Font<<%
13913      /ZaDb \OBJ@ZaDb\space 0 R%
13914      /Helv \OBJ@Helv\space 0 R%
13915      >>%
13916      >>%
13917      /DA(/Helv 10 Tf 0 g)%
13918      \ifHy@pdfa
13919      \else
13920      \ifHyField@NeedAppearances
13921      /NeedAppearances true%
13922      \fi
13923      \fi
13924      >>%
13925      }%
13926      \edef\OBJ@acroform{\the\pdflastobj}%
13927      \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
13928      }%
13929      }%
13930      \MakeFieldObject{%
Same as \ding{123} of package pifont.
13931      \begingroup
13932      \fontfamily{pzd}%
13933      \fontencoding{U}%
13934      \fontseries{m}%
13935      \fontshape{n}%
13936      \selectfont
13937      \char123 %
13938      \endgroup
13939      }{Ding}%
13940      \MakeFieldObject{%
13941      \fbox{\textcolor{yellow}{\textsf{Submit}}}%
13942      }{Submit}%
13943      \MakeFieldObject{%
13944      \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
13945      }{SubmitP}%
13946      }
13947      \let\@endForm\ltx@empty
13948      \let\HyAnn@AbsPageLabel\ltx@empty
13949      \let\Fld@pageobjref\ltx@empty
13950      \ltx@ifUndefined{pdfpageref}{%
13951      }{%
13952      \ltx@ifpackageloaded{zref-abspage}{%
13953      \newcount\HyAnn@Count
13954      \HyAnn@Count=\ltx@zero
13955      \def\HyAnn@AbsPageLabel{%
13956      \global\advance\HyAnn@Count by\ltx@one
13957      \zref@labelbyprops{HyAnn@\the\HyAnn@Count}{abspage}%
13958      \zref@refused{HyAnn@\the\HyAnn@Count}%
13959      }%
13960      \def\Fld@pageobjref{%
13961      \zref@ifrefundefined{HyAnn@\the\HyAnn@Count}{%
13962      }{%
13963      \zref@ifrefcontainsprop{HyAnn@\the\HyAnn@Count}{abspage}{%
13964      /P \pdfpageref
13965      \zref@extractdefault{HyAnn@\the\HyAnn@Count}{abspage}{1} %
13966      \space 0 R%

```

```

13967     }{%
13968     }%
13969     }%
13970     }%
13971 }{%
13972 }%
13973 }

13974 \def\@TextField[#1]#2{% parameters, label
13975   \def\Fld@name{#2}%
13976   \let\Fld@default\ltx@empty
13977   \let\Fld@value\@empty
13978   \def\Fld@width{\DefaultWidthofText}%
13979   \def\Fld@height{%
13980     \ifFld@multiline
13981       \DefaultHeightofTextMultiline
13982     \else
13983       \DefaultHeightofText
13984     \fi
13985   }%
13986   \begingroup
13987     \expandafter\HyField@SetKeys\expandafter{%
13988       \DefaultOptionsofText,#1%
13989     }%
13990     \PDFForm@Name
13991     \HyField@FlagsText
13992     \ifFld@hidden\def\Fld@width{1sp}\fi
13993     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13994     \LayoutTextField{#2}{%
13995       \leavevmode
13996       \HyAnn@AbsPageLabel
13997       \Hy@escapeform\PDFForm@Text
13998       \pdfstartlink user {\PDFForm@Text}\relax
13999       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
14000       \HyField@AddToFields
14001     }%
14002   \endgroup
14003 }

14004 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14005   \def\Fld@name{#2}%
14006   \let\Fld@default\relax
14007   \let\Fld@value\relax
14008   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14009   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14010   \begingroup
14011     \Fld@menulength=0 %
14012     \@tempdima\z@
14013     \@for\@curropt:=#3\do{%
14014       \expandafter\Fld@checkequals\@curropt==\\%
14015       \Hy@StepCount\Fld@menulength
14016       \settowidth{\@tempdimb}{\@currDisplay}%
14017       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14018     }%
14019     \advance\@tempdima by 15\p@
14020     \begingroup
14021       \HyField@SetKeys{#1}%
14022     \edef\x{\endgroup
14023       \noexpand\expandafter

```

```

14024 \noexpand\HyField@SetKeys
14025 \noexpand\expandafter{%
14026 \expandafter\noexpand\csname DefaultOptionsof%
14027 \ifFld@radio
14028 Radio%
14029 \else
14030 \ifFld@combo
14031 \ifFld@popdown
14032 PopdownBox%
14033 \else
14034 ComboBox%
14035 \fi
14036 \else
14037 ListBox%
14038 \fi
14039 \fi
14040 \endcsname
14041 }%
14042 }\x
14043 \HyField@SetKeys{#1}%
14044 \PDFForm@Name
14045 \ifFld@hidden\def\Fld@width{1sp}\fi
14046 \ifx\Fld@value\relax
14047 \let\Fld@value\Fld@default
14048 \fi
14049 \LayoutChoiceField{#2}{%
14050 \ifFld@radio
14051 \HyField@FlagsRadioButton
14052 \@@Radio{#3}%
14053 \else
14054 \begingroup
14055 \HyField@FlagsChoice
14056 \ifdim\Fld@width<\@tempdima
14057 \ifdim\@tempdima<1cm\@tempdima1cm\fi
14058 \edef\Fld@width{\the\@tempdima}%
14059 \fi
14060 \ifFld@combo
14061 \else
14062 \@tempdima=\the\Fld@menulength\Fld@charsize
14063 \advance\@tempdima by \Fld@borderwidth bp %
14064 \advance\@tempdima by \Fld@borderwidth bp %
14065 \edef\Fld@height{\the\@tempdima}%
14066 \fi
14067 \@@ListBox{#3}%
14068 \endgroup
14069 \fi
14070 }%
14071 \endgroup
14072 }
14073 \def\@@Radio#1{%
14074 \Fld@listcount=0 %
14075 \EdefEscapeName\Fld@default{\Fld@default}%
14076 \@for\@curropt:=#1\do{%
14077 \expandafter\Fld@checkequals\@curropt==\%
14078 \EdefEscapeName\@currValue{\@currValue}%
14079 \Hy@StepCount\Fld@listcount
14080 \@currDisplay\space

```

```

14081 \leavevmode
14082 \HyAnn@AbsPageLabel
14083 \Hy@escapeform\PDFForm@Radio
14084 \pdfstartlink user {%
14085 \PDFForm@Radio
14086 /AP<<%
14087 /N<<%

```

Laurent.Guillope@math.univ-nantes.fr (Laurent Guillope) persuades me that this was wrong: `/\Fld@name\the\Fld@listcount`. But I leave it here to remind me that it is untested.

```

14088 \/\@currValue\space \DingObject
14089 >>%
14090 >>%
14091 }%
14092 \relax
14093 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
14094 \ifnum\Fld@listcount=1 %
14095 \HyField@AddToFields
14096 \fi
14097 \space % deliberate space between radio buttons
14098 }%
14099 }
14100 \newcount\Fld@listcount
14101 \def\@@Listbox#1{%
14102 \HyField@PDFChoices{#1}%
14103 \leavevmode
14104 \HyAnn@AbsPageLabel
14105 \Hy@escapeform\PDFForm@List
14106 \pdfstartlink user {\PDFForm@List}\relax
14107 \MakeChoiceField{\Fld@width}{\Fld@height}%
14108 \pdfendlink
14109 \HyField@AddToFields
14110 }
14111 \def\@PushButton[#1]#2{% parameters, label
14112 \def\Fld@name{#2}%
14113 \begingroup
14114 \expandafter\HyField@SetKeys\expandafter{%
14115 \DefaultOptionsofPushButton,#1%
14116 }%
14117 \PDFForm@Name
14118 \ifHy@pdfa
14119 \Hy@Error{%
14120 PDF/A: Push button with JavaScript is prohibited%
14121 }\@ehc
14122 \LayoutPushButtonField{%
14123 \leavevmode
14124 \MakeButtonField{#2}%
14125 }%
14126 \else
14127 \HyField@FlagsPushButton
14128 \ifFld@hidden\def\Fld@width{1sp}\fi
14129 \LayoutPushButtonField{%
14130 \leavevmode
14131 \HyAnn@AbsPageLabel
14132 \Hy@escapeform\PDFForm@Push
14133 \pdfstartlink user {\PDFForm@Push}\relax
14134 \MakeButtonField{#2}%

```

```

14135     \pdfendlink
14136     \HyField@AddToFields
14137 }%
14138 \fi
14139 \endgroup
14140 }
14141 \def\@Submit[#1]#2{%
14142   \def\Fld@width{\DefaultWidthofSubmit}%
14143   \def\Fld@height{\DefaultHeightofSubmit}%
14144   \begingroup
14145     \expandafter\HyField@SetKeys\expandafter{%
14146       \DefaultOptionsofSubmit,#1%
14147     }%
14148     \HyField@FlagsPushButton
14149     \HyField@FlagsSubmit
14150     \ifFld@hidden\def\Fld@width{1sp}\fi
14151     \leavevmode
14152     \HyAnn@AbsPageLabel
14153     \Hy@escapeform\PDFForm@Submit
14154     \pdfstartlink user {%
14155       \PDFForm@Submit
14156       /AP<</N \SubmitObject/D \SubmitPObject>>%
14157     }%
14158     \relax
14159     \MakeButtonField{#2}%
14160     \pdfendlink
14161     \HyField@AddToFields
14162   \endgroup
14163 }
14164 \def\@Reset[#1]#2{%
14165   \def\Fld@width{\DefaultWidthofReset}%
14166   \def\Fld@height{\DefaultHeightofReset}%
14167   \begingroup
14168     \expandafter\HyField@SetKeys\expandafter{%
14169       \DefaultOptionsofReset,#1%
14170     }%
14171     \leavevmode
14172     \ifHy@pdfa
14173       \Hy@Error{%
14174         PDF/A: Reset action is prohibited%
14175       }\@ehc
14176       \MakeButtonField{#2}%
14177     \else
14178       \HyField@FlagsPushButton
14179       \ifFld@hidden\def\Fld@width{1sp}\fi
14180       \HyAnn@AbsPageLabel
14181       \Hy@escapeform\PDFForm@Reset
14182       \pdfstartlink user {\PDFForm@Reset}\relax
14183       \MakeButtonField{#2}%
14184       \pdfendlink
14185       \HyField@AddToFields
14186     \fi
14187   \endgroup
14188 }
14189 \def\@CheckBox[#1]#2{% parameters, label
14190   \def\Fld@name{#2}%
14191   \def\Fld@default{0}%

```

```

14192 \begingroup
14193 \def\Fld@width{\DefaultWidthofCheckBox}%
14194 \def\Fld@height{\DefaultHeightofCheckBox}%
14195 \expandafter\HyField@SetKeys\expandafter{%
14196 \DefaultOptionsofCheckBox,#1%
14197 }%
14198 \PDFForm@Name
14199 \HyField@FlagsCheckBox
14200 \ifFld@hidden\def\Fld@width{1sp}\fi
14201 \LayoutCheckField{#2}{%
14202 \leavevmode
14203 \HyAnn@AbsPageLabel
14204 \Hy@escapeform\PDFForm@Check
14205 \pdfstartlink user {\PDFForm@Check}\relax
14206 \MakeCheckField{\Fld@width}{\Fld@height}%
14207 \pdfendlink
14208 \HyField@AddToFields
14209 }%
14210 \endgroup
14211 }
14212 \def\Hy@FormObjects{%
14213 \pdfobj {%
14214 <<%
14215 /Type/Encoding%
14216 /Differences[%
14217 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
14218 /ring/tilde %
14219 39/quotesingle %
14220 96/grave %
14221 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14222 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14223 /quotedblbase/quotedblleft/quotedblright/quoteleft%
14224 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
14225 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14226 164/currency %
14227 166/brokenbar %
14228 168/dieresis/copyright/ordfeminine %
14229 172/logicalnot/.notdef/registered/macron/degree/plusminus%
14230 /twosuperior/threesuperior/acute/mu %
14231 183/periodcentered/cedilla/onesuperior/ordmasculine %
14232 188/onequarter/onehalf/threequarters %
14233 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14234 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
14235 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
14236 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
14237 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
14238 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
14239 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
14240 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
14241 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
14242 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
14243 ]%
14244 >>%
14245 }%
14246 \xdef\OBJ@pdfdocencoding{\the\pdfastobj}%
14247 \pdfobj{%
14248 <<%

```

```

14249 /Type/Font%
14250 /Subtype/Type1%
14251 /Name/ZaDb%
14252 /BaseFont/ZapfDingbats%
14253 >>%
14254 }%
14255 \xdef\OBJ@ZaDb{\the\pdfastobj}%
14256 \pdfobj{%
14257 <<%
14258 /Type/Font%
14259 /Subtype/Type1%
14260 /Name/Helv%
14261 /BaseFont/Helvetica%
14262 /Encoding \OBJ@pdfdocencoding\space 0 R%
14263 >>%
14264 }%
14265 \xdef\OBJ@Helv{\the\pdfastobj}%
14266 \global\let\Hy@FormObjects\relax
14267 }
14268 \pdfTeX

```

48.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

14269 \*dvipdfm | xetex

```

\@Gauge

```

14270 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
14271 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
14272 }

```

\@Form

```

14273 \def\@Form[#1]{%
14274 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
14275 \kvsetkeys{Form}{#1}%
14276 \Hy@FormObjects
14277 \@pdfm@mark{obj @afields []}%
14278 \@pdfm@mark{obj @corder []}%
14279 \@pdfm@mark{%
14280 obj @aform <<%
14281 /Fields @afields%
14282 /DR<<%
14283 /Font<<%
14284 /ZaDb @OBJZaDb%
14285 /Helv @OBJHelv%
14286 >>%
14287 >>%
14288 /DA(/Helv 10 Tf 0 g)%
14289 /CO @corder%
14290 \ifHy@pdfa
14291 \else
14292 \ifHyField@NeedAppearances
14293 /NeedAppearances true%
14294 \fi
14295 \fi
14296 >>%
14297 }%

```



```

14298 \pdfmark{put @catalog <</AcroForm @aform>>}}%
14299 }

\@endForm
14300 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
14301 \def\dvipdfm@setdim{%
14302   height \the\ht\pdfm@box\space
14303   width \the\wd\pdfm@box\space
14304   depth \the\dp\pdfm@box\space
14305 }

\HyField@AnnotCount
14306 \newcount\HyField@AnnotCount
14307 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
14308 \def\HyField@AdvanceAnnotCount{%
14309   \global\advance\HyField@AnnotCount\@ne
14310 }

\HyField@TheAnnotCount
14311 \def\HyField@TheAnnotCount{%
14312   \the\HyField@AnnotCount
14313 }

\Fld@pageobjref
14314 \def\Fld@pageobjref{/P @thispage}%

\HyField@AddToFields
14315 \def\HyField@AddToFields#1{%
14316   \pdfmark{put @afields @#1\HyField@TheAnnotCount}%
14317   \ifx\Fld@calculate@code\ltx@empty
14318   \else
14319     \pdfmark{put @corder @#1\HyField@TheAnnotCount}%
14320   \fi
14321 }

\@TextField
14322 \def\@TextField[#1]#2{% parameters, label
14323   \def\Fld@name{#2}%
14324   \let\Fld@default\ltx@empty
14325   \let\Fld@value\@empty
14326   \def\Fld@width{\DefaultWidthofText}%
14327   \def\Fld@height{%
14328     \ifFld@multiline
14329       \DefaultHeightofTextMultiline
14330     \else
14331       \DefaultHeightofText
14332     \fi
14333   }%
14334   \begingroup
14335     \expandafter\HyField@SetKeys\expandafter{%
14336       \DefaultOptionsofText,#1%
14337     }%

```

```

14338 \PDFForm@Name
14339 \HyField@FlagsText
14340 \ifFld@hidden\def\Fld@width{1sp}\fi
14341 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
14342 \setbox\pdfm@box=\hbox{%
14343   \MakeTextField{\Fld@width}{\Fld@height}%
14344 }%
14345 \HyField@AdvanceAnnotCount
14346 \LayoutTextField{#2}{%
14347   \leavevmode
14348   \Hy@escapeform\PDFForm@Text
14349   \@pdfm@mark{%
14350     ann @text\HyField@TheAnnotCount\space
14351     \dvi pdfm@setdim << \PDFForm@Text >>%
14352   }%
14353 }%
14354 \unhbox\pdfm@box
14355 \HyField@AddToFields{text}%
14356 % record in @afields array
14357 \endgroup
14358 }

```

\@ChoiceMenu

```

14359 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
14360   \def\Fld@name{#2}%
14361   \let\Fld@default\relax
14362   \let\Fld@value\relax
14363   \def\Fld@width{\DefaultWidthofChoiceMenu}%
14364   \def\Fld@height{\DefaultHeightofChoiceMenu}%
14365   \begingroup
14366     \Fld@menulength=0 %
14367     \@tempdima\z@
14368     \@for\@curropt:=#3\do{%
14369       \expandafter\Fld@checkequals\@curropt==\%
14370       \Hy@StepCount\Fld@menulength
14371       \settowidth{\@tempdimb}{\@currDisplay}%
14372       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
14373     }%
14374     \advance\@tempdima by 15\p@
14375     \begingroup
14376       \HyField@SetKeys{#1}%
14377     \edef\x{\endgroup
14378       \noexpand\expandafter
14379       \noexpand\HyField@SetKeys
14380       \noexpand\expandafter{%
14381         \expandafter\noexpand\curname DefaultOptionsof%
14382         \ifFld@radio
14383           Radio%
14384         \else
14385           \ifFld@combo
14386             \ifFld@popdown
14387               PopdownBox%
14388             \else
14389               ComboBox%
14390             \fi
14391           \else
14392             ListBox%
14393           \fi

```

```

14394     \fi
14395     \endcsname
14396   }%
14397 } \x
14398 \HyField@SetKeys{#1}%
14399 \PDFForm@Name
14400 \ifFld@hidden\def\Fld@width{1sp}\fi
14401 \ifx\Fld@value\relax
14402   \let\Fld@value\Fld@default
14403 \fi
14404 \LayoutChoiceField{#2}{%
14405   \ifFld@radio
14406     \HyField@FlagsRadioButton
14407     \@@Radio{#3}%
14408   \else
14409     \begingroup
14410     \HyField@FlagsChoice
14411     \ifdim\Fld@width<\@tempdima
14412       \ifdim\@tempdima<1cm\@tempdima1cm\fi
14413       \edef\Fld@width{\the\@tempdima}%
14414     \fi
14415     \ifFld@combo
14416     \else
14417       \@tempdima=\the\Fld@menulength\Fld@charsize
14418       \advance\@tempdima by \Fld@borderwidth bp %
14419       \advance\@tempdima by \Fld@borderwidth bp %
14420       \edef\Fld@height{\the\@tempdima}%
14421     \fi
14422     \@@ListBox{#3}%
14423   \endgroup
14424 \fi
14425 }%
14426 \endgroup
14427 }

```

\@@Radio

```

14428 \def\@@Radio#1{%
14429   \Fld@listcount=0 %
14430   \EdefEscapeName\Fld@default{\Fld@default}%
14431   \setbox\pdfm@box=\hbox{%
14432     \MakeRadioField{\Fld@width}{\Fld@height}%
14433   }%
14434   \@for\@curropt:=#1\do{%
14435     \expandafter\Fld@checkequals\@curropt==\%
14436     \EdefEscapeName\@currValue{\@currValue}%
14437     \Hy@StepCount\Fld@listcount
14438     \@currDisplay\space
14439     \leavevmode
14440     \Hy@escapeform\PDFForm@Radio
14441     \ifnum\Fld@listcount=1 %
14442       \HyField@AdvanceAnnotCount
14443     \fi
14444     \@pdfm@mark{%
14445       ann %
14446       \ifnum\Fld@listcount=1 %
14447         @radio\HyField@TheAnnotCount%
14448       \space
14449     \fi

```

```

14450     \dvipdfm@setdim
14451     <<%
14452     \PDFForm@Radio
14453     /AP<</N<</\@currValue /null>>>>%
14454     >>%
14455     }%
14456     \unhcopy\pdfm@box\space% deliberate space between radio buttons
14457     \ifnum\Fld@listcount=1 %
14458     \HyField@AddToFields{radio}%
14459     \fi
14460     }%
14461 }

\Fld@listcount
14462 \newcount\Fld@listcount

\@@Listbox
14463 \def\@@Listbox#1{%
14464     \HyField@PDFChoices{#1}%
14465     \setbox\pdfm@box=\hbox{%
14466         \MakeChoiceField{\Fld@width}{\Fld@height}%
14467     }%
14468     \leavevmode
14469     \Hy@escapeform\PDFForm@List
14470     \HyField@AdvanceAnnotCount
14471     \@pdfm@mark{%
14472         ann @list\HyField@TheAnnotCount\space
14473         \dvipdfm@setdim
14474         <<\PDFForm@List>>%
14475     }%
14476     \unhbox\pdfm@box
14477     \HyField@AddToFields{list}%
14478 }

\@PushButton
14479 \def\@PushButton[#1]#2{% parameters, label
14480     \def\Fld@name{#2}%
14481     \begingroup
14482     \expandafter\HyField@SetKeys\expandafter{%
14483         \DefaultOptionsofPushButton,#1%
14484     }%
14485     \PDFForm@Name
14486     \ifHy@pdfa
14487         \Hy@Error{%
14488             PDF/A: Push button with JavaScript is prohibited%
14489         }\@ehc
14490     \LayoutPushButtonField{%
14491         \leavevmode
14492         \MakeButtonField{#2}%
14493     }%
14494     \else
14495         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14496         \HyField@FlagsPushButton
14497         \ifFld@hidden\def\Fld@width{1sp}\fi
14498         \HyField@AdvanceAnnotCount
14499         \LayoutPushButtonField{%
14500             \leavevmode

```

```

14501     \Hy@escapeform\PDFForm@Push
14502     \@pdfm@mark{%
14503         ann @push\HyField@TheAnnotCount\space
14504         \dvipdfm@setdim
14505         <<\PDFForm@Push>>%
14506     }%
14507 }%
14508 \unhbox\pdfm@box
14509 \HyField@AddToFields{push}%
14510 \fi
14511 \endgroup
14512 }

\@Submit
14513 \def\@Submit[#1]#2{%
14514     \def\Fld@width{\DefaultWidthofSubmit}%
14515     \def\Fld@height{\DefaultHeightofSubmit}%
14516     \begingroup
14517     \expandafter\HyField@SetKeys\expandafter{%
14518         \DefaultOptionsofSubmit,#1%
14519     }%
14520     \HyField@FlagsPushButton
14521     \HyField@FlagsSubmit
14522     \ifFld@hidden\def\Fld@width{1sp}\fi
14523     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14524     \leavevmode
14525     \Hy@escapeform\PDFForm@Submit
14526     \HyField@AdvanceAnnotCount
14527     \@pdfm@mark{%
14528         ann @submit\HyField@TheAnnotCount\space
14529         \dvipdfm@setdim
14530         <<\PDFForm@Submit>>%
14531     }%
14532     \unhbox\pdfm@box%
14533     \HyField@AddToFields{submit}%
14534 \endgroup
14535 }

\@Reset
14536 \def\@Reset[#1]#2{%
14537     \def\Fld@width{\DefaultWidthofReset}%
14538     \def\Fld@height{\DefaultHeightofReset}%
14539     \begingroup
14540     \expandafter\HyField@SetKeys\expandafter{%
14541         \DefaultOptionsofReset,#1%
14542     }%
14543     \leavevmode
14544     \ifHy@pdfa
14545         \Hy@Error{%
14546             PDF/A: Reset action is prohibited%
14547         }\@ehc
14548         \MakeButtonField{#2}%
14549     \else
14550         \HyField@FlagsPushButton
14551         \ifFld@hidden\def\Fld@width{1sp}\fi
14552         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
14553         \Hy@escapeform\PDFForm@Reset

```

```

14554 \HyField@AdvanceAnnotCount
14555 \@pdfm@mark{%
14556   ann @reset\HyField@TheAnnotCount\space
14557   \dvipdfm@setdim
14558   <<\PDFForm@Reset>>%
14559 }%
14560 \unhbox\pdfm@box
14561 \HyField@AddToFields{reset}%
14562 \fi
14563 \endgroup
14564 }

```

\@CheckBox

```

14565 \def\@CheckBox[#1]#2{% parameters, label
14566   \def\Fld@name{#2}%
14567   \def\Fld@default{0}%
14568   \begingroup
14569     \def\Fld@width{\DefaultWidthofCheckBox}%
14570     \def\Fld@height{\DefaultHeightofCheckBox}%
14571     \expandafter\HyField@SetKeys\expandafter{%
14572       \DefaultOptionsofCheckBox,#1%
14573     }%
14574     \PDFForm@Name
14575     \HyField@FlagsCheckBox
14576     \ifFld@hidden\def\Fld@width{1sp}\fi
14577     \setbox\pdfm@box=\hbox{%
14578       \MakeCheckField{\Fld@width}{\Fld@height}%
14579     }%
14580     \HyField@AdvanceAnnotCount
14581     \LayoutCheckField{#2}{%
14582       \leavevmode
14583       \Hy@escapeform\PDFForm@Check
14584       \@pdfm@mark{%
14585         ann @check\HyField@TheAnnotCount\space
14586         \dvipdfm@setdim
14587         <<\PDFForm@Check>>%
14588       }%
14589       \unhbox\pdfm@box
14590       \HyField@AddToFields{check}%
14591     }%
14592   \endgroup
14593 }

14594 \def\Hy@FormObjects{%
14595   \@pdfm@mark{obj @OBJpdfdocencoding%
14596     <<%
14597     /Type/Encoding%
14598     /Differences[%
14599       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
14600       39/quotesingle %
14601       96/grave %
14602       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
14603       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
14604       /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
14605       /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
14606       /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
14607       164/currency %
14608       166/brokenbar %

```

```

14609      168/dieresis/copyright/ordfeminine %
14610      172/logicalnot/.notdef/registered/macron/degree/plusminus%
14611      /twosuperior/threesuperior/acute/mu %
14612      183/periodcentered/cedilla/onesuperior/ordmasculine %
14613      188/onequarter/onehalf/threequarters %
14614      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
14615      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
14616      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
14617      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
14618      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
14619      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
14620      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
14621      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
14622      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
14623      /thorn/ydieresis%
14624      ]%
14625      >>%
14626      }%
14627      \@pdfm@mark{obj @OBJZaDb%
14628      <<%
14629      /Type/Font%
14630      /Subtype/Type1%
14631      /Name/ZaDb%
14632      /BaseFont/ZapfDingbats%
14633      >>%
14634      }%
14635      \@pdfm@mark{obj @OBJHelv%
14636      <<%
14637      /Type/Font%
14638      /Subtype/Type1%
14639      /Name/Helv%
14640      /BaseFont/Helvetica%
14641      /Encoding @OBJpdfdocencoding%
14642      >>%
14643      }%
14644      \global\let\Hy@FormObjects\relax
14645      }
14646      </dvipdfm|xetex>

```

48.6 Common forms part

```

14647 (*pdfmform)

```

\Fld@pageobjref

```

14648 \providecommand*{\Fld@pageobjref}{}

```

\Hy@escapestring

```

14649 \begingroup\expandafter\expandafter\expandafter\endgroup
14650 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
14651   \let\Hy@escapestring\@firstofone
14652   \def\Hy@escapeform#1{%
14653     \ifHy@pdfescapeform
14654       \def\Hy@escapestring##1{%
14655         \noexpand\Hy@escapestring{\noexpand##1}%
14656       }%
14657       \edef\Hy@temp{#1}%
14658       \expandafter\Hy@escapeform\Hy@temp\Hy@escapestring{}\@nil

```

```

14659 \def\Hy@escapestring##1{%
14660 \ifundefined{Hy@esc@\string##1}{%
14661 ##1%
14662 \ThisShouldNotHappen
14663 }{%
14664 \csname Hy@esc@\string##1\endcsname
14665 }%
14666 }%
14667 \else
14668 \let\Hy@escapestring\@firstofone
14669 \fi
14670 }%
14671 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
14672 \ifx\#3\%
14673 \else
14674 \expandafter
14675 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
14676 \ltx@ReturnAfterFi{%
14677 \Hy@@escapeform#3\@nil
14678 }%
14679 \fi
14680 }%
14681 \else
14682 \def\Hy@escapeform#1{%
14683 \ifHy@pdfescapeform
14684 \let\Hy@escapestring\pdfescapestring
14685 \else
14686 \let\Hy@escapestring\@firstofone
14687 \fi
14688 }%
14689 \Hy@escapeform{}%
14690 \fi

```

\PDFForm@Name

```

14691 \def\PDFForm@Name{%
14692 \PDFForm@@Name\Fld@name
14693 \ifx\Fld@altname\relax
14694 \else
14695 \PDFForm@@Name\Fld@altname
14696 \fi
14697 \ifx\Fld@mappingname\relax
14698 \else
14699 \PDFForm@@Name\Fld@mappingname
14700 \fi
14701 }

```

\PDFForm@@Name

```

14702 \def\PDFForm@@Name#1{%
14703 \begingroup
14704 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
14705 \ifHy@unicode
14706 \Hy@unicodedefalse
14707 \fi
14708 \fi
14709 \HyPsd@XeTeXBigCharstrue
14710 \pdfstringdef\Hy@gtemp#1%
14711 \endgroup

```



```

14712 \let#1\Hy@gtemp
14713 }

```

\Fld@additionalactions

```

14714 \def\Fld@@additionalactions{%
K input (keystroke) format
14715 \ifx\Fld@keystroke@code\@empty
14716 \else
14717 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
14718 \fi

```

F display format

```

14719 \ifx\Fld@format@code\@empty
14720 \else
14721 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
14722 \fi

```

V validation

```

14723 \ifx\Fld@validate@code\@empty
14724 \else
14725 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
14726 \fi

```

C calculation

```

14727 \ifx\Fld@calculate@code\@empty
14728 \else
14729 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
14730 \fi

```

Fo receiving the input focus

```

14731 \ifx\Fld@onfocus@code\@empty
14732 \else
14733 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
14734 \fi

```

Bl loosing the input focus (blurred)

```

14735 \ifx\Fld@onblur@code\@empty
14736 \else
14737 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
14738 \fi

```

D pressing the mouse button (down)

```

14739 \ifx\Fld@onmousedown@code\@empty
14740 \else
14741 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
14742 \fi

```

U releasing the mouse button (up)

```

14743 \ifx\Fld@onmouseup@code\@empty
14744 \else
14745 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
14746 \fi

```

E cursor enters the annotation's active area.

```

14747 \ifx\Fld@onenter@code\@empty
14748 \else
14749 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
14750 \fi

```

X cursor exits the annotation's active area.

```
14751 \ifx\Fld@onexit@code\@empty
14752 \else
14753 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
14754 \fi
14755 }
14756 \def\Fld@additionalactions{%
14757 \if-\Fld@@additionalactions-%
14758 \else
14759 \ifHy@pdfa
14760 \else
14761 /AA<<\Fld@@additionalactions>>%
14762 \fi
14763 \fi
14764 }
```

\Fld@annotnames

```
14765 \def\Fld@annotnames{%
14766 /T(\Fld@name)%
14767 \ifx\Fld@altname\relax
14768 \else
14769 /TU(\Fld@altname)%
14770 \fi
14771 \ifx\Fld@mappingname\relax
14772 \else
14773 /TM(\Fld@mappingname)%
14774 \fi
14775 }
```

\PDFForm@Check

```
14776 \def\PDFForm@Check{%
14777 /Subtype/Widget%
14778 \Fld@annotflags
14779 \Fld@pageobjref
14780 \Fld@annotnames
14781 /FT/Btn%
14782 \Fld@flags
14783 /Q \Fld@align
14784 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
14785 /AP<< /N <</Yes<<>>>> >> %new string /Yes is from below
14786 /MK<<%
14787 \ifnum\Fld@rotation=\z@
14788 \else
14789 /R \Fld@rotation
14790 \fi
14791 \ifx\Fld@bordercolor\relax
14792 \else
14793 /BC[\Fld@bordercolor]%
14794 \fi
14795 \ifx\Fld@bcolor\relax
14796 \else
14797 /BG[\Fld@bcolor]%
14798 \fi
14799 /CA(\Hy@escapestring{\Fld@cbsymbol})%
14800 >>%
14801 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14802 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
```

```

14803 /H/P%
14804 \ifFld@checked /V/Yes/AS/Yes\else /V/Off/AS/Off\fi
14805 \Fld@additionalactions
14806 }

```

\PDFForm@Push

```

14807 \ifHy@pdfa
14808 \else
14809 \def\PDFForm@Push{%
14810 /Subtype/Widget%
14811 \Fld@annotflags
14812 \Fld@pageobjref
14813 \Fld@annotnames
14814 /FT/Btn%
14815 \Fld@flags
14816 /H/P%
14817 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14818 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14819 \ifx\Fld@bordercolor\relax\else 1\fi
14820 \space
14821 \else
14822 /MK<<%
14823 \ifnum\Fld@rotation=\z@
14824 \else
14825 /R \Fld@rotation
14826 \fi
14827 \ifx\Fld@bordercolor\relax
14828 \else
14829 /BC[\Fld@bordercolor]%
14830 \fi
14831 >>%
14832 \fi
14833 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
14834 \Fld@additionalactions
14835 }%
14836 \fi

```

\PDFForm@List

```

14837 \def\PDFForm@List{%
14838 /Subtype/Widget%
14839 \Fld@annotflags
14840 \Fld@pageobjref
14841 \Fld@annotnames
14842 /FT/Ch%
14843 \Fld@flags
14844 /Q \Fld@align
14845 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14846 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14847 \ifx\Fld@bordercolor\relax\else 1\fi
14848 \ifx\Fld@bcolor\relax \else 1\fi
14849 \space
14850 \else
14851 /MK<<%
14852 \ifnum\Fld@rotation=\z@
14853 \else
14854 /R \Fld@rotation
14855 \fi

```

```

14856     \ifx\Fld@bordercolor\relax
14857     \else
14858         /BC[\Fld@bordercolor]%
14859     \fi
14860     \ifx\Fld@bcolor\relax
14861     \else
14862         /BG[\Fld@bcolor]%
14863     \fi
14864     >>%
14865 \fi
14866 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14867     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14868 \Fld@choices
14869 \Fld@additionalactions
14870 }

```

\PDFForm@Radio

```

14871 \def\PDFForm@Radio{%
14872 /Subtype/Widget%
14873 \Fld@annotflags
14874 \Fld@pageobjref
14875 \Fld@annotnames
14876 /FT/Btn%
14877 \Fld@flags
14878 /H/P%
14879 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14880 /MK<<%
14881     \ifnum\Fld@rotation=\z@
14882     \else
14883         /R \Fld@rotation
14884     \fi
14885     \ifx\Fld@bordercolor\relax
14886     \else
14887         /BC[\Fld@bordercolor]%
14888     \fi
14889     \ifx\Fld@bcolor\relax
14890     \else
14891         /BG[\Fld@bcolor]%
14892     \fi
14893     /CA(\Hy@escapestring{\Fld@radiosymbol})%
14894 >>%
14895 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
14896     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

New code, the default value is used for all buttons

```

14897 \ifx\Fld@default\@empty
14898     /V/Off%
14899     /DV/Off%
14900 \else
14901     /V/\Fld@default
14902     /DV/\Fld@default
14903 \fi
14904 \Fld@additionalactions
14905 }

```

\PDFForm@Text

```

14906 \def\PDFForm@Text{%
14907 /Subtype/Widget%

```

```

14908 \Fld@annotflags
14909 \Fld@pageobjref
14910 \Fld@annotnames
14911 /FT/Tx%
14912 \Fld@flags
14913 /Q \Fld@align
14914 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
14915 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14916     \ifx\Fld@bordercolor\relax\else 1\fi
14917     \ifx\Fld@bcolor\relax \else 1\fi
14918     \space
14919 \else
14920 /MK<<%
14921     \ifnum\Fld@rotation=\z@
14922     \else
14923     /R \Fld@rotation
14924     \fi
14925     \ifx\Fld@bordercolor\relax
14926     \else
14927     /BC[\Fld@bordercolor]%
14928     \fi
14929     \ifx\Fld@bcolor\relax
14930     \else
14931     /BG[\Fld@bcolor]%
14932     \fi
14933 >>%
14934 \fi
14935 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
14936     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
14937 /DV(\Hy@escapestring{\Fld@default})%
14938 /V(\Hy@escapestring{\Fld@value})%
14939 \Fld@additionalactions
14940 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
14941 }

```

\PDFForm@Submit

```

14942 \def\PDFForm@Submit{%
14943 /Subtype/Widget%
14944 \Fld@annotflags
14945 \Fld@pageobjref
14946 \Fld@annotnames
14947 /FT/Btn%
14948 \Fld@flags
14949 /H/P%
14950 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
14951 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14952     \ifx\Fld@bordercolor\relax\else 1\fi
14953     \space
14954 \else
14955 /MK<<%
14956     \ifnum\Fld@rotation=\z@
14957     \else
14958     /R \Fld@rotation
14959     \fi
14960     \ifx\Fld@bordercolor\relax
14961     \else
14962     /BC[\Fld@bordercolor]%
14963     \fi

```

```

14964 >>%
14965 \fi
14966 /A<<%
14967 /S/SubmitForm%
14968 /F<<%
14969 /FS/URL%
14970 /F(\Hy@escapestring{\Form@action})%
14971 >>%
14972 \Fld@submitflags
14973 >>%
14974 \Fld@additionalactions
14975 }

```

\PDFForm@Reset

```

14976 \ifHy@pdfa
14977 \else
14978 \def\PDFForm@Reset{%
14979 /Subtype/Widget%
14980 \Fld@annotflags
14981 \Fld@pageobjref
14982 \Fld@annotnames
14983 /FT/Btn%
14984 \Fld@flags
14985 /H/P%
14986 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
14987 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
14988 \ifx\Fld@bordercolor\relax\else 1\fi
14989 \space
14990 \else
14991 /MK<<%
14992 \ifnum\Fld@rotation=\z@
14993 \else
14994 /R \Fld@rotation
14995 \fi
14996 \ifx\Fld@bordercolor\relax
14997 \else
14998 /BC[\Fld@bordercolor]%
14999 \fi
15000 % /CA (Clear)
15001 % /AC (Done)
15002 >>%
15003 \fi
15004 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
15005 /A<</S/ResetForm>>%
15006 \Fld@additionalactions
15007 }%
15008 \fi

15009 </pdfform>
15010 <*package>

```

49 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
15011 \def\phantomsection{%
15012   \Hy@MakeCurrentHrefAuto{section*}%
15013   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
15014 }
15015 \</package>
```

49.1 Bookmarks

```
15016 \<*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
15017 \def\Hy@writebookmark#1#2#3#4#5{%
15018   % section number, text, label, level, file
15019   \ifx\WriteBookmarks\relax%
15020   \else
15021     \ifnum#4>\Hy@bookmarksdepth\relax
15022     \else
15023       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
15024     \fi
15025   \fi
15026 }
15027 \def\Hy@currentbookmarklevel{0}
15028 \def\Hy@numberline#1{#1 }
15029 \def\@@writetorep#1#2#3#4#5{%
15030   \begingroup
15031     \edef\Hy@tempa{#5}%
15032     \ifx\Hy@tempa\Hy@bookmarkstype
15033       \edef\Hy@level{#4}%
15034       \ifx\Hy@levelcheck Y%
15035         \@tempcnta\Hy@level\relax
15036         \advance\@tempcnta by -1 %
15037         \ifnum\Hy@currentbookmarklevel<\@tempcnta
15038           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
15039           \advance\@tempcnta by 1 %
15040           \Hy@Warning{%
15041             Difference (\the\@tempcnta) between bookmark levels is %
```

```

15042         greater \MessageBreak than one, level fixed%
15043     }%
15044     \@tempcnta\Hy@currentbookmarklevel
15045     \advance\@tempcnta by 1 %
15046     \edef\Hy@level{\the\@tempcnta}%
15047     \fi
15048     \else
15049     \global\let\Hy@levelcheck Y%
15050     \fi
15051     \global\let\Hy@currentbookmarklevel\Hy@level
15052     \@tempcnta\Hy@level\relax
15053     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
15054     \advance\@tempcnta by -1 %
15055     \edef\Hy@tempa{#3}%
15056     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
15057     \ifx\Hy@tempa\Hy@tempb
15058     \Hy@Warning{%
15059         The anchor of a bookmark and its parent's must not%
15060         \MessageBreak be the same. Added a new anchor%
15061     }%
15062     \phantomsection
15063     \fi
15064     \ifHy@bookmarksnumbered
15065     \let\numberline\Hy@numberline
15066     \let\booknumberline\Hy@numberline
15067     \let\partnumberline\Hy@numberline
15068     \let\chapternumberline\Hy@numberline
15069     \else
15070     \let\numberline\@gobble
15071     \let\booknumberline\@gobble
15072     \let\partnumberline\@gobble
15073     \let\chapternumberline\@gobble
15074     \fi
15075     \HyPsd@XeTeXBigCharstrue
15076     \pdfstringdef\Hy@tempa{#2}%
15077     \HyPsd@SanitizeForOutFile\Hy@tempa
15078     \if@filesw
15079     \stepcounter{bookmark@seq@number}%
15080     \@ifundefined{@outlinefile}{%
15081     }{%
15082     \protected@write\@outlinefile{%
15083     \protect\BOOKMARK
15084     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
15085     {\Hy@tempa}{\Hy@tempb}%
15086     \@percentchar\space\thebookmark@seq@number
15087     }%
15088     }%
15089     \fi
15090     \fi
15091     \endgroup
15092 }
15093 \newcounter{bookmark@seq@number}

15094 \begingroup
15095 \lccode'('= '{%
15096 \lccode'='='}%
15097 \lccode'1=\z@
15098 \lccode'2=\z@

```



```

15099 \lccode'3=\z@
15100 \lccode'5=\z@
15101 \lccode'7=\z@
15102 \lccode'\#=\z@
15103 \lccode'\'=\z@
15104 \lccode'\{=\z@
15105 \lccode'\}=\z@
15106 \lowercase{%
15107 \endgroup
15108 \def\HyPsd@SanitizeForOutFile#1{%
15109 \@onelevel@sanitize\Hy@tempa
15110 \escapechar'\%
15111 \edef\Hy@tempa{%
15112 \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
15113 }%
15114 \edef\Hy@tempa{%
15115 \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
15116 }%
15117 }%
15118 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
15119 #1%
15120 \ifx\#2\%
15121 \expandafter\ltx@gobble
15122 \else
15123 \expandafter\ltx@firstofone
15124 \fi
15125 {%
15126 \string\173%
15127 \HyPsd@SanitizeOut@BraceLeft#2\@nil
15128 }%
15129 }%
15130 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
15131 #1%
15132 \ifx\#2\%
15133 \expandafter\ltx@gobble
15134 \else
15135 \expandafter\ltx@firstofone
15136 \fi
15137 {%
15138 \string\175%
15139 \HyPsd@SanitizeOut@BraceRight#2\@nil
15140 }%
15141 }%
15142 }

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

15143 \newcommand{\currentpdfbookmark}{%
15144 \pdfbookmark[\Hy@currentbookmarklevel]%
15145 }
15146 \newcommand{\subpdfbookmark}{%
15147 \@tempcnta\Hy@currentbookmarklevel
15148 \Hy@StepCount\@tempcnta
15149 \expandafter\pdfbookmark\expandafter[\the\@tempcnta%
15150 }
15151 \newcommand{\belowpdfbookmark}[2]{%
15152 \@tempcnta\Hy@currentbookmarklevel
15153 \Hy@StepCount\@tempcnta

```

```

15154 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
15155 \advance\@tempcnta by -1 %
15156 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
15157 }

```

Tobias Oetiker rightly points out that we need a way to force a bookmark entry. So we introduce `\pdfbookmark`, with two parameters, the title, and a symbolic name. By default this is at level 1, but we can reset that with the optional first argument.

```

15158 \renewcommand\pdfbookmark[3][0]{%
15159 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
15160 \hyper@anchorstart{#3.#1}\hyper@anchorend
15161 }
15162 \def\BOOKMARK{%
15163 \@ifnextchar{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
15164 }
15165 \def\@BOOKMARK[#1]{%
15166 \@ifnextchar{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
15167 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

49.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

15168 \RequirePackage{rerunfilecheck}[2009/12/10]
15169 \def\Hy@OutlineRerunCheck{%
15170 \RerunFileCheck{\jobname.out}{%
15171 \immediate\closeout\@outlinefile
15172 }{%
15173 Rerun to get outlines right\MessageBreak
15174 or use package ‘bookmark’%
15175 }%
15176 }

```

49.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

15177 <*vtex>
15178 \newcount\@serial@counter\@serial@counter=1\relax

```

`\hv@pdf@char` Plain octal codes doesn’t work with versions below 6.50. So for early versions hex numbers have to be used. It would be possible to program this instead of the large `\ifcase`, but I’m too lazy to sort that out now.

```

15179 \begingroup
15180 \catcode'\=12 %
15181 \ifnum\Hy@VTeXversion<650 %
15182 \catcode'\=12 %
15183 \gdef\hv@pdf@char#1#2#3{%
15184 \char
15185 \ifcase'#1#2#3 %
15186 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
15187 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
15188 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%

```

```

15189 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
15190 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
15191 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
15192 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
15193 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
15194 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
15195 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
15196 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
15197 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
15198 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
15199 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
15200 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
15201 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
15202 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
15203 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
15204 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
15205 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
15206 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
15207 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
15208 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
15209 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
15210 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
15211 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
15212 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
15213 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
15214 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
15215 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
15216 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
15217 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
15218 \fi
15219 }%
15220 \else
15221 \gdef\hv@pdf@char{\char'}%
15222 \fi
15223 \endgroup

```

\@@BOOKMARK

```

15224 \def\@@BOOKMARK[#1][#2]#3#4#5{%
15225 \expandafter\edef\csname @count@#3\endcsname{%
15226 \the\@serial@counter
15227 }%
15228 \edef\@mycount{\the\@serial@counter}%
15229 \Hy@StepCount\@serial@counter
15230 \edef\@parcount{%
15231 \expandafter\ifx\csname @count@#5\endcsname\relax
15232 0%
15233 \else
15234 \csname @count@#5\endcsname
15235 \fi
15236 }%
15237 \immediate\special{%
15238 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
15239 s=\ifx#2-c\else o\fi,t=#4%
15240 }%
15241 }%

```

\ReadBookmarks

```

15242 \def\ReadBookmarks{%
15243   \begingroup
15244   \def\0{\hv@pdf@char 0}%
15245   \def\1{\hv@pdf@char 1}%
15246   \def\2{\hv@pdf@char 2}%
15247   \def\3{\hv@pdf@char 3}%
15248   \def\({}%
15249   \def\)}%
15250   \def\do##1{%
15251     \ifnum\catcode'##1=\active
15252       \@makeother##1%
15253     \else
15254       \ifnum\catcode'##1=6 %
15255         \@makeother##1%
15256       \fi
15257     \fi
15258   }%
15259   \dospecials
15260   \Hy@safe@activetrue
15261   \InputIfFileExists{\jobname.out}{-}{-}%
15262 \endgroup
15263 \ifx\WriteBookmarks\relax
15264 \else
15265   \if@filesw
15266     \newwrite\@outlinefile
15267     \Hy@OutlineRerunCheck
15268     \immediate\openout\@outlinefile=\jobname.out\relax
15269     \ifHy@typexml
15270       \immediate\write\@outlinefile{<relaxxml>\relax}%
15271     \fi
15272   \fi
15273 \fi
15274 }

15275 </vtex>
15276 (*!vtex)
15277 \def\ReadBookmarks{%
15278   \pdf@ifdraftmode{-}{-}%
15279   \begingroup
15280   \def\do##1{%
15281     \ifnum\catcode'##1=\active
15282       \@makeother##1%
15283     \else
15284       \ifnum\catcode'##1=6 %
15285         \@makeother##1%
15286       \fi
15287     \fi
15288   }%
15289   \dospecials
15290   \Hy@safe@activetrue
15291   \escapechar='\'%
15292   \def\@@BOOKMARK[##1][##2]##3##4##5{%
15293     \calc@bm@number{##5}%
15294   }%
15295   \InputIfFileExists{\jobname.out}{-}{-}%
15296   \ifx\WriteBookmarks\relax
15297     \global\let\WriteBookmarks\relax
15298   \fi

```

```

15299 \def\@@BOOKMARK[##1][##2]###3###4###5{%
15300 \def\Hy@temp{##4}%
15301 (*pdfTeX)
15302 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15303 \Hy@OutlineName{}\Hy@pstringName{%
15304 ##2\check@bm@number{##3}%
15305 }{%
15306 \expandafter\strip@prefix\meaning\Hy@temp
15307 }%
15308 </pdfTeX>
15309 (*pdfmark)
15310 \pdfmark{%
15311 pdfmark=/OUT,%
15312 Count={##2\check@bm@number{##3}},%
15313 Dest={##3},%
15314 Title=\expandafter\strip@prefix\meaning\Hy@temp
15315 }%
15316 </pdfmark>
15317 (*dvipdfm|xetex)
15318 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
15319 \@pdfm@mark{%
15320 outline \ifHy@DvipdfmxOutlineOpen
15321 [%
15322 \ifnum##21>\z@
15323 \else
15324 -%
15325 \fi
15326 ]%
15327 \fi
15328 ##1<<%
15329 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
15330 /A<<%
15331 /S/GoTo%
15332 /D(\Hy@pstringName)%
15333 >>%
15334 >>%
15335 }%
15336 </dvipdfm|xetex>
15337 }%
15338 \begingroup
15339 \def\WriteBookmarks{0}%
15340 \InputIfFileExists{jobname.out}{-}{-}%
15341 \endgroup
15342 %{\escapechar\m@ne\InputIfFileExists{jobname.out}{-}{-}}%
15343 \endgroup
15344 }%
15345 \ifx\WriteBookmarks\relax
15346 \else
15347 \if@files
15348 \newwrite\@outlinefile
15349 \Hy@OutlineRerunCheck
15350 \immediate\openout\@outlinefile=jobname.out\relax
15351 \ifHy@typexml
15352 \immediate\write\@outlinefile{<relaxxml>\relax}%
15353 \fi
15354 \fi
15355 \fi

```

```

15356 }
15357 \<*pdfTeX>
15358 \def\Hy@OutlineName#1#2#3#4{%
15359   \pdfoutline goto name{#2}count#3{#4}%
15360 }
15361 \</pdfTeX>
15362 \def\check@bm@number#1{%
15363   \expandafter\ifx\csname B_#1\endcsname\relax
15364     0%
15365   \else
15366     \csname B_#1\endcsname
15367   \fi
15368 }
15369 \def\calc@bm@number#1{%
15370   \@tempcnta=\check@bm@number{#1}\relax
15371   \advance\@tempcnta by 1 %
15372   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
15373 }
15374 \</!vTeX>

15375 \ifHy@implicit
15376 \else
15377   \expandafter\endinput
15378 \fi

15379 \</outlines>
15380 \<*outlines | hypertex>

15381 \newlength\Hy@SectionHShift
15382 \def\Hy@SectionAnchorHref#1{%
15383   \ifx\protect\@typeset@protect
15384     \Hy@@SectionAnchor{#1}%
15385   \fi
15386 }
15387 \DeclareRobustCommand*{\Hy@@SectionAnchor}[1]{%
15388   \leavevmode
15389   \hbox to 0pt{%
15390     \kern-\Hy@SectionHShift
15391     \Hy@raisedlink{%
15392       \hyper@anchorstart{#1}\hyper@anchorend
15393     }%
15394     \hss
15395   }%
15396 }
15397 \let\H@old@ssect\@ssect
15398 \def\@ssect#1#2#3#4#5{%
15399   \Hy@MakeCurrentHrefAuto{section*}%
15400   \setlength{\Hy@SectionHShift}{#1}%
15401   \begingroup
15402     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
15403     \toks\tw@\expandafter{%
15404       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15405       #5%
15406     }%
15407   \edef\x{\endgroup
15408     \the\toks@\the\toks\tw@}%
15409   }\x
15410 }
15411 \let\H@old@schapter\@schapter

```

```

15412 \def\@schapter#1{%
15413   \begingroup
15414     \let\@mkboth\@gobbletwo
15415     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15416     \Hy@raisedlink{%
15417       \hyper@anchorstart{\@currentHref}\hyper@anchorend
15418     }%
15419   \endgroup
15420   \H@old@chapter{#1}%
15421 }

```

If there is no chapter number (`\frontmatter` or `\backmatter`) then the counting by `\refstepcounter{chapter}` is not executed, so there will be no destination for `\ddcontentsline`. So `\@chapter` is overloaded to avoid this:

```

15422 \ltx@ifundefined{@chapter}{-}{%
15423   \let\Hy@org@chapter\@chapter
15424   \def\@chapter{%
15425     \def\Hy@next{%
15426       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
15427       \Hy@raisedlink{%
15428         \hyper@anchorstart{\@currentHref}\hyper@anchorend
15429       }%
15430     }%
15431     \ifnum\c@secnumdepth>\m@ne
15432       \ltx@ifundefined{if@mainmatter}%
15433       \iftrue{\csname if@mainmatter\endcsname}%
15434       \let\Hy@next\relax
15435     \fi
15436     \fi
15437     \Hy@next
15438     \Hy@org@chapter
15439   }%
15440 }

15441 \let\H@old@part\@part
15442 \begingroup\expandafter\expandafter\expandafter\endgroup
15443 \expandafter\ifx\csname chapter\endcsname\relax
15444   \let\Hy@secnum@part\z@
15445 \else
15446   \let\Hy@secnum@part\m@ne
15447 \fi
15448 \def\@part{%
15449   \ifnum\Hy@secnum@part>\c@secnumdepth
15450     \phantomsection
15451     \fi
15452   \H@old@part
15453 }

15454 \let\H@old@spart\@spart
15455 \def\@spart#1{%
15456   \Hy@MakeCurrentHrefAuto{part*}%
15457   \Hy@raisedlink{%
15458     \hyper@anchorstart{\@currentHref}\hyper@anchorend
15459   }%
15460   \H@old@spart{#1}%
15461 }

15462 \let\H@old@sect\@sect
15463 \def\@sect#1#2#3#4#5#6[#7]#8{%
15464   \ifnum #2>\c@secnumdepth

```

```

15465 \expandafter\@firstoftwo
15466 \else
15467 \expandafter\@secondoftwo
15468 \fi
15469 {%
15470 \Hy@MakeCurrentHrefAuto{section*}%
15471 \setlength{\Hy@SectionHShift}{#3}%
15472 \begingroup
15473 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
15474 \toks\tw@\expandafter{%
15475 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
15476 #8%
15477 }%
15478 \edef\x{\endgroup
15479 \the\toks@\the\toks\tw@}%
15480 }\x
15481 }{%
15482 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
15483 }%
15484 }

15485 </outlines | hypertex>
15486 <*outlines>

15487 \expandafter\def\csname Parent-4\endcsname{}
15488 \expandafter\def\csname Parent-3\endcsname{}
15489 \expandafter\def\csname Parent-2\endcsname{}
15490 \expandafter\def\csname Parent-1\endcsname{}
15491 \expandafter\def\csname Parent0\endcsname{}
15492 \expandafter\def\csname Parent1\endcsname{}
15493 \expandafter\def\csname Parent2\endcsname{}
15494 \expandafter\def\csname Parent3\endcsname{}
15495 \expandafter\def\csname Parent4\endcsname{}
15496 </outlines>

```

50 Compatibility with koma-script classes

```
15497 <*outlines | hypertex>
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

15498 \def\Hy@tempa{%
15499 \def\@addchap[##1]##2{%
15500 \typeout{##2}%
15501 \if@twoside
15502 \@mkboth{##1}{}%
15503 \else
15504 \@mkboth{}{##1}%
15505 \fi
15506 \addtocontents{lof}{\protect\addvspace{10\p@}}%
15507 \addtocontents{lot}{\protect\addvspace{10\p@}}%
15508 \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
15509 \Hy@raisedlink{%
15510 \hyper@anchorstart{\@currentHref}\hyper@anchorend
15511 }%
15512 \if@twocolumn

```



```

15513 \topnewpage[\@makeschapterhead{##2}]%
15514 \else
15515 \@makeschapterhead{##2}%
15516 \@afterheading
15517 \fi
15518 \addcontentsline{toc}{chapter}{##1}%
15519 }%
15520 }
15521 \@ifclassloaded{scrbook}{%
15522 \@ifclasslater{scrbook}{2001/01/01}{%
15523 \let\Hy@tempa\@empty
15524 }{}%
15525 }{%
15526 \@ifclassloaded{scrreprt}{%
15527 \@ifclasslater{scrreprt}{2001/01/01}{%
15528 \let\Hy@tempa\@empty
15529 }{}%
15530 }{%
15531 \let\Hy@tempa\@empty
15532 }%
15533 }%
15534 \Hy@tempa
15535 </outlines | hypertext>

```

51 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

51.1 PD1 encoding

```

15536 <*pd1enc>
15537 \DeclareFontEncoding{PD1}{}{}

Accents
15538 \DeclareTextAccent{'}{PD1}{\textasciigrave}
15539 \DeclareTextAccent{'}{PD1}{\textacute}
15540 \DeclareTextAccent{^}{PD1}{\textasciicircum}
15541 \DeclareTextAccent{~}{PD1}{\texttilde}
15542 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
15543 \DeclareTextAccent{r}{PD1}{\textstring}
15544 \DeclareTextAccent{v}{PD1}{\textasciicaron}
15545 \DeclareTextAccent{.}{PD1}{\textdotaccent}
15546 \DeclareTextAccent{c}{PD1}{\textcedilla}
15547 \DeclareTextAccent{=}{PD1}{\textasciimacron}
15548 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
15549 \DeclareTextAccent{d}{PD1}{\textdotbelow}
15550 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
15551 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
15552 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
15553 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
15554 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
15555 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textstring}
15556 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
15557 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
15558 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
15559 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}

```

```

15560 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
15561 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
15562 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
15563 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textacute}
15564 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
15565 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
15566 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
15567 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
15568 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
15569 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
15570 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
15571 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
15572 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
15573 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
15574 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
15575 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
15576 \DeclareTextCommand{\newtie}{PD1}[1]{%
15577   \TextSymbolUnavailable{\newtie{#1}}#1%
15578 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

15579 % U+0009 (CHARACTER TABULATION)
15580 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
15581 % U+000A (LINE FEED)
15582 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
15583 % U+000D (CARRIAGE RETURN)
15584 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

15585 % U+02D8 BREVE; breve
15586 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
15587 % U+02C7 CARON; caron
15588 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
15589 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
15590 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
15591 % U+02D9 DOT ABOVE; dotaccent
15592 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
15593 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
15594 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
15595 % U+02DB OGONEK; ogonek
15596 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
15597 % U+02DA RING ABOVE; ring
15598 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
15599 % U+02DC SMALL TILDE; ilde, *tilde
15600 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

15601 % U+0022 QUOTATION MARK; quotedbl
15602 \DeclareTextCommand{\textquotedbl}{PD1}{"}% \042 U+0022
15603 % U+0023 NUMBER SIGN; numbersign
15604 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
15605 % U+0024 DOLLAR SIGN; dollar
15606 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
15607 % U+0025 PERCENT SIGN; percent
15608 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
15609 % U+0026 AMPERSAND; ampersand
15610 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

 15611 % U+0028 LEFT PARENTHESIS; parenleft
 15612 \DeclareTextCommand{\textparenleft}{PD1}{\string\}% \050 U+0028
 15613 % U+0029 RIGHT PARENTHESIS; parenright
 15614 \DeclareTextCommand{\textparenright}{PD1}{\string\})% \051 U+0029

 \052: U+002A ASTERISK; asterisk
 \053: U+002B PLUS SIGN; plus
 \054: U+002C COMMA; comma
 \055: U+002D HYPHEN-MINUS; hyphen
 \056: U+002E FULL STOP; period
 15615 % U+002E FULL STOP; period
 15616 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E

 \057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero

 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 15617 % U+003C LESS-THAN SIGN; less
 15618 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

 \075: U+003D EQUALS SIGN; equal
 15619 % U+003E GREATER-THAN SIGN; greater
 15620 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E

 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A

 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 15621 % U+005C REVERSE SOLIDUS; backslash
 15622 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 15623 % "U+2216 SET MINUS" simulated by "U+005C REVERSE SOLIDUS"
 15624 \DeclareTextCommand{\textsetminus}{PD1}{\textbackslash}

 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 15625 % U+005E CIRCUMFLEX ACCENT; asciicircum
 15626 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 15627 % U+005F LOW LINE; underscore
 15628 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 15629 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 15630 % U+0060 GRAVE ACCENT; grave
 15631 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060

 \141: U+0061 LATIN SMALL LETTER A; a

 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 15632 % U+0069 LATIN SMALL LETTER I; i
 15633 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

 \152: U+006A LATIN SMALL LETTER J; j

 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 15634 % U+007B LEFT CURLY BRACKET; braceleft
 15635 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 15636 % U+007C VERTICAL LINE; *bar, verticalbar

15637 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 15638 % U+007D RIGHT CURLY BRACKET; braceright
 15639 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 15640 % U+007E TILDE; asciitilde
 15641 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 15642 % U+2022 BULLET; bullet
 15643 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 15644 % U+2020 DAGGER; dagger
 15645 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 15646 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 15647 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 15648 \DeclareTextCommand{\textddagger}{PD1}{\textddagger}
 15649 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15650 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 15651 % U+2014 EM DASH; emdash
 15652 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 15653 % U+2013 EN DASH; endash
 15654 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 15655 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15656 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 15657 % U+2044 FRACTION SLASH; fraction
 15658 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 15659 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15660 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
 15661 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 ingright
 15662 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
 15663 % U+2212 MINUS SIGN; minus
 15664 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 15665 % U+2030 PER MILLE SIGN; perthousand
 15666 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 15667 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15668 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 15669 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15670 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 15671 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15672 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 15673 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15674 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 15675 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15676 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 15677 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15678 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 15679 % U+2122 TRADE MARK SIGN; trademark
 15680 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 15681 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15682 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 15683 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15684 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 15685 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 15686 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 15687 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15688 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 15689 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15690 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160

15691 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15692 \DeclareTextCompositeCommand{"Y}{PD1}{Y}{\230}% U+0178
15693 \DeclareTextCommand{\IJ}{PD1}{IJ}% ligature U+0049 U+004A
15694 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
15695 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
15696 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15697 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
15698 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15699 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
15700 % U+0153 LATIN SMALL LIGATURE OE; oe
15701 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
15702 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15703 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
15704 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
15705 \DeclareTextCompositeCommand{\v}{PD1}{z}{\236}% U+017E

Slot \237 (0x9F) is not defined in PDFDocEncoding.

The euro \240 is inserted in version 1.3 of the pdf specification.

15706 % U+20AC EURO SIGN; *Euro, euro
15707 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
15708 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
15709 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
15710 % U+00A2 CENT SIGN; cent
15711 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
15712 % U+00A3 POUND SIGN; sterling
15713 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
15714 % U+00A4 CURRENCY SIGN; currency
15715 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
15716 % U+00A5 YEN SIGN; yen
15717 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
15718 % U+00A6 BROKEN BAR; brokenbar
15719 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
15720 % U+00A7 SECTION SIGN; section
15721 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
15722 % U+00A8 DIAERESIS; dieresis
15723 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
15724 % U+00A9 COPYRIGHT SIGN; copyright
15725 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
15726 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
15727 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
15728 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
15729 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
15730 % U+00AC NOT SIGN; logicalnot
15731 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
15732 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

15733 % U+00AE REGISTERED SIGN; registered
15734 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
15735 % U+00AF MACRON; *macron, overscore
15736 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
15737 % U+00B0 DEGREE SIGN; degree
15738 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
15739 % U+00B1 PLUS-MINUS SIGN; plusminus
15740 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
15741 % U+00B2 SUPERSCRIPT TWO; twosuperior
15742 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}%* U+00B2
15743 % U+00B3 SUPERSCRIPT THREE; threesuperior

15744 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}%* U+00B3
 15745 % U+00B4 ACUTE ACCENT; acute
 15746 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 15747 % U+00B5 MICRO SIGN; mu, mul
 15748 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 15749 % U+00B6 PILCROW SIGN; paragraph
 15750 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 15751 % U+00B7 MIDDLE DOT; middot, *periodcentered
 15752 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 15753 % U+00B8 CEDILLA; cedilla
 15754 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 15755 % U+00B9 SUPERSCRIPT ONE; onesuperior
 15756 \DeclareTextCommand{\textonesuperior}{PD1}{\271}%* U+00B9
 15757 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 15758 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 15759 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 15760 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 15761 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 15762 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 15763 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 15764 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 15765 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 15766 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 15767 % U+00BF INVERTED QUESTION MARK; questiondown
 15768 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 15769 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 15770 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 15771 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 15772 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 15773 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 15774 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 15775 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 15776 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 15777 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 15778 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
 15779 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 15780 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
 15781 % U+00C6 LATIN CAPITAL LETTER AE; AE
 15782 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
 15783 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 15784 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
 15785 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 15786 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
 15787 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 15788 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
 15789 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 15790 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
 15791 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 15792 \DeclareTextCompositeCommand{\\"}{PD1}{E}{\313}% U+00CB
 15793 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 15794 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
 15795 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 15796 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
 15797 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 15798 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
 15799 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis

15800 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
15801 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
15802 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
15803 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
15804 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
15805 \DeclareTextCompositeCommand{~}{PD1}{N}{\321}% U+00D1
15806 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15807 \DeclareTextCompositeCommand{'}{PD1}{O}{\322}% U+00D2
15808 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15809 \DeclareTextCompositeCommand{'}{PD1}{O}{\323}% U+00D3
15810 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15811 \DeclareTextCompositeCommand{^}{PD1}{O}{\324}% U+00D4
15812 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15813 \DeclareTextCompositeCommand{~}{PD1}{O}{\325}% U+00D5
15814 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15815 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
15816 % U+00D7 MULTIPLICATION SIGN; multiply
15817 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
15818 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15819 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
15820 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15821 \DeclareTextCompositeCommand{'}{PD1}{U}{\331}% U+00D9
15822 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15823 \DeclareTextCompositeCommand{'}{PD1}{U}{\332}% U+00DA
15824 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15825 \DeclareTextCompositeCommand{^}{PD1}{U}{\333}% U+00DB
15826 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15827 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
15828 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15829 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
15830 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
15831 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
15832 \DeclareTextCommand{\textThorn}{PD1}{\336}%* U+00DE
15833 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15834 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
15835 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15836 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
15837 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15838 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
15839 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15840 \DeclareTextCompositeCommand{^}{PD1}{a}{\342}% U+00E2
15841 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15842 \DeclareTextCompositeCommand{~}{PD1}{a}{\343}% U+00E3
15843 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15844 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
15845 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15846 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
15847 % U+00E6 LATIN SMALL LETTER AE; ae
15848 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
15849 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15850 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
15851 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15852 \DeclareTextCompositeCommand{'}{PD1}{e}{\350}% U+00E8
15853 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15854 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
15855 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15856 \DeclareTextCompositeCommand{^}{PD1}{e}{\352}% U+00EA

15857 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
 15858 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
 15859 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
 15860 \DeclareTextCompositeCommand{"}{PD1}{i}{\354}% U+00EC
 15861 \DeclareTextCompositeCommand{"}{PD1}{i}{\354}% U+00EC
 15862 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
 15863 \DeclareTextCompositeCommand{"}{PD1}{i}{\355}% U+00ED
 15864 \DeclareTextCompositeCommand{"}{PD1}{i}{\355}% U+00ED
 15865 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
 15866 \DeclareTextCompositeCommand{"}{PD1}{i}{\356}% U+00EE
 15867 \DeclareTextCompositeCommand{"}{PD1}{i}{\356}% U+00EE
 15868 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 15869 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
 15870 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
 15871 % U+00F0 LATIN SMALL LETTER ETH; eth
 15872 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 15873 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 15874 \DeclareTextCompositeCommand{"}{PD1}{n}{\361}% U+00F1
 15875 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15876 \DeclareTextCompositeCommand{"}{PD1}{o}{\362}% U+00F2
 15877 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15878 \DeclareTextCompositeCommand{"}{PD1}{o}{\363}% U+00F3
 15879 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15880 \DeclareTextCompositeCommand{"}{PD1}{o}{\364}% U+00F4
 15881 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otile
 15882 \DeclareTextCompositeCommand{"}{PD1}{o}{\365}% U+00F5
 15883 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 15884 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 15885 % U+00F7 DIVISION SIGN; divide
 15886 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 15887 % U+00F8 LATIN SMALL LETTER O WITH STROKE; slash
 15888 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 15889 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 15890 \DeclareTextCompositeCommand{"}{PD1}{u}{\371}% U+00F9
 15891 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 15892 \DeclareTextCompositeCommand{"}{PD1}{u}{\372}% U+00FA
 15893 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 15894 \DeclareTextCompositeCommand{"}{PD1}{u}{\373}% U+00FB
 15895 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 15896 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 15897 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15898 \DeclareTextCompositeCommand{"}{PD1}{y}{\375}% U+00FD
 15899 % U+00FE LATIN SMALL LETTER THORN; thorn; \th, \thorn (wasysym)
 15900 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 15901 \DeclareTextCommand{\textthorn}{PD1}{\376}%* U+00FE
 15902 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15903 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 15904 \DeclareTextCommand{\ij}{PD1}{ij}% ligature U+0069 U+006A

Glyphs that consist of several characters.

15905 \DeclareTextCommand{\SS}{PD1}{SS}%
 15906 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}%

Aliases (german.sty)

15907 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}%
 15908 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}%
 15909 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}%
 15910 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}%
 15911 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}%


```

15912 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}%
15913 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}%
15914 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}%
Aliases (math names)
15915 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}%
15916 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}%
15917 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}%
15918 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}%
15919 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}%
15920 \DeclareTextCommand{\textbeta}{PD1}{\ss}%

```

Polish aliases. PDF encoding does not have the characters, but it is useful to Poles to have the plain letters regardless. Requested by Wojciech Myszka (W.Myszka@immt.pwr.wroc.pl).

```

15921 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
15922 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
15923 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
15924 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
15925 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
15926 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
15927 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
15928 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
15929 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
15930 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
15931 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
15932 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
15933 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
15934 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
15935 \pdlenc

```

51.2 PU encoding

```

15936 \*puenc
15937 \DeclareFontEncoding{PU}{-}{-}

```

51.2.1 NFSS2 accents

```

15938 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
15939 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
15940 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
15941 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
15942 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
15943 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
15944 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
15945 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
15946 % U+0304 COMBINING MACRON; macroncmb
15947 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
15948 % U+0306 COMBINING BREVE; brevecmb
15949 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
15950 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
15951 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
15952 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
15953 % U+0308 COMBINING DIAERESIS; dieresiscmb
15954 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
15955 % U+030A COMBINING RING ABOVE; ringcmb
15956 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
15957 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
15958 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
15959 % U+030C COMBINING CARON; caroncmb

```

```

15960 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
15961 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
15962 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
15963 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
15964 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
15965 \DeclareTextCommand{\textinvbreve}{PU}[1]{#1\83\021}% U+0311
15966 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
15967 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
15968 % U+0324 COMBINING DIAERESIS BELOW; dieresisbelowcmb; \textsubum-
    laut (tipa)
15969 \DeclareTextCommand{\textsubumlaut}{PU}[1]{#1\83\044}% U+0324
15970 % U+0325 COMBINING RING BELOW; ringbelowcmb; \textsubring (tipa)
15971 \DeclareTextCommand{\textsubring}{PU}[1]{#1\83\045}% U+0325
15972 % U+0327 COMBINING CEDILLA; cedillacmb
15973 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
15974 % U+0328 COMBINING OGONEK; ogonekcmb
15975 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
15976 % U+032D COMBINING CIRCUMFLEX ACCENT BELOW;
15977 % \textsubcircum (tipa)
15978 \DeclareTextCommand{\textsubcircum}{PU}[1]{#1\83\055}% U+032D
15979 % U+032E COMBINING BREVE BELOW; brevebelowcmb
15980 \DeclareTextCommand{\textsubbreve}{PU}[1]{#1\83\056}% U+032E
15981 % U+0330 COMBINING TILDE BELOW; tildebelowcmb; \textsubtilde (tipa)
15982 \DeclareTextCommand{\textsubtilde}{PU}[1]{#1\83\060}% U+0330
15983 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
15984 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
15985 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddou-
    blecmb
15986 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
15987 % U+20DD COMBINING ENCLOSING CIRCLE
15988 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

```

Double accents.

```

15989 \DeclareTextCommand{\textacutemacron}{PU}[1]{#1\83\001\83\004}% U+0301 U+0304
15990 \DeclareTextCommand{\textgravemacron}{PU}[1]{#1\83\000\83\004}% U+0300 U+0304

```

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

```

15991 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}%
15992 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textacute}%
15993 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}%
15994 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}%
15995 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}%
15996 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textstring}%
15997 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}%
15998 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}%
15999 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}%
16000 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}%
16001 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}%
16002 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}%
16003 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}%
16004 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}%
16005 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\@empty}{\{ \83\021\}}% U+0311
16006 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\@empty}{\{ \83\044\}}% U+0324
16007 \DeclareTextCompositeCommand{\textsubring}{PU}{\@empty}{\textstringlow}%
16008 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\@empty}{\textcircum-
    low}%
16009 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\@empty}{\{ \83\056\}}% U+032E
16010 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\@empty}{\texttildebelow}%

```

```

16011 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}%
16012 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}%
16013 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}%
16014 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}%
16015 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}%
16016 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\@empty}{\{\ \83\001\83\004\}}% U+0301 U
16017 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\@empty}{\{\ \83\000\83\004\}}% U+0300 U
16018 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}%
16019 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textacute}%
16020 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}%
16021 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}%
16022 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}%
16023 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}%
16024 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}%
16025 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}%
16026 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}%
16027 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}%
16028 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}%
16029 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}%
16030 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}%
16031 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}%
16032 \DeclareTextCompositeCommand{\textinvbreve}{PU}{\ }{\{\ \83\021\}}% U+0311
16033 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{\ }{\{\ \83\044\}}% U+0324
16034 \DeclareTextCompositeCommand{\textsubring}{PU}{\ }{\textringlow}%
16035 \DeclareTextCompositeCommand{\textsubcircum}{PU}{\ }{\textcircumlow}%
16036 \DeclareTextCompositeCommand{\textsubbreve}{PU}{\ }{\{\ \83\056\}}% U+032E
16037 \DeclareTextCompositeCommand{\textsubtilde}{PU}{\ }{\texttildelow}%
16038 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}%
16039 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}%
16040 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}%
16041 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}%
16042 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}%
16043 \DeclareTextCompositeCommand{\textacutemacron}{PU}{\ }{\{\ \83\001\83\004\}}% U+0301 U+0304
16044 \DeclareTextCompositeCommand{\textgravemacron}{PU}{\ }{\{\ \83\000\83\004\}}% U+0300 U+0304

```

Accents for capitals (see encoding TS1)

```

16045 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}%
16046 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}%
16047 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}%
16048 \DeclareTextCommand{\capitalacute}{PU}[1]{\`{#1}}%
16049 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}%
16050 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}%
16051 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\">{#1}}%
16052 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}%
16053 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}%
16054 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}%
16055 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}%
16056 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}%
16057 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}%
16058 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}%
16059 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}%

```

51.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

16060 % U+0009 (CHARACTER TABULATION)
16061 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
16062 % U+000A (LINE FEED)

```

16063 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
16064 % U+000D (CARRIAGE RETURN)
16065 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
16066 % U+0022 QUOTATION MARK; quotedbl
16067 \DeclareTextCommand{\textquotedbl}{PU}{"}% \80\042 U+0022
16068 % U+0023 NUMBER SIGN; numbersign
16069 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
16070 % U+0024 DOLLAR SIGN; dollar
16071 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
16072 %* \textdollar -> \mathdollar
16073 %* \textdollar -> \EyesDollar (marvosym)
16074 % U+0025 PERCENT SIGN; percent
16075 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
16076 % U+0026 AMPERSAND; ampersand
16077 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
16078 %* \textampersand -> \binampersand (stmaryrd)
16079 %* \textampersand -> \with (cml)
16080 % U+0027 APOSTROPHE; quotesingle
16081 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
16082 % U+0028 LEFT PARENTHESIS; parenleft
16083 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
16084 % U+0029 RIGHT PARENTHESIS; parenright
16085 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
16086 % U+002A ASTERISK; asterisk; (?)
16087 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A
16088 % U+002B PLUS SIGN; plus; \MVPlus (marvosym)
16089 \DeclareTextCommand{\textMVPlus}{PU}{\80\053}%* U+002B
16090 % U+002C COMMA; comma; \MVComma (marvosym)
16091 \DeclareTextCommand{\textMVComma}{PU}{\80\054}%* U+002C
16092 % U+002D HYPHEN-MINUS; hyphen; \MVMinus (marvosym)
16093 \DeclareTextCommand{\textMVMinus}{PU}{\80\055}%* U+002D
16094 % U+002E FULL STOP; period; \MVPeriod (marvosym)
16095 \DeclareTextCommand{\textMVPeriod}{PU}{\80\056}%* U+002E
16096 % U+002F SOLIDUS; slash; \MVDivision (marvosym)
16097 \DeclareTextCommand{\textMVDivision}{PU}{\80\057}%* U+002F
16098 % U+0030 DIGIT ZERO; zero; \MVZero (marvosym)
16099 \DeclareTextCommand{\textMVZero}{PU}{\80\060}%* U+0030
16100 % U+0031 DIGIT ONE; one; \MVOne (marvosym)
16101 \DeclareTextCommand{\textMVOne}{PU}{\80\061}%* U+0031
16102 % U+0032 DIGIT TWO; two; \MVTwo (marvosym)
16103 \DeclareTextCommand{\textMVTwo}{PU}{\80\062}%* U+0032
16104 % U+0033 DIGIT THREE; three; \MVThree (marvosym)
16105 \DeclareTextCommand{\textMVThree}{PU}{\80\063}%* U+0033
16106 % U+0034 DIGIT FOUR; four; \MVFfour (marvosym)
16107 \DeclareTextCommand{\textMVFfour}{PU}{\80\064}%* U+0034
16108 % U+0035 DIGIT FIVE; five; \MVFfive (marvosym)
16109 \DeclareTextCommand{\textMVFfive}{PU}{\80\065}%* U+0035
16110 % U+0036 DIGIT SIX; six; \MVSix (marvosym)
16111 \DeclareTextCommand{\textMVSix}{PU}{\80\066}%* U+0036
16112 % U+0037 DIGIT SEVEN; seven; \MVSeven (marvosym)
16113 \DeclareTextCommand{\textMVSeven}{PU}{\80\067}%* U+0037
16114 % U+0038 DIGIT EIGHT; eight; \MVEight (marvosym)
16115 \DeclareTextCommand{\textMVEight}{PU}{\80\070}%* U+0038
16116 % U+0039 DIGIT NINE; nine; \MVNine (marvosym)
16117 \DeclareTextCommand{\textMVNine}{PU}{\80\071}%* U+0039

$\backslash 80\backslash 072$: U+003A COLON; colon
 $\backslash 80\backslash 073$: U+003B SEMICOLON; semicolon
16118 % U+003C LESS-THAN SIGN; less
16119 $\backslash \text{DeclareTextCommand}\{\backslash \text{textless}\}\{\text{PU}\}\{<\}\%$ $\backslash 80\backslash 074$ U+003C
 $\backslash 80\backslash 075$: U+003D EQUALS SIGN; equal
16120 % U+003E GREATER-THAN SIGN; greater
16121 $\backslash \text{DeclareTextCommand}\{\backslash \text{textgreater}\}\{\text{PU}\}\{>\}\%$ $\backslash 80\backslash 076$ U+003E
 $\backslash 80\backslash 077$: U+003F QUESTION MARK; question
16122 % U+0040 COMMERCIAL AT; at; $\backslash \text{MVAt}$ (marvosym)
16123 $\backslash \text{DeclareTextCommand}\{\backslash \text{textMVAt}\}\{\text{PU}\}\{\backslash 80\backslash 100\}\%$ U+0040
 $\backslash 80\backslash 101$: U+0041 LATIN CAPITAL LETTER A; A
...
 $\backslash 80\backslash 132$: U+005A LATIN CAPITAL LETTER Z; Z
 $\backslash 80\backslash 133$: U+005B LEFT SQUARE BRACKET; bracketleft
16124 % U+005C REVERSE SOLIDUS; backslash
16125 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbackslash}\}\{\text{PU}\}\{\backslash 80\backslash 134\}\%$ U+005C
 $\backslash 80\backslash 135$: U+005D RIGHT SQUARE BRACKET; bracketright
16126 % U+005E CIRCUMFLEX ACCENT; asciicircum
16127 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciicircum}\}\{\text{PU}\}\{\backslash 80\backslash 136\}\%$ U+005E
16128 % U+005F LOW LINE; underscore
16129 $\backslash \text{DeclareTextCommand}\{\backslash \text{textunderscore}\}\{\text{PU}\}\{\backslash 80\backslash 137\}\%$ U+005F
16130 %* $\backslash \text{textunderscore} \rightarrow \backslash \text{mathunderscore}$ (LaTeX)
16131 % U+0060 GRAVE ACCENT; grave
16132 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciigrave}\}\{\text{PU}\}\{\backslash 80\backslash 140\}\%$ U+0060
 $\backslash 80\backslash 141$: U+0061 LATIN SMALL LETTER A; a
...
 $\backslash 80\backslash 150$: U+0068 LATIN SMALL LETTER H; h
16133 % U+0069 LATIN SMALL LETTER I; i
16134 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
16135 $\backslash \text{DeclareTextCompositeCommand}\{\backslash .\}\{\text{PU}\}\{\text{i}\}\{\text{i}\}\%$ $\backslash 80\backslash 151$ U+0069
 $\backslash 80\backslash 152$: U+006A LATIN SMALL LETTER J; j
...
 $\backslash 80\backslash 172$: U+007A LATIN SMALL LETTER Z; z
16136 % U+007B LEFT CURLY BRACKET; braceleft
16137 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceleft}\}\{\text{PU}\}\{\backslash 80\backslash 173\}\%$ U+007B
16138 % U+007C VERTICAL LINE; *bar, verticalbar
16139 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbar}\}\{\text{PU}\}\{\text{|}\}\%$ $\backslash 80\backslash 174$ U+007C
16140 %* $\backslash \text{textbar} \rightarrow \backslash \text{textvertline}$ (tipa)
16141 % U+007D RIGHT CURLY BRACKET; braceright
16142 $\backslash \text{DeclareTextCommand}\{\backslash \text{textbraceright}\}\{\text{PU}\}\{\backslash 80\backslash 175\}\%$ U+007D
16143 % U+007E TILDE; asciitilde
16144 $\backslash \text{DeclareTextCommand}\{\backslash \text{textasciitilde}\}\{\text{PU}\}\{\backslash 80\backslash 176\}\%$ U+007E

51.2.3 Latin-1 Supplement: U+0080 to U+00FF

$\backslash 80\backslash 240$: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
16145 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
16146 $\backslash \text{DeclareTextCommand}\{\backslash \text{textexclamdown}\}\{\text{PU}\}\{\backslash 80\backslash 241\}\%$ U+00A1
16147 % U+00A2 CENT SIGN; cent
16148 $\backslash \text{DeclareTextCommand}\{\backslash \text{textcent}\}\{\text{PU}\}\{\backslash 80\backslash 242\}\%$ U+00A2
16149 % U+00A3 POUND SIGN; sterling
16150 $\backslash \text{DeclareTextCommand}\{\backslash \text{textsterling}\}\{\text{PU}\}\{\backslash 80\backslash 243\}\%$ U+00A3
16151 %* $\backslash \text{textsterling} \rightarrow \backslash \text{mathsterling}$ (LaTeX)

16152 %* \textsterling -> \pounds (LaTeX)
16153 % U+00A4 CURRENCY SIGN; currency
16154 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
16155 % U+00A5 YEN SIGN; yen
16156 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
16157 % U+00A6 BROKEN BAR; brokenbar
16158 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
16159 %* \textbrokenbar -> \brokenvert (wasysym)
16160 % U+00A7 SECTION SIGN; section
16161 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
16162 %* \textsection -> \mathsection (LaTeX)
16163 %* \textsection -> \S (LaTeX)
16164 % U+00A8 DIAERESIS; dieresis
16165 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
16166 % U+00A9 COPYRIGHT SIGN; copyright
16167 \DeclareTextCommand{\textcopyright}{PU}{\80\251}%* U+00A9
16168 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
16169 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
16170 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
16171 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
16172 % U+00AC NOT SIGN; logicalnot
16173 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
16174 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sftthyphen, softthyphen
16175 % U+00AE REGISTERED SIGN; registered
16176 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
16177 % U+00AF MACRON; *macron, overscore
16178 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
16179 % U+00B0 DEGREE SIGN; degree
16180 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
16181 % U+00B1 PLUS-MINUS SIGN; plusminus
16182 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
16183 % U+00B2 SUPERSCRIPT TWO; twosuperior
16184 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}%* U+00B2
16185 % U+00B3 SUPERSCRIPT THREE; threesuperior
16186 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}%* U+00B3
16187 % U+00B4 ACUTE ACCENT; acute
16188 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
16189 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
16190 % U+00B5 MICRO SIGN; mu, mu1
16191 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
16192 % U+00B6 PILCROW SIGN; paragraph
16193 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
16194 %* \textparagraph -> \mathparagraph (LaTeX)
16195 % U+00B7 MIDDLE DOT; middot, *periodcentered
16196 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
16197 %* \textperiodcentered -> \MultiplicationDot (marvosym)
16198 %* \textperiodcentered -> \Squaredot (marvosym)
16199 % U+00B8 CEDILLA; cedilla
16200 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
16201 % U+00B9 SUPERSCRIPT ONE; onesuperior
16202 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}%* U+00B9
16203 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
16204 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
16205 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright

16206 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
16207 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
16208 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
16209 % U+00BD VULGAR FRACTION ONE HALF; onehalf
16210 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
16211 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
16212 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
16213 % U+00BF INVERTED QUESTION MARK; questiondown
16214 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
16215 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
16216 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
16217 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
16218 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
16219 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
16220 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
16221 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
16222 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
16223 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
16224 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
16225 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
16226 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
16227 % U+00C6 LATIN CAPITAL LETTER AE; AE
16228 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
16229 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
16230 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
16231 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
16232 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
16233 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
16234 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
16235 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
16236 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
16237 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
16238 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
16239 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
16240 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
16241 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
16242 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
16243 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
16244 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
16245 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
16246 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
16247 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
16248 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
16249 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
16250 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
16251 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
16252 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
16253 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
16254 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
16255 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
16256 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
16257 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
16258 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
16259 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
16260 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
16261 % U+00D7 MULTIPLICATION SIGN; multiply
16262 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7

16263 %* \textmultiply -> \vartimes (stmaryrd)
16264 %* \textmultiply -> \MVMultiplication (marvosym)
16265 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
16266 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
16267 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
16268 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
16269 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
16270 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
16271 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
16272 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
16273 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
16274 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
16275 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
16276 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
16277 % U+00DE LATIN CAPITAL LETTER THORN; Thorn; \TH, \Thorn (wasysym)
16278 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
16279 \DeclareTextCommand{\textThorn}{PU}{\80\336}%* U+00DE
16280 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
16281 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
16282 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
16283 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
16284 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
16285 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
16286 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
16287 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
16288 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
16289 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
16290 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
16291 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
16292 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
16293 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
16294 % U+00E6 LATIN SMALL LETTER AE; ae
16295 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
16296 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
16297 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
16298 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
16299 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
16300 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
16301 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
16302 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
16303 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
16304 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
16305 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
16306 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
16307 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16308 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
16309 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
16310 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16311 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
16312 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
16313 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16314 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
16315 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
16316 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16317 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
16318 % U+00F0 LATIN SMALL LETTER ETH; eth
16319 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0

16320 %* \dh -> \eth (wsuipa, phonetic)
 16321 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 16322 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 16323 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 16324 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 16325 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 16326 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 16327 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 16328 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 16329 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 16330 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 16331 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 16332 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 16333 % U+00F7 DIVISION SIGN; divide
 16334 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 16335 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 16336 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 16337 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 16338 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 16339 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 16340 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 16341 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 16342 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 16343 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 16344 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 16345 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 16346 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 16347 % U+00FE LATIN SMALL LETTER THORN; thorn;
 16348 % \th, \thorn (wasysym), \textthorn (tipa)
 16349 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 16350 \DeclareTextCommand{\textthorn}{PU}{\80\376}%* U+00FE
 16351 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 16352 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

51.2.4 Latin Extended-A: U+0080 to U+017F

16353 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 16354 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 16355 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 16356 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 16357 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 16358 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 16359 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 16360 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 16361 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 16362 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 16363 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 16364 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 16365 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 16366 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 16367 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 16368 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 16369 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 16370 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 16371 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 16372 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 16373 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotac-

cent

16374 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
16375 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
16376 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
16377 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
16378 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
16379 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
16380 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
16381 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
16382 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
16383 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
16384 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
16385 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
16386 \DeclareTextCompositeCommand{\DJ}{PU}{\81\020}% U+0110
16387 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron;
16388 % \textcrd (tipa)
16389 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
16390 \DeclareTextCommand{\textcrd}{PU}{\81\021}% U+0111
16391 %* \textcrd -> \crossd (wsuipa)
16392 % An alternate glyph with the stroke through the bowl:
16393 %* \textcrd -> \textbard (tipa)
16394 %* \textcrd -> \bard (wsuipa)
16395 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
16396 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
16397 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
16398 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
16399 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
16400 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
16401 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
16402 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
16403 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
16404 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
16405 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
16406 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
16407 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
16408 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
16409 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
16410 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
16411 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
16412 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
16413 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
16414 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
16415 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
16416 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
16417 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
16418 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
16419 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
16420 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
16421 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
16422 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
16423 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotac-
cent
16424 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
16425 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
16426 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
16427 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcom-
maaccent

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16428 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
16429 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
16430 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
16431 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
16432 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
16433 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
16434 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
16435 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
16436 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
16437 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar; \hbar (AmS)
16438 \DeclareTextCommand{\texthbar}{PU}{\81\047}%* U+0127
16439 %* \texthbar -> \textcrh (tipa)
16440 %* \texthbar -> \crossh (wsuipa)
16441 %* \texthbar -> \planck (phonetic)
16442 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
16443 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
16444 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
16445 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16446 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
16447 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
16448 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
16449 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
16450 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16451 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
16452 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibrevé
16453 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
16454 % U+012D LATIN SMALL LETTER I WITH BREVE; ibrevé
16455 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16456 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
16457 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
16458 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
16459 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
16460 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16461 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
16462 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
16463 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
16464 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
16465 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
16466 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
16467 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
16468 % U+0133 LATIN SMALL LIGATURE IJ; ij
16469 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
16470 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
16471 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
16472 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
16473 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16474 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
16475 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
cent
16476 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
16477 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
16478 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

```

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

```

16479 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
16480 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138

```

16481 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 16482 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 16483 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 16484 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 16485 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
 cent
 16486 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 16487 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 16488 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 16489 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 16490 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 16491 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 16492 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E
 There seems to be no variants of letters 'L' and 'l' with a dot above (reasonable).
 Therefore the \. accent is reused instead of making a separate accent macro
 \textmiddledot.
 16493 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotac-
 cent
 16494 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 16495 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 16496 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 16497 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 16498 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 16499 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 16500 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 16501 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 16502 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 16503 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 16504 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 16505 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent
 16506 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 16507 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 16508 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 16509 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 16510 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 16511 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 16512 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 16513 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 16514 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 16515 % U+014A LATIN CAPITAL LETTER ENG; Eng
 16516 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 16517 % U+014B LATIN SMALL LETTER ENG; eng
 16518 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 16519 %* \ng -> \eng (wsuipa)
 16520 %* \ng -> \engma (phonetic)
 16521 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 16522 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 16523 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 16524 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 16525 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 16526 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 16527 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 16528 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 16529 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
 cute, Ohungarumlaut

16530 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
16531 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
16532 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
16533 % U+0152 LATIN CAPITAL LIGATURE OE; OE
16534 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
16535 % U+0153 LATIN SMALL LIGATURE OE; oe
16536 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
16537 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
16538 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
16539 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
16540 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
16541 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
16542 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
16543 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
16544 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
16545 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
16546 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
16547 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
16548 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
16549 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
16550 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
16551 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
16552 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
16553 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
16554 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
16555 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
16556 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
16557 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
16558 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
16559 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
16560 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
16561 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
16562 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
16563 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
16564 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
16565 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
16566 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
16567 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
16568 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
16569 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
16570 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
16571 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
16572 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
16573 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
16574 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
16575 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
16576 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
16577 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
16578 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
16579 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
16580 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
16581 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
16582 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
16583 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron

16584 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 16585 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 16586 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 16587 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 16588 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 16589 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 16590 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 16591 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 16592 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 16593 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 16594 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 16595 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 16596 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 16597 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 16598 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 16599 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 16600 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 16601 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 16602 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 16603 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 16604 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 16605 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 16606 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 16607 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 16608 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 16609 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 16610 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 16611 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 16612 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 16613 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 16614 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 16615 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 16616 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 16617 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 16618 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 16619 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 16620 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 16621 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 16622 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 16623 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 16624 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

51.2.5 Latin Extended-B: U+0180 to U+024F

16625 % U+0180 LATIN SMALL LETTER B WITH STROKE; bstroke; \textcrb (tipa)
 16626 \DeclareTextCommand{\textcrb}{PU}{\81\200}% U+0180
 16627 %* \textcrb -> \crossb (wsuipa)
 16628 % An alternate glyph with the stroke through the bowl:
 16629 %* \textcrb -> \textbarb (tipa)
 16630 %* \textcrb -> \barb (wsuipa)
 16631 % U+0181 LATIN CAPITAL LETTER B WITH HOOK; Bhook; \hausab (phonetic)
 16632 \DeclareTextCommand{\texthausaB}{PU}{\81\201}%* U+0181
 16633 % U+0188 LATIN SMALL LETTER C WITH HOOK; chook; \texthtc (tipa)
 16634 \DeclareTextCommand{\texthtc}{PU}{\81\210}% U+0188
 16635 % U+018A LATIN CAPITAL LETTER D WITH HOOK; Dhook; \hausad (pho-

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netic)
16636 \DeclareTextCommand{\texthausaD}{PU}{\81\212}%* U+018A
16637 % U+018E LATIN CAPITAL LETTER REVERSED E; Ereversed
16638 \DeclareTextCommand{\textEreversed}{PU}{\81\216}% U+018E
16639 \DeclareTextCommand{\textrevE}{PU}{\81\216}% U+018E
16640 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
16641 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
16642 %* \textflorin -> \Florin (marvosym)
16643 % U+0195 LATIN SMALL LETTER HV; hv; \texthvlig (tipa)
16644 \DeclareTextCommand{\texthvlig}{PU}{\81\225}% U+0195
16645 %* \texthvlig -> \hv (wsuipa)
16646 % U+0198 LATIN CAPITAL LETTER K WITH HOOK; Khook; \hausak (pho-
netic)
16647 \DeclareTextCommand{\texthausaK}{PU}{\81\230}%* U+0198
16648 % U+0199 LATIN SMALL LETTER K WITH HOOK; khook; \texthtk (tipa)
16649 \DeclareTextCommand{\texthtk}{PU}{\81\231}% U+0199
16650 %* \texthtk -> \hausak (phonetic)
16651 % U+019A LATIN SMALL LETTER L WITH BAR; lbar;
16652 % \textbarl (tipa), \barl (wsuipa)
16653 \DeclareTextCommand{\textbarl}{PU}{\81\232}%* U+019A
16654 % U+019B LATIN SMALL LETTER LAMBDA WITH STROKE/
16655 % LATIN SMALL LETTER BARRED LAMBDA; lambdastroke;
16656 % \textcrlambda (tipa)
16657 \DeclareTextCommand{\textcrlambda}{PU}{\81\233}% U+019B
16658 %* \textcrlambda -> \crossnilambda (wsuipa)
16659 %* \textcrlambda -> \barlambd (phonetic)
16660 %* \textcrlambda -> \lambdabar (txfonts/pxfonts)
16661 %* \textcrlambda -> \lambdaslash (txfonts/pxfonts)
16662 % U+019E LATIN SMALL LETTER N WITH LONG RIGHT LEG; nlegright-
long;
16663 % \textnrleg (tipx)
16664 \DeclareTextCommand{\textPUnrleg}{PU}{\81\236}% U+019E
16665 %* \textPUnrleg -> \textnrleg (tipx)
16666 % U+01A5 LATIN SMALL LETTER P WITH HOOK; phook; \texthtp (tipa)
16667 \DeclareTextCommand{\texthtp}{PU}{\81\245}% U+01A5
16668 % U+01AB LATIN SMALL LETTER T WITH PALATAL HOOK; tpalatalhook;
16669 % \textlhookt (tipa)
16670 \DeclareTextCommand{\textlhookt}{PU}{\81\253}% U+01AB
16671 % U+01AD LATIN SMALL LETTER T WITH HOOK; thook; \texthtt (tipa)
16672 \DeclareTextCommand{\texthtt}{PU}{\81\255}% U+01AD
16673 % U+01B9 LATIN SMALL LETTER EZH REVERSED/
16674 % LATIN SMALL LETTER REVERSED YOGH; \textrevyogh (tipa)
16675 \DeclareTextCommand{\textrevyogh}{PU}{\81\271}% U+01B9
16676 % U+01BB LATIN LETTER TWO WITH STROKE; twostroke; \textcrtwo (tipa)
16677 \DeclareTextCommand{\textcrtwo}{PU}{\81\273}% U+01BB
16678 % U+01BE LATIN LETTER INVERTED GLOTTAL STOP WITH STROKE;
16679 % glottalinvertedstroke; \textcrinvglotstop (tipa)
16680 \DeclareTextCommand{\textcrinvglotstop}{PU}{\81\276}% U+01BE
16681 % U+01BF LATIN LETTER WYNN; wynn; \textwynn (tipa)
16682 \DeclareTextCommand{\textwynn}{PU}{\81\277}% U+01BF
16683 % U+01C0 LATIN LETTER DENTAL CLICK/LATIN LETTER PIPE; clickden-
tal;
16684 % \textpipe (tipa)
16685 \DeclareTextCommand{\textpipe}{PU}{\81\300}% U+01C0
16686 %* \textpipe -> \textpipevar (tipx)
16687 % U+01C1 LATIN LETTER LATERAL CLICK/LATIN LETTER
16688 % DOUBLE PIPE; clicklateral; \textdoublepipe (tipa)

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16689 \DeclareTextCommand{\textdoublepipe}{PU}{\81\301}% U+01C1
16690 %* \textdoublepipe -> \textdoublepipevar (tipx)
16691 % U+01C2 LATIN LETTER ALVEOLAR CLICK/LATIN LETTER PIPE DOUBLE BAR;
16692 % clickalveolar; \textdoublebarpipe (tipa)
16693 \DeclareTextCommand{\textdoublebarpipe}{PU}{\81\302}% U+01C2
16694 %* \textdoublebarpipe -> \textdoublebarpipevar (tipx)
16695 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
16696 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
16697 % U+01CE LATIN SMALL LETTER A WITH CARON; acarón
16698 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
16699 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
16700 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
16701 % U+01D0 LATIN SMALL LETTER I WITH CARON; icarón
16702 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16703 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
16704 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
16705 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
16706 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocarón
16707 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
16708 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
16709 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
16710 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucarón
16711 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
16712 % U+01DD LATIN SMALL LETTER TURNED E; eturned; \inve (wasysym)
16713 \DeclareTextCommand{\textinve}{PU}{\81\335}%* U+01DD
16714 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
16715 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
16716 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
16717 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
16718 %* \textgslash -> \textcrg (tipa)
16719 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
16720 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
16721 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
16722 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
16723 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
16724 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
16725 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
16726 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
16727 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
16728 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
16729 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
16730 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
16731 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
16732 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16733 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
16734 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
16735 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
16736 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
16737 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
16738 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
16739 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
16740 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
16741 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
16742 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
16743 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
16744 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

16745 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
16746 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE;
16747 % *Oslashacute, Ostrokeacut
16748 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
16749 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE;
16750 % *oslashacute, ostrokeacute
16751 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
16752 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
16753 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
16754 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
16755 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
16756 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
16757 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
16758 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
16759 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
16760 % U+0206 LATIN CAPITAL LETTER E WITH INVERTED BREVE; Einvert-
edbreve
16761 \DeclareTextCompositeCommand{\textinvbreve}{PU}{E}{\82\006}% U+0206
16762 % U+0207 LATIN SMALL LETTER E WITH INVERTED BREVE; einvert-
breve
16763 \DeclareTextCompositeCommand{\textinvbreve}{PU}{e}{\82\007}% U+0207
16764 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
16765 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
16766 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
16767 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16768 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
16769 % U+020A LATIN CAPITAL LETTER I WITH INVERTED BREVE; Iinverted-
breve
16770 \DeclareTextCompositeCommand{\textinvbreve}{PU}{I}{\82\012}% U+020A
16771 % U+020B LATIN SMALL LETTER I WITH INVERTED BREVE; iinverted-
breve
16772 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16773 \DeclareTextCompositeCommand{\textinvbreve}{PU}{i}{\82\013}% U+020B
16774 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
16775 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
16776 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
16777 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
16778 % U+020E LATIN CAPITAL LETTER O WITH INVERTED BREVE; Oinvert-
edbreve
16779 \DeclareTextCompositeCommand{\textinvbreve}{PU}{O}{\82\016}% U+020E
16780 % U+020F LATIN SMALL LETTER O WITH INVERTED BREVE; oinverted-
breve
16781 \DeclareTextCompositeCommand{\textinvbreve}{PU}{o}{\82\017}% U+020F
16782 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
16783 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
16784 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
16785 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
16786 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
16787 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
16788 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
16789 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
16790 % U+0216 LATIN CAPITAL LETTER U WITH INVERTED BREVE; Uinvert-
edbreve
16791 \DeclareTextCompositeCommand{\textinvbreve}{PU}{U}{\82\026}% U+0216
16792 % U+0217 LATIN SMALL LETTER U WITH INVERTED BREVE; uinverted-
breve
16793 \DeclareTextCompositeCommand{\textinvbreve}{PU}{u}{\82\027}% U+0217

16794 % U+021E LATIN CAPITAL LETTER H WITH CARON
 16795 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 16796 % U+021F LATIN SMALL LETTER H WITH CARON
 16797 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 16798 % U+0221 LATIN SMALL LETTER D WITH CURL; \textctd (tipa)
 16799 \DeclareTextCommand{\textctd}{PU}{\82\041}% U+0221
 16800 % U+0225 LATIN SMALL LETTER Z WITH HOOK; \textcommatailz (tipa)
 16801 \DeclareTextCommand{\textcommatailz}{PU}{\82\045}% U+0225
 16802 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 16803 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 16804 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 16805 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 16806 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 16807 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 16808 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 16809 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 16810 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 16811 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 16812 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 16813 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 16814 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 16815 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 16816 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 16817 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 16818 % U+0235 LATIN SMALL LETTER N WITH CURL; \textctn (tipa)
 16819 \DeclareTextCommand{\textctn}{PU}{\82\065}% U+0235
 16820 % U+0236 LATIN SMALL LETTER T WITH CURL; \textctt (tipa)
 16821 \DeclareTextCommand{\textctt}{PU}{\82\066}% U+0236
 16822 % U+0237 LATIN SMALL LETTER DOTLESS J
 16823 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237
 16824 % U+0238 LATIN SMALL LETTER DB DIGRAPH; \textdblig (tipx)
 16825 \DeclareTextCommand{\textPUdblig}{PU}{\82\070}% U+0238
 16826 %* \textPUdblig -> \textdblig (tipx)
 16827 % U+0239 LATIN SMALL LETTER QP DIGRAPH; \textqplig (tipx)
 16828 \DeclareTextCommand{\textPUqplig}{PU}{\82\071}% U+0239
 16829 %* \textPUqplig -> \textqplig (tipx)
 16830 % U+023C LATIN SMALL LETTER C WITH STROKE; \slashc (wsuipa)
 16831 \DeclareTextCommand{\textslashc}{PU}{\82\074}%* U+023C
 16832 %* \textslashc -> \textcentoldstyle (textcomp)
 16833 % With bar instead of stroke:
 16834 %* \textslashc -> \textbarc (tipa)

51.2.6 IPA Extensions: U+0250 to U+02AF

16835 % U+0250 LATIN SMALL LETTER TURNED A; aturned; \textturna (tipa)
 16836 \DeclareTextCommand{\textturna}{PU}{\82\120}% U+0250
 16837 %* \textturna -> \inva (wasysym)
 16838 % U+0251 LATIN SMALL LETTER ALPHA/LATIN SMALL LETTER
 16839 % SCRIPT A; ascript; \textscripta (tipa), \scripta (wsuipa)
 16840 \DeclareTextCommand{\textscripta}{PU}{\82\121}%* U+0251
 16841 %* \textscripta -> \vara (phonetic)
 16842 % U+0252 LATIN SMALL LETTER TURNED ALPHA; ascriptturned;
 16843 % \textturnscripta (tipa)
 16844 \DeclareTextCommand{\textturnscripta}{PU}{\82\122}% U+0252
 16845 %* \textturnscripta -> \invscripta (wsuipa)
 16846 %* \textturnscripta -> \rotvara (phonetic)
 16847 % U+0253 LATIN CAPITAL LETTER B WITH HOOK; bhook; \texthtb (tipa)
 16848 \DeclareTextCommand{\texthtb}{PU}{\82\123}% U+0253

16849 %* \texthtb -> \hookb (wsuipa)
 16850 %* \texthtb -> \hausab (phonetic)
 16851 % U+0254 LATIN SMALL LETTER OPEN O; oopen;
 16852 % \textopeno (tipa), \openo (wasysym)
 16853 \DeclareTextCommand{\textopeno}{PU}{\82\124}%* U+0254
 16854 %* \textopeno -> \varopeno (phonetic)
 16855 % U+0255 LATIN SMALL LETTER C WITH CURL; ccurl; \textctc (tipa)
 16856 \DeclareTextCommand{\textctc}{PU}{\82\125}% U+0255
 16857 %* \textctc -> \curlyc (wsuipa)
 16858 % U+0256 LATIN SMALL LETTER D WITH TAIL; dtail; \textrtaild (tipa)
 16859 \DeclareTextCommand{\textrtaild}{PU}{\82\126}%* U+0256
 16860 %* \textrtaild -> \taild (wsuipa)
 16861 % U+0257 LATIN SMALL LETTER D WITH HOOK; dhook; \texthtd (tipa)
 16862 \DeclareTextCommand{\texthtd}{PU}{\82\127}% U+0257
 16863 %* \texthtd -> \hookd (wsuipa)
 16864 %* \texthtd -> \hausad (phonetic)
 16865 % U+0258 LATIN SMALL LETTER REVERSED E; ereversed;
 16866 % \textreve (tipa), \reve (wsuipa)
 16867 \DeclareTextCommand{\textreve}{PU}{\82\130}%* U+0258
 16868 % U+0259 LATIN SMALL LETTER SCHWA; schwa;
 16869 % \textschwa (tipa), \schwa (wsuipa, phonetic)
 16870 \DeclareTextCommand{\textschwa}{PU}{\82\131}%* U+0259
 16871 % U+025A LATIN SMALL LETTER SCHWA WITH HOOK; schwahook;
 16872 % \textrhookswa (tipa)
 16873 \DeclareTextCommand{\textrhookswa}{PU}{\82\132}% U+025A
 16874 %* \textrhookswa -> \er (wsuipa)
 16875 % U+025B LATIN SMALL LETTER OPEN E/LATIN SMALL LETTER EP-
 SILON; eopen;
 16876 % \niepsilon (wsuipa)
 16877 \DeclareTextCommand{\textniepsilon}{PU}{\82\133}%* U+025B
 16878 %* \textniepsilon -> \epsi (phonetic)
 16879 % U+025C LATIN SMALL LETTER REVERSED OPEN E; eopenreversed;
 16880 % \textreversible (tipa), \reversible (wsuipa)
 16881 \DeclareTextCommand{\textreversible}{PU}{\82\134}%* U+025C
 16882 % U+025D LATIN SMALL LETTER REVERSED OPEN E WITH HOOK; eopen-
 reversedhook;
 16883 % \textrhookreversible (tipa)
 16884 \DeclareTextCommand{\textrhookreversible}{PU}{\82\135}%* U+025D
 16885 %* \textrhookreversible -> \hookreversible (wsuipa)
 16886 % U+025E LATIN SMALL LETTER CLOSED REVERSED OPEN E; eopenre-
 versedclosed;
 16887 % \textclosereversible (tipa)
 16888 \DeclareTextCommand{\textclosereversible}{PU}{\82\136}% U+025E
 16889 %* \textclosereversible -> \closedreversible (wsuipa)
 16890 % U+025F LATIN SMALL LETTER DOTLESS J WITH STROKE; jdot-
 lessstroke;
 16891 % \textbardotlessj (tipa)
 16892 \DeclareTextCommand{\textbardotlessj}{PU}{\82\137}% U+025F
 16893 %* \textbardotlessj -> \barj (phonetic)
 16894 % U+0260 LATIN SMALL LETTER G WITH HOOK; ghook; \texthtg (tipa)
 16895 \DeclareTextCommand{\texthtg}{PU}{\82\140}% U+0260
 16896 %* \texthtg -> \hookg (wsuipa)
 16897 % U+0261 LATIN SMALL LETTER SCRIPT G; gscript;
 16898 % \textscriptg (tipa), \scriptg (wsuipa)
 16899 \DeclareTextCommand{\textscriptg}{PU}{\82\141}%* U+0261
 16900 %* \textscriptg -> \varg (phonetic)
 16901 % U+0262 LATIN LETTER SMALL CAPITAL G; \textscg (tipa), \scg (wsuipa)

16902 \DeclareTextCommand{\textscg}{PU}{\82\142}%* U+0262
16903 % U+0263 LATIN SMALL LETTER GAMMA; gammalatinssmall;
16904 % \ipagamma (wsuipa), \vod (phonetic)
16905 \DeclareTextCommand{\textipagamma}{PU}{\82\143}%* U+0263
16906 %* \textipagamma -> \vod (pnonetic)
16907 % U+0264 LATIN SMALL LETTER RAMS HORN; ramshorn;
16908 % \babygamma (wsuipa)
16909 \DeclareTextCommand{\textbabygamma}{PU}{\82\144}%* U+0264
16910 % U+0265 LATIN SMALL LETTER TURNED H; hturned; \textturnh (tipa)
16911 \DeclareTextCommand{\textturnh}{PU}{\82\145}% U+0265
16912 %* \textturnh -> \invh (wsuipa)
16913 %* \textturnh -> \udesc (phonetic)
16914 % U+0266 LATIN SMALL LETTER H WITH HOOK; hhook; \texthth (tipa)
16915 \DeclareTextCommand{\texthth}{PU}{\82\146}% U+0266
16916 %* \texthth -> \hookh (wsuipa)
16917 %* \texthth -> \voicedh (phonetic)
16918 % U+0267 LATIN SMALL LETTER HENG WITH HOOK; henghook; \tex-
ththeng (tipa)
16919 \DeclareTextCommand{\texththeng}{PU}{\82\147}% U+0267
16920 %* \texththeng -> \hookheng (wsuipa)
16921 % U+0268 LATIN SMALL LETTER I WITH STROKE;
16922 % \textbari (tipa), \bari (wsuipa)
16923 \DeclareTextCommand{\textbari}{PU}{\82\150}%* U+0268
16924 %* \textbari -> \ibar (phonetic)
16925 % U+0269 LATIN SMALL LETTER IOTA; iotalatin; \nniota (wsuipa)
16926 \DeclareTextCommand{\textnniota}{PU}{\82\151}%* U+0269
16927 %* \textnniota -> \vari (phonetic)
16928 % U+026A LATIN LETTER SMALL CAPITAL I; \textsci (tipa), \sci (wsuipa)
16929 \DeclareTextCommand{\textsci}{PU}{\82\152}%* U+026A
16930 % U+026B LATIN SMALL LETTER L WITH MIDDLE TILDE; lmiddletilde;
16931 % \textltilde (tipa)
16932 \DeclareTextCommand{\textltilde}{PU}{\82\153}% U+026B
16933 %* \textltilde -> \tildel (wsuipa)
16934 % U+026C LATIN SMALL LETTER L WITH BELT; lbelt; \textbeltl (tipa)
16935 \DeclareTextCommand{\textbeltl}{PU}{\82\154}% U+026C
16936 %* \textbeltl -> \latfric (wsuipa)
16937 % U+026D LATIN SMALL LETTER L WITH RETROFLEX HOOK;
16938 % \hookretroflex; \textrtaill (tipa)
16939 \DeclareTextCommand{\textrtaill}{PU}{\82\155}% U+026D
16940 %* \textrtaill -> \taill (wsuipa)
16941 % U+026E LATIN SMALL LETTER LEZH; lezh; \textlyoghlig (tipa)
16942 \DeclareTextCommand{\textlyoghlig}{PU}{\82\156}% U+026E
16943 %* \textlyoghlig -> \lz (wsuipa)
16944 % U+026F LATIN SMALL LETTER TURNED M; mturned; \textturnm (tipa)
16945 \DeclareTextCommand{\textturnm}{PU}{\82\157}% U+026F
16946 %* \textturnm -> \invm (wsuipa)
16947 %* \textturnm -> \rotm (phonetic)
16948 % U+0270 LATIN SMALL LETTER TURNED M WITH LONG LEG; mlongleg-
turned;
16949 % \textturnmrleg (tipa)
16950 \DeclareTextCommand{\textturnmrleg}{PU}{\82\160}% U+0270
16951 %* \textturnmrleg -> \legm (wsuipa)
16952 % U+0271 LATIN SMALL LETTER M WITH HOOK; mhook; \textltailm (tipa)
16953 \DeclareTextCommand{\textltailm}{PU}{\82\161}% U+0271
16954 %* \textltailm -> \labdentalnas (wsuipa)
16955 %* \textltailm -> \emgma (phonetic)
16956 % U+0272 LATIN SMALL LETTER N WITH LEFT HOOK; nhookleft; \textl-

tailn (tipa)

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16957 \DeclareTextCommand{\textltailn}{PU}{\82\162}% U+0272
16958 %* \textltailn -> \nj (wsuipa)
16959 %* \textltailn -> \nya (phonetic)
16960 % U+0273 LATIN SMALL LETTER N WITH RETROFLEX HOOK;
16961 %   nhookretroflex; \textrtailn (tipa)
16962 \DeclareTextCommand{\textrtailn}{PU}{\82\163}% U+0273
16963 %* \textrtailn -> \tailn (wsuipa)
16964 % U+0274 LATIN LETTER SMALL CAPITAL N; \textscn (tipa), \scn (wsuipa)
16965 \DeclareTextCommand{\textscn}{PU}{\82\164}%* U+0274
16966 % U+0275 LATIN CAPITAL LETTER O WITH MIDDLE TILDE/
16967 %   LATIN CAPITAL LETTER BARRED O; obarred;
16968 %   \textbaro (tipa), \baro (wsuipa)
16969 % But \baro from stmaryrd is different!
16970 \DeclareTextCommand{\textbaro}{PU}{\82\165}% U+0275
16971 % U+0276 LATIN LETTER SMALL CAPITAL OE; \textscoe (tipa)
16972 \DeclareTextCommand{\textscoe}{PU}{\82\166}% U+0276
16973 % U+0277 LATIN SMALL LETTER CLOSED OMEGA; omegalatinclosed;
16974 %   \textcloseomega (tipa)
16975 \DeclareTextCommand{\textcloseomega}{PU}{\82\167}% U+0277
16976 %* \textcloseomega -> \closedniomega (wsuipa)
16977 %* \textcloseomega -> \varomega (phonetic)
16978 % U+0278 LATIN SMALL LETTER PHI; philatin; \nphi (wsuipa)
16979 \DeclareTextCommand{\textnphi}{PU}{\82\170}%* U+0278
16980 % U+0279 LATIN SMALL LETTER TURNED R; rturned; \textturnr (tipa)
16981 \DeclareTextCommand{\textturnr}{PU}{\82\171}% U+0279
16982 %* \textturnr -> \invr (wsuipa)
16983 %* \textturnr -> \rotr (phonetic)
16984 % U+027A LATIN SMALL LETTER TURNED R WITH LONG LEG;
16985 %   rlonglegturned; \textturnrlongleg (tipa)
16986 \DeclareTextCommand{\textturnrlongleg}{PU}{\82\172}% U+027A
16987 %* \textturnrlongleg -> \invleg (wsuipa)
16988 % U+027B LATIN SMALL LETTER TURNED R WITH HOOK; rhookturned;
16989 %   \textturnrrtail (tipa)
16990 \DeclareTextCommand{\textturnrrtail}{PU}{\82\173}% U+027B
16991 %* \textturnrrtail -> \tailinvr (wsuipa)
16992 % U+027C LATIN SMALL LETTER R WITH LONG LEG; rlongleg; \textlongleg (tipa)
16993 \DeclareTextCommand{\textlongleg}{PU}{\82\174}%* U+027C
16994 %* \textlongleg -> \leg (wsuipa)
16995 % U+027D LATIN SMALL LETTER R WITH TAIL; rhook; \textrtailr (tipa)
16996 \DeclareTextCommand{\textrtailr}{PU}{\82\175}% U+027D
16997 %* \textrtailr -> \tailr (wsuipa)
16998 % U+027E LATIN SMALL LETTER R WITH FISHHOOK; rfishhook;
16999 %   \textfishhookr (tipa)
17000 \DeclareTextCommand{\textfishhookr}{PU}{\82\176}% U+027E
17001 %* \textfishhookr -> \flapr (wsuipa)
17002 %* \textfishhookr -> \flap (phonetic)
17003 % U+027F LATIN SMALL LETTER REVERSED R WITH FISHHOOK; rfishhookreversed;
17004 %   \textlhtlongi (tipa)
17005 \DeclareTextCommand{\textlhtlongi}{PU}{\82\177}% U+027F
17006 % U+0280 LATIN LETTER SMALL CAPITAL R; \textscr (tipa), \scr (wsuipa)
17007 \DeclareTextCommand{\textscr}{PU}{\82\200}%* U+0280
17008 % U+0281 LATIN LETTER SMALL CAPITAL INVERTED R; Rsmallinverted;
17009 %   \textinvscr (tipa), \invscr (wsuipa)
17010 \DeclareTextCommand{\textinvscr}{PU}{\82\201}%* U+0281

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17011 % U+0282 LATIN SMALL LETTER S WITH HOOK; shook; \texttrails (tipa)
17012 \DeclareTextCommand{\texttrails}{PU}{\82\202}% U+0282
17013 %* \texttrails -> \tails (wsuipa)
17014 % U+0283 LATIN SMALL LETTER ESH; esh; \textesh (tipa), \esh (wsuipa)
17015 \DeclareTextCommand{\textesh}{PU}{\82\203}% U+0283
17016 % U+0284 LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK;
17017 % dotlessjstrokehook; \texthtbardotlessj (tipa)
17018 \DeclareTextCommand{\texthtbardotlessj}{PU}{\82\204}% U+0284
17019 % U+0285 LATIN SMALL LETTER SQUAT REVERSED ESH; eshsquatre-
versed;
17020 % \textvibyi (tipa)
17021 \DeclareTextCommand{\textvibyi}{PU}{\82\205}% U+0285
17022 % U+0286 LATIN SMALL LETTER ESH WITH CURL; eshcurl; \textctesh (tipa)
17023 \DeclareTextCommand{\textctesh}{PU}{\82\206}% U+0286
17024 %* \textctesh -> \curlyesh (wsuipa)
17025 % U+0287 LATIN SMALL LETTER TURNED T; tturned; \textturnt (tipa)
17026 \DeclareTextCommand{\textturnt}{PU}{\82\207}% U+0287
17027 %* \textturnt -> \clickt (wsuipa)
17028 % U+0288 LATIN SMALL LETTER T WITH RETROFLEX HOOK; retroflex-
hook;
17029 % \texttrtailt (tipa)
17030 \DeclareTextCommand{\texttrtailt}{PU}{\82\210}% U+0288
17031 %* \texttrtailt -> \tailt (wsuipa)
17032 % U+0289 LATIN SMALL LETTER U BAR; ubar;
17033 % \textbaru (tipa), \baru (wsuipa)
17034 \DeclareTextCommand{\textbaru}{PU}{\82\211}% U+0289
17035 %* \textbaru -> \ubar (phonetic)
17036 % U+028A LATIN SMALL LETTER UPSILON; \niupsilon (wsuipa)
17037 \DeclareTextCommand{\textniupsilon}{PU}{\82\212}% U+028A
17038 %* \textniupsilon -> \rotOmega (phonetic)
17039 % U+028B LATIN SMALL LETTER V WITH HOOK/LATIN SMALL LET-
TER SCRIPT V;
17040 % vhook; \textscriptv (tipa), \scriptv (wsuipa)
17041 \DeclareTextCommand{\textscriptv}{PU}{\82\213}% U+028B
17042 % U+028C LATIN SMALL LETTER TURNED V; vturned; \textturnv (tipa)
17043 \DeclareTextCommand{\textturnv}{PU}{\82\214}% U+028C
17044 %* \textturnv -> \invv (wsuipa)
17045 %* \textturnv -> \pwedge (phonetic)
17046 % U+028D LATIN SMALL LETTER TURNED W; wturned; \textturnw (tipa)
17047 \DeclareTextCommand{\textturnw}{PU}{\82\215}% U+028D
17048 %* \textturnw -> \invw (wsuipa)
17049 %* \textturnw -> \rotw (phonetic)
17050 % U+028E LATIN SMALL LETTER TURNED Y; yturned; \textturny (tipa)
17051 \DeclareTextCommand{\textturny}{PU}{\82\216}% U+028E
17052 %* \textturny -> \invy (wsuipa)
17053 %* \textturny -> \roty (phonetic)
17054 % U+028F LATIN LETTER SMALL CAPITAL Y; \textscy (tipa), \scy (wsuipa)
17055 \DeclareTextCommand{\textscy}{PU}{\82\217}% U+028F
17056 % U+0290 LATIN SMALL LETTER Z WITH RETROFLEX HOOK; zretroflex-
hook;
17057 % \texttrtailz (tipa)
17058 \DeclareTextCommand{\texttrtailz}{PU}{\82\220}% U+0290
17059 %* \texttrtailz -> \tailz (wsuipa)
17060 % U+0291 LATIN SMALL LETTER Z WITH CURL; zcurl; \textctz (tipa)
17061 \DeclareTextCommand{\textctz}{PU}{\82\221}% U+0291
17062 %* \textctz -> \curlyz (wsuipa)
17063 % U+0292 LATIN SMALL LETTER EZH/LATIN SMALL LETTER YOGH; ezh;

17064 % \textyogh (tipa), \yogh (wsuipa)
17065 \DeclareTextCommand{\textyogh}{PU}{\82\222}%* U+0292
17066 % U+0293 LATIN SMALL LETTER EZH WITH CURL/LATIN SMALL LETTER YOGH CURL;
17067 % ezhcurl; \textctyogh (tipa)
17068 \DeclareTextCommand{\textctyogh}{PU}{\82\223}% U+0293
17069 %* \textctyogh -> \curlyyogh (wsuipa)
17070 % U+0294 LATIN LETTER GLOTTAL STOP; glottalstop;
17071 % \textglotstop (tipa), \glotstop (wsuipa)
17072 \DeclareTextCommand{\textglotstop}{PU}{\82\224}%* U+0294
17073 %* \textglotstop -> \ejective (wsuipa)
17074 %* \textglotstop -> \glottal (phonetic)
17075 % U+0295 LATIN LETTER PHARYNGEAL VOICED FRICATIVE/
17076 % LATIN LETTER REVERSED GLOTTAL STOP; glottalstopreversed;
17077 % \textrevglotstop (tipa), \revglotstop (wsuipa)
17078 \DeclareTextCommand{\textrevglotstop}{PU}{\82\225}%* U+0295
17079 %* \textrevglotstop -> \reveject (wsuipa)
17080 % U+0296 LATIN LETTER INVERTED GLOTTAL STOP; glottalstopinverted;
17081 % \textinvglotstop (tipa), \invglotstop (wsuipa)
17082 \DeclareTextCommand{\textinvglotstop}{PU}{\82\226}%* U+0296
17083 % U+0297 LATIN LETTER STRETCHED C; cstretched; \textstretchc (tipa)
17084 \DeclareTextCommand{\textstretchc}{PU}{\82\227}% U+0297
17085 %* \textstretchc -> \clickc (wsuipa)
17086 %* \textstretchc -> \textstretchcvar (tipx)
17087 % U+0298 LATIN LETTER BILABIAL CLICK; bilabialclick;
17088 % \textbullseye (tipa)
17089 \DeclareTextCommand{\textbullseye}{PU}{\82\230}% U+0298
17090 %* \textbullseye -> \clickb (wsuipa)
17091 %* \textbullseye -> \textObullseye (tipx)
17092 % U+0299 LATIN LETTER SMALL CAPITAL B; \textscb (tipa)
17093 \DeclareTextCommand{\textscb}{PU}{\82\231}% U+0299
17094 % U+029A LATIN SMALL LETTER CLOSED OPEN E; eopenclosed;
17095 % \textcloseepsilon (tipa)
17096 \DeclareTextCommand{\textcloseepsilon}{PU}{\82\232}% U+029A
17097 % U+029B LATIN LETTER SMALL CAPITAL G WITH HOOK; Gsmallhook;
17098 % \texthtscg (tipa)
17099 \DeclareTextCommand{\texthtscg}{PU}{\82\233}% U+029B
17100 % U+029C LATIN LETTER SMALL CAPITAL H; \textsch (tipa)
17101 \DeclareTextCommand{\textsch}{PU}{\82\234}% U+029C
17102 % U+029D LATIN SMALL LETTER J WITH CROSSED-TAIL; jcrossetail; \textcdj (tipa)
17103 \DeclareTextCommand{\textctj}{PU}{\82\235}% U+029D
17104 %* \textctj -> \textctjvar (tipx)
17105 % U+029E LATIN SMALL LETTER TURNED K; kturned; \textturnk (tipa)
17106 \DeclareTextCommand{\textturnk}{PU}{\82\236}% U+029E
17107 %* \textturnk -> \textturnsck (tipx)
17108 % U+029F LATIN LETTER SMALL CAPITAL L; \textsl (tipa)
17109 \DeclareTextCommand{\textsl}{PU}{\82\237}% U+029F
17110 % U+02A0 LATIN SMALL LETTER Q WITH HOOK; qhook; \texthtq (tipa)
17111 \DeclareTextCommand{\texthtq}{PU}{\82\240}% U+02A0
17112 % U+02A1 LATIN LETTER GLOTTAL STOP WITH STROKE; glottalstopstroke;
17113 % \textbarglotstop (tipa)
17114 \DeclareTextCommand{\textbarglotstop}{PU}{\82\241}% U+02A1
17115 % U+02A2 LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE/
17116 % LATIN LETTER REVERSED GLOTTAL STOP BAR; glottalstopstrokereversed;

17117 % \textbarrevglotstop (tipa)
 17118 \DeclareTextCommand{\textbarrevglotstop}{PU}{\82\242}% U+02A2
 17119 % U+02A3 LATIN SMALL LETTER DZ DIGRAPH; dzaltone; \textdzlig (tipa)
 17120 \DeclareTextCommand{\textdzlig}{PU}{\82\243}% U+02A3
 17121 %* \textdzlig -> \dz (wsupipa)
 17122 % U+02A4 LATIN SMALL LETTER DEZH DIGRAPH; dezh; \textdyoghlig (tipa)
 17123 \DeclareTextCommand{\textdyoghlig}{PU}{\82\244}% U+02A4
 17124 % U+02A5 LATIN SMALL LETTER DZ DIGRAPH WITH CURL; dzcurl;
 17125 % \textdctzlig (tipa)
 17126 \DeclareTextCommand{\textdctzlig}{PU}{\82\245}% U+02A5
 17127 % U+02A6 LATIN SMALL LETTER TS DIGRAPH; ts; \texttslig (tipa)
 17128 \DeclareTextCommand{\texttslig}{PU}{\82\246}% U+02A6
 17129 % U+02A7 LATIN SMALL LETTER TESH DIGRAPH; tesh; \textteshlig (tipa)
 17130 \DeclareTextCommand{\textteshlig}{PU}{\82\247}% U+02A7
 17131 %* \textteshlig -> \tesh (wsuipa)
 17132 % U+02A8 LATIN SMALL LETTER TC DIGRAPH WITH CURL; tccurl;
 17133 % \texttctclig (tipa)
 17134 \DeclareTextCommand{\texttctclig}{PU}{\82\250}% U+02A8
 17135 % U+02AE LATIN SMALL LETTER TURNED H WITH FISHHOOK;
 17136 % \textlhtlongy (tipa)
 17137 \DeclareTextCommand{\textlhtlongy}{PU}{\82\256}% U+02AE
 17138 % U+02AF LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL;
 17139 % \textvibyy (tipa)
 17140 \DeclareTextCommand{\textvibyy}{PU}{\82\257}% U+02AF

51.2.7 Spacing Modifier Letters: U+02B0 to U+02FF

17141 % U+02BD MODIFIER LETTER REVERSED COMMA;
 17142 % commareversedmod, afi64937; \textrevapostrophe (tipa)
 17143 \DeclareTextCommand{\textrevapostrophe}{PU}{\82\275}% U+02BD
 17144 % U+02C0 MODIFIER LETTER GLOTTAL STOP; glottalstopmod;
 17145 % \textraiseglotstop (tipa)
 17146 \DeclareTextCommand{\textraiseglotstop}{PU}{\82\300}% U+02C0
 17147 % U+02C2 MODIFIER LETTER LEFT ARROWHEAD; arrowheadleftmod;
 17148 % \textlptr (tipa)
 17149 \DeclareTextCommand{\textlptr}{PU}{\82\302}% U+02C2
 17150 % U+02C3 MODIFIER LETTER RIGHT ARROWHEAD; arrowheadrightmod;
 17151 % \textrptr (tipa)
 17152 \DeclareTextCommand{\textrptr}{PU}{\82\303}% U+02C3
 17153 % U+02C7 CARON; caron
 17154 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 17155 % U+02C8 MODIFIER LETTER VERTICAL LINE; verticallinemod;
 17156 % \textprimstress (tipa)
 17157 \DeclareTextCommand{\textprimstress}{PU}{\82\310}% U+02C8
 17158 % U+02CC MODIFIER LETTER LOW VERTICAL LINE; verticallinelowmod;
 17159 % \textsecstress (tipa)
 17160 \DeclareTextCommand{\textsecstress}{PU}{\82\314}% U+02CC
 17161 % U+02D0 MODIFIER LETTER TRIANGULAR COLON; colontriangularmod;
 17162 % \textlengthmark (tipa)
 17163 \DeclareTextCommand{\textlengthmark}{PU}{\82\320}% U+02D0
 17164 % U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON; colontriangularhalfmod;
 17165 % \texthalflength (tipa)
 17166 \DeclareTextCommand{\texthalflength}{PU}{\82\321}% U+02D1
 17167 % U+02D8 BREVE; breve
 17168 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 17169 % U+02D9 DOT ABOVE; dotaccent

17170 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 17171 % U+02DA RING ABOVE; ring
 17172 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 17173 % U+02DB OGONEK; ogonek
 17174 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 17175 % U+02DC SMALL TILDE; ilde, *tilde
 17176 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 17177 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 17178 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 17179 \DeclareTextCommand{\textacutedbl}{PU}{\82\335}% U+02DD
 17180 % U+02F3 MODIFIER LETTER LOW RING
 17181 \DeclareTextCommand{\textringlow}{PU}{\82\363}% U+02F3
 17182 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 17183 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 17184 % U+02F7 MODIFIER LETTER LOW TILDE
 17185 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7
 17186 % U+02F9 MODIFIER LETTER BEGIN HIGH TONE; \textopencorner (tipa)
 17187 \DeclareTextCommand{\textopencorner}{PU}{\82\371}% U+02F9
 17188 % U+02FA MODIFIER LETTER END HIGH TONE; \textcorner (tipa)
 17189 \DeclareTextCommand{\textcorner}{PU}{\82\372}% U+02FA

51.2.8 Combining Diacritical Marks: U+0300 to U+036F

17190 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 17191 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 17192 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 17193 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 17194 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 17195 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 17196 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 17197 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 17198 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 17199 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

51.2.9 Greek and Coptic: U+0370 to U+03FF

17200 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 17201 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 17202 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 17203 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 17204 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 17205 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 17206 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 17207 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 17208 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 17209 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 17210 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 17211 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 17212 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 17213 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 17214 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 17215 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 17216 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 17217 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 17218 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS;
 17219 % \textiotadieresis
 17220 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390

17221 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
17222 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
17223 % U+0392 GREEK CAPITAL LETTER BETA; Beta
17224 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
17225 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma; \Gamma (LaTeX)
17226 \DeclareTextCommand{\textGamma}{PU}{\83\223}%* U+0393
17227 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta; \Delta (LaTeX)
17228 \DeclareTextCommand{\textDelta}{PU}{\83\224}%* U+0394
17229 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
17230 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
17231 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
17232 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
17233 % U+0397 GREEK CAPITAL LETTER ETA; Eta
17234 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
17235 % U+0398 GREEK CAPITAL LETTER THETA; Theta; \Theta (LaTeX)
17236 \DeclareTextCommand{\textTheta}{PU}{\83\230}%* U+0398
17237 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
17238 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
17239 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
17240 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
17241 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda; \Lambda (LaTeX)
17242 \DeclareTextCommand{\textLambda}{PU}{\83\233}%* U+039B
17243 % U+039C GREEK CAPITAL LETTER MU; Mu
17244 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
17245 % U+039D GREEK CAPITAL LETTER NU; Nu
17246 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
17247 % U+039E GREEK CAPITAL LETTER XI; Xi; \Xi (LaTeX)
17248 \DeclareTextCommand{\textXi}{PU}{\83\236}%* U+039E
17249 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
17250 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
17251 % U+03A0 GREEK CAPITAL LETTER PI; Pi
17252 \DeclareTextCommand{\textPi}{PU}{\83\240}%* U+03A0
17253 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
17254 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
17255 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma; \Sigma (LaTeX)
17256 \DeclareTextCommand{\textSigma}{PU}{\83\243}%* U+03A3
17257 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
17258 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
17259 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon; \Upsilon (LaTeX)
17260 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}%* U+03A5
17261 % U+03A6 GREEK CAPITAL LETTER PHI; Phi; \Phi (LaTeX)
17262 \DeclareTextCommand{\textPhi}{PU}{\83\246}%* U+03A6
17263 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
17264 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
17265 % U+03A8 GREEK CAPITAL LETTER PSI; Psi; \Psi (LaTeX)
17266 \DeclareTextCommand{\textPsi}{PU}{\83\250}%* U+03A8
17267 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega;
17268 % \Omega (LaTeX)
17269 \DeclareTextCommand{\textOmega}{PU}{\83\251}%* U+03A9
17270 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
17271 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
17272 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
17273 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
17274 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
17275 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos

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17276 \DeclareTextCompositeCommand{\'}{PU}{\textalpha}{\83\254}%* U+03AC
17277 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon-tonos
17278 \DeclareTextCompositeCommand{\'}{PU}{\textepsilon}{\83\255}% U+03AD
17279 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
17280 \DeclareTextCompositeCommand{\'}{PU}{\texteta}{\83\256}% U+03AE
17281 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
17282 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\257}% U+03AF
17283 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA
17284 % AND TONOS; upsilon-dieresisto
17285 \DeclareTextCompositeCommand{\'}{PU}{\textupsilonacute}{\83\260}% U+03B0
17286 % U+03B1 GREEK SMALL LETTER ALPHA; alpha; \alpha (LaTeX)
17287 \DeclareTextCommand{\textalpha}{PU}{\83\261}%* U+03B1
17288 % U+03B2 GREEK SMALL LETTER BETA; beta; \beta (LaTeX)
17289 \DeclareTextCommand{\textbeta}{PU}{\83\262}%* U+03B2
17290 % U+03B3 GREEK SMALL LETTER GAMMA; gamma; \gamma (LaTeX)
17291 \DeclareTextCommand{\textgamma}{PU}{\83\263}%* U+03B3
17292 % U+03B4 GREEK SMALL LETTER DELTA; delta; \delta (LaTeX)
17293 \DeclareTextCommand{\textdelta}{PU}{\83\264}%* U+03B4
17294 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon; \epsilon (LaTeX)
17295 \DeclareTextCommand{\textepsilon}{PU}{\83\265}%* U+03B5
17296 % U+03B6 GREEK SMALL LETTER ZETA; zeta; \zeta (LaTeX)
17297 \DeclareTextCommand{\textzeta}{PU}{\83\266}%* U+03B6
17298 % U+03B7 GREEK SMALL LETTER ETA; eta; \eta (LaTeX)
17299 \DeclareTextCommand{\texteta}{PU}{\83\267}%* U+03B7
17300 % U+03B8 GREEK SMALL LETTER THETA; theta; \theta (LaTeX)
17301 \DeclareTextCommand{\texttheta}{PU}{\83\270}%* U+03B8
17302 % U+03B9 GREEK SMALL LETTER IOTA; iota; \iota (LaTeX)
17303 \DeclareTextCommand{\textiota}{PU}{\83\271}%* U+03B9
17304 % U+03BA GREEK SMALL LETTER KAPPA; kappa; \kappa (LaTeX)
17305 \DeclareTextCommand{\textkappa}{PU}{\83\272}%* U+03BA
17306 % U+03BB GREEK SMALL LETTER LAMDA; lambda; \lambda (LaTeX)
17307 \DeclareTextCommand{\textlambda}{PU}{\83\273}%* U+03BB
17308 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu; \mu (LaTeX)
17309 \DeclareTextCommand{\textmugreek}{PU}{\83\274}%* U+03BC
17310 % U+03BD GREEK SMALL LETTER NU; nu; \nu (LaTeX)
17311 \DeclareTextCommand{\textnu}{PU}{\83\275}%* U+03BD
17312 % U+03BE GREEK SMALL LETTER XI; xi; \xi (LaTeX)
17313 \DeclareTextCommand{\textxi}{PU}{\83\276}%* U+03BE
17314 % U+03BF GREEK SMALL LETTER OMICRON; omicron
17315 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
17316 % U+03C0 GREEK SMALL LETTER PI; pi; \pi (LaTeX)
17317 \DeclareTextCommand{\textpi}{PU}{\83\300}%* U+03C0
17318 % U+03C1 GREEK SMALL LETTER RHO; rho; \rho (LaTeX)
17319 \DeclareTextCommand{\textrho}{PU}{\83\301}%* U+03C1
17320 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
17321 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}%* U+03C2
17322 % U+03C3 GREEK SMALL LETTER SIGMA; sigma; \sigma (LaTeX)
17323 \DeclareTextCommand{\textsigma}{PU}{\83\303}%* U+03C3
17324 % U+03C4 GREEK SMALL LETTER TAU; tau; \tau (LaTeX)
17325 \DeclareTextCommand{\texttau}{PU}{\83\304}%* U+03C4
17326 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon; \upsilon (LaTeX)
17327 \DeclareTextCommand{\textupsilon}{PU}{\83\305}%* U+03C5
17328 % U+03C6 GREEK SMALL LETTER PHI; phi; \phi (LaTeX)
17329 \DeclareTextCommand{\textphi}{PU}{\83\306}%* U+03C6
17330 % U+03C7 GREEK SMALL LETTER CHI; chi; \chi (LaTeX)
17331 \DeclareTextCommand{\textchi}{PU}{\83\307}%* U+03C7
17332 % U+03C8 GREEK SMALL LETTER PSI; psi; \psi (LaTeX)

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17333 \DeclareTextCommand{\textpsi}{PU}{\83\310}%* U+03C8
17334 % U+03C9 GREEK SMALL LETTER OMEGA; omega; \omega (LaTeX)
17335 \DeclareTextCommand{\textomega}{PU}{\83\311}%* U+03C9
17336 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
17337 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
17338 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
        silondieresis
17339 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
17340 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
17341 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
17342 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
17343 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
17344 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
17345 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
17346 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
17347 % U+03DA GREEK LETTER STIGMA; Stigmagreek
17348 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
17349 % U+03DB GREEK SMALL LETTER STIGMA
17350 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
17351 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
17352 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
17353 % U+03DD GREEK SMALL LETTER DIGAMMA
17354 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
17355 %* \textdigammagreek -> \digamma (AmS)
17356 % U+03DE GREEK LETTER KOPPA; Koppagreek
17357 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
17358 % U+03DF GREEK SMALL LETTER KOPPA
17359 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
17360 % U+03E0 GREEK LETTER SAMPI; Sampigreek
17361 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
17362 % U+03E1 GREEK SMALL LETTER SAMPI
17363 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1
17364 % U+03F6 GREEK REVERSED LUNATE EPSILON SYMBOL;
17365 % \backepsilon (AmS)
17366 \DeclareTextCommand{\textbackepsilon}{PU}{\83\366}% U+03F6

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51.2.10 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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17367 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
17368 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
17369 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afi10023
17370 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
17371 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% U+0401
17372 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afi10051
17373 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
17374 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afi10052
17375 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
17376 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afi10053
17377 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
17378 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afi10054
17379 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
17380 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I;
17381 % Icyrrilic, *afi10055
17382 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
17383 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afi10056
17384 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407

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17385 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
17386 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
17387 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
17388 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
17389 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
17390 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
17391 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
17392 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
17393 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
17394 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
17395 \DeclareTextCompositeCommand{'}{PU}{\CYRK}{\84\014}% U+040C
17396 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
17397 \DeclareTextCompositeCommand{'}{PU}{\CYRI}{\84\015}% U+040D
17398 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
17399 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
17400 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
17401 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
17402 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
17403 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
17404 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
17405 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
17406 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
17407 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
17408 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
17409 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
17410 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
17411 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
17412 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
17413 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
17414 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
17415 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
17416 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
17417 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
17418 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
17419 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
17420 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
17421 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; lishortcyrillic, *afii10027
17422 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
17423 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
17424 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
17425 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
17426 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
17427 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
17428 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
17429 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
17430 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
17431 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
17432 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
17433 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
17434 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
17435 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
17436 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
17437 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
17438 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
17439 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
17440 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
17441 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422

17442 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
17443 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
17444 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
17445 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
17446 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
17447 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
17448 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
17449 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
17450 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
17451 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
17452 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
17453 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
17454 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
17455 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
17456 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN;
17457 % Hardsigncyrillic, *afii10044
17458 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
17459 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
17460 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
17461 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN;
17462 % Softsigncyrillic, *afii10046
17463 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
17464 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
17465 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
17466 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
17467 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
17468 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
17469 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
17470 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
17471 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
17472 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
17473 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
17474 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
17475 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
17476 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
17477 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
17478 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
17479 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
17480 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
17481 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
17482 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
17483 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
17484 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
17485 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
17486 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
17487 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
17488 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
17489 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
17490 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
17491 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
17492 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
17493 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
17494 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
17495 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
17496 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
17497 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
17498 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D

17499 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
 17500 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
 17501 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
 17502 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
 17503 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
 17504 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
 17505 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
 17506 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
 17507 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
 17508 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
 17509 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
 17510 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
 17511 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
 17512 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
 17513 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
 17514 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
 17515 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
 17516 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
 17517 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
 17518 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
 17519 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
 17520 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
 17521 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
 17522 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
 17523 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
 17524 \DeclareTextCommand{\cyhrdsn}{PU}{\84\112}% U+044A
 17525 %* \cyhrdsn -> \hardsign (tipa)
 17526 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
 17527 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
 17528 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
 17529 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
 17530 %* \cyrsftsn -> \softsign (tipa)
 17531 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
 17532 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
 17533 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
 17534 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
 17535 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 17536 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 17537 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 17538 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
 17539 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 17540 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 17541 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 17542 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 17543 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
 17544 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 17545 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
 17546 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 17547 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
 17548 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 17549 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 17550 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I;
 17551 % *afii10103, icyrillic
 17552 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 17553 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 17554 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457

17555 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
17556 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
17557 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
17558 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
17559 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
17560 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
17561 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
17562 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
17563 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
17564 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
17565 \DeclareTextCompositeCommand{'}{PU}{\cyrk}{\84\134}% U+045C
17566 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
17567 \DeclareTextCompositeCommand{'}{PU}{\cyri}{\84\135}% U+045D
17568 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
17569 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
17570 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
17571 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
17572 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
17573 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
17574 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
17575 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
17576 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
17577 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
17578 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
17579 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
17580 \DeclareTextCommand{\cyr yat}{PU}{\84\143}% U+0463
17581 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
17582 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
17583 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
17584 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
17585 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslitlecyrillic
17586 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
17587 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslitlecyrillic
17588 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
17589 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitlei-
otifiedcyrillic
17590 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
17591 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitlei-
otifiedcyrillic
17592 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
17593 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
17594 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
17595 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
17596 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
17597 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
17598 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
17599 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotified-
cyrillic
17600 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
17601 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
17602 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
17603 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
17604 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
17605 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
17606 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
17607 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic

17608 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 17609 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afi10147
 17610 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 17611 % U+0473 CYRILLIC SMALL LETTER FITA; *afi10195, fitacyrillic
 17612 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 17613 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afi10148
 17614 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 17615 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afi10196, izhitsacyrillic
 17616 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 17617 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE
 17618 % GRAVE ACCENT; Izhitsadblgravecyrillic
 17619 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 17620 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE
 17621 % GRAVE ACCENT; izhitsadblgravecyrillic
 17622 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 17623 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 17624 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 17625 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 17626 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 17627 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 17628 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 17629 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 17630 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 17631 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatit-
 locyrillic
 17632 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 17633 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 17634 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 17635 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 17636 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 17637 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 17638 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 17639 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 17640 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 17641 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 17642 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 17643 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 17644 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalization-
 cyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneu-
 matacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumat-
 acyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 17645 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 17646 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 17647 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 17648 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 17649 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 17650 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C

17651 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 17652 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 17653 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 17654 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 17655 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 17656 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 17657 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 17658 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 17659 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 17660 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 17661 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-
 cyrillic
 17662 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 17663 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 17664 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 17665 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK;
 17666 % Ghemiddlehookcyrillic
 17667 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 17668 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK;
 17669 % ghemiddlehookcyrillic
 17670 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 17671 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER;
 17672 % Zhedescendercyrillic
 17673 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 17674 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER;
 17675 % zhedescendercyrillic
 17676 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 17677 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 17678 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 17679 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 17680 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 17681 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 17682 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 17683 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 17684 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 17685 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescen-
 dercyrillic
 17686 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 17687 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE;
 17688 % Kavertikalstrokecyrillic
 17689 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 17690 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE;
 17691 % kavertikalstrokecyrillic
 17692 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 17693 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 17694 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 17695 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 17696 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 17697 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 17698 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 17699 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 17700 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

17701 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 17702 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 17703 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 17704 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 17705 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 17706 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 17707 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 17708 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 17709 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 17710 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 17711 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 17712 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 17713 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 17714 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 17715 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 17716 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 17717 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 17718 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 17719 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 17720 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 17721 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 17722 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 17723 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 17724 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 17725 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 17726 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 17727 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 17728 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 17729 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 17730 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 17731 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 17732 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 17733 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 17734 \DeclareTextCommand{\cyr yhcrs}{PU}{\84\261}% U+04B1
 17735 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
 17736 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 17737 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 17738 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 17739 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 17740 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 17741 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 17742 \DeclareTextCommand{\cyr tetse}{PU}{\84\265}% U+04B5
 17743 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER;
 17744 % Chedescendercyrillic

17745 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
17746 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
17747 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
17748 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE;
17749 % Cheverticalstrokecyrillic
17750 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
17751 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE;
17752 % cheverticalstrokecyrillic
17753 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
17754 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
17755 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
17756 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
17757 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
17758 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
17759 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
17760 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
17761 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
17762 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
17763 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
17764 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
17765 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
17766 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
17767 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
17768 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
17769 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
17770 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
17771 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
17772 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
17773 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
17774 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
17775 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
17776 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
17777 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
17778 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
17779 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
17780 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
17781 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
17782 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
17783 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
17784 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
17785 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
17786 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
17787 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
17788 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
17789 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
17790 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
17791 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
17792 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
17793 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA

17794 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevacyrillic
17795 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
17796 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevacyrillic
17797 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
17798 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
17799 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
17800 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
17801 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
17802 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
17803 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
17804 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
17805 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
17806 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
17807 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
17808 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
17809 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
17810 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
17811 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
17812 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
17813 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
17814 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS;
17815 % Schwadieresiscyrillic
17816 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
17817 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS;
17818 % schwadieresiscyrillic
17819 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
17820 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
17821 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
17822 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
17823 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\335}% U+04DD
17824 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
17825 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
17826 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
17827 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
17828 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
17829 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
17830 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
17831 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
17832 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
17833 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
17834 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
17835 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
17836 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
17837 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
17838 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
17839 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
17840 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
17841 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
17842 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic

17843 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
17844 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
17845 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
17846 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
17847 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
17848 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS;
17849 % Obarreddieresiscyrillic
17850 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
17851 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS;
17852 % obarreddieresiscyrillic
17853 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
17854 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
17855 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
17856 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
17857 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
17858 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
17859 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
17860 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
17861 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
17862 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
17863 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
17864 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
17865 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
17866 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
17867 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
17868 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
17869 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
17870 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
17871 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
17872 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
17873 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
17874 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
17875 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
17876 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
17877 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
17878 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
17879 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
17880 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
17881 \DeclareTextCompositeCommand{"}{PU}{\cyrery}{\84\371}% U+04F9
\84\372: U+04FA CYRILLIC CAPITAL LETTER GHE WITH STROKE AND HOOK
\84\373: U+04FB CYRILLIC SMALL LETTER GHE WITH STROKE AND HOOK
17882 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
17883 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
17884 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
17885 \DeclareTextCommand{\cyrhk}{PU}{\84\375}% U+04FD
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

51.2.11 Hebrew: U+0590 to U+05FF

Macro names are taken from `he8enc.def`.

```
17886 % U+05C3 HEBREW PUNCTUATION SOF PASUQ
17887 \DeclareTextCommand{\sofpasuq}{PU}{\85\303}% U+05C3
17888 % U+05D0 HEBREW LETTER ALEF
17889 \DeclareTextCommand{\hebalef}{PU}{\85\320}% U+05D0
17890 % U+05D1 HEBREW LETTER BET
17891 \DeclareTextCommand{\hebbet}{PU}{\85\321}% U+05D1
17892 % U+05D2 HEBREW LETTER GIMEL
17893 \DeclareTextCommand{\hebgimel}{PU}{\85\322}% U+05D2
17894 % U+05D3 HEBREW LETTER DALET
17895 \DeclareTextCommand{\hebdalet}{PU}{\85\323}% U+05D3
17896 % U+05D4 HEBREW LETTER HE
17897 \DeclareTextCommand{\hebhe}{PU}{\85\324}% U+05D4
17898 % U+05D5 HEBREW LETTER VAV
17899 \DeclareTextCommand{\hebvav}{PU}{\85\325}% U+05D5
17900 % U+05D6 HEBREW LETTER ZAYIN
17901 \DeclareTextCommand{\hebzayin}{PU}{\85\326}% U+05D6
17902 % U+05D7 HEBREW LETTER HET
17903 \DeclareTextCommand{\hebhet}{PU}{\85\327}% U+05D7
17904 % U+05D8 HEBREW LETTER TET
17905 \DeclareTextCommand{\hebtet}{PU}{\85\330}% U+05D8
17906 % U+05D9 HEBREW LETTER YOD
17907 \DeclareTextCommand{\hebyod}{PU}{\85\331}% U+05D9
17908 % U+05DA HEBREW LETTER FINAL KAF
17909 \DeclareTextCommand{\hebfinalkaf}{PU}{\85\332}% U+05DA
17910 % U+05DB HEBREW LETTER KAF
17911 \DeclareTextCommand{\hebkafe}{PU}{\85\333}% U+05DB
17912 % U+05DC HEBREW LETTER LAMED
17913 \DeclareTextCommand{\heblamed}{PU}{\85\334}% U+05DC
17914 % U+05DD HEBREW LETTER FINAL MEM
17915 \DeclareTextCommand{\hebfinalmem}{PU}{\85\335}% U+05DD
17916 % U+05DE HEBREW LETTER MEM
17917 \DeclareTextCommand{\hebmem}{PU}{\85\336}% U+05DE
17918 % U+05DF HEBREW LETTER FINAL NUN
17919 \DeclareTextCommand{\hebfinalnun}{PU}{\85\337}% U+05DF
17920 % U+05E0 HEBREW LETTER NUN
17921 \DeclareTextCommand{\hebnun}{PU}{\85\340}% U+05E0
17922 % U+05E1 HEBREW LETTER SAMEKH
17923 \DeclareTextCommand{\hebsamekh}{PU}{\85\341}% U+05E1
17924 % U+05E2 HEBREW LETTER AYIN
17925 \DeclareTextCommand{\hebayin}{PU}{\85\342}% U+05E2
17926 % U+05E3 HEBREW LETTER FINAL PE
17927 \DeclareTextCommand{\hebfinalpe}{PU}{\85\343}% U+05E3
17928 % U+05E4 HEBREW LETTER PE
17929 \DeclareTextCommand{\hebpe}{PU}{\85\344}% U+05E4
17930 % U+05E5 HEBREW LETTER FINAL TSADI
17931 \DeclareTextCommand{\hebfinaltsadi}{PU}{\85\345}% U+05E5
17932 % U+05E6 HEBREW LETTER TSADI
17933 \DeclareTextCommand{\hebtsadi}{PU}{\85\346}% U+05E6
17934 % U+05E7 HEBREW LETTER QOF
17935 \DeclareTextCommand{\hebqof}{PU}{\85\347}% U+05E7
17936 % U+05E8 HEBREW LETTER RESH
17937 \DeclareTextCommand{\hebresh}{PU}{\85\350}% U+05E8
17938 % U+05E9 HEBREW LETTER SHIN
17939 \DeclareTextCommand{\hebshin}{PU}{\85\351}% U+05E9
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17940 %* \hebshin -> \hebsin (he8)
 17941 % U+05EA HEBREW LETTER TAV
 17942 \DeclareTextCommand{\hebtav}{PU}{\85\352}% U+05EA
 17943 % U+05F0 HEBREW LIGATURE YIDDISH DOUBLE VAV
 17944 \DeclareTextCommand{\doublevav}{PU}{\85\360}% U+05F0
 17945 % U+05F1 HEBREW LIGATURE YIDDISH VAV YOD
 17946 \DeclareTextCommand{\vavyod}{PU}{\85\361}% U+05F1
 17947 % U+05F2 HEBREW LIGATURE YIDDISH DOUBLE YOD
 17948 \DeclareTextCommand{\doubleyod}{PU}{\85\362}% U+05F2

51.2.12 Thai: U+0E00 to U+0E7F

17949 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 17950 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

51.2.13 Phonetic Extensions: U+1D00 to U+1D7F

17951 % U+1D00 LATIN LETTER SMALL CAPITAL A; \textscA (tipa)
 17952 \DeclareTextCommand{\textscA}{PU}{\9035\000}% U+1D00
 17953 % U+1D05 LATIN LETTER SMALL CAPITAL D; \scd (wsuipa)
 17954 \DeclareTextCommand{\textscd}{PU}{\9035\005}% U+1D05
 17955 % U+1D07 LATIN LETTER SMALL CAPITAL E; \textscE (tipa)
 17956 \DeclareTextCommand{\textscE}{PU}{\9035\007}% U+1D07
 17957 % U+1D0A LATIN LETTER SMALL CAPITAL J; \textscJ (tipa)
 17958 \DeclareTextCommand{\textscJ}{PU}{\9035\012}% U+1D0A
 17959 % U+1D0B LATIN LETTER SMALL CAPITAL K; \textscK (tipx)
 17960 \DeclareTextCommand{\textPUscK}{PU}{\9035\013}% U+1D0B
 17961 %* \textPUscK -> \textscK (tipx)
 17962 % U+1D0D LATIN LETTER SMALL CAPITAL M; \textscM (tipx)
 17963 \DeclareTextCommand{\textPUscM}{PU}{\9035\015}% U+1D0D
 17964 %* \textPUscM -> \textscM (tipx)
 17965 % U+1D18 LATIN LETTER SMALL CAPITAL P; \textscP (tipx)
 17966 \DeclareTextCommand{\textPUscP}{PU}{\9035\030}% U+1D18
 17967 %* \textPUscP -> \textscP (tipx)
 17968 % U+1D19 LATIN LETTER SMALL CAPITAL REVERSED R; \textrevscr (tipx)
 17969 \DeclareTextCommand{\textPUrevscr}{PU}{\9035\031}% U+1D19
 17970 %* \textPUrevscr -> \textrevscr (tipx)
 17971 % U+1D1C LATIN LETTER SMALL CAPITAL U; \textscU (tipa), \scu (wsuipa)
 17972 \DeclareTextCommand{\textscU}{PU}{\9035\034}% U+1D1C
 17973 % U+1D62 LATIN SUBSCRIPT SMALL LETTER I
 17974 \DeclareTextCommand{\textiinferior}{PU}{\9035\142}% U+1D62
 17975 % U+1D63 LATIN SUBSCRIPT SMALL LETTER R
 17976 \DeclareTextCommand{\textrinferior}{PU}{\9035\143}% U+1D63
 17977 % U+1D64 LATIN SUBSCRIPT SMALL LETTER U
 17978 \DeclareTextCommand{\textuinferior}{PU}{\9035\144}% U+1D64
 17979 % U+1D65 LATIN SUBSCRIPT SMALL LETTER V
 17980 \DeclareTextCommand{\textvinferior}{PU}{\9035\145}% U+1D65
 17981 % U+1D66 GREEK SUBSCRIPT SMALL LETTER BETA
 17982 \DeclareTextCommand{\textbetainferior}{PU}{\9035\146}% U+1D66
 17983 % U+1D67 GREEK SUBSCRIPT SMALL LETTER GAMMA
 17984 \DeclareTextCommand{\textgammainferior}{PU}{\9035\147}% U+1D67
 17985 % U+1D68 GREEK SUBSCRIPT SMALL LETTER RHO
 17986 \DeclareTextCommand{\textrhoinferior}{PU}{\9035\150}% U+1D68
 17987 % U+1D69 GREEK SUBSCRIPT SMALL LETTER PHI
 17988 \DeclareTextCommand{\textphiinferior}{PU}{\9035\151}% U+1D69
 17989 % U+1D6A GREEK SUBSCRIPT SMALL LETTER CHI
 17990 \DeclareTextCommand{\textchiinferior}{PU}{\9035\152}% U+1D6A
 17991 % U+1D7B LATIN SMALL CAPITAL LETTER I WITH STROKE;

17992 % \barsci (wsuipa)
17993 \DeclareTextCommand{\textbarsci}{PU}{\9035\173}%* U+1D7B
17994 % U+1D7D LATIN SMALL LETTER P WITH STROKE; \barp (wsuipa)
17995 \DeclareTextCommand{\textbarp}{PU}{\9035\175}%* U+1D7D
17996 % U+1D7E LATIN SMALL CAPITAL LETTER U WITH STROKE;
17997 % \barscu (wsuipa)
17998 \DeclareTextCommand{\textbarscu}{PU}{\9035\176}%* U+1D7E

51.2.14 Phonetic Extensions Supplement: U+1D80 to U+1DBF

17999 % U+1D8F LATIN SMALL LETTER A WITH RETROFLEX HOOK; \tex-
trhooka (tipx)
18000 \DeclareTextCommand{\textPUrhooka}{PU}{\9035\217}% U+1D8F
18001 %* \textPUrhooka -> \textrhooka (tipx)
18002 % U+1D91 LATIN SMALL LETTER D WITH HOOK AND TAIL; \texthtr-
taild (tipa)
18003 \DeclareTextCommand{\texthtrtaild}{PU}{\9035\221}%* U+1D91
18004 % U+1D92 LATIN SMALL LETTER E WITH RETROFLEX HOOK; \tex-
trhooke (tipx)
18005 \DeclareTextCommand{\textPUrhooke}{PU}{\9035\222}% U+1D92
18006 %* \textPUrhooke -> \textrhooke (tipx)
18007 % U+1D93 LATIN SMALL LETTER OPEN E WITH RETROFLEX HOOK;
18008 % \textrhookepsilon (tipx)
18009 \DeclareTextCommand{\textPUrhookepsilon}{PU}{\9035\223}% U+1D93
18010 %* \textPUrhookepsilon -> \textrhookepsilon (tipx)
18011 % U+1D97 LATIN SMALL LETTER OPEN O WITH RETROFLEX HOOK;
18012 % \textrhookopeno (tipx)
18013 \DeclareTextCommand{\textPUrhookopeno}{PU}{\9035\227}% U+1D97
18014 %* \textPUrhookopeno -> \textrhookopeno (tipx)

51.2.15 Latin Extended Additional: U+1E00 to U+1EFF

18015 % U+1E00 LATIN CAPITAL LETTER A WITH RING BELOW; Aringbelow
18016 \DeclareTextCompositeCommand{\textsubring}{PU}{A}{\9036\000}% U+1E00
18017 % U+1E01 LATIN SMALL LETTER A WITH RING BELOW; aringbelow
18018 \DeclareTextCompositeCommand{\textsubring}{PU}{a}{\9036\001}% U+1E01
18019 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
18020 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
18021 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
18022 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
18023 % U+1E04 LATIN CAPITAL LETTER B WITH DOT BELOW; Bdotbelow
18024 \DeclareTextCompositeCommand{\d}{PU}{B}{\9036\004}% U+1E04
18025 % U+1E05 LATIN SMALL LETTER B WITH DOT BELOW; bdotbelow
18026 \DeclareTextCompositeCommand{\d}{PU}{b}{\9036\005}% U+1E05
18027 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
18028 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
18029 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
18030 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
18031 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
18032 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
18033 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
18034 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
18035 % U+1E0C LATIN CAPITAL LETTER D WITH DOT BELOW; Ddotbelow
18036 \DeclareTextCompositeCommand{\d}{PU}{D}{\9036\014}% U+1E0C
18037 % U+1E0D LATIN SMALL LETTER D WITH DOT BELOW; ddotbelow
18038 \DeclareTextCompositeCommand{\d}{PU}{d}{\9036\015}% U+1E0D
18039 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
18040 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
18041 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow

18042 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
18043 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
18044 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
18045 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
18046 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
18047 % U+1E12 LATIN CAPITAL LETTER D WITH CIRCUMFLEX BELOW; Dcir-
cumflexbelow
18048 \DeclareTextCompositeCommand{\textsubcircum}{PU}{D}{\9036\022}% U+1E12
18049 % U+1E13 LATIN SMALL LETTER D WITH CIRCUMFLEX BELOW; dcir-
cumflexbelow
18050 \DeclareTextCompositeCommand{\textsubcircum}{PU}{d}{\9036\023}% U+1E13
18051 % U+1E14 LATIN CAPITAL LETTER E WITH MACRON AND GRAVE;
18052 % Emacrongrave
18053 \DeclareTextCompositeCommand{\textgravemacron}{PU}{E}{\9036\024}% U+1E14
18054 % U+1E15 LATIN SMALL LETTER E WITH MACRON AND GRAVE;
18055 % emacrongrave
18056 \DeclareTextCompositeCommand{\textgravemacron}{PU}{e}{\9036\025}% U+1E15
18057 % U+1E16 LATIN CAPITAL LETTER E WITH MACRON AND ACUTE;
18058 % Emacronacute
18059 \DeclareTextCompositeCommand{\textacutemacron}{PU}{E}{\9036\026}% U+1E16
18060 % U+1E17 LATIN SMALL LETTER E WITH MACRON AND ACUTE;
18061 % emacronacute
18062 \DeclareTextCompositeCommand{\textacutemacron}{PU}{e}{\9036\027}% U+1E17
18063 % U+1E18 LATIN CAPITAL LETTER E WITH CIRCUMFLEX BELOW; Ecir-
cumflexbelow
18064 \DeclareTextCompositeCommand{\textsubcircum}{PU}{E}{\9036\030}% U+1E18
18065 % U+1E19 LATIN SMALL LETTER E WITH CIRCUMFLEX BELOW; ecir-
cumflexbelow
18066 \DeclareTextCompositeCommand{\textsubcircum}{PU}{e}{\9036\031}% U+1E19
18067 % U+1E1A LATIN CAPITAL LETTER E WITH TILDE BELOW; Etildebelow
18068 \DeclareTextCompositeCommand{\textsubtilde}{PU}{E}{\9036\032}% U+1E1A
18069 % U+1E1B LATIN SMALL LETTER E WITH TILDE BELOW; etildebelow
18070 \DeclareTextCompositeCommand{\textsubtilde}{PU}{e}{\9036\033}% U+1E1B
18071 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
18072 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
18073 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
18074 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
18075 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
18076 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
18077 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
18078 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
18079 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
18080 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
18081 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
18082 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
18083 % U+1E24 LATIN CAPITAL LETTER H WITH DOT BELOW; Hdotbelow
18084 \DeclareTextCompositeCommand{\d}{PU}{H}{\9036\044}% U+1E24
18085 % U+1E25 LATIN SMALL LETTER H WITH DOT BELOW; hdotbelow
18086 \DeclareTextCompositeCommand{\d}{PU}{h}{\9036\045}% U+1E25
18087 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
18088 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
18089 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
18090 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
18091 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
18092 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
18093 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
18094 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29

18095 % U+1E2A LATIN CAPITAL LETTER H WITH BREVE BELOW; Hbrevebelow
18096 \DeclareTextCompositeCommand{\textsubbreve}{PU}{H}{\9036\052}% U+1E2A
18097 % U+1E2B LATIN SMALL LETTER H WITH BREVE BELOW; hbrevebelow
18098 \DeclareTextCompositeCommand{\textsubbreve}{PU}{h}{\9036\053}% U+1E2B
18099 % U+1E2C LATIN CAPITAL LETTER I WITH TILDE BELOW; Itildebelow
18100 \DeclareTextCompositeCommand{\textsubtilde}{PU}{I}{\9036\054}% U+1E2C
18101 % U+1E2D LATIN SMALL LETTER I WITH TILDE BELOW; itildebelow
18102 \DeclareTextCompositeCommand{\textsubtilde}{PU}{i}{\9036\055}% U+1E2D
18103 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
18104 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
18105 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
18106 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
18107 % U+1E32 LATIN CAPITAL LETTER K WITH DOT BELOW; Kdotbelow
18108 \DeclareTextCompositeCommand{\d}{PU}{K}{\9036\062}% U+1E32
18109 % U+1E33 LATIN SMALL LETTER K WITH DOT BELOW; kdotbelow
18110 \DeclareTextCompositeCommand{\d}{PU}{k}{\9036\063}% U+1E33
18111 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
18112 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
18113 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
18114 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
18115 % U+1E36 LATIN CAPITAL LETTER L WITH DOT BELOW; Ldotbelow
18116 \DeclareTextCompositeCommand{\d}{PU}{L}{\9036\066}% U+1E36
18117 % U+1E37 LATIN SMALL LETTER L WITH DOT BELOW; ldotbelow
18118 \DeclareTextCompositeCommand{\d}{PU}{l}{\9036\067}% U+1E37
18119 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
18120 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
18121 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
18122 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
18123 % U+1E3C LATIN CAPITAL LETTER L WITH CIRCUMFLEX BELOW; Lcir-
cumflexbelow
18124 \DeclareTextCompositeCommand{\textsubcircum}{PU}{L}{\9036\074}% U+1E3C
18125 % U+1E3D LATIN SMALL LETTER L WITH CIRCUMFLEX BELOW; lcir-
cumflexbelow
18126 \DeclareTextCompositeCommand{\textsubcircum}{PU}{l}{\9036\075}% U+1E3D
18127 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
18128 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
18129 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
18130 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
18131 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
18132 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
18133 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
18134 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
18135 % U+1E42 LATIN CAPITAL LETTER M WITH DOT BELOW; Mdotbelow
18136 \DeclareTextCompositeCommand{\d}{PU}{M}{\9036\102}% U+1E42
18137 % U+1E43 LATIN SMALL LETTER M WITH DOT BELOW; mdotbelow
18138 \DeclareTextCompositeCommand{\d}{PU}{m}{\9036\103}% U+1E43
18139 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
18140 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
18141 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
18142 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
18143 % U+1E46 LATIN CAPITAL LETTER N WITH DOT BELOW; Ndotbelow
18144 \DeclareTextCompositeCommand{\d}{PU}{N}{\9036\106}% U+1E46
18145 % U+1E47 LATIN SMALL LETTER N WITH DOT BELOW; ndotbelow
18146 \DeclareTextCompositeCommand{\d}{PU}{n}{\9036\107}% U+1E47
18147 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
18148 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
18149 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow

18150 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
 18151 % U+1E4A LATIN CAPITAL LETTER N WITH CIRCUMFLEX BELOW; Ncir-
 cumflexbelow
 18152 \DeclareTextCompositeCommand{\textsubcircum}{PU}{N}{\9036\112}% U+1E4A
 18153 % U+1E4B LATIN SMALL LETTER N WITH CIRCUMFLEX BELOW; ncir-
 cumflexbelow
 18154 \DeclareTextCompositeCommand{\textsubcircum}{PU}{n}{\9036\113}% U+1E4B
 18155 % U+1E50 LATIN CAPITAL LETTER O WITH MACRON AND GRAVE;
 18156 % Omacrongrave
 18157 \DeclareTextCompositeCommand{\textgravemacron}{PU}{O}{\9036\120}% U+1E50
 18158 % U+1E51 LATIN SMALL LETTER O WITH MACRON AND GRAVE;
 18159 % omacrongrave
 18160 \DeclareTextCompositeCommand{\textgravemacron}{PU}{o}{\9036\121}% U+1E51
 18161 % U+1E52 LATIN CAPITAL LETTER O WITH MACRON AND ACUTE;
 18162 % Omacronacute
 18163 \DeclareTextCompositeCommand{\textacutemacron}{PU}{O}{\9036\122}% U+1E52
 18164 % U+1E53 LATIN SMALL LETTER O WITH MACRON AND ACUTE;
 18165 % omacronacute
 18166 \DeclareTextCompositeCommand{\textacutemacron}{PU}{o}{\9036\123}% U+1E53
 18167 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
 18168 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
 18169 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
 18170 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
 18171 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
 18172 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
 18173 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
 18174 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
 18175 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
 18176 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
 18177 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
 18178 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
 18179 % U+1E5A LATIN CAPITAL LETTER R WITH DOT BELOW; Rdotbelow
 18180 \DeclareTextCompositeCommand{\d}{PU}{R}{\9036\132}% U+1E5A
 18181 % U+1E5B LATIN SMALL LETTER R WITH DOT BELOW; rdotbelow
 18182 \DeclareTextCompositeCommand{\d}{PU}{r}{\9036\133}% U+1E5B
 18183 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
 18184 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
 18185 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
 18186 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
 18187 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
 18188 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
 18189 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
 18190 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
 18191 % U+1E62 LATIN CAPITAL LETTER S WITH DOT BELOW; Sdotbelow
 18192 \DeclareTextCompositeCommand{\d}{PU}{S}{\9036\142}% U+1E62
 18193 % U+1E63 LATIN SMALL LETTER S WITH DOT BELOW; sdotbelow
 18194 \DeclareTextCompositeCommand{\d}{PU}{s}{\9036\143}% U+1E63
 18195 % U+1E6A LATIN CAPITAL LETTER T WITH DOT ABOVE; Tdotaccent
 18196 \DeclareTextCompositeCommand{\.}{PU}{T}{\9036\152}% U+1E6A
 18197 % U+1E6B LATIN SMALL LETTER T WITH DOT ABOVE; tdotaccent
 18198 \DeclareTextCompositeCommand{\.}{PU}{t}{\9036\153}% U+1E6B
 18199 % U+1E6C LATIN CAPITAL LETTER T WITH DOT BELOW; Tdotbelow
 18200 \DeclareTextCompositeCommand{\d}{PU}{T}{\9036\154}% U+1E6C
 18201 % U+1E6D LATIN SMALL LETTER T WITH DOT BELOW; tdotbelow
 18202 \DeclareTextCompositeCommand{\d}{PU}{t}{\9036\155}% U+1E6D
 18203 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
 18204 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E

18205 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
 18206 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
 18207 % U+1E70 LATIN CAPITAL LETTER T WITH CIRCUMFLEX BELOW; Tcir-
 cumflexbelow
 18208 \DeclareTextCompositeCommand{\textsubcircum}{PU}{T}{\9036\160}% U+1E70
 18209 % U+1E71 LATIN SMALL LETTER T WITH CIRCUMFLEX BELOW; tcir-
 cumflexbelow
 18210 \DeclareTextCompositeCommand{\textsubcircum}{PU}{t}{\9036\161}% U+1E71
 18211 % U+1E72 LATIN CAPITAL LETTER U WITH DIAERESIS BELOW; Udiere-
 sisbelow
 18212 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{U}{\9036\162}% U+1E72
 18213 % U+1E73 LATIN SMALL LETTER U WITH DIAERESIS BELOW; udieresis-
 below
 18214 \DeclareTextCompositeCommand{\textsubumlaut}{PU}{u}{\9036\163}% U+1E73
 18215 % U+1E74 LATIN CAPITAL LETTER U WITH TILDE BELOW; Utildebelow
 18216 \DeclareTextCompositeCommand{\textsubtilde}{PU}{U}{\9036\164}% U+1E74
 18217 % U+1E75 LATIN SMALL LETTER U WITH TILDE BELOW; utildebelow
 18218 \DeclareTextCompositeCommand{\textsubtilde}{PU}{u}{\9036\165}% U+1E75
 18219 % U+1E76 LATIN CAPITAL LETTER U WITH CIRCUMFLEX BELOW; Ucir-
 cumflexbelow
 18220 \DeclareTextCompositeCommand{\textsubcircum}{PU}{U}{\9036\166}% U+1E76
 18221 % U+1E77 LATIN SMALL LETTER U WITH CIRCUMFLEX BELOW; ucir-
 cumflexbelow
 18222 \DeclareTextCompositeCommand{\textsubcircum}{PU}{u}{\9036\167}% U+1E77
 18223 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
 18224 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
 18225 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
 18226 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
 18227 % U+1E7E LATIN CAPITAL LETTER V WITH DOT BELOW; Vdotbelow
 18228 \DeclareTextCompositeCommand{\d}{PU}{V}{\9036\176}% U+1E7E
 18229 % U+1E7F LATIN SMALL LETTER V WITH DOT BELOW; vdotbelow
 18230 \DeclareTextCompositeCommand{\d}{PU}{v}{\9036\177}% U+1E7F
 18231 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
 18232 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
 18233 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
 18234 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
 18235 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
 18236 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
 18237 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 18238 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
 18239 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 18240 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
 18241 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 18242 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
 18243 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 18244 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
 18245 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 18246 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
 18247 % U+1E88 LATIN CAPITAL LETTER W WITH DOT BELOW; wdotbelow
 18248 \DeclareTextCompositeCommand{\d}{PU}{W}{\9036\210}% U+1E88
 18249 % U+1E89 LATIN SMALL LETTER W WITH DOT BELOW; wdotbelow
 18250 \DeclareTextCompositeCommand{\d}{PU}{w}{\9036\211}% U+1E89
 18251 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 18252 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
 18253 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 18254 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
 18255 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis

18256 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 18257 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 18258 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 18259 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 18260 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
 18261 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 18262 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
 18263 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 18264 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
 18265 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 18266 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
 18267 % U+1E92 LATIN CAPITAL LETTER Z WITH DOT BELOW; Zdotbelow
 18268 \DeclareTextCompositeCommand{d}{PU}{Z}{\9036\222}% U+1E92
 18269 % U+1E93 LATIN SMALL LETTER Z WITH DOT BELOW; zdotbelow
 18270 \DeclareTextCompositeCommand{d}{PU}{z}{\9036\223}% U+1E93
 18271 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 18272 \DeclareTextCompositeCommand{b}{PU}{Z}{\9036\224}% U+1E94
 18273 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 18274 \DeclareTextCompositeCommand{b}{PU}{z}{\9036\225}% U+1E95
 18275 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 18276 \DeclareTextCompositeCommand{b}{PU}{h}{\9036\226}% U+1E96
 18277 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 18278 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 18279 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 18280 \DeclareTextCompositeCommand{r}{PU}{w}{\9036\230}% U+1E98
 18281 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 18282 \DeclareTextCompositeCommand{r}{PU}{y}{\9036\231}% U+1E99
 18283 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdo-
 taccent
 18284 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 18285 % U+1EA0 LATIN CAPITAL LETTER A WITH DOT BELOW; Adotbelow
 18286 \DeclareTextCompositeCommand{d}{PU}{A}{\9036\240}% U+1EA0
 18287 % U+1EA1 LATIN SMALL LETTER A WITH DOT BELOW; adotbelow
 18288 \DeclareTextCompositeCommand{d}{PU}{a}{\9036\241}% U+1EA1
 18289 % U+1EB8 LATIN CAPITAL LETTER E WITH DOT BELOW; Edotbelow
 18290 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}% U+1EB8
 18291 % U+1EB9 LATIN SMALL LETTER E WITH DOT BELOW; edotbelow
 18292 \DeclareTextCompositeCommand{d}{PU}{e}{\9036\271}% U+1EB9
 18293 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 18294 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}% U+1EBC
 18295 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 18296 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}% U+1EBD
 18297 % U+1ECA LATIN CAPITAL LETTER I WITH DOT BELOW; Idotbelow
 18298 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}% U+1ECA
 18299 % U+1ECB LATIN SMALL LETTER I WITH DOT BELOW; idotbelow
 18300 \DeclareTextCompositeCommand{d}{PU}{i}{\9036\313}% U+1ECB
 18301 % U+1ECC LATIN CAPITAL LETTER O WITH DOT BELOW; Odotbelow
 18302 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}% U+1ECC
 18303 % U+1ECD LATIN SMALL LETTER O WITH DOT BELOW; odotbelow
 18304 \DeclareTextCompositeCommand{d}{PU}{o}{\9036\315}% U+1ECD
 18305 % U+1EE4 LATIN CAPITAL LETTER U WITH DOT BELOW; Udotbelow
 18306 \DeclareTextCompositeCommand{d}{PU}{U}{\9036\344}% U+1EE4
 18307 % U+1EE5 LATIN SMALL LETTER U WITH DOT BELOW; udotbelow
 18308 \DeclareTextCompositeCommand{d}{PU}{u}{\9036\345}% U+1EE5
 18309 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 18310 \DeclareTextCompositeCommand{'}{PU}{Y}{\9036\362}% U+1EF2
 18311 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave

18312 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 18313 % U+1EF4 LATIN CAPITAL LETTER Y WITH DOT BELOW; Ydotbelow
 18314 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
 18315 % U+1EF5 LATIN SMALL LETTER Y WITH DOT BELOW; ydotbelow
 18316 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 18317 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 18318 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 18319 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 18320 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

51.2.16 General Punctuation: U+2000 to U+206F

18321 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 18322 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 18323 % U+2013 EN DASH; endash
 18324 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 18325 % U+2014 EM DASH; emdash
 18326 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 18327 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 18328 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 18329 %* \textbardbl -> \textdoublevertline (tipa)
 18330 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 18331 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 18332 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 18333 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 18334 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 18335 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 18336 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 18337 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 18338 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 18339 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 18340 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 18341 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 18342 % U+2020 DAGGER; dagger
 18343 \DeclareTextCommand{\textdagger}{PU}{\9040\040}%* U+2020
 18344 %* \textdagger -> \dag (LaTeX)
 18345 % U+2021 DOUBLE DAGGER; daggerdbl; \ddagger (LaTeX)
 18346 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 18347 %* \textdaggerdbl -> \ddagger (LaTeX)
 18348 %* \textdaggerdbl -> \ddag (LaTeX)
 18349 % U+2022 BULLET; bullet
 18350 \DeclareTextCommand{\textbullet}{PU}{\9040\042}%* U+2022
 18351 % U+2025 TWO DOT LEADER; \hdotfor (MnSymbol)
 18352 \DeclareTextCommand{\texthdotfor}{PU}{\9040\045}%* U+2025
 18353 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 18354 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 18355 %* \textellipsis -> \mathellipsis
 18356 % U+2030 PER MILLE SIGN; perthousand
 18357 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 18358 % U+2031 PER TEN THOUSAND SIGN
 18359 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 18360 % U+2032 PRIME; minute; \prime (MnSymbol)
 18361 \DeclareTextCommand{\textprime}{PU}{\9040\062}%* U+2032
 18362 % U+2033 DOUBLE PRIME; \second (mathabx)
 18363 \DeclareTextCommand{\textsecond}{PU}{\9040\063}%* U+2033
 18364 % U+2034 TRIPLE PRIME; \third (mathabx)
 18365 \DeclareTextCommand{\textthird}{PU}{\9040\064}%* U+2034
 18366 % U+2035 REVERSED PRIME; \backprime (AmsS)

18367 \DeclareTextCommand{\textbackprime}{PU}{\9040\065}%* U+2035
 18368 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 18369 \DeclareTextCommand{\guilingleft}{PU}{\9040\071}% U+2039
 18370 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 inglright
 18371 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 18372 % U+203B REFERENCE MARK; referencemark
 18373 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 18374 % U+203D INTERROBANG
 18375 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 18376 % U+2044 FRACTION SLASH; fraction
 18377 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 18378 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 18379 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 18380 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 18381 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 18382 % U+2052 COMMERCIAL MINUS SIGN
 18383 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052
 18384 % U+2056 THREE DOT PUNCTUATION; \lefttherefore (MnSymbol)
 18385 \DeclareTextCommand{\textlefttherefore}{PU}{\9040\126}%* U+2056
 18386 % U+2057 QUADRUPLE PRIME; \fourth (mathabx)
 18387 \DeclareTextCommand{\textfourth}{PU}{\9040\127}%* U+2057
 18388 % U+2058 FOUR DOT PUNCTUATION; \diamonddots (MnSymbol)
 18389 \DeclareTextCommand{\textdiamonddots}{PU}{\9040\130}%* U+2058

51.2.17 Superscripts and Subscripts: U+2070 to U+209F

18390 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 18391 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}%* U+2070
 18392 % U+2071 SUPERSCRIPT LATIN SMALL LETTER I
 18393 \DeclareTextCommand{\textisuperior}{PU}{\9040\161}%* U+2071
 18394 % U+2074 SUPERSCRIPT FOUR; foursuperior
 18395 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}%* U+2074
 18396 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 18397 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}%* U+2075
 18398 % U+2076 SUPERSCRIPT SIX; sixsuperior
 18399 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}%* U+2076
 18400 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 18401 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}%* U+2077
 18402 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 18403 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}%* U+2078
 18404 % U+2079 SUPERSCRIPT NINE; ninesuperior
 18405 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}%* U+2079
 18406 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 18407 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}%* U+207A
 18408 % U+207B SUPERSCRIPT MINUS
 18409 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}%* U+207B
 18410 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 18411 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}%* U+207C
 18412 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 18413 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}%* U+207D
 18414 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 18415 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}%* U+207E
 18416 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 18417 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}%* U+207F
 18418 % U+2080 SUBSCRIPT ZERO; zeroinferior
 18419 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}%* U+2080

18420 % U+2081 SUBSCRIPT ONE; oneinferior
 18421 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}%* U+2081
 18422 % U+2082 SUBSCRIPT TWO; twoinferior
 18423 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}%* U+2082
 18424 % U+2083 SUBSCRIPT THREE; threeinferior
 18425 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}%* U+2083
 18426 % U+2084 SUBSCRIPT FOUR; fourinferior
 18427 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}%* U+2084
 18428 % U+2085 SUBSCRIPT FIVE; fiveinferior
 18429 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}%* U+2085
 18430 % U+2086 SUBSCRIPT SIX; sixinferior
 18431 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}%* U+2086
 18432 % U+2087 SUBSCRIPT SEVEN; seveninferior
 18433 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}%* U+2087
 18434 % U+2088 SUBSCRIPT EIGHT; eightinferior
 18435 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}%* U+2088
 18436 % U+2089 SUBSCRIPT NINE; nineinferior
 18437 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}%* U+2089
 18438 % U+208A SUBSCRIPT PLUS SIGN
 18439 \DeclareTextCommand{\textplusinferior}{PU}{\9040\212}%* U+208A
 18440 % U+208B SUBSCRIPT MINUS
 18441 \DeclareTextCommand{\textminusinferior}{PU}{\9040\213}%* U+208B
 18442 % U+208C SUBSCRIPT EQUALS SIGN
 18443 \DeclareTextCommand{\textequalsinferior}{PU}{\9040\214}%* U+208C
 18444 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 18445 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}%* U+208D
 18446 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 18447 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}%* U+208E
 18448 % U+2090 LATIN SUBSCRIPT SMALL LETTER A
 18449 \DeclareTextCommand{\textainferior}{PU}{\9040\220}%* U+2090
 18450 % U+2091 LATIN SUBSCRIPT SMALL LETTER E
 18451 \DeclareTextCommand{\texteinferior}{PU}{\9040\221}%* U+2091
 18452 % U+2092 LATIN SUBSCRIPT SMALL LETTER O
 18453 \DeclareTextCommand{\textoinferior}{PU}{\9040\222}%* U+2092
 18454 % U+2093 LATIN SUBSCRIPT SMALL LETTER X
 18455 \DeclareTextCommand{\textxinferior}{PU}{\9040\223}%* U+2093
 18456 % U+2094 LATIN SUBSCRIPT SMALL LETTER SCHWA
 18457 \DeclareTextCommand{\textschwainferior}{PU}{\9040\224}%* U+2094
 18458 % U+2095 LATIN SUBSCRIPT SMALL LETTER H
 18459 \DeclareTextCommand{\texthinferior}{PU}{\9040\225}%* U+2095
 18460 % U+2096 LATIN SUBSCRIPT SMALL LETTER K
 18461 \DeclareTextCommand{\textkinferior}{PU}{\9040\226}%* U+2096
 18462 % U+2097 LATIN SUBSCRIPT SMALL LETTER L
 18463 \DeclareTextCommand{\textlinferior}{PU}{\9040\227}%* U+2097
 18464 % U+2098 LATIN SUBSCRIPT SMALL LETTER M
 18465 \DeclareTextCommand{\textminferior}{PU}{\9040\230}%* U+2098
 18466 % U+2099 LATIN SUBSCRIPT SMALL LETTER N
 18467 \DeclareTextCommand{\textninferior}{PU}{\9040\231}%* U+2099
 18468 % U+209A LATIN SUBSCRIPT SMALL LETTER P
 18469 \DeclareTextCommand{\textpinferior}{PU}{\9040\232}%* U+209A
 18470 % U+209B LATIN SUBSCRIPT SMALL LETTER S
 18471 \DeclareTextCommand{\textsinferior}{PU}{\9040\233}%* U+209B
 18472 % U+209C LATIN SUBSCRIPT SMALL LETTER T
 18473 \DeclareTextCommand{\texttinferior}{PU}{\9040\234}%* U+209C

51.2.18 Currency Symbols: U+20A0 to U+20CF

18474 % U+20A1 COLON SIGN; *colonmonetary, colonsign

18475 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 18476 % U+20A4 LIRA SIGN; afii08941, *lira
 18477 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 18478 % U+20A6 NAIRA SIGN
 18479 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 18480 % U+20A7 PESETA SIGN; peseta
 18481 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 18482 % U+20A9 WON SIGN; won
 18483 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 18484 % U+20AB DONG SIGN; dong
 18485 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 18486 % U+20AC EURO SIGN; *Euro, euro
 18487 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 18488 %* \texteuro -> \EurDig (marvosym)
 18489 %* \texteuro -> \EURdig (marvosym)
 18490 %* \texteuro -> \EurHv (marvosym)
 18491 %* \texteuro -> \EURhv (marvosym)
 18492 %* \texteuro -> \EurCr (marvosym)
 18493 %* \texteuro -> \EURcr (marvosym)
 18494 %* \texteuro -> \EurTm (marvosym)
 18495 %* \texteuro -> \EURtm (marvosym)
 18496 %* \texteuro -> \Eur (marvosym)
 18497 % U+20B0 GERMAN PENNY SIGN; \Deleatur (marvosym)
 18498 \DeclareTextCommand{\textDeleatur}{PU}{\9040\260}%* U+20B0
 18499 %* \textDeleatur -> \Denarius (marvosym)
 18500 % U+20B1 PESO SIGN
 18501 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 18502 % U+20B2 GUARANI SIGN
 18503 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

51.2.19 Letterlike Symbols: U+2100 to U+214F

18504 % U+2103 DEGREE CELSIUS; centigrade
 18505 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 18506 % U+210F PLANCK CONSTANT OVER TWO PI; \hslash (AmS)
 18507 \DeclareTextCommand{\texthslash}{PU}{\9041\017}%* U+210F
 18508 % U+2111 BLACK-LETTER CAPITAL I (=imaginary part); Ifraktur; \Im (LaTeX)
 18509 \DeclareTextCommand{\textIm}{PU}{\9041\021}%* U+2111
 18510 % U+2113 SCRIPT SMALL L (=ell, liter); afii61289, lsquare; \ell (LaTeX)
 18511 \DeclareTextCommand{\textell}{PU}{\9041\023}%* U+2113
 18512 % U+2116 NUMERO SIGN; *afii61352, numero
 18513 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 18514 % U+2117 SOUND RECORDING COPYRIGHT
 18515 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 18516 % U+2118 SCRIPT CAPITAL P (=Weierstrass elliptic function);
 18517 % weierstrass; \wp (LaTeX)
 18518 \DeclareTextCommand{\textwp}{PU}{\9041\030}%* U+2118
 18519 % U+211C BLACK-LETTER CAPITAL R (=real part); Rfraktur; \Re (LaTeX)
 18520 \DeclareTextCommand{\textRe}{PU}{\9041\034}%* U+211C
 18521 % U+211E PRESCRIPTION TAKE; prescription
 18522 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 18523 % U+2120 SERVICE MARK
 18524 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 18525 % U+2122 TRADE MARK SIGN; trademark
 18526 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 18527 % U+2126 OHM SIGN; Ohm, Omega
 18528 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126

18529 % U+2127 INVERTED OHM SIGN
 18530 \DeclareTextCommand{\textmho}{PU}{\9041\047}%* U+2127
 18531 %* \textmho -> \agemO (wasysym)
 18532 % U+2129 TURNED GREEK SMALL LETTER IOTA; \riota (phonetic)
 18533 \DeclareTextCommand{\textriota}{PU}{\9041\051}%* U+2129
 18534 % U+212B ANGSTROM SIGN; angstrom
 18535 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 18536 % U+212E ESTIMATED SYMBOL; estimated
 18537 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 18538 %* \textestimated -> \EstimatedSign (marvosym)
 18539 %* \textestimated -> \Ecommerce (marvosym)
 18540 % U+2132 TURNED CAPITAL F; \Finv (AmS)
 18541 \DeclareTextCommand{\textFinv}{PU}{\9041\062}%* U+2132
 18542 % U+2135 ALEF SYMBOL; aleph; \aleph (LaTeX)
 18543 \DeclareTextCommand{\textaleph}{PU}{\9041\065}%* U+2135
 18544 % U+2136 BET SYMBOL; \beth (AmS, MnSymbol)
 18545 \DeclareTextCommand{\textbeth}{PU}{\9041\066}%* U+2136
 18546 % U+2137 GIMEL SYMBOL; \gimel (AmS, MnSymbol)
 18547 \DeclareTextCommand{\textgimel}{PU}{\9041\067}%* U+2137
 18548 % U+2138 DALET SYMBOL; \daleth (AmS, MnSymbol)
 18549 \DeclareTextCommand{\textdaleth}{PU}{\9041\070}%* U+2138
 18550 % U+213B FACSIMILE SIGN; \fax (marvosym)
 18551 \DeclareTextCommand{\textfax}{PU}{\9041\073}%* U+213B
 18552 % U+2141 TURNED SANS-SERIF CAPITAL G (=game); \Game
 18553 \DeclareTextCommand{\textGame}{PU}{\9041\101}%* U+2141
 18554 % U+214B TURNED AMPERSAND; \invamp (txfonts/pxfonts)
 18555 \DeclareTextCommand{\textinvamp}{PU}{\9041\113}% U+214B
 18556 %* \textinvamp -> \bindnasrepma (stmaryrd)
 18557 %* \textinvamp -> \parr (cml)

51.2.20 Number Forms: U+2150 to U+218F

18558 % U+2150 VULGAR FRACTION ONE SEVENTH
 18559 \DeclareTextCommand{\textoneseventh}{PU}{\9041\120}% U+2150
 18560 % U+2151 VULGAR FRACTION ONE NINTH
 18561 \DeclareTextCommand{\textoneninth}{PU}{\9041\121}% U+2151
 18562 % U+2152 VULGAR FRACTION ONE TENTH
 18563 \DeclareTextCommand{\textonetenth}{PU}{\9041\122}% U+2152
 18564 % U+2153 VULGAR FRACTION ONE THIRD; onethird
 18565 \DeclareTextCommand{\textonethird}{PU}{\9041\123}% U+2153
 18566 % U+2154 VULGAR FRACTION TWO THIRDS; twothirds
 18567 \DeclareTextCommand{\texttwothirds}{PU}{\9041\124}% U+2154
 18568 % U+2155 VULGAR FRACTION ONE FIFTH
 18569 \DeclareTextCommand{\textonefifth}{PU}{\9041\125}% U+2155
 18570 % U+2156 VULGAR FRACTION TWO FIFTHS
 18571 \DeclareTextCommand{\texttwofifths}{PU}{\9041\126}% U+2156
 18572 % U+2157 VULGAR FRACTION THREE FIFTHS
 18573 \DeclareTextCommand{\textthreefifths}{PU}{\9041\127}% U+2157
 18574 % U+2158 VULGAR FRACTION FOUR FIFTHS
 18575 \DeclareTextCommand{\textfourfifths}{PU}{\9041\130}% U+2158
 18576 % U+2159 VULGAR FRACTION ONE SIXTH
 18577 \DeclareTextCommand{\textonesixth}{PU}{\9041\131}% U+2159
 18578 % U+215A VULGAR FRACTION FIVE SIXTHS
 18579 \DeclareTextCommand{\textfivesixths}{PU}{\9041\132}% U+215A
 18580 % U+215B VULGAR FRACTION ONE EIGHTH; oneeighth
 18581 \DeclareTextCommand{\textoneeighth}{PU}{\9041\133}% U+215B
 18582 % U+215C VULGAR FRACTION THREE EIGHTHS; threeeighths
 18583 \DeclareTextCommand{\textthreeeighths}{PU}{\9041\134}% U+215C

18584 % U+215D VULGAR FRACTION FIVE EIGHTHS; fiveeighths
18585 \DeclareTextCommand{\textfiveeighths}{PU}{\9041\135}% U+215D
18586 % U+215E VULGAR FRACTION SEVEN EIGHTHS; seveneighths
18587 \DeclareTextCommand{\textseveneighths}{PU}{\9041\136}% U+215E
18588 % U+2184 LATIN SMALL LETTER REVERSED C
18589 \DeclareTextCommand{\textrevc}{PU}{\9041\204}% U+2184
18590 % U+2189 VULGAR FRACTION ZERO THIRDS
18591 \DeclareTextCommand{\textzer thirds}{PU}{\9041\211}% U+2189

51.2.21 Arrows: U+2190 to U+21FF

18592 % U+2190 LEFTWARDS ARROW; arrowleft
18593 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}%* U+2190
18594 % U+2191 UPWARDS ARROW; arrowup
18595 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}%* U+2191
18596 % U+2192 RIGHTWARDS ARROW; arrowright
18597 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}%* U+2192
18598 %* \textrightarrow -> \MVRightArrow (marvosym)
18599 %* \textrightarrow -> \MVRightarrow (marvosym)
18600 % U+2193 DOWNWARDS ARROW; arrowdown
18601 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}%* U+2193
18602 %* \textdownarrow -> \MVArrowDown (marvosym)
18603 %* \textdownarrow -> \Force (marvosym)
18604 % U+2194 LEFT RIGHT ARROW; arrowboth; \leftrightharrow (LaTeX)
18605 \DeclareTextCommand{\textleftrightharrow}{PU}{\9041\224}%* U+2194
18606 % U+2195 UP DOWN ARROW; arrowupdn; \updownarrow (LaTeX)
18607 \DeclareTextCommand{\textupdownarrow}{PU}{\9041\225}%* U+2195
18608 % U+2196 NORTH WEST ARROW; arrowupleft; \nwarrow (LaTeX)
18609 \DeclareTextCommand{\textnwarrow}{PU}{\9041\226}%* U+2196
18610 % U+2197 NORTH EAST ARROW; arrowupright; \nearrow (LaTeX)
18611 \DeclareTextCommand{\textnearrow}{PU}{\9041\227}%* U+2197
18612 %* \textnearrow -> \textglobrise (tipa)
18613 % U+2198 SOUTH EAST ARROW; arrowdownright; \searrow (LaTeX)
18614 \DeclareTextCommand{\textsearrow}{PU}{\9041\230}%* U+2198
18615 %* \textsearrow -> \textglobfall (tipa)
18616 % U+2199 SOUTH WEST ARROW; arrowdownleft; \swarrow (LaTeX)
18617 \DeclareTextCommand{\textswarrow}{PU}{\9041\231}%* U+2199
18618 % U+219A LEFTWARDS ARROW WITH STROKE; \nleftarrow (AmS)
18619 \DeclareTextCommand{\textnleftarrow}{PU}{\9041\232}%* U+219A
18620 % U+219B RIGHTWARDS ARROW WITH STROKE; \nrightarrow (AmS)
18621 \DeclareTextCommand{\textnrightarrow}{PU}{\9041\233}%* U+219B
18622 % U+219E LEFTWARDS TWO HEADED ARROW; \twoheadleftarrow (AmS)
18623 \DeclareTextCommand{\texttwoheadleftarrow}{PU}{\9041\236}%* U+219E
18624 % \ntwoheadleftarrow (txfonts/pxfonts)
18625 \DeclareTextCommand{\textntwoheadleftarrow}{PU}{\9041\236\83\070}%* U+219E U+0338
18626 % U+219F UPWARDS TWO HEADED ARROW; \twoheaduparrow (MnSymbol)
18627 \DeclareTextCommand{\texttwoheaduparrow}{PU}{\9041\237}%* U+219F
18628 % U+21A0 RIGHTWARDS TWO HEADED ARROW;
18629 % \twoheadrightarrow (AmS)
18630 \DeclareTextCommand{\texttwoheadrightarrow}{PU}{\9041\240}%* U+21A0
18631 % \ntwoheadrightarrow (txfonts/pxfonts)
18632 \DeclareTextCommand{\textntwoheadrightarrow}{PU}{\9041\240\83\070}%* U+21A0 U+0338
18633 % U+21A1 DOWNWARDS TWO HEADED ARROW; \twoheaddownarrow (Mn-
Symbol)
18634 \DeclareTextCommand{\texttwoheaddownarrow}{PU}{\9041\241}%* U+21A1
18635 % U+21A2 LEFTWARDS ARROW WITH TAIL; \leftarrowtail (AmS)
18636 \DeclareTextCommand{\textleftarrowtail}{PU}{\9041\242}%* U+21A2
18637 % U+21A3 RIGHTWARDS ARROW WITH TAIL; \rightarrowtail (AmS)

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18638 \DeclareTextCommand{\textrightarrowtail}{PU}{\9041\243}%* U+21A3
18639 % U+21A6 RIGHTWARDS ARROW FROM BAR; \mapsto (LaTeX)
18640 \DeclareTextCommand{\textmapsto}{PU}{\9041\246}%* U+21A6
18641 % U+21A9 LEFTWARDS ARROW WITH HOOK; \hookleftarrow (LaTeX)
18642 \DeclareTextCommand{\texthookleftarrow}{PU}{\9041\251}%* U+21A9
18643 % U+21AA RIGHTWARDS ARROW WITH HOOK; \hookrightarrow (LaTeX)
18644 \DeclareTextCommand{\texthookrightarrow}{PU}{\9041\252}%* U+21AA
18645 % U+21AB LEFTWARDS ARROW WITH LOOP; \looparrowleft (AmS)
18646 \DeclareTextCommand{\textlooparrowleft}{PU}{\9041\253}%* U+21AB
18647 % U+21AC RIGHTWARDS ARROW WITH LOOP; \looparrowright (AmS)
18648 \DeclareTextCommand{\textlooparrowright}{PU}{\9041\254}%* U+21AC
18649 % U+21AE LEFT RIGHT ARROW WITH STROKE; \leftrightharrow (AmS)
18650 \DeclareTextCommand{\textnlefrightharrow}{PU}{\9041\256}%* U+21AE
18651 % U+21AF DOWNWARDS ZIGZAG ARROW; \lightning (stmaryrd)
18652 \DeclareTextCommand{\textlightning}{PU}{\9041\257}%* U+21AF
18653 %* \textlightning -> \Lightning (marvosym)
18654 % U+21B5 DOWNWARDS ARROW WITH CORNER LEFTWARDS;
18655 % \dlsh (mathabx)
18656 \DeclareTextCommand{\textdlsh}{PU}{\9041\265}%* U+21B5
18657 % U+21B6 ANTICLOCKWISE TOP SEMICIRCLE ARROW;
18658 % \curvearrowleft (AmS)
18659 \DeclareTextCommand{\textcurvearrowleft}{PU}{\9041\266}%* U+21B6
18660 % U+21B7 CLOCKWISE TOP SEMICIRCLE ARROW; \curvearrowright (AmS)
18661 \DeclareTextCommand{\textcurvearrowright}{PU}{\9041\267}%* U+21B7
18662 % U+21BC LEFTWARDS HARPOON WITH BARB UPWARDS; harpoonleft-
    barbup;
18663 % \leftharpoonup (LaTeX)
18664 \DeclareTextCommand{\textleftharpoonup}{PU}{\9041\274}%* U+21BC
18665 % U+21BD LEFTWARDS HARPOON WITH BARB DOWNWARDS;
18666 % \leftharpoondown (LaTeX)
18667 \DeclareTextCommand{\textleftharpoondown}{PU}{\9041\275}%* U+21BD
18668 % U+21BE UPWARDS HARPOON WITH BARB RIGHTWARDS;
18669 % \upharpoonright (AmS)
18670 \DeclareTextCommand{\textupharpoonright}{PU}{\9041\276}%* U+21BE
18671 % U+21BF UPWARDS HARPOON WITH BARB LEFTWARDS;
18672 % \upharpoonleft (AmS)
18673 \DeclareTextCommand{\textupharpoonleft}{PU}{\9041\277}%* U+21BF
18674 % U+21C0 RIGHTWARDS HARPOON WITH BARB UPWARDS; harpoonright-
    barbup
18675 % \rightharpoonup (LaTeX)
18676 \DeclareTextCommand{\textrightharpoonup}{PU}{\9041\300}%* U+21C0
18677 % U+21C1 RIGHTWARDS HARPOON WITH BARB DOWNWARDS;
18678 % \rightharpoondown (LaTeX)
18679 \DeclareTextCommand{\textrightharpoondown}{PU}{\9041\301}%* U+21C1
18680 % U+21C2 DOWNWARDS HARPOON WITH BARB RIGHTWARDS;
18681 % \downharpoonright (AmS)
18682 \DeclareTextCommand{\textdownharpoonright}{PU}{\9041\302}%* U+21C2
18683 % U+21C3 DOWNWARDS HARPOON WITH BARB LEFTWARDS;
18684 % \downharpoonleft (AmS)
18685 \DeclareTextCommand{\textdownharpoonleft}{PU}{\9041\303}%* U+21C3
18686 % U+21C4 RIGHTWARDS ARROW OVER LEFTWARDS ARROW;
18687 % \rightarrowoverleftarrow; \rightleftarrows (MnSymbol)
18688 \DeclareTextCommand{\textrightleftarrows}{PU}{\9041\304}%* U+21C4
18689 % U+21C5 UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW; ar-
    rowupleftofdown;
18690 % \updownarrows (MnSymbol)
18691 \DeclareTextCommand{\textupdownarrows}{PU}{\9041\305}%* U+21C5

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18692 % U+21C6 LEFTWARDS ARROW OVER RIGHTWARDS ARROW; arrowleft-
      overright;
18693 % \leftrightharrows (AmS)
18694 \DeclareTextCommand{\textleftrightharrows}{PU}{\9041\306}%* U+21C6
18695 % U+21C7 LEFTWARDS PAIRED ARROWS; \leftleftarrows (AmS)
18696 \DeclareTextCommand{\textleftleftarrows}{PU}{\9041\307}%* U+21C7
18697 % U+21C8 UPWARDS PAIRED ARROWS; \upuparrows (AmS)
18698 \DeclareTextCommand{\textupuparrows}{PU}{\9041\310}%* U+21C8
18699 % U+21C9 RIGHTWARDS PAIRED ARROWS; \rightrightarrows (AmS)
18700 \DeclareTextCommand{\textrightarrows}{PU}{\9041\311}%* U+21C9
18701 % U+21CA DOWNWARDS PAIRED ARROWS; \downdownarrows (AmS)
18702 \DeclareTextCommand{\textdowndownarrows}{PU}{\9041\312}%* U+21CA
18703 % U+21CB LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON;
18704 % \leftrightharpoons (AmS);
18705 \DeclareTextCommand{\textleftrightharpoons}{PU}{\9041\313}%* U+21CB
18706 % U+21CC RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON;
18707 % \rightleftharpoons (LaTeX, AmS)
18708 \DeclareTextCommand{\textrightleftharpoons}{PU}{\9041\314}%* U+21CC
18709 % U+21CD LEFTWARDS DOUBLE ARROW WITH STROKE; arrowleftd-
      blstroke;
18710 % \nLeftarrow (AmS)
18711 \DeclareTextCommand{\textnLeftarrow}{PU}{\9041\315}%* U+21CD
18712 % U+21CE LEFT RIGHT DOUBLE ARROW WITH STROKE; \nLeftrightar-
      row (AmS)
18713 \DeclareTextCommand{\textnLeftrightarrow}{PU}{\9041\316}%* U+21CE
18714 % U+21CF RIGHTWARDS DOUBLE ARROW WITH STROKE; arrowrightd-
      blstroke;
18715 % \nRightarrow (AmS)
18716 \DeclareTextCommand{\textnRightarrow}{PU}{\9041\317}%* U+21CF
18717 % U+21D0 LEFTWARDS DOUBLE ARROW; arrowdblleft, arrowleftdbl;
18718 % \Leftarrow (LaTeX)
18719 \DeclareTextCommand{\textLeftarrow}{PU}{\9041\320}%* U+21D0
18720 % U+21D1 UPWARDS DOUBLE ARROW; arrowdblup; \Uparrow (LaTeX)
18721 \DeclareTextCommand{\textUparrow}{PU}{\9041\321}%* U+21D1
18722 % U+21D2 RIGHTWARDS DOUBLE ARROW; arrowdblright, dblarrowright;
18723 % \Rightarrow (LaTeX)
18724 \DeclareTextCommand{\textRightarrow}{PU}{\9041\322}%* U+21D2
18725 %* \textRightarrow -> \Conclusion (marvosym)
18726 % U+21D3 DOWNWARDS DOUBLE ARROW; arrowdbldown; \Downarrow (La-
      TeX)
18727 \DeclareTextCommand{\textDownarrow}{PU}{\9041\323}%* U+21D3
18728 % U+21D4 LEFT RIGHT DOUBLE ARROW; arrowdblboth;
18729 % \Leftrightarrow (LaTeX)
18730 \DeclareTextCommand{\textLeftrightarrow}{PU}{\9041\324}%* U+21D4
18731 %* \textLeftrightarrow -> \Equivalence (marvosym)
18732 % U+21D5 UP DOWN DOUBLE ARROW; \Updownarrow (LaTeX)
18733 \DeclareTextCommand{\textUpdownarrow}{PU}{\9041\325}%* U+21D5
18734 % U+21D6 NORTH WEST DOUBLE ARROW; \Nwarrow (MnSymbol)
18735 \DeclareTextCommand{\textNwarrow}{PU}{\9041\326}%* U+21D6
18736 % U+21D7 NORTH EAST DOUBLE ARROW; \Nearrow (MnSymbol)
18737 \DeclareTextCommand{\textNearrow}{PU}{\9041\327}%* U+21D7
18738 % U+21D8 SOUTH EAST DOUBLE ARROW; \Searrow (MnSymbol)
18739 \DeclareTextCommand{\textSearrow}{PU}{\9041\330}%* U+21D8
18740 % U+21D9 SOUTH WEST DOUBLE ARROW; \Svarrow (MnSymbol)
18741 \DeclareTextCommand{\textSvarrow}{PU}{\9041\331}%* U+21D9
18742 % U+21DA LEFTWARDS TRIPLE ARROW; \Lleftarrow (AmS)
18743 \DeclareTextCommand{\textLleftarrow}{PU}{\9041\332}%* U+21DA

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18744 % U+21DB RIGHTWARDS TRIPLE ARROW; \Rrightarrow (MnSymbol)
18745 \DeclareTextCommand{\textRrightarrow}{PU}{\9041\333}%* U+21DB
18746 % U+21DC LEFTWARDS SQUIGGLE ARROW; \leftsquigarrow (mathabx)
18747 \DeclareTextCommand{\textleftsquigarrow}{PU}{\9041\334}%* U+21DC
18748 % U+21DD RIGHTWARDS SQUIGGLE ARROW; \rightsquigarrow (mathabx)
18749 \DeclareTextCommand{\textright squigarrow}{PU}{\9041\335}%* U+21DD
18750 % U+21E0 LEFTWARDS DASHED ARROW; arrowdashleft;
18751 % \dashleftarrow (AmS)
18752 \DeclareTextCommand{\textdashleftarrow}{PU}{\9041\340}%* U+21E0
18753 %* \textdashleftarrow -> \dashedleftarrow (MnSymbol)
18754 % U+21E1 UPWARDS DASHED ARROW; arrowdashup; \dasheduparrow (Mn-
Symbol)
18755 \DeclareTextCommand{\textdasheduparrow}{PU}{\9041\341}%* U+21E1
18756 % U+21E2 RIGHTWARDS DASHED ARROW; arrowdashright; \dashrightarrow
(AmS)
18757 \DeclareTextCommand{\textdashrightarrow}{PU}{\9041\342}%* U+21E2
18758 %* \textdashrightarrow -> \dashedrightarrow (MnSymbol)
18759 % U+21E3 DOWNWARDS DASHED ARROW; arrowdashdown; \dasheddownarrow
(MnSymbol)
18760 \DeclareTextCommand{\textdasheddownarrow}{PU}{\9041\343}%* U+21E3
18761 % U+21E8 RIGHTWARDS WHITE ARROW; \pointer (wasysym)
18762 \DeclareTextCommand{\textpointer}{PU}{\9041\350}%* U+21E8
18763 % U+21F5 DOWNWARDS ARROW LEFTWARDS OF UPWARDS ARROW;
18764 % \downuparrows (MnSymbol)
18765 \DeclareTextCommand{\textdownuparrows}{PU}{\9041\365}%* U+21F5
18766 % U+21FD LEFTWARDS OPEN-HEADED ARROW; \leftarrowtriangle (stmaryrd)
18767 \DeclareTextCommand{\textleftarrowtriangle}{PU}{\9041\375}%* U+21FD
18768 % U+21FE RIGHTWARDS OPEN-HEADED ARROW; \rightarrowtriangle (stmaryrd)
18769 \DeclareTextCommand{\textrightarrowtriangle}{PU}{\9041\376}%* U+21FE
18770 % U+21FF LEFT RIGHT OPEN-HEADED ARROW; \leftrightarrowtriangle
(stmaryrd)
18771 \DeclareTextCommand{\textleftrightarrowtriangle}{PU}{\9041\377}%* U+21FF

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51.2.22 Mathematical Operators: U+2200 to U+22FF

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18772 % U+2200 FOR ALL; forall; \forall (LaTeX)
18773 \DeclareTextCommand{\textforall}{PU}{\9042\000}%* U+2200
18774 % U+2201 COMPLEMENT; \complement (AmS)
18775 \DeclareTextCommand{\textcomplement}{PU}{\9042\001}%* U+2201
18776 % U+2202 PARTIAL DIFFERENTIAL; partialdiff; \partial (LaTeX)
18777 \DeclareTextCommand{\textpartial}{PU}{\9042\002}%* U+2202
18778 % U+2203 THERE EXISTS; existential; \exists (LaTeX)
18779 \DeclareTextCommand{\textexists}{PU}{\9042\003}%* U+2203
18780 % U+2204 THERE DOES NOT EXIST; \nexists (AmS)
18781 \DeclareTextCommand{\textnexists}{PU}{\9042\004}%* U+2204
18782 % U+2205 EMPTY SET; emptyset; \emptyset (LaTeX), \varnothing (AmS)
18783 \DeclareTextCommand{\textemptyset}{PU}{\9042\005}%* U+2205
18784 %* \textemptyset -> \varnothing (AmS)
18785 % U+2206 INCREMENT; increment, Delta; \triangle (LaTeX)
18786 \DeclareTextCommand{\texttriangle}{PU}{\9042\006}%* U+2206
18787 % U+2207 NABLA; nabla, gradient; \nabla (LaTeX)
18788 \DeclareTextCommand{\textnabla}{PU}{\9042\007}%* U+2207
18789 % U+2208 ELEMENT OF; element; \in (LaTeX)
18790 \DeclareTextCommand{\textin}{PU}{\9042\010}%* U+2208
18791 % U+2209 NOT AN ELEMENT OF; notelement, notelementof; \notin (LaTeX)
18792 \DeclareTextCommand{\textnotin}{PU}{\9042\011}%* U+2209
18793 % U+220A SMALL ELEMENT OF; \smallin (mathdesign)
18794 \DeclareTextCommand{\textsmallin}{PU}{\9042\012}%* U+220A

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18795 % U+220B CONTAINS AS MEMBER; suchthat; \ni (LaTeX)
18796 \DeclareTextCommand{\textni}{PU}{\9042\013}%* U+220B
18797 %* \textni -> \owns (mathabx)
18798 % U+220C DOES NOT CONTAIN AS MEMBER; \notowner (mathabx)
18799 \DeclareTextCommand{\textnotowner}{PU}{\9042\014}%* U+220C
18800 %* \textnotowner -> \notni (txfonts/pxfonts)
18801 % U+220D SMALL CONTAINS AS MEMBER; \smallowns (mathdesign)
18802 \DeclareTextCommand{\textsmallowns}{PU}{\9042\015}%* U+220D
18803 % U+220F N-ARY PRODUCT; \prod (LaTeX)
18804 \DeclareTextCommand{\textprod}{PU}{\9042\017}%* U+220F
18805 % U+2210 N-ARY COPRODUCT; \amalg (LaTeX)
18806 \DeclareTextCommand{\textamalg}{PU}{\9042\020}%* U+2210
18807 % U+2211 N-ARY SUMMATION; summation; \sum (LaTeX)
18808 \DeclareTextCommand{\textsum}{PU}{\9042\021}%* U+2211
18809 % U+2212 MINUS SIGN; minus
18810 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
18811 % U+2213 MINUS-OR-PLUS SIGN; minusplus; \mp (LaTeX)
18812 \DeclareTextCommand{\textmp}{PU}{\9042\023}%* U+2213
18813 % U+2214 DOT PLUS; \dotplus (AmS)
18814 \DeclareTextCommand{\textdotplus}{PU}{\9042\024}%* U+2214
18815 % U+2215 DIVISION SLASH; divisionslash; \Divides (marvosym)
18816 \DeclareTextCommand{\textDivides}{PU}{\9042\025}%* U+2215
18817 % \DividesNot (marvosym)
18818 \DeclareTextCommand{\textDividesNot}{PU}{\9042\025\9040\322}%* U+2215 U+20D2
18819 % U+2216 SET MINUS; \setminus (LaTeX)
18820 \DeclareTextCommand{\textsetminus}{PU}{\9042\026}%* U+2216
18821 % U+2217 ASTERISK OPERATOR; asteriskmath; \ast (LaTeX)
18822 \DeclareTextCommand{\textast}{PU}{\9042\027}%* U+2217
18823 % U+2218 RING OPERATOR; \circ (LaTeX)
18824 \DeclareTextCommand{\textcirc}{PU}{\9042\030}%* U+2218
18825 % U+2219 BULLET OPERATOR; bulletoperator; \bullet (LaTeX)
18826 \DeclareTextCommand{\textbulletoperator}{PU}{\9042\031}% U+2219
18827 % U+221A SQUARE ROOT; radical
18828 \DeclareTextCommand{\textsqrt}{PU}{\9042\032}%* U+221A
18829 % U+221D PROPORTIONAL TO; proportional; \propto (LaTeX)
18830 \DeclareTextCommand{\textpropto}{PU}{\9042\035}%* U+221D
18831 %* \textpropto -> \varprop (wasysym)
18832 % U+221E INFINITY; infinity; \infty (LaTeX)
18833 \DeclareTextCommand{\textinfty}{PU}{\9042\036}%* U+221E
18834 % U+2220 ANGLE; angle; \angle (LaTeX)
18835 \DeclareTextCommand{\textangle}{PU}{\9042\040}%* U+2220
18836 % U+2221 MEASURED ANGLE; \measuredangle (mathabx, MnSymbol)
18837 \DeclareTextCommand{\textmeasuredangle}{PU}{\9042\041}%* U+2221
18838 % U+2222 SPHERICAL ANGLE; \sphericalangle (AmS)
18839 \DeclareTextCommand{\textsphericalangle}{PU}{\9042\042}%* U+2222
18840 %* \textsphericalangle -> \varangle (wasysym)
18841 %* \textsphericalangle -> \Anglesign (marvosym)
18842 %* \textsphericalangle -> \AngleSign (marvosym)
18843 % U+2223 DIVIDES; divides; \mid (LaTeX)
18844 \DeclareTextCommand{\textmid}{PU}{\9042\043}%* U+2223
18845 % U+2224 DOES NOT DIVIDE; \nmid (AmS)
18846 \DeclareTextCommand{\textnmid}{PU}{\9042\044}%* U+2224
18847 %* \textnmid -> \notdivides (mathabx)
18848 % U+2225 PARALLEL TO; parallel; \parallel (LaTeX)
18849 \DeclareTextCommand{\textparallel}{PU}{\9042\045}%* U+2225
18850 % U+2226 NOT PARALLEL TO; notparallel; \nparallel (AmS)
18851 \DeclareTextCommand{\textnparallel}{PU}{\9042\046}%* U+2226

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18852 %* \textnparallel -> nUpdownline (MnSymbol)
18853 % U+2227 LOGICAL AND; logicaland; \wedge (LaTeX)
18854 \DeclareTextCommand{\textwedge}{PU}{\9042\047}%* U+2227
18855 % \owedge (stmaryrd)
18856 \DeclareTextCommand{\textowedge}{PU}{\9042\047\9040\335}%* U+2227 U+20DD
18857 %* \textowedge -> \varowedge (stmaryrd)
18858 % U+2228 LOGICAL OR; logicalor; \vee (LaTeX)
18859 \DeclareTextCommand{\textvee}{PU}{\9042\050}%* U+2228
18860 % \ovee (stmaryrd)
18861 \DeclareTextCommand{\textovee}{PU}{\9042\050\9040\335}%* U+2228 U+20DD
18862 %* \textovee -> \varovee (stmaryrd)
18863 % U+2229 INTERSECTION; intersection; \cap (LaTeX)
18864 \DeclareTextCommand{\textcap}{PU}{\9042\051}%* U+2229
18865 % U+222A UNION; union; \cup (LaTeX)
18866 \DeclareTextCommand{\textcup}{PU}{\9042\052}%* U+222A
18867 % U+222B INTEGRAL; integral; \int (LaTeX)
18868 \DeclareTextCommand{\textint}{PU}{\9042\053}%* U+222B
18869 %* \textint -> \varint (wasysym)
18870 % U+222C DOUBLE INTEGRAL; dblintegral; \iint (AmS)
18871 \DeclareTextCommand{\textiint}{PU}{\9042\054}%* U+222C
18872 % U+222D TRIPLE INTEGRAL; \iiint (AmS)
18873 \DeclareTextCommand{\textiiint}{PU}{\9042\055}%* U+222D
18874 % U+222E CONTOUR INTEGRAL; contourintegral; \oint (LaTeX)
18875 \DeclareTextCommand{\textoint}{PU}{\9042\056}%* U+222E
18876 %* \textoint -> \varoint (wasysym)
18877 % U+222F SURFACE INTEGRAL; \oiint (wasysym)
18878 \DeclareTextCommand{\textoiint}{PU}{\9042\057}%* U+222F
18879 % U+2232 CLOCKWISE CONTOUR INTEGRAL;
18880 % \ointclockwise (txfonts/pxfonts)
18881 \DeclareTextCommand{\textointclockwise}{PU}{\9042\062}%* U+2232
18882 % U+2233 ANTICLOCKWISE CONTOUR INTEGRAL; \ointctrclockwise (tx-
    fonts/pxfonts)
18883 \DeclareTextCommand{\textointctrclockwise}{PU}{\9042\063}%* U+2233
18884 % U+2234 THEREFORE; therefore; \therefore (AmS)
18885 \DeclareTextCommand{\texttherefore}{PU}{\9042\064}%* U+2234
18886 %* \texttherefore -> uptherefore (MnSymbol)
18887 % U+2235 BECAUSE; because; \because (AmS)
18888 \DeclareTextCommand{\textbecause}{PU}{\9042\065}%* U+2235
18889 %* \textbecause -> \downtherefore (MnSymbol)
18890 % U+2236 RATIO; \vdotdot (MnSymbol)
18891 \DeclareTextCommand{\textvdotdot}{PU}{\9042\066}%* U+2236
18892 % U+2237 PROPORTION; \squaredots (MnSymbol)
18893 \DeclareTextCommand{\textsquaredots}{PU}{\9042\067}%* U+2237
18894 % U+2238 DOT MINUS; \dotminus (MnSymbol)
18895 \DeclareTextCommand{\textdotminus}{PU}{\9042\070}%* U+2238
18896 %* \textdotminus -> \textdotdiv (mathabx)
18897 % U+2239 EXCESS; \eqcolon (txfonts/pxfonts)
18898 \DeclareTextCommand{\texteqcolon}{PU}{\9042\071}%* U+2239
18899 % U+223C TILDE OPERATOR; similar; \sim (LaTeX)
18900 \DeclareTextCommand{\textsim}{PU}{\9042\074}%* U+223C
18901 %* \textsim -> \AC (wasysym)
18902 % U+223D REVERSED TILDE; reverseditilde; \backsim (AmS)
18903 \DeclareTextCommand{\textbacksim}{PU}{\9042\075}%* U+223D
18904 % \nbacksim (txfonts/pxfonts)
18905 \DeclareTextCommand{\textnbacksim}{PU}{\9042\075\83\070}%* U+223D U+0338
18906 % U+2240 WREATH PRODUCT; \wr (LaTeX)
18907 \DeclareTextCommand{\textwr}{PU}{\9042\100}%* U+2240

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18908 %* \textwr -> \wreath (MnSymbol)
18909 % U+2241 NOT TILDE; \nsim (AmS)
18910 \DeclareTextCommand{\textnsim}{PU}{\9042\101}%* U+2241
18911 % U+2242 MINUS TILDE; \eqsim (MnSymbol)
18912 \DeclareTextCommand{\texteqsim}{PU}{\9042\102}%* U+2242
18913 % \neqsim (MnSymbol)
18914 \DeclareTextCommand{\textneqsim}{PU}{\9042\102\83\070}%* U+2242 U+0338
18915 % U+2243 ASYMPTOTICALLY EQUAL TO; asymptoticallyequal; \simeq (La-
TeX)
18916 \DeclareTextCommand{\textsimeq}{PU}{\9042\103}%* U+2243
18917 % U+2244 NOT ASYMPTOTICALLY EQUAL TO; \nsimeq (txfonts/pxfonts)
18918 \DeclareTextCommand{\textnsimeq}{PU}{\9042\104}%* U+2244
18919 % U+2245 APPROXIMATELY EQUAL TO; approximatelyequal; \cong (LaTeX)
18920 \DeclareTextCommand{\textcong}{PU}{\9042\105}%* U+2245
18921 % U+2247 NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO;
18922 % \ncong (AmS)
18923 \DeclareTextCommand{\textncong}{PU}{\9042\107}%* U+2247
18924 % U+2248 ALMOST EQUAL TO; approxequal; \approx (LaTeX)
18925 \DeclareTextCommand{\textapprox}{PU}{\9042\110}%* U+2248
18926 % U+2249 NOT ALMOST EQUAL TO; \napprox (txfonts/pxfonts)
18927 \DeclareTextCommand{\textnapprox}{PU}{\9042\111}%* U+2249
18928 %* \textnapprox -> \nthickapprox (txfonts/pxfonts)
18929 % U+224A ALMOST EQUAL OR EQUAL TO; \approxeq (AmS)
18930 \DeclareTextCommand{\textapproxeq}{PU}{\9042\112}%* U+224A
18931 % \napproxeq (txfonts/pxfonts)
18932 \DeclareTextCommand{\textnapproxeq}{PU}{\9042\112\83\070}%* U+224A U+0338
18933 % U+224B TRIPLE TILDE; \triplesim (MnSymbol)
18934 \DeclareTextCommand{\texttriplesim}{PU}{\9042\113}%* U+224B
18935 %* \texttriplesim -> \VHF (wasysym)
18936 % \ntriplesim (MnSymbol)
18937 \DeclareTextCommand{\textntriplesim}{PU}{\9042\113\83\070}%* U+224B U+0338
18938 % U+224C ALL EQUAL TO; allequal; \backcong (MnSymbol)
18939 \DeclareTextCommand{\textbackcong}{PU}{\9042\114}%* U+224C
18940 % \nbackcong (MnSymbol)
18941 \DeclareTextCommand{\textnbackcong}{PU}{\9042\114\83\070}%* U+224C U+0338
18942 % U+224D EQUIVALENT TO; \asymp (LaTeX)
18943 \DeclareTextCommand{\textasympt}{PU}{\9042\115}%* U+224D
18944 % \nasympt (txfonts/pxfonts)
18945 \DeclareTextCommand{\textnasympt}{PU}{\9042\115\83\070}%* U+224D U+0338
18946 %* \textnasympt -> \notasympt (mathabx)
18947 % U+224E GEOMETRICALLY EQUIVALENT TO; \Bumpeq (AmS)
18948 \DeclareTextCommand{\textBumpeq}{PU}{\9042\116}%* U+224E
18949 % \nBumpeq (txfonts/pxfonts)
18950 \DeclareTextCommand{\textnBumpeq}{PU}{\9042\116\83\070}%* U+224E U+0338
18951 % U+224F DIFFERENCE BETWEEN; \bumpeq (AmS)
18952 \DeclareTextCommand{\textbumpeq}{PU}{\9042\117}%* U+224F
18953 % \nbumpeq (txfonts/pxfonts)
18954 \DeclareTextCommand{\textnbumpeq}{PU}{\9042\117\83\070}%* U+224F U+0338
18955 % U+2250 APPROACHES THE LIMIT; approaches; \doteq (LaTeX)
18956 \DeclareTextCommand{\textdoteq}{PU}{\9042\120}%* U+2250
18957 % \ndoteq (MnSymbol)
18958 \DeclareTextCommand{\textndoteq}{PU}{\9042\120\83\070}%* U+2250 U+0338
18959 % U+2251 GEOMETRICALLY EQUAL TO; geometricallyequal;
18960 % \doteqdot (AmS)
18961 \DeclareTextCommand{\textdoteqdot}{PU}{\9042\121}%* U+2251
18962 %* \textdoteqdot -> \Doteq (MnSymbol)
18963 % \nDoteq (MnSymbol)

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18964 \DeclareTextCommand{\textnDoteq}{PU}{\9042\121\83\070}%* U+2251 U+0338
 18965 % U+2252 APPROXIMATELY EQUAL TO OR THE IMAGE OF; approx-
 equalimage;
 18966 % \fallingdotseq (AmS)
 18967 \DeclareTextCommand{\textfallingdoteq}{PU}{\9042\122}%* U+2252
 18968 % \nfallingdotseq (MnSymbol)
 18969 \DeclareTextCommand{\textnfallingdoteq}{PU}{\9042\122\83\070}%* U+2252 U+0338
 18970 % U+2253 IMAGE OF OR APPROXIMATELY EQUAL TO; imageorapproxi-
 matelyequal;
 18971 % \risingdotseq (AmS)
 18972 \DeclareTextCommand{\textrisingdoteq}{PU}{\9042\123}%* U+2253
 18973 % \nrisingdoteq (MnSymbol)
 18974 \DeclareTextCommand{\textnrisingdoteq}{PU}{\9042\123\83\070}%* U+2253 U+0338
 18975 % U+2254 COLON EQUALS; \colonequals (colonequals)
 18976 \DeclareTextCommand{\textcolonequals}{PU}{\9042\124}%* U+2254
 18977 % U+2255 EQUALS COLON; \equalscolon (colonequals)
 18978 \DeclareTextCommand{\textequalscolon}{PU}{\9042\125}%* U+2255
 18979 % U+2256 RING IN EQUAL TO; \eqcirc (AmS)
 18980 \DeclareTextCommand{\texteqcirc}{PU}{\9042\126}%* U+2256
 18981 % \neqcirc (MnSymbol)
 18982 \DeclareTextCommand{\textneqcirc}{PU}{\9042\126\83\070}%* U+2256 U+0338
 18983 % U+2257 RING EQUAL TO; \circeq (AmS)
 18984 \DeclareTextCommand{\textcirceq}{PU}{\9042\127}%* U+2257
 18985 % \ncirceq (MnSymbol)
 18986 \DeclareTextCommand{\textncirceq}{PU}{\9042\127\83\070}%* U+2257 U+0338
 18987 % U+2259 ESTIMATES; \hateq (MnSymbol)
 18988 \DeclareTextCommand{\texthateq}{PU}{\9042\131}%* U+2259
 18989 %* \texthateq -> \corresponds (mathabx)
 18990 %* \texthateq -> \Corresponds (marvosym)
 18991 % \nhateq (MnSymbol)
 18992 \DeclareTextCommand{\textnhateq}{PU}{\9042\131\83\070}%* U+2259 U+0338
 18993 % U+225C DELTA EQUAL TO; \triangleeq (AmS)
 18994 \DeclareTextCommand{\texttriangleeq}{PU}{\9042\134}%* U+225C
 18995 % U+2260 NOT EQUAL TO; notequal; \ne (LaTeX), \neq (LaTeX)
 18996 \DeclareTextCommand{\textneq}{PU}{\9042\140}%* U+2260
 18997 \DeclareTextCommand{\textne}{PU}{\9042\140}%* U+2260
 18998 %* \textneq -> \nequal (MnSymbol)
 18999 % U+2261 IDENTICAL TO; equivalence; \equiv (LaTeX)
 19000 \DeclareTextCommand{\textequiv}{PU}{\9042\141}%* U+2261
 19001 %* \textequiv -> \Congruent (marvosym)
 19002 % U+2262 NOT IDENTICAL TO; notidentical; \nequiv (txfonts/pxfonts)
 19003 \DeclareTextCommand{\textnequiv}{PU}{\9042\142}%* U+2262
 19004 %* \textnequiv -> \NotCongruent (marvosym)
 19005 %* \textnequiv -> \notequiv (mathabx)
 19006 % U+2264 LESS-THAN OR EQUAL TO; lessequal; \le (LaTeX), \leq (LaTeX)
 19007 \DeclareTextCommand{\textleq}{PU}{\9042\144}%* U+2264
 19008 \DeclareTextCommand{\textle}{PU}{\9042\144}%* U+2264
 19009 %* \textleq -> \LessOrEqual (marvosym)
 19010 % U+2265 GREATER-THAN OR EQUAL TO; greaterequal;
 19011 % \ge (LaTeX), \geq (LaTeX)
 19012 \DeclareTextCommand{\textgeq}{PU}{\9042\145}%* U+2265
 19013 \DeclareTextCommand{\textge}{PU}{\9042\145}%* U+2265
 19014 %* \textgeq -> \LargerOrEqual (marvosym)
 19015 % U+2266 LESS-THAN OVER EQUAL TO; lessorequal; \leqq (AmS)
 19016 \DeclareTextCommand{\textleqq}{PU}{\9042\146}%* U+2266
 19017 % \nleqq (txfonts/pxfonts)
 19018 \DeclareTextCommand{\textnleqq}{PU}{\9042\146\83\070}%* U+2266 U+0338

19019 % U+2267 GREATER-THAN OVER EQUAL TO; \gtrsim (AmS)
 19020 \DeclareTextCommand{\textgtrsim}{PU}{\9042\147}%* U+2267
 19021 % \ngeqq (txfonts/pxfonts)
 19022 \DeclareTextCommand{\textngeqq}{PU}{\9042\147\83\070}%* U+2267 U+0338
 19023 % U+2268 LESS-THAN BUT NOT EQUAL TO; \lneqq (AmS)
 19024 \DeclareTextCommand{\textlneqq}{PU}{\9042\150}%* U+2268
 19025 % U+2269 GREATER-THAN BUT NOT EQUAL TO; \gneqq (AmS)
 19026 \DeclareTextCommand{\textgneqq}{PU}{\9042\151}%* U+2269
 19027 % U+226A MUCH LESS-THAN; \ll (LaTeX)
 19028 \DeclareTextCommand{\textll}{PU}{\9042\152}%* U+226A
 19029 % \nll (txfonts/pxfonts)
 19030 \DeclareTextCommand{\textnll}{PU}{\9042\152\83\070}%* U+226A U+0338
 19031 % U+226B MUCH GREATER-THAN; \gg (LaTeX)
 19032 \DeclareTextCommand{\textgg}{PU}{\9042\153}%* U+226B
 19033 % \ngg (txfonts/pxfonts)
 19034 \DeclareTextCommand{\textngg}{PU}{\9042\153\83\070}%* U+226B U+0338
 19035 % U+226C BETWEEN; \between (AmS)
 19036 \DeclareTextCommand{\textbetween}{PU}{\9042\154}%* U+226C
 19037 % U+226E NOT LESS-THAN; \notless ; \nless (AmS)
 19038 \DeclareTextCommand{\textnless}{PU}{\9042\156}%* U+226E
 19039 % U+226F NOT GREATER-THAN; \notgreater ; \ngtr (AmS)
 19040 \DeclareTextCommand{\textngtr}{PU}{\9042\157}%* U+226F
 19041 % U+2270 NEITHER LESS-THAN NOR EQUAL TO; \notlessnorequal ;
 19042 % \nleq (AmS)
 19043 \DeclareTextCommand{\textnleq}{PU}{\9042\160}%* U+2270
 19044 % U+2271 NEITHER GREATER-THAN NOR EQUAL TO; \notgreaternorequal ;
 19045 % \ngeq (AmS)
 19046 \DeclareTextCommand{\textngeq}{PU}{\9042\161}%* U+2271
 19047 % U+2272 LESS-THAN OR EQUIVALENT TO; \lessorequivalent ; \lessssim (AmS)
 19048 \DeclareTextCommand{\textlessssim}{PU}{\9042\162}%* U+2272
 19049 %* \textlessssim -> \apprle (wasysym)
 19050 % U+2273 GREATER-THAN OR EQUIVALENT TO; \greaterorequivalent ; \gtrsim
 19051 % (AmS)
 19052 \DeclareTextCommand{\textgtrsim}{PU}{\9042\163}%* U+2273
 19053 %* \textgtrsim -> \apprge (wasysym)
 19054 % U+2274 NEITHER LESS-THAN NOR EQUIVALENT TO; \nlessssim (tx-
 19055 % fonts/pxfonts)
 19056 \DeclareTextCommand{\textnlessssim}{PU}{\9042\164}%* U+2274
 19057 % U+2275 NEITHER GREATER-THAN NOR EQUIVALENT TO; \ngtrsim (tx-
 19058 % fonts/pxfonts)
 19059 \DeclareTextCommand{\textngtrsim}{PU}{\9042\165}%* U+2275
 19060 % U+2276 LESS-THAN OR GREATER-THAN; \lessorgreater ; \lessgtr (AmS)
 19061 \DeclareTextCommand{\textlessgtr}{PU}{\9042\166}%* U+2276
 19062 % U+2277 GREATER-THAN OR LESS-THAN; \greaterorless ; \gtrless (AmS)
 19063 \DeclareTextCommand{\textgtrless}{PU}{\9042\167}%* U+2277
 19064 % U+2278 NEITHER LESS-THAN NOR GREATER-THAN; \ngtrless (tx-
 19065 % fonts/pxfonts)
 19066 \DeclareTextCommand{\textngtrless}{PU}{\9042\170}%* U+2278
 19067 % U+2279 NEITHER GREATER-THAN NOR LESS-THAN; \nlessgtr (tx-
 19068 % fonts/pxfonts)
 19069 \DeclareTextCommand{\textnlessgtr}{PU}{\9042\171}%* U+2279
 19070 % U+227A PRECEDES; \prec (LaTeX)
 19071 \DeclareTextCommand{\textprec}{PU}{\9042\172}%* U+227A
 19072 % U+227B SUCCEEDS; \succ (LaTeX)
 19073 \DeclareTextCommand{\textsucc}{PU}{\9042\173}%* U+227B
 19074 % U+227C PRECEDES OR EQUAL TO; \preccurlyeq (AmS)
 19075 \DeclareTextCommand{\textpreccurlyeq}{PU}{\9042\174}%* U+227C

19070 % U+227D SUCCEEDS OR EQUAL TO; \succcurlyeq (AmS)
 19071 \DeclareTextCommand{\textsuccurlyeq}{PU}{\9042\175}%* U+227D
 19072 % U+227E PRECEDES OR EQUIVALENT TO; \precsim (AmS)
 19073 \DeclareTextCommand{\textprecsim}{PU}{\9042\176}%* U+227E
 19074 % \nprecsim (txfonts/pxfonts)
 19075 \DeclareTextCommand{\textnprecsim}{PU}{\9042\176\83\070}%* U+227E U+0338
 19076 % U+227F SUCCEEDS OR EQUIVALENT TO; \succsim (AmS)
 19077 \DeclareTextCommand{\textsuccsim}{PU}{\9042\177}%* U+227F
 19078 % \nsuccsim (txfonts/pxfonts)
 19079 \DeclareTextCommand{\textnsuccsim}{PU}{\9042\177\83\070}%* U+227F U+0338
 19080 % U+2280 DOES NOT PRECEDE; notprecedes; \nprec (AmS)
 19081 \DeclareTextCommand{\textnprec}{PU}{\9042\200}%* U+2280
 19082 % U+2281 DOES NOT SUCCEED; notsucceds; \nsucc (AmS)
 19083 \DeclareTextCommand{\textnsucc}{PU}{\9042\201}%* U+2281
 19084 % U+2282 SUBSET OF; propersubset; \subset (LaTeX)
 19085 \DeclareTextCommand{\textsubset}{PU}{\9042\202}%* U+2282
 19086 % U+2283 SUPERSET OF; propersuperset; \supset (LaTeX)
 19087 \DeclareTextCommand{\textsupset}{PU}{\9042\203}%* U+2283
 19088 % U+2284 NOT A SUBSET OF; notsubset; \nsubset (mathabx)
 19089 \DeclareTextCommand{\textnsubset}{PU}{\9042\204}%* U+2284
 19090 % U+2285 NOT A SUPERSET OF; notsuperset; \nsupset (mathabx)
 19091 \DeclareTextCommand{\textnsupset}{PU}{\9042\205}%* U+2285
 19092 % U+2286 SUBSET OF OR EQUAL TO; reflexsubset; \subseq (LaTeX)
 19093 \DeclareTextCommand{\textsubseq}{PU}{\9042\206}%* U+2286
 19094 % U+2287 SUPERSET OF OR EQUAL TO; reflexsuperset; \supseq (LaTeX)
 19095 \DeclareTextCommand{\textsupseq}{PU}{\9042\207}%* U+2287
 19096 % U+2288 NEITHER A SUBSET OF NOR EQUAL TO; \nsubseq (AmS)
 19097 \DeclareTextCommand{\textnsubseq}{PU}{\9042\210}%* U+2288
 19098 % U+2289 NEITHER A SUPERSET OF NOR EQUAL TO; \nsupseq (AmS)
 19099 \DeclareTextCommand{\textnsupseq}{PU}{\9042\211}%* U+2289
 19100 % U+228A SUBSET OF WITH NOT EQUAL TO; subsetnotequal; \subset-
 neq (AmS)
 19101 \DeclareTextCommand{\textsubsetneq}{PU}{\9042\212}%* U+228A
 19102 % U+228B SUPERSET OF WITH NOT EQUAL TO; supersetnotequal; \supset-
 neq (AmS)
 19103 \DeclareTextCommand{\textsupsetneq}{PU}{\9042\213}%* U+228B
 19104 % U+228D MULTISET MULTIPLICATION; \cupdot (MnSymbol)
 19105 \DeclareTextCommand{\textcupdot}{PU}{\9042\215}%* U+228D
 19106 % U+228E MULTISET UNION; \cupplus (MnSymbol)
 19107 \DeclareTextCommand{\textcupplus}{PU}{\9042\216}%* U+228E
 19108 % U+228F SQUARE IMAGE OF; \sqsubset (latexsym, ...)
 19109 \DeclareTextCommand{\textsqsubset}{PU}{\9042\217}%* U+228F
 19110 % \nsqsubset (txfonts/pxfonts)
 19111 \DeclareTextCommand{\textnsqsubset}{PU}{\9042\217\83\070}%* U+228F U+0338
 19112 % U+2290 SQUARE ORIGINAL OF; \sqsupset (latexsym, ...)
 19113 \DeclareTextCommand{\textsqsupset}{PU}{\9042\220}%* U+2290
 19114 % \nsqsupset (txfonts/pxfonts)
 19115 \DeclareTextCommand{\textnsqsupset}{PU}{\9042\220\83\070}%* U+2290 U+0338
 19116 % U+2291 SQUARE IMAGE OF OR EQUAL TO; \sqsubseq (LaTeX)
 19117 \DeclareTextCommand{\textsqsubseq}{PU}{\9042\221}%* U+2291
 19118 % \nsqsubseq (txfonts/pxfonts)
 19119 \DeclareTextCommand{\textnsqsubseq}{PU}{\9042\221\83\070}%* U+2291 U+0338
 19120 % U+2292 SQUARE ORIGINAL OF OR EQUAL TO; \sqsupseq (LaTeX)
 19121 \DeclareTextCommand{\textsqsupseq}{PU}{\9042\222}%* U+2292
 19122 % \nsqsupseq (txfonts/pxfonts)
 19123 \DeclareTextCommand{\textnsqsupseq}{PU}{\9042\222\83\070}%* U+2292 U+0338
 19124 % U+2293 SQUARE CAP; \sqcap (LaTeX)

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19125 \DeclareTextCommand{\textsqcap}{PU}{\9042\223}%* U+2293
19126 % U+2294 SQUARE CUP; \sqcup (LaTeX)
19127 \DeclareTextCommand{\textsqcup}{PU}{\9042\224}%* U+2294
19128 % U+2295 CIRCLED PLUS; circleplus; \oplus (LaTeX)
19129 \DeclareTextCommand{\textoplus}{PU}{\9042\225}%* U+2295
19130 %* \textoplus -> \varoplus (stmaryrd)
19131 % U+2296 CIRCLED MINUS; minuscircle; \ominus (LaTeX)
19132 \DeclareTextCommand{\textominus}{PU}{\9042\226}%* U+2296
19133 %* \textominus -> \varominus (stmaryrd)
19134 % U+2297 CIRCLED TIMES; circlemultiply; \otimes (LaTeX)
19135 \DeclareTextCommand{\textotimes}{PU}{\9042\227}%* U+2297
19136 %* \textotimes -> \varotimes (stmaryrd)
19137 % U+2298 CIRCLED DIVISION SLASH; \oslash (LaTeX)
19138 \DeclareTextCommand{\textoslash}{PU}{\9042\230}%* U+2298
19139 %* \textoslash -> \varoslash (stmaryrd)
19140 % U+2299 CIRCLED DOT OPERATOR; circle(d?)ot; \odot (LaTeX)
19141 \DeclareTextCommand{\textodot}{PU}{\9042\231}%* U+2299
19142 %* \textodot -> \varodot (stmaryrd)
19143 % U+229A CIRCLED RING OPERATOR; \circledcirc (AmS)
19144 \DeclareTextCommand{\textcircledcirc}{PU}{\9042\232}%* U+229A
19145 %* \textcircledcirc -> \ocirc (mathabx)
19146 %* \textcircledcirc -> \varocircle (stmaryrd)
19147 % U+229B CIRCLED ASTERISK OPERATOR; \circledast (AmS)
19148 \DeclareTextCommand{\textcircledast}{PU}{\9042\233}%* U+229B
19149 %* \textcircledast -> \varoast (stmaryrd)
19150 %* \textcircledast -> \oasterisk (mathabx)
19151 % U+229D CIRCLED DASH; \circleddash (AmS)
19152 \DeclareTextCommand{\textcircleddash}{PU}{\9042\235}%* U+229D
19153 % U+229E SQUARED PLUS; \boxplus (AmS)
19154 \DeclareTextCommand{\textboxplus}{PU}{\9042\236}%* U+229E
19155 % U+229F SQUARED MINUS; \boxminus (AmS)
19156 \DeclareTextCommand{\textboxminus}{PU}{\9042\237}%* U+229F
19157 % U+22A0 SQUARED TIMES; \boxtimes (AmS)
19158 \DeclareTextCommand{\textboxtimes}{PU}{\9042\240}%* U+22A0
19159 % U+22A1 SQUARED DOT OPERATOR; \boxdot (AmS)
19160 \DeclareTextCommand{\textboxdot}{PU}{\9042\241}%* U+22A1
19161 % U+22A2 RIGHT TACK; \vdash (LaTeX)
19162 \DeclareTextCommand{\textvdash}{PU}{\9042\242}%* U+22A2
19163 %* \textvdash -> \rightvdash (MnSymbol)
19164 % U+22A3 LEFT TACK; \dashleftarrow; \dashv (LaTeX)
19165 \DeclareTextCommand{\textdashv}{PU}{\9042\243}%* U+22A3
19166 %* \textdashv -> \leftvdash (MnSymbol)
19167 % \ndashv (mathabx)
19168 \DeclareTextCommand{\textndashv}{PU}{\9042\243\83\070}%* U+22A3 U+0338
19169 %* \textndashv -> \nleftvdash (MnSymbol)
19170 % U+22A4 DOWN TACK (=top); \dashrightarrow; \top (LaTeX)
19171 \DeclareTextCommand{\textttop}{PU}{\9042\244}%* U+22A4
19172 %* \textttop -> \downvdash (MnSymbol)
19173 % \ndownvdash (MnSymbol)
19174 \DeclareTextCommand{\textndownvdash}{PU}{\9042\244\83\070}%* U+22A4 U+0338
19175 % U+22A5 UP TACK (=base, bottom); \bot (LaTeX)
19176 \DeclareTextCommand{\textbot}{PU}{\9042\245}%* U+22A5
19177 %* \textbot -> \upvdash (MnSymbol)
19178 % \nupvdash (MnSymbol)
19179 \DeclareTextCommand{\textnupvdash}{PU}{\9042\245\83\070}%* U+22A5 U+0338
19180 %* \textnupvdash -> \nperp (MnSymbol)
19181 % U+22A8 TRUE; \vDash (AmS)

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19182 \DeclareTextCommand{\textvDash}{PU}{\9042\250}%* U+22A8
19183 %* \textvDash -> \models (LaTeX)
19184 %* \textvDash -> \rightmodels (MnSymbol)
19185 % U+22A9 FORCES; \Vdash (AmS)
19186 \DeclareTextCommand{\textVdash}{PU}{\9042\251}%* U+22A9
19187 %* \textVdash -> \rightVdash (MnSymbol)
19188 % U+22AA TRIPLE VERTICAL BAR RIGHT TURNSTILE; \Vvdash (AmS)
19189 \DeclareTextCommand{\textVvdash}{PU}{\9042\252}%* U+22AA
19190 % \nVdash (mathabx)
19191 \DeclareTextCommand{\textnVdash}{PU}{\9042\252\83\070}%* U+22AA U+0338
19192 % U+22AB DOUBLE VERTICAL BAR DOUBLE RIGHT TURNSTILE;
19193 % \VDash (mathabx)
19194 \DeclareTextCommand{\textVDash}{PU}{\9042\253}%* U+22AB
19195 %* \textVDash -> \rightModels (MnSymbol)
19196 % U+22AC DOES NOT PROVE; \nvDash (AmS)
19197 \DeclareTextCommand{\textnvdash}{PU}{\9042\254}%* U+22AC
19198 %* \textnvdash -> \nrighnvDash (MnSymbol)
19199 % U+22AD NOT TRUE; \nvDash (AmS)
19200 \DeclareTextCommand{\textnvDash}{PU}{\9042\255}%* U+22AD
19201 %* \textnvDash -> \nrighmodels (MnSymbol)
19202 %* \textnvDash -> \nmodels (MnSymbol)
19203 % U+22AE DOES NOT FORCE; \nVdash (txfonts/pxfonts)
19204 \DeclareTextCommand{\textnVdash}{PU}{\9042\256}%* U+22AE
19205 %* \textnVdash -> \nrighVdash (MnSymbol)
19206 % U+22AF NEGATED DOUBLE VERTICAL BAR DOUBLE RIGHT TURN-
19207 % STILE; \nVDash (AmS)
19207 \DeclareTextCommand{\textnVDash}{PU}{\9042\257}%* U+22AF
19208 %* \textnVDash -> \nrighModels (MnSymbol)
19209 % U+22B2 NORMAL SUBGROUP OF; \lhd (latexsym, ...)
19210 \DeclareTextCommand{\textlhd}{PU}{\9042\262}%* U+22B2
19211 %* \textlhd -> \lessclosed (MnSymbol)
19212 % U+22B3 CONTAINS AS NORMAL SUBGROUP; \rhd (latexsym, ...)
19213 \DeclareTextCommand{\textrhd}{PU}{\9042\263}%* U+22B3
19214 %* \textrhd -> \gtrclosed (MnSymbol)
19215 % U+22B4 NORMAL SUBGROUP OF OR EQUAL TO; \unlhd (latexsym, ...)
19216 \DeclareTextCommand{\textunlhd}{PU}{\9042\264}%* U+22B4
19217 %* \textunlhd -> \leqclosed (MnSymbol)
19218 %* \textunlhd -> \trianglelefteq (MnSymbol)
19219 % U+22B5 CONTAINS AS NORMAL SUBGROUP OR EQUAL TO; \unrhd (la-
19220 % texsym, ...)
19220 \DeclareTextCommand{\textunrhd}{PU}{\9042\265}%* U+22B5
19221 %* \textunrhd -> \geqclosed (MnSymbol)
19222 %* \textunrhd -> \trianglerighteq (MnSymbol)
19223 % U+22B6 ORIGINAL OF; \multimapdotbothA (txfonts/pxfonts)
19224 \DeclareTextCommand{\textmultimapdotbothA}{PU}{\9042\266}%* U+22B6
19225 % U+22B7 IMAGE OF; \multimapdotbothB (txfonts/pxfonts)
19226 \DeclareTextCommand{\textmultimapdotbothB}{PU}{\9042\267}%* U+22B7
19227 % U+22B8 MULTIMAP; \multimap (AmS, txfonts/pxfonts)
19228 \DeclareTextCommand{\textmultimap}{PU}{\9042\270}%* U+22B8
19229 % U+22BB XOR; \veebar (AmS)
19230 \DeclareTextCommand{\textveebar}{PU}{\9042\273}%* U+22BB
19231 % U+22BC NAND; \barwedge (mathabx)
19232 \DeclareTextCommand{\textbarwedge}{PU}{\9042\274}%* U+22BC
19233 % U+22C6 STAR OPERATOR; \star (LaTeX)
19234 \DeclareTextCommand{\textstar}{PU}{\9042\306}%* U+22C6
19235 % U+22C7 DIVISION TIMES; \divideontimes (AmS)
19236 \DeclareTextCommand{\textdivideontimes}{PU}{\9042\307}%* U+22C7

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19237 % U+22C8 BOWTIE; \bowtie (LaTeX)
19238 \DeclareTextCommand{\textbowtie}{PU}{\9042\310}%* U+22C8
19239 %* \textbowtie -> \Bowtie (wasysym)
19240 % U+22C9 LEFT NORMAL FACTOR SEMIDIRECT PRODUCT; \ltimes (AmS)
19241 \DeclareTextCommand{\textltimes}{PU}{\9042\311}%* U+22C9
19242 % U+22CA RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT;
19243 % \rtimes (AmS)
19244 \DeclareTextCommand{\textrtimes}{PU}{\9042\312}%* U+22CA
19245 % U+22CB LEFT SEMIDIRECT PRODUCT; \leftthreetimes (AmS)
19246 \DeclareTextCommand{\textleftthreetimes}{PU}{\9042\313}%* U+22CB
19247 % U+22CC RIGHT SEMIDIRECT PRODUCT; \rightthreetimes (AmS)
19248 \DeclareTextCommand{\textrightthreetimes}{PU}{\9042\314}%* U+22CC
19249 % U+22CD REVERSED TILDE EQUALS; \backsimeq (AmS)
19250 \DeclareTextCommand{\textbacksimeq}{PU}{\9042\315}%* U+22CD
19251 % \nbacksimeq (txfonts/pxfonts)
19252 \DeclareTextCommand{\textnbacksimeq}{PU}{\9042\315\83\070}%* U+22CD U+0338
19253 % U+22CE CURLY LOGICAL OR; curlyor; \curlyvee (AmS)
19254 \DeclareTextCommand{\textcurlyvee}{PU}{\9042\316}%* U+22CE
19255 %* \textcurlyvee -> \varcurlyvee (stmaryrd)
19256 % U+22CF CURLY LOGICAL AND; curlyand; \curlywedge (AmS)
19257 \DeclareTextCommand{\textcurlywedge}{PU}{\9042\317}%* U+22CF
19258 %* \textcurlywedge -> \varcurlywedge (stmaryrd)
19259 % U+22D0 DOUBLE SUBSET; \Subset (AmS)
19260 \DeclareTextCommand{\textSubset}{PU}{\9042\320}%* U+22D0
19261 % \nSubset (txfonts/pxfonts)
19262 \DeclareTextCommand{\textnSubset}{PU}{\9042\320\83\070}%* U+22D0 U+0338
19263 % U+22D1 DOUBLE SUPERSET; \Supset (AmS)
19264 \DeclareTextCommand{\textSupset}{PU}{\9042\321}%* U+22D1
19265 % \nSupset (txfonts/pxfonts)
19266 \DeclareTextCommand{\textnSupset}{PU}{\9042\321\83\070}%* U+22D1 U+0338
19267 % U+22D2 DOUBLE INTERSECTION; \Cap (AmS)
19268 \DeclareTextCommand{\textCap}{PU}{\9042\322}%* U+22D2
19269 %* \textCap -> \doublecap (mathabx)
19270 % U+22D3 DOUBLE UNION; \Cup (AmS)
19271 \DeclareTextCommand{\textCup}{PU}{\9042\323}%* U+22D3
19272 %* \textCup -> \doublecup (mathabx)
19273 % U+22D4 PITCHFORK; \pitchfork (mathabx)
19274 \DeclareTextCommand{\textpitchfork}{PU}{\9042\324}%* U+22D4
19275 % U+22D6 LESS-THAN WITH DOT; \lessdot (AmS)
19276 \DeclareTextCommand{\textlessdot}{PU}{\9042\326}%* U+22D6
19277 % U+22D7 GREATER-THAN WITH DOT; \gtrdot (AmS)
19278 \DeclareTextCommand{\textgtrdot}{PU}{\9042\327}%* U+22D7
19279 % U+22D8 VERY MUCH LESS-THAN; \lll (AmS)
19280 \DeclareTextCommand{\textlll}{PU}{\9042\330}%* U+22D8
19281 % U+22D9 VERY MUCH GREATER-THAN; \ggg (AmS)
19282 \DeclareTextCommand{\textggg}{PU}{\9042\331}%* U+22D9
19283 % U+22DA LESS-THAN EQUAL TO OR GREATER-THAN; lessequalorgreater;
19284 % \lesseqgtr (AmS)
19285 \DeclareTextCommand{\textlesseqgtr}{PU}{\9042\332}%* U+22DA
19286 % U+22DB GREATER-THAN EQUAL TO OR LESS-THAN; greaterequalorless;
19287 % \gtreqless (AmS)
19288 \DeclareTextCommand{\textgtreqless}{PU}{\9042\333}%* U+22DB
19289 % U+22DE EQUAL TO OR PRECEDES; \curlyeqprec (MnSymbol)
19290 \DeclareTextCommand{\textcurlyeqprec}{PU}{\9042\336}%* U+22DE
19291 % \ncurlyeqprec (mathabx)
19292 \DeclareTextCommand{\textncurlyeqprec}{PU}{\9042\336\83\070}%* U+22DE U+0338
19293 % U+22DF EQUAL TO OR SUCCEEDS; \curlyeqsucc (MnSymbol)

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19294 \DeclareTextCommand{\textcurlyeqsucc}{PU}{\9042\337}%* U+22DF
 19295 % \ncurlyeqsucc (mathabx)
 19296 \DeclareTextCommand{\textncurlyeqsucc}{PU}{\9042\337\83\070}%* U+22DF U+0338
 19297 % U+22E0 DOES NOT PRECEDE OR EQUAL; \npreccurlyeq (txfonts/pxfonts)
 19298 \DeclareTextCommand{\textnpreccurlyeq}{PU}{\9042\340}%* U+22E0
 19299 % U+22E1 DOES NOT SUCCEED OR EQUAL; \nsucccurlyeq (txfonts/pxfonts)
 19300 \DeclareTextCommand{\textnsucccurlyeq}{PU}{\9042\341}%* U+22E1
 19301 % U+22E2 NOT SQUARE IMAGE OF OR EQUAL TO; \nsqsubseteq (tx-
 fonts/pxfonts)
 19302 \DeclareTextCommand{\textnqsubseteq}{PU}{\9042\342}%* U+22E2
 19303 % U+22E3 NOT SQUARE ORIGINAL OF OR EQUAL TO; \nsqsupseteq (tx-
 fonts/pxfonts)
 19304 \DeclareTextCommand{\textnqsupseteq}{PU}{\9042\343}%* U+22E3
 19305 % U+22E4 SQUARE IMAGE OF OR NOT EQUAL TO; \sqsubsetneq (mathabx)
 19306 \DeclareTextCommand{\textsqsubsetneq}{PU}{\9042\344}%* U+22E4
 19307 %* \textsqsubsetneq -> \varsqsubsetneq (mathabx)
 19308 % U+22E5 SQUARE ORIGINAL OF OR NOT EQUAL TO; \sqsupsetneq (math-
 abx)
 19309 \DeclareTextCommand{\textsqsupsetneq}{PU}{\9042\345}%* U+22E5
 19310 %* \textsqsupsetneq -> \varsqsupsetneq (mathabx)
 19311 % U+22E6 LESS-THAN BUT NOT EQUIVALENT TO; \lnsim (AmS)
 19312 \DeclareTextCommand{\textlnsim}{PU}{\9042\346}%* U+22E6
 19313 % U+22E7 GREATER-THAN BUT NOT EQUIVALENT TO; \gnsim (AmS)
 19314 \DeclareTextCommand{\textgnsim}{PU}{\9042\347}%* U+22E7
 19315 % U+22E8 PRECEDES BUT NOT EQUIVALENT TO; \precnsim (AmS)
 19316 \DeclareTextCommand{\textprecnsim}{PU}{\9042\350}%* U+22E8
 19317 % U+22E9 SUCCEEDS BUT NOT EQUIVALENT TO; \succnsim (AmS)
 19318 \DeclareTextCommand{\textsuccnsim}{PU}{\9042\351}%* U+22E9
 19319 % U+22EA NOT NORMAL SUBGROUP OF; \ntriangleleft (AmS)
 19320 \DeclareTextCommand{\textntriangleleft}{PU}{\9042\352}%* U+22EA
 19321 %* \textntriangleleft -> \nlessclosed (MnSymbol)
 19322 % U+22EB DOES NOT CONTAIN AS NORMAL SUBGROUP; \ntriang-
 leright (AmS)
 19323 \DeclareTextCommand{\textntriangleright}{PU}{\9042\353}%* U+22EB
 19324 %* \textntriangleright -> \ngtrclosed (MnSymbol)
 19325 % U+22EC NOT NORMAL SUBGROUP OF OR EQUAL TO;
 19326 % \ntrianglelefteq (AmS)
 19327 \DeclareTextCommand{\textntrianglelefteq}{PU}{\9042\354}%* U+22EC
 19328 % U+22ED DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL;
 19329 % \ntrianglerighteq (AmS)
 19330 \DeclareTextCommand{\textntrianglerighteq}{PU}{\9042\355}%* U+22ED
 19331 %* \textntrianglerighteq -> \textngeqclosed
 19332 % U+22EE VERTICAL ELLIPSIS; \vdots (LaTeX)
 19333 \DeclareTextCommand{\textvdots}{PU}{\9042\356}%* U+22EE
 19334 % U+22EF MIDLINE HORIZONTAL ELLIPSIS; \cdots (LaTeX)
 19335 \DeclareTextCommand{\textcdots}{PU}{\9042\357}%* U+22EF
 19336 % U+22F0 UP RIGHT DIAGONAL ELLIPSIS; \udots (MnSymbol)
 19337 \DeclareTextCommand{\textudots}{PU}{\9042\360}%* U+22F0
 19338 % U+22F1 DOWN RIGHT DIAGONAL ELLIPSIS; \ddots (LaTeX)
 19339 \DeclareTextCommand{\textddots}{PU}{\9042\361}%* U+22F1
 19340 % U+22F6 ELEMENT OF WITH OVERBAR; \barin (mathabx)
 19341 \DeclareTextCommand{\textbarin}{PU}{\9042\366}%* U+22F6

51.2.23 Miscellaneous Technical: U+2300 to U+23FF

19342 % U+2300 DIAMETER SIGN; \diameter (mathabx,wasysym)
 19343 \DeclareTextCommand{\textdiameter}{PU}{\9043\000}%* U+2300
 19344 % U+2310 REVERSED NOT SIGN; \backneg (MnSymbol)

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19345 \DeclareTextCommand{\textbackneg}{PU}{\9043\020}%* U+2310
19346 % U+2311 SQUARE LOZENGE; \wasylounge (wasysym)
19347 \DeclareTextCommand{\textwasylounge}{PU}{\9043\021}%* U+2311
19348 % U+2319 TURNED NOT SIGN; \invbackneg (MnSymbol)
19349 \DeclareTextCommand{\textinvbackneg}{PU}{\9043\031}%* U+2319
19350 % U+231A WATCH; \clock (wasysym)
19351 \DeclareTextCommand{\textclock}{PU}{\9043\032}%* U+231A
19352 %* \textclock -> \Clocklogo (marvosym)
19353 %* \textclock -> \ClockLogo (marvosym)
19354 % U+231C TOP LEFT CORNER; \ulcorner (AmS)
19355 \DeclareTextCommand{\textulcorner}{PU}{\9043\034}%* U+231C
19356 % U+231D TOP RIGHT CORNER; \urcorner (AmS)
19357 \DeclareTextCommand{\texturcorner}{PU}{\9043\035}%* U+231D
19358 % U+231E BOTTOM LEFT CORNER; \llcorner (AmS)
19359 \DeclareTextCommand{\textllcorner}{PU}{\9043\036}%* U+231E
19360 % U+231F BOTTOM RIGHT CORNER; \lrcorner (AmS)
19361 \DeclareTextCommand{\textlrcorner}{PU}{\9043\037}%* U+231F
19362 % U+2322 FROWN; \frown (LaTeX)
19363 \DeclareTextCommand{\textfrown}{PU}{\9043\042}%* U+2322
19364 % U+2323 SMILE; \smile (LaTeX)
19365 \DeclareTextCommand{\textsmile}{PU}{\9043\043}%* U+2323
19366 % U+2328 KEYBOARD; \Keyboard (marvosym)
19367 \DeclareTextCommand{\textKeyboard}{PU}{\9043\050}%* U+2328
19368 % U+2329 LEFT-POINTING ANGLE BRACKET; \angleleft; \langle (LaTeX)
19369 \DeclareTextCommand{\textlangle}{PU}{\9043\051}%* U+2329
19370 % U+232A RIGHT-POINTING ANGLE BRACKET; \angleright; \rangle (LaTeX)
19371 \DeclareTextCommand{\textrightangle}{PU}{\9043\052}%* U+232A
19372 % U+2339 APL FUNCTIONAL SYMBOL QUAD DIVIDE; \APLinv (wasysym)
19373 \DeclareTextCommand{\textAPLinv}{PU}{\9043\071}%* U+2339
19374 % U+233C APL FUNCTIONAL SYMBOL QUAD CIRCLE; \Tumbler (mar-
      vosym)
19375 \DeclareTextCommand{\textTumbler}{PU}{\9043\074}%* U+233C
19376 % U+233D APL FUNCTIONAL SYMBOL CIRCLE STILE; \baro (stmaryrd)
19377 \DeclareTextCommand{\textstmaryrdbaro}{PU}{\9043\075}% U+233D
19378 %* \textstmaryrdbaro -> \baro (stmaryrd)
19379 % U+233F APL FUNCTIONAL SYMBOL SLASH BAR; \notslash (wasysym)
19380 \DeclareTextCommand{\textnotslash}{PU}{\9043\077}%* U+233F
19381 % U+2340 APL FUNCTIONAL SYMBOL BACKSLASH BAR;
19382 % \notbackslash (wasysym)
19383 \DeclareTextCommand{\textnotbackslash}{PU}{\9043\100}%* U+2340
19384 % U+2342 APL FUNCTIONAL SYMBOL QUAD BACKSLASH; \boxback-
      slash (mathabx)
19385 \DeclareTextCommand{\textboxbackslash}{PU}{\9043\102}%* U+2342
19386 % U+2347 APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW;
19387 % \APLleftarrowbox (wasysym)
19388 \DeclareTextCommand{\textAPLleftarrowbox}{PU}{\9043\107}%* U+2347
19389 % U+2348 APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW;
19390 % \APLrightarrowbox (wasysym)
19391 \DeclareTextCommand{\textAPLrightarrowbox}{PU}{\9043\110}%* U+2348
19392 % U+2350 APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW; \APLu-
      parrowbox (wasysym)
19393 \DeclareTextCommand{\textAPLuparrowbox}{PU}{\9043\120}%* U+2350
19394 % U+2357 APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW;
19395 % \APLdownarrowbox (wasysym)
19396 \DeclareTextCommand{\textAPLdownarrowbox}{PU}{\9043\127}%* U+2357
19397 % U+235E APL FUNCTIONAL SYMBOL QUOTE QUAD;
19398 % \APLinput (wasysym)

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19399 \DeclareTextCommand{\textAPLinput}{PU}{\9043\136}%* U+235E
 19400 % U+2370 APL FUNCTIONAL SYMBOL QUAD QUESTION; \Request (china2e)
 19401 \DeclareTextCommand{\textRequest}{PU}{\9043\160}%* U+2370
 19402 % U+2393 DIRECT CURRENT SYMBOL FORM TWO; \Beam (marvosym)
 19403 \DeclareTextCommand{\textBeam}{PU}{\9043\223}%* U+2393
 19404 % U+2394 SOFTWARE-FUNCTION SYMBOL; \hexagon (wasysym)
 19405 \DeclareTextCommand{\texthexagon}{PU}{\9043\224}%* U+2394
 19406 % U+2395 APL FUNCTIONAL SYMBOL QUAD; \APLbox (wasysym)
 19407 \DeclareTextCommand{\textAPLbox}{PU}{\9043\225}%* U+2395
 19408 % U+23ED BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19409 % \ForwardToIndex (marvosym)
 19410 \DeclareTextCommand{\textForwardToIndex}{PU}{\9043\355}%* U+23ED
 19411 % U+23EE BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTI-
 CAL BAR;
 19412 % \RewindToIndex (marvosym)
 19413 \DeclareTextCommand{\textRewindToIndex}{PU}{\9043\356}%* U+23EE

51.2.24 Control Pictures: U+2400 to U+243F

19414 % U+2422 BLANK SYMBOL
 19415 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 19416 % U+2423 OPEN BOX; blank
 19417 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

51.2.25 Optical Character Recognition: U+2440 to U+245F

19418 % U+244A OCR DOUBLE BACKSLASH; \bbslash (stmaryrd)
 19419 \DeclareTextCommand{\textbbslash}{PU}{\9044\112}%* U+244A
 19420 %* \textbbslash -> \varparalelinv (txfonts/pxfonts)

51.2.26 Enclosed Alphanumerics: U+2460 to U+24FF

19421 % U+2460 CIRCLED DIGIT ONE; onecircle
 19422 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 19423 % U+2461 CIRCLED DIGIT TWO; twocircle
 19424 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 19425 % U+2462 CIRCLED DIGIT THREE; threecircle
 19426 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 19427 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 19428 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 19429 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 19430 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 19431 % U+2465 CIRCLED DIGIT SIX; sixcircle
 19432 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 19433 % U+2466 CIRCLED DIGIT SEVEN; sevendcircle
 19434 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 19435 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 19436 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 19437 % U+2468 CIRCLED DIGIT NINE; ninecircle
 19438 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 19439 % U+2469 CIRCLED NUMBER TEN; tencircle
 19440 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 19441 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 19442 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 19443 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 19444 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 19445 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 19446 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 19447 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle

19448 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
19449 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
19450 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
19451 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
19452 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
19453 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
19454 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
19455 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
19456 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
19457 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
19458 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
19459 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
19460 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
19461 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
19462 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
19463 % \CircledA (marvosym)
19464 \DeclareTextCommand{\textCircledA}{PU}{\9044\266}%* U+24B6
19465 %* \textCircledA -> \CleaningA
19466 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
19467 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
19468 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
19469 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
19470 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
19471 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
19472 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
19473 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
19474 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
19475 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
19476 % \CleaningF (marvosym)
19477 \DeclareTextCommand{\textCleaningF}{PU}{\9044\273}%* U+24BB
19478 % \CleaningFF (marvosym)
19479 \DeclareTextCommand{\textCleaningFF}{PU}{\9044\273\83\062}%* U+24BB U+0332
19480 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
19481 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
19482 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
19483 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
19484 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
19485 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
19486 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
19487 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
19488 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
19489 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
19490 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
19491 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
19492 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
19493 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
19494 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
19495 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
19496 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
19497 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
19498 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
19499 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
19500 % \CleaningP (marvosym)
19501 \DeclareTextCommand{\textCleaningP}{PU}{\9044\305}%* U+24C5
19502 % \CleaningPP (marvosym)
19503 \DeclareTextCommand{\textCleaningPP}{PU}{\9044\305\83\062}%* U+24C5 U+0332
19504 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle

19505 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 19506 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 19507 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 19508 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 19509 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 19510 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 19511 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 19512 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 19513 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 19514 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 19515 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 19516 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 19517 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 19518 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 19519 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 19520 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 19521 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 19522 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 19523 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 19524 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 19525 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 19526 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 19527 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 19528 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 19529 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 19530 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 19531 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 19532 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 19533 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 19534 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 19535 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 19536 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 19537 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 19538 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 19539 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 19540 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 19541 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 19542 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 19543 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 19544 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 19545 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 19546 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 19547 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 19548 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 19549 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 19550 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 19551 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 19552 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 19553 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 19554 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 19555 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 19556 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 19557 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 19558 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 19559 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 19560 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 19561 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2

19562 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 19563 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 19564 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 19565 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 19566 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 19567 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 19568 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 19569 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 19570 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 19571 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 19572 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 19573 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 19574 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 19575 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 19576 % U+24EA CIRCLED DIGIT ZERO
 19577 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

51.2.27 Box Drawing: U+2500 to 257F

19578 % U+2504 BOX DRAWINGS LIGHT TRIPLE DASH HORIZONTAL; \Cutting-
 Line (marvosym)
 19579 \DeclareTextCommand{\textCuttingLine}{PU}{\9045\004}%* U+2504
 19580 %* \textCuttingLine -> \Kutline (marvosym)
 19581 %* \textCuttingLine -> \CutLine (marvosym)
 19582 %* \textCuttingLine -> \Cutline (marvosym)

51.2.28 Geometric Shapes: U+25A0 to U+25FF

19583 % U+25B2 BLACK UP-POINTING TRIANGLE; \UParrow (wasysym)
 19584 \DeclareTextCommand{\textUParrow}{PU}{\9045\262}%* U+25B2
 19585 %* \textUParrow -> \MoveUp (marvosym)
 19586 % U+25B3 WHITE UP-POINTING TRIANGLE; whiteuppointingtriangle;
 19587 % \bigtriangleup (LaTeX)
 19588 \DeclareTextCommand{\textbigtriangleup}{PU}{\9045\263}%* U+25B3
 19589 %* \textbigtriangleup -> \APLup (wasysym)
 19590 %* \textbigtriangleup -> \Bleech (marvosym)
 19591 % U+25B6 BLACK RIGHT-POINTING TRIANGLE; \Forward (marvosym)
 19592 \DeclareTextCommand{\textForward}{PU}{\9045\266}%* U+25B6
 19593 % U+25B7 WHITE RIGHT-POINTING TRIANGLE (= z notation range restric-
 tion);
 19594 % whiterightpointingtriangle; \triangleright (LaTeX)
 19595 \DeclareTextCommand{\texttriangleright}{PU}{\9045\267}%* U+25B7
 19596 % U+25BA BLACK RIGHT-POINTING POINTER; \RHD (wasysym)
 19597 \DeclareTextCommand{\textRHD}{PU}{\9045\272}%* U+25BA
 19598 % U+25BC BLACK DOWN-POINTING TRIANGLE; \DOWNarrow (wasysym)
 19599 \DeclareTextCommand{\textDOWNarrow}{PU}{\9045\274}%* U+25BC
 19600 %* \textDOWNarrow -> \MoveDown (marvosym)
 19601 % U+25BD WHITE DOWN-POINTING TRIANGLE; whitedownpointingtri-
 angle;
 19602 % \bigtriangledown (LaTeX)
 19603 \DeclareTextCommand{\textbigtriangledown}{PU}{\9045\275}%* U+25BD
 19604 %* \textbigtriangledown -> \APLdown (wasysym)
 19605 % U+25C0 BLACK LEFT-POINTING TRIANGLE; \Rewind (marvosym)
 19606 \DeclareTextCommand{\textRewind}{PU}{\9045\300}%* U+25C0
 19607 % U+25C1 WHITE RIGHT-POINTING TRIANGLE (= z notation domain re-
 striction);
 19608 % whiteleftpointingtriangle; \triangleleft (LaTeX)
 19609 \DeclareTextCommand{\texttriangleleft}{PU}{\9045\301}%* U+25C1
 19610 % U+25C4 BLACK LEFT-POINTING POINTER; \LHD (wasysym)

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19611 \DeclareTextCommand{\textLHD}{PU}{\9045\304}%* U+25C4
19612 % U+25C7 WHITE DIAMOND; whitediamond; \diamond (LaTeX)
19613 \DeclareTextCommand{\textdiamond}{PU}{\9045\307}%* U+25C7
19614 %* \textdiamond -> \Diamond (wasysym)
19615 % U+25CA LOZENGE; lozenge; \lozenge (AmS)
19616 \DeclareTextCommand{\textlozenge}{PU}{\9045\312}%* U+25CA
19617 % U+25D6 LEFT HALF BLACK CIRCLE; \LEFTCIRCLE (wasysym)
19618 \DeclareTextCommand{\textLEFTCIRCLE}{PU}{\9045\326}%* U+25D6
19619 % U+25D7 RIGHT HALF BLACK CIRCLE; \RIGHTCIRCLE (wasysym)
19620 \DeclareTextCommand{\textRIGHTCIRCLE}{PU}{\9045\327}%* U+25D7
19621 % U+25E6 WHITE BULLET; *openbullet, whitebullet
19622 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}%* U+25E6
19623 % U+25EB WHITE SQUARE WITH VERTICAL BISECTING LINE;
19624 % \boxbar (stmaryrd)
19625 \DeclareTextCommand{\textboxbar}{PU}{\9045\353}%* U+25EB
19626 % U+25EF LARGE CIRCLE; largecircle
19627 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}%* U+25EF
19628 %* \textbigcircle -> \varbigcirc (stmaryrd)
19629 %

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51.2.29 Miscellaneous Symbols: U+2600 to U+26FF

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19630 % U+2601 CLOUD; \Cloud (ifsym)
19631 \DeclareTextCommand{\textCloud}{PU}{\9046\001}%* U+2601
19632 % U+2605 BLACK STAR; \FiveStar (bbding)
19633 \DeclareTextCommand{\textFiveStar}{PU}{\9046\005}%* U+2605
19634 % U+2606 WHITE STAR; \FiveStarOpen (bbding)
19635 \DeclareTextCommand{\textFiveStarOpen}{PU}{\9046\006}%* U+2606
19636 % U+260E BLACK TELEPHONE; telephoneblack; \Phone (bbding)
19637 \DeclareTextCommand{\textPhone}{PU}{\9046\016}%* U+260E
19638 %* \textPhone -> \Telefon (marvosym)
19639 % U+2610 BALLOT BOX; \boxempty (stmaryrd)
19640 \DeclareTextCommand{\textboxempty}{PU}{\9046\020}%* U+2610
19641 %* \textboxempty -> \Box (wasysym)
19642 % U+2611 BALLOT BOX WITH CHECK; \Checkedbox (marvosym)
19643 \DeclareTextCommand{\textCheckedbox}{PU}{\9046\021}%* U+2611
19644 %* \textCheckedbox -> \CheckedBox (marvosym)
19645 % U+2612 BALLOT BOX WITH X; \Crossedbox (marvosym)
19646 \DeclareTextCommand{\textCrossedbox}{PU}{\9046\022}%* U+2612
19647 %* \textCrossedbox -> \XBox (wasysym)
19648 %* \textCrossedbox -> \CrossedBox (marvosym)
19649 % U+2615 HOT BEVERAGE; \Coffeecup (marvosym)
19650 \DeclareTextCommand{\textCoffeecup}{PU}{\9046\025}%* U+2615
19651 % U+261A BLACK LEFT POINTING INDEX; \HandCuffLeft (bbding)
19652 \DeclareTextCommand{\textHandCuffLeft}{PU}{\9046\032}%* U+261A
19653 % U+261B BLACK RIGHT POINTING INDEX; \HandCuffRight (bbding)
19654 \DeclareTextCommand{\textHandCuffRight}{PU}{\9046\033}%* U+261B
19655 % U+261C WHITE LEFT POINTING INDEX; \HandLeft (bbding)
19656 \DeclareTextCommand{\textHandLeft}{PU}{\9046\034}%* U+261C
19657 %* \textHandLeft -> \rightpointleft (fourier)
19658 % U+261E WHITE RIGHT POINTING INDEX; \HandRight (bbding)
19659 \DeclareTextCommand{\textHandRight}{PU}{\9046\036}%* U+261E
19660 %* \textHandRight -> \leftpointright (fourier)
19661 %* \textHandRight -> \PointingHand (marvosym)
19662 %* \textHandRight -> \Pointinghand (marvosym)
19663 % U+2622 RADIOACTIVE SIGN; \Radioactivity (marvosym)
19664 \DeclareTextCommand{\textRadioactivity}{PU}{\9046\042}%* U+2622
19665 %* \textRadioactivity -> \Radiation (ifsym)

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19666 % U+2623 BIOHAZARD SIGN; \Biohazard (marvosym)
19667 \DeclareTextCommand{\textBiohazard}{PU}{\9046\043}%* U+2623
19668 % U+2625 ANKH; \Ankh (marvosym)
19669 \DeclareTextCommand{\textAnkh}{PU}{\9046\045}%* U+2625
19670 % U+262F YIN YANG; \YinYang (marvosym)
19671 \DeclareTextCommand{\textYinYang}{PU}{\9046\057}%* U+262F
19672 %* \textYinYang -> \Yinyang (marvosym)
19673 %* \textYinYang -> \YingYang (marvosym)
19674 %* \textYinYang -> \Yingyang (marvosym)
19675 % U+2639 WHITE FROWNING FACE; \frownie (wasysym)
19676 \DeclareTextCommand{\textfrownie}{PU}{\9046\071}%* U+2639
19677 %* \textfrownie -> \Frowny (marvosym)
19678 % U+263A WHITE SMILING FACE; \smiley (wasysym)
19679 \DeclareTextCommand{\textsmiley}{PU}{\9046\072}%* U+263A
19680 %* \textsmiley -> \Smiley (marvosym)
19681 % U+263B BLACK SMILING FACE; \blacksmiley (wasysym)
19682 \DeclareTextCommand{\textblacksmiley}{PU}{\9046\073}%* U+263B
19683 % U+263C WHITE SUN WITH RAYS; \sun (wasysym)
19684 \DeclareTextCommand{\textsun}{PU}{\9046\074}%* U+263C
19685 %* \textsun -> \Sun (marvosym)
19686 % U+263D FIRST QUARTER MOON; \leftmoon (wasysym, mathabx)
19687 \DeclareTextCommand{\textleftmoon}{PU}{\9046\075}%* U+263D
19688 % U+263E LAST QUARTER MOON; \rightmoon (wasysym, mathabx)
19689 \DeclareTextCommand{\textrightmoon}{PU}{\9046\076}%* U+263E
19690 % U+263F MERCURY; \mercury (wasysym)
19691 \DeclareTextCommand{\textmercury}{PU}{\9046\077}%* U+263F
19692 %* \textmercury -> \Mercury (marvosym)
19693 % U+2640 FEMALE SIGN; female; \female (wasysym)
19694 \DeclareTextCommand{\textPUfemale}{PU}{\9046\100}% U+2640
19695 %* \textPUfemale -> \textfemale (tipx)
19696 %* \textPUfemale -> \female (wasysym)
19697 %* \textPUfemale -> \venus (wasysym)
19698 %* \textPUfemale -> \Venus (marvosym)
19699 %* \textPUfemale -> \Female (marvosym)
19700 % U+2641 EARTH; \earth (wasysym)
19701 \DeclareTextCommand{\textearth}{PU}{\9046\101}%* U+2641
19702 %* \textearth -> \Earth (marvosym)
19703 % U+2642 MALE SIGN; male, mars; \male (wasysym)
19704 \DeclareTextCommand{\textmale}{PU}{\9046\102}%* U+2642
19705 %* \textmale -> \mars (wasysym)
19706 %* \textmale -> \Mars (marvosym)
19707 %* \textmale -> \Male (marvosym)
19708 % U+2643 JUPITER; \jupiter (wasysym)
19709 \DeclareTextCommand{\textjupiter}{PU}{\9046\103}%* U+2643
19710 %* \textjupiter -> \Jupiter (marvosym)
19711 % U+2644 SATURN; \saturn (wasysym)
19712 \DeclareTextCommand{\textsaturn}{PU}{\9046\104}%* U+2644
19713 %* \textsaturn -> \Saturn (marvosym)
19714 % U+2645 URANUS; \uranus (wasysym)
19715 \DeclareTextCommand{\texturanus}{PU}{\9046\105}%* U+2645
19716 %* \texturanus -> \Uranus (marvosym)
19717 % U+2646 NEPTUNE; \neptune (wasysym)
19718 \DeclareTextCommand{\textneptune}{PU}{\9046\106}%* U+2646
19719 %* \textneptune -> \Neptune (marvosym)
19720 % U+2647 PLUTO; \pluto (wasysym)
19721 \DeclareTextCommand{\textpluto}{PU}{\9046\107}%* U+2647
19722 %* \textpluto -> \Pluto (marvosym)

19723 % U+2648 ARIES; \aries (wasysym)
 19724 \DeclareTextCommand{\textaries}{PU}{\9046\110}%* U+2648
 19725 %* \textaries -> \Aries (marvosym)
 19726 % U+2649 TAURUS; \taurus (wasysym)
 19727 \DeclareTextCommand{\texttaurus}{PU}{\9046\111}%* U+2649
 19728 %* \texttaurus -> \Taurus (marvosym)
 19729 % U+264A GEMINI; \gemini (wasysym)
 19730 \DeclareTextCommand{\textgemini}{PU}{\9046\112}%* U+264A
 19731 %* \textgemini -> \Gemini (marvosym)
 19732 % U+264B CANCER; \cancer (wasysym)
 19733 \DeclareTextCommand{\textcancer}{PU}{\9046\113}%* U+264B
 19734 %* \textcancer -> \Cancer (marvosym)
 19735 % U+264C LEO; \leo (wasysym)
 19736 \DeclareTextCommand{\textleo}{PU}{\9046\114}%* U+264C
 19737 %* \textleo -> \Leo (marvosym)
 19738 % U+264D VIRGO; \virgo (wasysym)
 19739 \DeclareTextCommand{\textvirgo}{PU}{\9046\115}%* U+264D
 19740 %* \textvirgo -> \Virgo (marvosym)
 19741 % U+264E LIBRA; \libra (wasysym)
 19742 \DeclareTextCommand{\textlibra}{PU}{\9046\116}%* U+264E
 19743 %* \textlibra -> \Libra (marvosym)
 19744 % U+264F SCORPIO; \scorpio (wasysym)
 19745 \DeclareTextCommand{\textscorpio}{PU}{\9046\117}%* U+264F
 19746 %* \textscorpio -> \Scorpio (marvosym)
 19747 % U+2650 SAGITTARIUS; \sagittarius (wasysym)
 19748 \DeclareTextCommand{\textsagittarius}{PU}{\9046\120}%* U+2650
 19749 %* \textsagittarius -> \Sagittarius (marvosym)
 19750 % U+2651 CAPRICORN; \capricornus (wasysym)
 19751 \DeclareTextCommand{\textcapricornus}{PU}{\9046\121}%* U+2651
 19752 %* \textcapricornus -> \Capricorn (marvosym)
 19753 % U+2652 AQUARIUS; \aquarius (wasysym)
 19754 \DeclareTextCommand{\textaquarius}{PU}{\9046\122}%* U+2652
 19755 %* \textaquarius -> \Aquarius (marvosym)
 19756 % U+2653 PISCES; \pisces (wasysym)
 19757 \DeclareTextCommand{\textpisces}{PU}{\9046\123}%* U+2653
 19758 %* \textpisces -> \Pisces (marvosym)
 19759 % U+2660 BLACK SPADE SUIT; spade, spadesuitblack; \spadesuit (LaTeX)
 19760 \DeclareTextCommand{\textspadesuitblack}{PU}{\9046\140}% U+2660
 19761 %* \textspadesuitblack -> \spadesuit (MnSymbol)
 19762 % U+2661 WHITE HEART SUIT; heartsuitwhite; \heartsuit (LaTeX)
 19763 \DeclareTextCommand{\textheartsuitwhite}{PU}{\9046\141}% U+2661
 19764 %* \textheartsuitwhite -> \Heart (marvosym)
 19765 %* \textheartsuitwhite -> \heartsuit (MnSymbol)
 19766 % U+2662 WHITE DIAMOND SUIT; diamondsuitwhite; \diamondsuit (LaTeX)
 19767 \DeclareTextCommand{\textdiamondsuitwhite}{PU}{\9046\142}% U+2662
 19768 %* \textdiamondsuitwhite -> \diamondsuit (MnSymbol)
 19769 % U+2663 BLACK CLUB SUIT; club, clubsuitblack; \clubsuit (LaTeX)
 19770 \DeclareTextCommand{\textclubsuitblack}{PU}{\9046\143}% U+2663
 19771 %* \textclubsuitblack -> \clubsuit (MnSymbol)
 19772 % U+2664 WHITE SPADE SUIT; spadesuitwhite
 19773 \DeclareTextCommand{\textspadesuitwhite}{PU}{\9046\144}% U+2664
 19774 % U+2665 BLACK HEART SUIT; heartsuitblack, heart
 19775 \DeclareTextCommand{\textheartsuitblack}{PU}{\9046\145}% U+2665
 19776 % U+2666 BLACK DIAMOND SUIT; diamond
 19777 \DeclareTextCommand{\textdiamondsuitblack}{PU}{\9046\146}% U+2666
 19778 % U+2667 WHITE CLUB SUIT; clubsuitwhite
 19779 \DeclareTextCommand{\textclubsuitwhite}{PU}{\9046\147}% U+2667

19780 % U+2669 QUARTER NOTE; quarternote; \quarternote (wasysym, arev)
 19781 \DeclareTextCommand{\textquarternote}{PU}{\9046\151}%* U+2669
 19782 % U+266A EIGHTH NOTE; musicalnote; \textmusicalnote (textcomp)
 19783 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 19784 %* \textmusicalnote -> \eighthnote (wasysym, arev)
 19785 % U+266B BEAMED EIGHTH NOTES; eighthnotebeamed; \twonotes (wasysym)
 19786 \DeclareTextCommand{\texttwonotes}{PU}{\9046\153}%* U+266B
 19787 % U+266C BEAMED SIXTEENTH NOTES; beamedsixteenthnotes; \sixteenth-
 note (arev)
 19788 \DeclareTextCommand{\textsixteenthnote}{PU}{\9046\154}%* U+266C
 19789 % U+266D MUSIC FLAT SIGN; musicflatsign; \flat (LaTeX)
 19790 \DeclareTextCommand{\textflat}{PU}{\9046\155}%* U+266D
 19791 % U+266E MUSIC NATURAL SIGN; \natural (LaTeX)
 19792 \DeclareTextCommand{\textnatural}{PU}{\9046\156}%* U+266E
 19793 % U+266F MUSIC SHARP SIGN; musicsharpsign; \sharp (LaTeX)
 19794 \DeclareTextCommand{\textsharp}{PU}{\9046\157}%* U+266F
 19795 % U+2672 UNIVERSAL RECYCLING SYMBOL; \recycle (recycle)
 19796 \DeclareTextCommand{\textrecycle}{PU}{\9046\162}%* U+2672
 19797 %* \textrecycle -> \Recycling (marvosym)
 19798 % U+267F WHEELCHAIR SYMBOL; \Wheelchair (marvosym)
 19799 \DeclareTextCommand{\textWheelchair}{PU}{\9046\177}%* U+267F
 19800 % U+2691 BLACK FLAG; \Flag (ifsym)
 19801 \DeclareTextCommand{\textFlag}{PU}{\9046\221}%* U+2691
 19802 %* \textFlag -> \VarFlag (ifsym)
 19803 % U+2692 HAMMER AND PICK; \MineSign (marvosym)
 19804 \DeclareTextCommand{\textMineSign}{PU}{\9046\222}%* U+2692
 19805 % U+2694 CROSSED SWORDS; \dsmilitary (dictsym)
 19806 \DeclareTextCommand{\textdsmilitary}{PU}{\9046\224}%* U+2694
 19807 %* \textdsmilitary -> \textxswup (fourier)
 19808 % U+2695 STAFF OF AESCULAPIUS; \dsmedical (dictsym)
 19809 \DeclareTextCommand{\textdsmedical}{PU}{\9046\225}%* U+2695
 19810 % U+2696 SCALES; \dsjuridical (dictsym)
 19811 \DeclareTextCommand{\textdsjuridical}{PU}{\9046\226}%* U+2696
 19812 % U+2697 ALEMBIC; \dschemical (dictsym)
 19813 \DeclareTextCommand{\textdschemical}{PU}{\9046\227}%* U+2697
 19814 % U+2698 FLOWER; \dsbiological (dictsym)
 19815 \DeclareTextCommand{\textdsbiological}{PU}{\9046\230}%* U+2698
 19816 % U+269A STAFF OF HERMES; \dscommercial (dictsym)
 19817 \DeclareTextCommand{\textdscommercial}{PU}{\9046\232}%* U+269A
 19818 % U+269D OUTLINED WHITE STAR; \manstar (manfnt)
 19819 \DeclareTextCommand{\textmanstar}{PU}{\9046\235}%* U+269D
 19820 % U+26A0 WARNING SIGN; \danger (fourier)
 19821 \DeclareTextCommand{\textdanger}{PU}{\9046\240}%* U+26A0
 19822 % U+26A2 DOUBLED FEMALE SIGN; \FemaleFemale (marvosym)
 19823 \DeclareTextCommand{\textFemaleFemale}{PU}{\9046\242}%* U+26A2
 19824 % U+26A3 DOUBLED MALE SIGN; \MaleMale (marvosym)
 19825 \DeclareTextCommand{\textMaleMale}{PU}{\9046\243}%* U+26A3
 19826 % U+26A4 INTERLOCKED FEMALE AND MALE SIGN; \FemaleMale (mar-
 vosym)
 19827 \DeclareTextCommand{\textFemaleMale}{PU}{\9046\244}%* U+26A4
 19828 % U+26A5 MALE AND FEMALE SIGN; \Hermaphrodite (marvosym)
 19829 \DeclareTextCommand{\textHermaphrodite}{PU}{\9046\245}%* U+26A5
 19830 % U+26AA MEDIUM WHITE CIRCLE; \Neural (marvosym)
 19831 \DeclareTextCommand{\textNeutral}{PU}{\9046\252}%* U+26AA
 19832 % U+26AD MARRIAGE SYMBOL
 19833 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 19834 % U+26AE DIVORCE SYMBOL

19835 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
 19836 % U+26B2 NEUTER; \textunconfemale (tipx)
 19837 \DeclareTextCommand{\textPUunconfemale}{PU}{\9046\262}% U+26B2
 19838 %* \textPUunconfemale -> \textunconfemale (tipx)
 19839 % U+26B9 SEXTILE; \hexstar (wasysym)
 19840 \DeclareTextCommand{\texthexstar}{PU}{\9046\271}%* U+26B9
 19841 % U+26BD SOCCER BALL; \Football (marvosym)
 19842 \DeclareTextCommand{\textSoccerBall}{PU}{\9046\275}% U+26BD
 19843 %* \textSoccerBall -> \Football (marvosym)
 19844 % U+26C5 SUN BEHIND CLOUD; \SunCloud (ifsym)
 19845 \DeclareTextCommand{\textSunCloud}{PU}{\9046\305}%* U+26C5
 19846 % U+26C6 RAIN; \Rain (ifsym)
 19847 \DeclareTextCommand{\textRain}{PU}{\9046\306}%* U+26C6
 19848 % U+26D4 NO ENTRY; \noway (fourier)
 19849 \DeclareTextCommand{\textnoway}{PU}{\9046\324}%* U+26D4
 19850 % U+26F0 MOUNTAIN; \Mountain (ifsym)
 19851 \DeclareTextCommand{\textMountain}{PU}{\9046\360}%* U+26F0
 19852 % U+26FA TENT; \Tent (ifsym)
 19853 \DeclareTextCommand{\textTent}{PU}{\9046\372}%* U+26FA

51.2.30 Dingbats: U+2700 to U+27BF

19854 % U+2701 UPPER BLADE SCISSORS; \ScissorRightBrokenBottom (bding)
 19855 \DeclareTextCommand{\textScissorRightBrokenBottom}{PU}{\9047\001}% U+2701
 19856 %* \textScissorRightBrokenBottom -> \CutLeft (marvosym)
 19857 %* \textScissorRightBrokenBottom -> \Cutright (marvosym)
 19858 % U+2702 BLACK SCISSORS; \ScissorRight (bding)
 19859 \DeclareTextCommand{\textScissorRight}{PU}{\9047\002}%* U+2702
 19860 %* \textScissorRight -> \RightScissors (marvosym)
 19861 %* \textScissorRight -> \Leftscissors (marvosym)
 19862 % U+2703 LOWER BLADE SCISSORS; \ScissorRightBrokenTop (bding)
 19863 \DeclareTextCommand{\textScissorRightBrokenTop}{PU}{\9047\003}%* U+2703
 19864 % U+2704 WHITE SCISSORS; \ScissorHollowRight (bding)
 19865 \DeclareTextCommand{\textScissorHollowRight}{PU}{\9047\004}%* U+2704
 19866 % U+2706 TELEPHONE LOCATION SIGN; \PhoneHandset (bding)
 19867 \DeclareTextCommand{\textPhoneHandset}{PU}{\9047\006}%* U+2706
 19868 % U+2707 TAPE DRIVE; \Tape (bding)
 19869 \DeclareTextCommand{\textTape}{PU}{\9047\007}%* U+2707
 19870 % U+2708 AIRPLANE; \Plane (bding)
 19871 \DeclareTextCommand{\textPlane}{PU}{\9047\010}%* U+2708
 19872 % U+2709 ENVELOPE; \Envelope (bding),
 19873 \DeclareTextCommand{\textEnvelope}{PU}{\9047\011}%* U+2709
 19874 %* \textEnvelope -> \Letter (marvosym)
 19875 % U+270C VICTORY HAND; \Peace (bding)
 19876 \DeclareTextCommand{\textPeace}{PU}{\9047\014}%* U+270C
 19877 % U+270D WRITING HAND; \WritingHand (marvosym)
 19878 \DeclareTextCommand{\textWritingHand}{PU}{\9047\015}%* U+270D
 19879 %* \textWritingHand -> \Writinghand (marvosym)
 19880 % U+270E LOWER RIGHT PENCIL; \PencilRightDown (bding)
 19881 \DeclareTextCommand{\textPencilRightDown}{PU}{\9047\016}%* U+270E
 19882 % U+270F PENCIL; \PencilRight (bding)
 19883 \DeclareTextCommand{\textPencilRight}{PU}{\9047\017}%* U+270F
 19884 % U+2710 UPPER RIGHT PENCIL; \PencilRightUp (bding)
 19885 \DeclareTextCommand{\textPencilRightUp}{PU}{\9047\020}%* U+2710
 19886 % U+2711 WHITE NIB; \NibRight (bding)
 19887 \DeclareTextCommand{\textNibRight}{PU}{\9047\021}%* U+2711
 19888 % U+2712 BLACK NIB; \NibSolidRight (bding)
 19889 \DeclareTextCommand{\textNibSolidRight}{PU}{\9047\022}%* U+2712

19890 % U+2713 CHECK MARK; checkmark; \Checkmark (bding)
 19891 \DeclareTextCommand{\textCheckmark}{PU}{\9047\023}%* U+2713
 19892 %* \textCheckmark -> \checkmark (MnSymbol)
 19893 % U+2714 HEAVY CHECK MARK; \CheckmarkBold (bding)
 19894 \DeclareTextCommand{\textCheckmarkBold}{PU}{\9047\024}%* U+2714
 19895 % U+2715 MULTIPLICATION X; \XSolid (bding)
 19896 \DeclareTextCommand{\textXSolid}{PU}{\9047\025}%* U+2715
 19897 % U+2716 HEAVY MULTIPLICATION X; \XSolidBold (bding)
 19898 \DeclareTextCommand{\textXSolidBold}{PU}{\9047\026}%* U+2716
 19899 % U+2717 BALLOT X; \XSolidBrush (bding)
 19900 \DeclareTextCommand{\textXSolidBrush}{PU}{\9047\027}%* U+2717
 19901 % U+2719 OUTLINED GREEK CROSS; \PlusOutline (bding)
 19902 \DeclareTextCommand{\textPlusOutline}{PU}{\9047\031}%* U+2719
 19903 % U+271A HEAVY GREEK CROSS; \Plus (bding)
 19904 \DeclareTextCommand{\textPlus}{PU}{\9047\032}%* U+271A
 19905 % U+271B OPEN CENTRE CROSS; \PlusThinCenterOpen (bding)
 19906 \DeclareTextCommand{\textPlusThinCenterOpen}{PU}{\9047\033}%* U+271B
 19907 % U+271C HEAVY OPEN CENTRE CROSS; \PlusCenterOpen (bding)
 19908 \DeclareTextCommand{\textPlusCenterOpen}{PU}{\9047\034}%* U+271C
 19909 % U+271D LATIN CROSS; \Cross (bding)
 19910 \DeclareTextCommand{\textCross}{PU}{\9047\035}%* U+271D
 19911 % U+271E SHADOWED WHITE LATIN CROSS; \CrossOpenShadow (bding)
 19912 \DeclareTextCommand{\textCrossOpenShadow}{PU}{\9047\036}%* U+271E
 19913 % U+271F OUTLINED LATIN CROSS; \CrossOutline (bding)
 19914 \DeclareTextCommand{\textCrossOutline}{PU}{\9047\037}%* U+271F
 19915 % U+2720 MALTESE CROSS; \CrossMaltese (bding)
 19916 \DeclareTextCommand{\textCrossMaltese}{PU}{\9047\040}%* U+2720
 19917 % U+2721 STAR OF DAVID; \DavidStar (bding)
 19918 \DeclareTextCommand{\textDavidStar}{PU}{\9047\041}%* U+2721
 19919 %* \textDavidStar -> \davidstar (wasysym)
 19920 % U+2722 FOUR TEARDROP-SPOKED ASTERISK; \FourAsterisk (bding)
 19921 \DeclareTextCommand{\textFourAsterisk}{PU}{\9047\042}%* U+2722
 19922 % U+2723 FOUR BALLOON-SPOKED ASTERISK; \JackStar (bding)
 19923 \DeclareTextCommand{\textJackStar}{PU}{\9047\043}%* U+2723
 19924 % U+2724 HEAVY FOUR BALLOON-SPOKED ASTERISK; \JackStarBold (bding)
 19925 \DeclareTextCommand{\textJackStarBold}{PU}{\9047\044}%* U+2724
 19926 % U+2725 FOUR CLUB-SPOKED ASTERISK; \CrossClowerTips (bding)
 19927 \DeclareTextCommand{\textClowerTips}{PU}{\9047\045}%* U+2725
 19928 % U+2726 BLACK FOUR POINTED STAR; \FourStar (bding)
 19929 \DeclareTextCommand{\textFourStar}{PU}{\9047\046}%* U+2726
 19930 % U+2727 WHITE FOUR POINTED STAR; \FourStarOpen (bding)
 19931 \DeclareTextCommand{\textFourStarOpen}{PU}{\9047\047}%* U+2727
 19932 % U+272A CIRCLED WHITE STAR; \FiveStarOpenCircled (bding)
 19933 \DeclareTextCommand{\textFiveStarOpenCircled}{PU}{\9047\052}%* U+272A
 19934 % U+272B OPEN CENTRE BLACK STAR; \FiveStarCenterOpen (bding)
 19935 \DeclareTextCommand{\textFiveStarCenterOpen}{PU}{\9047\053}%* U+272B
 19936 % U+272C BLACK CENTRE WHITE STAR; \FiveStarOpenDotted (bding)
 19937 \DeclareTextCommand{\textFiveStarOpenDotted}{PU}{\9047\054}%* U+272C
 19938 % U+272D OUTLINED BLACK STAR; \FiveStarOutline (bding)
 19939 \DeclareTextCommand{\textFiveStarOutline}{PU}{\9047\055}%* U+272D
 19940 % U+272E HEAVY OUTLINED BLACK STAR; \FiveStarOutlineHeavy (bding)
 19941 \DeclareTextCommand{\textFiveStarOutlineHeavy}{PU}{\9047\056}%* U+272E
 19942 % U+272F PINWHEEL STAR; \FiveStarConvex (bding)
 19943 \DeclareTextCommand{\textFiveStarConvex}{PU}{\9047\057}%* U+272F
 19944 % U+2730 SHADOWED WHITE STAR; \FiveStarShadow (bding)
 19945 \DeclareTextCommand{\textFiveStarShadow}{PU}{\9047\060}%* U+2730

19946 % U+2731 HEAVY ASTERISK; \AsteriskBold (bding)
 19947 \DeclareTextCommand{\textAsteriskBold}{PU}{\9047\061}%* U+2731
 19948 % U+2732 OPEN CENTRE ASTERISK; \AsteriskCenterOpen (bding)
 19949 \DeclareTextCommand{\textAsteriskCenterOpen}{PU}{\9047\062}%* U+2732
 19950 % U+2734 EIGHT POINTED BLACK STAR; \EightStarTaper (bding)
 19951 \DeclareTextCommand{\textEightStarTaper}{PU}{\9047\064}%* U+2734
 19952 % U+2735 EIGHT POINTED PINWHEEL STAR; \EightStarConvex (bding)
 19953 \DeclareTextCommand{\textEightStarConvex}{PU}{\9047\065}%* U+2735
 19954 % U+2736 SIX POINTED BLACK STAR; \SixStar (bding)
 19955 \DeclareTextCommand{\textSixStar}{PU}{\9047\066}%* U+2736
 19956 % U+2737 EIGHT POINTED RECTILINEAR BLACK STAR; \EightStar (bding)
 19957 \DeclareTextCommand{\textEightStar}{PU}{\9047\067}%* U+2737
 19958 % U+2738 HEAVY EIGHT POINTED RECTILINEAR BLACK STAR; \EightStarBold (bding)
 19959 \DeclareTextCommand{\textEightStarBold}{PU}{\9047\070}%* U+2738
 19960 % U+2739 TWELVE POINTED BLACK STAR; \TwelveStar (bding)
 19961 \DeclareTextCommand{\textTwelveStar}{PU}{\9047\071}%* U+2739
 19962 % U+273A SIXTEEN POINTED ASTERISK; \SixteenStarLight (bding)
 19963 \DeclareTextCommand{\textSixteenStarLight}{PU}{\9047\072}%* U+273A
 19964 % U+273B TEARDROP-SPOKED ASTERISK; \SixFlowerPetalRemoved (bding)
 19965 \DeclareTextCommand{\textSixFlowerPetalRemoved}{PU}{\9047\073}%* U+273B
 19966 % U+273C OPEN CENTRE TEARDROP-SPOKED ASTERISK;
 19967 % \SixFlowerOpenCenter (bding)
 19968 \DeclareTextCommand{\textSixFlowerOpenCenter}{PU}{\9047\074}%* U+273C
 19969 % U+273D HEAVY TEARDROP-SPOKED ASTERISK; \Asterisk (bding)
 19970 \DeclareTextCommand{\textAsterisk}{PU}{\9047\075}%* U+273D
 19971 % U+273E SIX PETALLED BLACK AND WHITE FLORETTE; \SixFlowerAlternate (bding)
 19972 \DeclareTextCommand{\textSixFlowerAlternate}{PU}{\9047\076}%* U+273E
 19973 % U+273F BLACK FLORETTE; \FiveFlowerPetal (bding)
 19974 \DeclareTextCommand{\textFiveFlowerPetal}{PU}{\9047\077}%* U+273F
 19975 % U+2740 WHITE FLORETTE; \FiveFlowerOpen (bding)
 19976 \DeclareTextCommand{\textFiveFlowerOpen}{PU}{\9047\100}%* U+2740
 19977 % U+2741 EIGHT PETALLED OUTLINED BLACK FLORETTE; \EightFlowerPetal (bding)
 19978 \DeclareTextCommand{\textEightFlowerPetal}{PU}{\9047\101}%* U+2741
 19979 % U+2742 CIRCLED OPEN CENTRE EIGHT POINTED STAR; \SunshineOpenCircled (bding)
 19980 \DeclareTextCommand{\textSunshineOpenCircled}{PU}{\9047\102}%* U+2742
 19981 % U+2743 HEAVY TEARDROP-SPOKED PINWHEEL ASTERISK; \SixFlowerAltPetal (bding)
 19982 \DeclareTextCommand{\textSixFlowerAltPetal}{PU}{\9047\103}%* U+2743
 19983 % U+2744 SNOWFLAKE; \SnowflakeChevron (bding)
 19984 \DeclareTextCommand{\textSnowflakeChevron}{PU}{\9047\104}%* U+2744
 19985 % U+2745 TIGHT TRIFOLIATE SNOWFLAKE; \Snowflake (bding)
 19986 \DeclareTextCommand{\textSnowflake}{PU}{\9047\105}%* U+2745
 19987 % U+2746 HEAVY CHEVRON SNOWFLAKE; \SnowflakeChevronBold (bding)
 19988 \DeclareTextCommand{\textSnowflakeChevronBold}{PU}{\9047\106}%* U+2746
 19989 % U+2747 SPARKLE; \Sparkle (bding)
 19990 \DeclareTextCommand{\textSparkle}{PU}{\9047\107}%* U+2747
 19991 % U+2748 HEAVY SPARKLE; \SparkleBold (bding)
 19992 \DeclareTextCommand{\textSparkleBold}{PU}{\9047\110}%* U+2748
 19993 % U+2749 BALLOON-SPOKED ASTERISK; \AsteriskRoundedEnds (bding)
 19994 \DeclareTextCommand{\textAsteriskRoundedEnds}{PU}{\9047\111}%* U+2749
 19995 % U+274A EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;

19996 % \EightFlowerPetalRemoved (bding)
 19997 \DeclareTextCommand{\textEightFlowerPetalRemoved}{PU}{\9047\112}%* U+274A
 19998 % U+274B HEAVY EIGHT TEARDROP-SPOKED PROPELLER ASTERISK;
 19999 % \EightAsterisk (bding)
 20000 \DeclareTextCommand{\textEightAsterisk}{PU}{\9047\113}%* U+274B
 20001 % U+274D SHADOWED WHITE CIRCLE; \CircleShadow (bding)
 20002 \DeclareTextCommand{\textCircleShadow}{PU}{\9047\115}%* U+274D
 20003 % U+274F LOWER RIGHT DROP-SHADOWED WHITE SQUARE;
 20004 % \SquareShadowBottomRight (bding)
 20005 \DeclareTextCommand{\textSquareShadowBottomRight}{PU}{\9047\117}%* U+274F
 20006 % U+2750 UPPER RIGHT DROP-SHADOWED WHITE SQUARE;
 20007 % \SquareShadowTopRight (bding)
 20008 \DeclareTextCommand{\textSquareTopRight}{PU}{\9047\120}%* U+2750
 20009 % U+2751 LOWER RIGHT SHADOWED WHITE SQUARE;
 20010 % \SquareCastShadowBottomRight (bding)
 20011 \DeclareTextCommand{\textSquareCastShadowBottomRight}{PU}{\9047\121}%* U+2751
 20012 % U+2752 UPPER RIGHT SHADOWED WHITE SQUARE;
 20013 % \SquareCastShadowTopRight (bding)
 20014 \DeclareTextCommand{\textSquareCastShadowTopRight}{PU}{\9047\122}%* U+2752
 20015 % U+2756 BLACK DIAMOND MINUS WHITE X; \OrnamentDiamandSolid (bding)
 20016 \DeclareTextCommand{\textDiamandSolid}{PU}{\9047\126}%* U+2756
 20017 % U+2758 LIGHT VERTICAL BAR; \RectangleThin (bding)
 20018 \DeclareTextCommand{\textRectangleThin}{PU}{\9047\130}%* U+2758
 20019 % U+2759 MEDIUM VERTICAL BAR; \Rectangle (bding)
 20020 \DeclareTextCommand{\textRectangle}{PU}{\9047\131}%* U+2759
 20021 % U+275A HEAVY VERTICAL BAR; \RectangleBold (bding)
 20022 \DeclareTextCommand{\textRectangleBold}{PU}{\9047\132}%* U+275A

51.2.31 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

20023 % U+27C2 PERPENDICULAR; perpendicular; \perp (LaTeX)
 20024 \DeclareTextCommand{\textperp}{PU}{\9047\302}%* U+27C2
 20025 % \notperp (mathabx)
 20026 \DeclareTextCommand{\textnotperp}{PU}{\9047\302\83\070}%* U+27C2 U+0338
 20027 % U+27C7 OR WITH DOT INSIDE; \veedot (MnSymbol)
 20028 \DeclareTextCommand{\textveedot}{PU}{\9047\307}%* U+27C7
 20029 % U+27D1 AND WITH DOT; \wedgedot (MnSymbol)
 20030 \DeclareTextCommand{\textwedgedot}{PU}{\9047\321}%* U+27D1
 20031 % U+27DC LEFT MULTIMAP; \leftspoon (MnSymbol)
 20032 \DeclareTextCommand{\textleftspoon}{PU}{\9047\334}%* U+27DC
 20033 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 20034 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}%* U+27E6
 20035 %* \textlbrackdbl -> \lbracket (stmaryrd)
 20036 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 20037 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}%* U+27E7
 20038 %* \textrbrackdbl -> \rrbracket (stmaryrd)

51.2.32 Supplemental Arrows-A: U+27F0 to U+27FF

20039 % U+27F2 ANTICLOCKWISE GAPPED CIRCLE ARROW;
 20040 % \circlearrowleft (AmS)
 20041 \DeclareTextCommand{\textcirclearrowleft}{PU}{\9047\362}%* U+27F2
 20042 % U+27F3 CLOCKWISE GAPPED CIRCLE ARROW; \circlearrowright (AmS)
 20043 \DeclareTextCommand{\textcirclearrowright}{PU}{\9047\363}%* U+27F3
 20044 % U+27F5 LONG LEFTWARDS ARROW; \longleftarrow (AmS)
 20045 \DeclareTextCommand{\textlongleftarrow}{PU}{\9047\365}%* U+27F5
 20046 % U+27F6 LONG RIGHTWARDS ARROW; \longrightarrow (AmS)
 20047 \DeclareTextCommand{\textlongrightarrow}{PU}{\9047\366}%* U+27F6

20048 % U+27F7 LONG LEFT RIGHT ARROW; \longlefttrightarrow (AmS)
 20049 \DeclareTextCommand{\textlonglefttrightarrow}{PU}{\9047\367}%* U+27F7
 20050 % U+27F8 LONG LEFTWARDS DOUBLE ARROW; \Longleftarrow (AmS)
 20051 \DeclareTextCommand{\textLongleftarrow}{PU}{\9047\370}%* U+27F8
 20052 % U+27F9 LONG RIGHTWARDS DOUBLE ARROW; \Longrightarrow (AmS)
 20053 \DeclareTextCommand{\textLongrightarrow}{PU}{\9047\371}%* U+27F9
 20054 % U+27FA LONG LEFT RIGHT DOUBLE ARROW; \Longlefttrightarrow (AmS)
 20055 \DeclareTextCommand{\textLonglefttrightarrow}{PU}{\9047\372}%* U+27FA
 20056 % U+27FC LONG RIGHTWARDS ARROW FROM BAR; \longmapsto (AmS)
 20057 \DeclareTextCommand{\textlongmapsto}{PU}{\9047\374}%* U+27FC
 20058 % U+27FD LONG LEFTWARDS DOUBLE ARROW FROM BAR; \Longmapsfrom (stmaryrd)
 20059 \DeclareTextCommand{\textLongmapsfrom}{PU}{\9047\375}%* U+27FD
 20060 % U+27FE LONG RIGHTWARDS DOUBLE ARROW FROM BAR; \Longmapsto (stmaryrd)
 20061 \DeclareTextCommand{\textLongmapsto}{PU}{\9047\376}%* U+27FE

51.2.33 Supplemental Arrows-B: U+2900 to U+297F

20062 % U+2921 NORTH WEST AND SOUTH EAST ARROW; \nwsearrow (MnSymbol)
 20063 \DeclareTextCommand{\textnwsearrow}{PU}{\9051\041}%* U+2921
 20064 % U+2922 NORTH EAST AND SOUTH WEST ARROW; \neswarrow (MnSymbol)
 20065 \DeclareTextCommand{\textneswarrow}{PU}{\9051\042}%* U+2922
 20066 % U+2923 NORTH WEST ARROW WITH HOOK; \lhooknwarrow (MnSymbol)
 20067 \DeclareTextCommand{\textlhooknwarrow}{PU}{\9051\043}%* U+2923
 20068 % U+2924 NORTH EAST ARROW WITH HOOK; \rhooknarrow (MnSymbol)
 20069 \DeclareTextCommand{\textrhooknarrow}{PU}{\9051\044}%* U+2924
 20070 % U+2925 SOUTH EAST ARROW WITH HOOK; \lhooksearrow (MnSymbol)
 20071 \DeclareTextCommand{\textlhooksearrow}{PU}{\9051\045}%* U+2925
 20072 % U+2926 SOUTH WEST ARROW WITH HOOK; \rhookswarrow (MnSymbol)
 20073 \DeclareTextCommand{\textrhookswarrow}{PU}{\9051\046}%* U+2926
 20074 % U+2933 WAVE ARROW POINTING DIRECTLY RIGHT; \leadsto (wasysym)
 20075 \DeclareTextCommand{\textleadsto}{PU}{\9051\063}%* U+2933
 20076 % U+2934 ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS;
 20077 % \rcurvearrowne (MnSymbol)
 20078 \DeclareTextCommand{\textrcurvearrowne}{PU}{\9051\064}%* U+2934
 20079 % U+2935 ARROW POINTING RIGHTWARDS THEN CURVING DOWN-
 20080 % \lcurvearrowse (MnSymbol)
 20081 \DeclareTextCommand{\textlcurvearrowse}{PU}{\9051\065}%* U+2935
 20082 % U+2936 ARROW POINTING DOWNWARDS THEN CURVING LEFT-
 20083 % \lcurvearrowsw (MnSymbol)
 20084 \DeclareTextCommand{\textlcurvearrowsw}{PU}{\9051\066}%* U+2936
 20085 % U+2937 ARROW POINTING DOWNWARDS THEN CURVING RIGHT-
 20086 % \rcurvearrowse (MnSymbol)
 20087 \DeclareTextCommand{\textrcurvearrowse}{PU}{\9051\067}%* U+2937
 20088 % U+2938 RIGHT-SIDE ARC CLOCKWISE ARROW; \lcurvearrowdown (Mn-
 20089 \DeclareTextCommand{\textlcurvearrowdown}{PU}{\9051\070}%* U+2938
 20090 %* \textlcurvearrowdown -> \RightTorque (marvosym)
 20091 %* \textlcurvearrowdown -> \Righttorque (marvosym)
 20092 % U+2939 LEFT-SIDE ARC ANTICLOCKWISE ARROW;
 20093 % \rcurvearrowdown (MnSymbol)
 20094 \DeclareTextCommand{\textrcurvearrowdown}{PU}{\9051\071}%* U+2939

20095 %* \texttrcurvearrowdown -> \LeftTorque (marvosym)
 20096 %* \texttrcurvearrowdown -> \Lefttorque (marvosym)
 20097 % U+293A TOP ARC ANTICLOCKWISE ARROW; \rcurvearrowleft (MnSymbol)
 20098 \DeclareTextCommand{\texttrcurvearrowleft}{PU}{\9051\072}%* U+293A
 20099 % U+293B BOTTOM ARC ANTICLOCKWISE ARROW;
 20100 % \rcurvearrowright (MnSymbol)
 20101 \DeclareTextCommand{\texttrcurvearrowright}{PU}{\9051\073}%* U+293B
 20102 % U+294A LEFT BARB UP RIGHT BARB DOWN HARPOON; \leftrightharpoon (mathabx)
 20103 \DeclareTextCommand{\textleftrightharpoon}{PU}{\9051\112}%* U+294A
 20104 % U+294B LEFT BARB DOWN RIGHT BARB UP HARPOON; \rightleftharpoon (mathabx)
 20105 \DeclareTextCommand{\textrightleftharpoon}{PU}{\9051\113}%* U+294B
 20106 % U+294C UP BARB RIGHT DOWN BARB LEFT HARPOON;
 20107 % \updownharpoonrightleft (MnSymbol)
 20108 \DeclareTextCommand{\textupdownharpoonrightleft}{PU}{\9051\114}%* U+294C
 20109 % U+294D UP BARB LEFT DOWN BARB RIGHT HARPOON;
 20110 % \updownharpoonleftright (MnSymbol)
 20111 \DeclareTextCommand{\textupdownharpoonleftright}{PU}{\9051\115}%* U+294D
 20112 % U+2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS
 20113 % HARPOON WITH BARB DOWN; \leftleftharpoons (mathabx)
 20114 \DeclareTextCommand{\textleftleftharpoons}{PU}{\9051\142}%* U+2962
 20115 % U+2963 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS
 20116 % HARPOON WITH BARB RIGHT; \upupharpoons (mathabx)
 20117 \DeclareTextCommand{\textupupharpoons}{PU}{\9051\143}%* U+2963
 20118 % U+2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHT-
 20119 % WARDS HARPOON
 20120 \DeclareTextCommand{\textrightharpoons}{PU}{\9051\144}%* U+2964
 20121 % U+2965 DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 20122 % WARDS HARPOON
 20123 \DeclareTextCommand{\textdownharpoons}{PU}{\9051\145}%* U+2965
 20124 % U+296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH;
 20125 % \leftbarharpoon (mathabx)
 20126 \DeclareTextCommand{\textleftbarharpoon}{PU}{\9051\152}%* U+296A
 20127 % U+296B LEFTWARDS HARPOON WITH BARB DOWN BELOW
 20128 % LONG DASH; \barleftharpoon (mathabx)
 20129 \DeclareTextCommand{\textbarleftharpoon}{PU}{\9051\153}%* U+296B
 20130 % U+296C RIGHTWARDS HARPOON WITH BARB UP ABOVE
 20131 % LONG DASH; \rightbarharpoon (mathabx)
 20132 \DeclareTextCommand{\textrightbarharpoon}{PU}{\9051\154}%* U+296C
 20133 % U+296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW
 20134 % LONG DASH; \barrightharpoon (mathabx)
 20135 \DeclareTextCommand{\textbarrightharpoon}{PU}{\9051\155}%* U+296D
 20136 % U+296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWN-
 20137 % WARDS HARPOON
 20138 \DeclareTextCommand{\textupdownharpoons}{PU}{\9051\156}%* U+296E
 20139 % U+296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UP-
 20140 % WARDS HARPOON
 20141 \DeclareTextCommand{\textdownupharpoons}{PU}{\9051\157}%* U+296F
 20142 % U+297F DOWN FISH TAIL
 20143 \DeclareTextCommand{\textmoo}{PU}{\9051\177\83\066}%* U+297F U+0336

51.2.34 Miscellaneous Mathematical Symbols-B: U+2980 to U+29FF

20144 % U+2987 Z NOTATION LEFT IMAGE BRACKET; \llparenthesis (stmaryrd)
 20145 \DeclareTextCommand{\textllparenthesis}{PU}{\9051\207}%* U+2987
 20146 % U+2988 Z NOTATION RIGHT IMAGE BRACKET; \rrparenthesis (stmaryrd)
 20147 \DeclareTextCommand{\textrrparenthesis}{PU}{\9051\210}%* U+2988
 20148 % U+29B0 REVERSED EMPTY SET; \invdiameter (wasysym)
 20149 \DeclareTextCommand{\textinvdiameter}{PU}{\9051\260}%* U+29B0
 20150 % U+29B6 CIRCLED VERTICAL BAR; \obar (stmaryrd)
 20151 \DeclareTextCommand{\textobar}{PU}{\9051\266}%* U+29B6
 20152 %* \textobar -> \textvarobar (stmaryrd)
 20153 % U+29B8 CIRCLED REVERSE SOLIDUS; \obslash (stmaryrd)
 20154 \DeclareTextCommand{\textobslash}{PU}{\9051\270}%* U+29B8
 20155 %* \textobslash -> \circledbslash (txfonts/pxfonts)
 20156 %* \textobslash -> \obackslash (mathabx)
 20157 %* \textobslash -> \varobslash (stmaryrd)
 20158 % U+29BA CIRCLE DIVIDED BY HORIZONTAL BAR AND TOP HALF
 20159 % DIVIDED BY VERTICAL BAR; \obot (mathabx)
 20160 \DeclareTextCommand{\textobot}{PU}{\9051\272}%* U+29BA
 20161 %* \textobot -> \odplus (ulsy)
 20162 % U+29BB CIRCLE WITH SUPERIMPOSED X; \NoChemicalCleaning (mar-
 vosym)
 20163 \DeclareTextCommand{\textNoChemicalCleaning}{PU}{\9051\273}%* U+29BB
 20164 % U+29C0 CIRCLED LESS-THAN; \olessthan (stmaryrd)
 20165 \DeclareTextCommand{\textolessthan}{PU}{\9051\300}%* U+29C0
 20166 %* \textolessthan -> \varolessthan (stmaryrd)
 20167 % U+29C1 CIRCLED GREATER-THAN; \ogreaterthan (stmaryrd)
 20168 \DeclareTextCommand{\textogreaterthan}{PU}{\9051\301}%* U+29C1
 20169 %* \textogreaterthan -> \varogreaterthan (stmaryrd)
 20170 % U+29C4 SQUARED RISING DIAGONAL SLASH; \boxslash (mathabx, stmaryrd)
 20171 \DeclareTextCommand{\textboxslash}{PU}{\9051\304}%* U+29C4
 20172 % U+29C5 SQUARED FALLING DIAGONAL SLASH; \boxbslash (stmaryrd)
 20173 \DeclareTextCommand{\textboxbslash}{PU}{\9051\305}%* U+29C5
 20174 % U+29C6 SQUARED ASTERISK; \boxast (stmaryrd)
 20175 \DeclareTextCommand{\textboxast}{PU}{\9051\306}%* U+29C6
 20176 % U+29C7 SQUARED SMALL CIRCLE; \boxcircle (stmaryrd)
 20177 \DeclareTextCommand{\textboxcircle}{PU}{\9051\307}%* U+29C7
 20178 % U+29C8 SQUARED SQUARE; \boxbox (stmaryrd)
 20179 \DeclareTextCommand{\textboxbox}{PU}{\9051\310}%* U+29C8
 20180 % U+29D3 BLACK BOWTIE; \Valve (marvosym)
 20181 \DeclareTextCommand{\textValve}{PU}{\9051\323}%* U+29D3
 20182 % U+29DF DOUBLE-ENDED MULTIMAP; \multimapboth (txfonts/pxfonts)
 20183 \DeclareTextCommand{\textmultimapboth}{PU}{\9051\337}%* U+29DF
 20184 % U+29E2 SHUFFLE PRODUCT; \shuffle (shuffle)
 20185 \DeclareTextCommand{\textshuffle}{PU}{\9051\342}%* U+29E2

51.2.35 Supplemental Mathematical Operators: U+2A00 to U+2AFF

20186 % U+2A04 N-ARY UNION OPERATOR WITH PLUS; \uplus (LaTeX)
 20187 \DeclareTextCommand{\textuplus}{PU}{\9052\004}%* U+2A04
 20188 % U+2A07 TWO LOGICAL AND OPERATOR; \bigdoublewedge (MnSymbol)
 20189 \DeclareTextCommand{\textbigdoublewedge}{PU}{\9052\007}%* U+2A07
 20190 % U+2A08 TWO LOGICAL OR OPERATOR; \bigdoublevee (MnSymbol)
 20191 \DeclareTextCommand{\textbigdoublevee}{PU}{\9052\010}%* U+2A08
 20192 % U+2A1D JOIN; \Join (latexsym, amsfonts, amssymb, mathabx, txfonts,
 20193 % pxfonts, wasysym)
 20194 \DeclareTextCommand{\textJoin}{PU}{\9052\035}%* U+2A1D
 20195 % U+2A1F Z NOTATION SCHEMA COMPOSITION; \fatsemi (stmaryrd)
 20196 \DeclareTextCommand{\textfatsemi}{PU}{\9052\037}%* U+2A1F

20197 % U+2A22 PLUS SIGN WITH SMALL CIRCLE ABOVE; \circplus (mathabx)
 20198 \DeclareTextCommand{\textcircplus}{PU}{\9052\042}%* U+2A22
 20199 % U+2A2A MINUS SIGN WITH DOT BELOW; \minusdot (MnSymbol)
 20200 \DeclareTextCommand{\textminusdot}{PU}{\9052\052}%* U+2A2A
 20201 %* \textminusdot -> \divdot (mathabx)
 20202 % U+2A30 MULTIPLICATION SIGN WITH DOT ABOVE; \dottimes (mathabx)
 20203 \DeclareTextCommand{\textdottimes}{PU}{\9052\060}%* U+2A30
 20204 % U+2A32 SEMIDIRECT PRODUCT WITH BOTTOM CLOSED;
 20205 % \dtimes (mathdesign)
 20206 \DeclareTextCommand{\textdtimes}{PU}{\9052\062}%* U+2A32
 20207 % U+2A38 CIRCLED DIVISION SIGN; \odiv (mathabx)
 20208 \DeclareTextCommand{\textodiv}{PU}{\9052\070}%* U+2A38
 20209 % U+2A3C INTERIOR PRODUCT; \invneg (MnSymbol)
 20210 \DeclareTextCommand{\textinvneg}{PU}{\9052\074}%* U+2A3C
 20211 % U+2A4E DOUBLE SQUARE INTERSECTION; \sqdoublecap (mathabx)
 20212 \DeclareTextCommand{\textsqdoublecap}{PU}{\9052\116}%* U+2A4E
 20213 %* \textsqdoublecap -> \doublesqcap (MnSymbol)
 20214 % U+2A40 INTERSECTION WITH DOT; \capdot (MnSymbol)
 20215 \DeclareTextCommand{\textcapdot}{PU}{\9052\100}%* U+2A40
 20216 % U+2A4F DOUBLE SQUARE UNION; \sqdoublecup (mathabx)
 20217 \DeclareTextCommand{\textsqdoublecup}{PU}{\9052\117}%* U+2A4F
 20218 %* \textsqdoublecup -> \doublesqcup (MnSymbol)
 20219 % U+2A55 TWO INTERSECTING LOGICAL AND; \doublewedge (MnSymbol)
 20220 \DeclareTextCommand{\textdoublewedge}{PU}{\9052\125}%* U+2A55
 20221 % U+2A56 TWO INTERSECTING LOGICAL OR; \doublevee (MnSymbol)
 20222 \DeclareTextCommand{\textdoublevee}{PU}{\9052\126}%* U+2A56
 20223 %* \textdoublevee -> \merge (stmaryrd)
 20224 % U+2A5E LOGICAL AND WITH DOUBLE OVERBAR;
 20225 % \doublebarwedge (AmS)
 20226 \DeclareTextCommand{\textdoublebarwedge}{PU}{\9052\136}%* U+2A5E
 20227 % U+2A63 LOGICAL OR WITH DOUBLE UNDERBAR;
 20228 % \veedoublebar (mahtabx)
 20229 \DeclareTextCommand{\textveedoublebar}{PU}{\9052\143}%* U+2A63
 20230 % U+2A66 EQUALS SIGN WITH DOT BELOW; \eqdot (MnSymbol)
 20231 \DeclareTextCommand{\texteqdot}{PU}{\9052\146}%* U+2A66
 20232 % \neqdot (MnSymbol)
 20233 \DeclareTextCommand{\textneqdot}{PU}{\9052\146\83\070}%* U+2A66 U+0338
 20234 % U+2A74 DOUBLE COLON EQUAL; \coloncolonequals (colonequals)
 20235 \DeclareTextCommand{\textcoloncolonequals}{PU}{\9052\164}%* U+2A74
 20236 % U+2A7D LESS-THAN OR SLANTED EQUAL TO; \leqslant (AmS)
 20237 \DeclareTextCommand{\textleqslant}{PU}{\9052\175}%* U+2A7D
 20238 % \nleqslant (txfonts/pxfonts)
 20239 \DeclareTextCommand{\textnleqslant}{PU}{\9052\175\83\070}%* U+2A7D U+0338
 20240 % U+2A7E GREATER-THAN OR SLANTED EQUAL TO; \geqslant (AmS)
 20241 \DeclareTextCommand{\textgeqslant}{PU}{\9052\176}%* U+2A7E
 20242 % \ngeqslant (txfonts/pxfonts)
 20243 \DeclareTextCommand{\textngeqslant}{PU}{\9052\176\83\070}%* U+2A7E U+0338
 20244 % U+2A85 LESS-THAN OR APPROXIMATE; \lessapprox (AmS)
 20245 \DeclareTextCommand{\textlessapprox}{PU}{\9052\205}%* U+2A85
 20246 % \nlessapprox (txfonts/pxfonts)
 20247 \DeclareTextCommand{\textnlessapprox}{PU}{\9052\205\83\070}%* U+2A85 U+0338
 20248 % U+2A86 GREATER-THAN OR APPROXIMATE; \gtrapprox (AmS)
 20249 \DeclareTextCommand{\textgtrapprox}{PU}{\9052\206}%* U+2A86
 20250 % \ngtrapprox (txfonts/pxfonts)
 20251 \DeclareTextCommand{\textngtrapprox}{PU}{\9052\206\83\070}%* U+2A86 U+0338
 20252 % U+2A87 LESS-THAN AND SINGLE-LINE NOT EQUAL TO; \lneq (AmS)
 20253 \DeclareTextCommand{\textlneq}{PU}{\9052\207}%* U+2A87

20254 % U+2A88 GREATER-THAN AND SINGLE-LINE NOT EQUAL TO;
 20255 % \gneq (AmS)
 20256 \DeclareTextCommand{\textgneq}{PU}{\9052\210}%* U+2A88
 20257 % U+2A89 LESS-THAN AND NOT APPROXIMATE; \lnapprox (AmS)
 20258 \DeclareTextCommand{\textlnapprox}{PU}{\9052\211}%* U+2A89
 20259 % U+2A8A GREATER-THAN AND NOT APPROXIMATE; \gnapprox (AmS)
 20260 \DeclareTextCommand{\textgnapprox}{PU}{\9052\212}%* U+2A8A
 20261 % U+2A8B LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN;
 20262 % \lesseqqgtr (AmS)
 20263 \DeclareTextCommand{\textlesseqqgtr}{PU}{\9052\213}%* U+2A8B
 20264 % U+2A8C GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN;
 20265 % \gtreqqless (AmS)
 20266 \DeclareTextCommand{\textgtreqqless}{PU}{\9052\214}%* U+2A8C
 20267 % U+2A95 SLANTED EQUAL TO OR LESS-THAN; \eqslantless (AmS)
 20268 \DeclareTextCommand{\texteqslantless}{PU}{\9052\225}%* U+2A95
 20269 % U+2A96 SLANTED EQUAL TO OR GREATER-THAN; \eqslantgtr (AmS)
 20270 \DeclareTextCommand{\texteqslantgtr}{PU}{\9052\226}%* U+2A96
 20271 % U+2AA6 LESS-THAN CLOSED BY CURVE; \leftslice (stmaryrd)
 20272 \DeclareTextCommand{\textleftslice}{PU}{\9052\246}%* U+2AA6
 20273 % U+2AA7 GREATER-THAN CLOSED BY CURVE; \rightslice (stmaryrd)
 20274 \DeclareTextCommand{\textrightangle}{PU}{\9052\247}%* U+2AA7
 20275 % U+2AAF PRECEDES ABOVE SINGLE-LINE EQUALS SIGN; \preceq (Mn-Symbol)
 20276 \DeclareTextCommand{\textpreceq}{PU}{\9052\257}%* U+2AAF
 20277 % \npreceq (txfonts/pxfonts)
 20278 \DeclareTextCommand{\textnpreceq}{PU}{\9052\257\83\070}%* U+2AAF U+0338
 20279 % U+2AB0 SUCCEEDS ABOVE SINGLE-LINE EQUALS SIGN; \succeq (Mn-Symbol)
 20280 \DeclareTextCommand{\textsucceq}{PU}{\9052\260}%* U+2AB0
 20281 % \nsucceq (txfonts/pxfonts)
 20282 \DeclareTextCommand{\textnsucceq}{PU}{\9052\260\83\070}%* U+2AB0 U+0338
 20283 % U+2AB1 PRECEDES ABOVE SINGLE-LINE NOT EQUAL TO; \precneq (mathabx)
 20284 \DeclareTextCommand{\textprecneq}{PU}{\9052\261}%* U+2AB1
 20285 % U+2AB2 SUCCEEDS ABOVE SINGLE-LINE NOT EQUAL TO; \succneq (mathabx)
 20286 \DeclareTextCommand{\textsuccneq}{PU}{\9052\262}%* U+2AB2
 20287 % U+2AB3 PRECEDES ABOVE EQUALS SIGN; \preceqq (txfonts/pxfonts)
 20288 \DeclareTextCommand{\textpreceqq}{PU}{\9052\263}%* U+2AB3
 20289 % \npreceqq (txfonts/pxfonts)
 20290 \DeclareTextCommand{\textnpreceqq}{PU}{\9052\263\83\070}%* U+2AB3 U+0338
 20291 % U+2AB4 SUCCEEDS ABOVE EQUALS SIGN; \succeqq (txfonts/pxfonts)
 20292 \DeclareTextCommand{\textsucceqq}{PU}{\9052\264}%* U+2AB4
 20293 % \nsucceqq (txfonts/pxfonts)
 20294 \DeclareTextCommand{\textnsucceqq}{PU}{\9052\264\83\070}%* U+2AB4 U+0338
 20295 % U+2AB5 PRECEDES ABOVE NOT EQUAL TO; \precneqq (txfonts/pxfonts)
 20296 \DeclareTextCommand{\textprecneqq}{PU}{\9052\265}%* U+2AB5
 20297 % U+2AB6 SUCCEEDS ABOVE NOT EQUAL TO; \succneqq (txfonts/pxfonts)
 20298 \DeclareTextCommand{\textsuccneqq}{PU}{\9052\266}%* U+2AB6
 20299 % U+2AB7 PRECEDES ABOVE ALMOST EQUAL TO; \precapprox (AmS)
 20300 \DeclareTextCommand{\textprecapprox}{PU}{\9052\267}%* U+2AB7
 20301 % \nprecapprox (txfonts/pxfonts)
 20302 \DeclareTextCommand{\textnprecapprox}{PU}{\9052\267\83\070}%* U+2AB7 U+0338
 20303 % U+2AB8 SUCCEEDS ABOVE ALMOST EQUAL TO; \succapprox (AmS)
 20304 \DeclareTextCommand{\textsuccapprox}{PU}{\9052\270}%* U+2AB8
 20305 % \nsuccapprox (txfonts/pxfonts)
 20306 \DeclareTextCommand{\textnsuccapprox}{PU}{\9052\270\83\070}%* U+2AB8 U+0338

20307 % U+2AB9 PRECEDES ABOVE NOT ALMOST EQUAL TO; \precnapprox (AmS)
 20308 \DeclareTextCommand{\textprecnapprox}{PU}{\9052\271}%* U+2AB9
 20309 % U+2ABA SUCCEEDS ABOVE NOT ALMOST EQUAL TO; \succnapprox (AmS)
 20310 \DeclareTextCommand{\textsuccnapprox}{PU}{\9052\272}%* U+2ABA
 20311 % U+2AC5 SUBSET OF ABOVE EQUALS SIGN; \subseteqq (AmS)
 20312 \DeclareTextCommand{\textsubseteqq}{PU}{\9052\305}%* U+2AC5
 20313 % \nsubseteqq (txfonts/pxfonts, mathabx)
 20314 \DeclareTextCommand{\textnsubseteqq}{PU}{\9052\305\83\070}%* U+2AC5 U+0338
 20315 % U+2AC6 SUPERSET OF ABOVE EQUALS SIGN; \supseteqq (AmS)
 20316 \DeclareTextCommand{\textsupseteqq}{PU}{\9052\306}%* U+2AC6
 20317 % \nsupseteqq (mathabx)
 20318 \DeclareTextCommand{\textnsupseteqq}{PU}{\9052\306\83\070}%* U+2AC6 U+0338
 20319 % U+2AE3 DOUBLE VERTICAL BAR LEFT TURNSTILE
 20320 \DeclareTextCommand{\textdashV}{PU}{\9052\343}%* U+2AE3
 20321 %* \textdashV -> \leftVdash (MnSymbol)
 20322 % \ndashV (mathabx)
 20323 \DeclareTextCommand{\textndashV}{PU}{\9052\343\83\070}%* U+2AE3 U+0338
 20324 %* \textndashV -> \nleftVdash (MnSymbol)
 20325 % U+2AE4 VERTICAL BAR DOUBLE LEFT TURNSTILE; \Dashv (mathabx)
 20326 \DeclareTextCommand{\textDashv}{PU}{\9052\344}%* U+2AE4
 20327 %* \textDashv -> \leftmodels (MnSymbol)
 20328 % \nDashv (mathabx)
 20329 \DeclareTextCommand{\textnDashv}{PU}{\9052\344\83\070}%* U+2AE4 U+0338
 20330 %* \textnDashv -> \nleftmodels (MnSymbol)
 20331 % U+2AE5 DOUBLE VERTICAL BAR DOUBLE LEFT TURNSTILE;
 20332 % \DashV (mathabx)
 20333 \DeclareTextCommand{\textDashV}{PU}{\9052\345}%* U+2AE5
 20334 %* \textDashV -> \leftModels (MnSymbol)
 20335 % \nDashV (mathabx)
 20336 \DeclareTextCommand{\textnDashV}{PU}{\9052\345\83\070}%* U+2AE5 U+0338
 20337 %* \textnDashV -> \nleftModels (MnSymbol)
 20338 % U+2AEA DOUBLE DOWN TACK; \downmodels (MnSymbol)
 20339 \DeclareTextCommand{\textdownmodels}{PU}{\9052\352}%* U+2AEA
 20340 % \ndownmodels (MnSymbol)
 20341 \DeclareTextCommand{\textndownmodels}{PU}{\9052\352\83\070}%* U+2AEA U+0338
 20342 % U+2AEB DOUBLE UP TACK; \upmodels (MnSymbol)
 20343 \DeclareTextCommand{\textupmodels}{PU}{\9052\353}%* U+2AEB
 20344 % \nupmodels (MnSymbol)
 20345 \DeclareTextCommand{\textnupmodels}{PU}{\9052\353\83\070}%* U+2AEB U+0338
 20346 % U+2AEF VERTICAL LINE WITH CIRCLE ABOVE; \upspoon (MnSymbol)
 20347 \DeclareTextCommand{\textupspoon}{PU}{\9052\357}%* U+2AEF
 20348 % U+2AF4 TRIPLE VERTICAL BAR BINARY RELATION;
 20349 % \interleave (stmaryrd)
 20350 \DeclareTextCommand{\textinterleave}{PU}{\9052\364}%* U+2AF4
 20351 % U+2AFD DOUBLE SOLIDUS OPERATOR; \sslash (stmaryrd)
 20352 \DeclareTextCommand{\textsslash}{PU}{\9052\375}%* U+2AFD
 20353 %* \textsslash -> \varparallel (txfonts/pxfonts)

51.2.36 Miscellaneous Symbols and Arrows: U+2B00 to U+2BFF

20354 % U+2B20 WHITE PENTAGON; \pentagon (wasysym)
 20355 \DeclareTextCommand{\textpentagon}{PU}{\9053\040}%* U+2B20
 20356 % U+2B21 WHITE HEXAGON; \varhexagon (wasysym)
 20357 \DeclareTextCommand{\textvarhexagon}{PU}{\9053\041}%* U+2B21

51.2.37 Latin Extended-C: U+2C60 to U+2C7F

20358 % U+2C7C LATIN SUBSCRIPT SMALL LETTER J
 20359 \DeclareTextCommand{\textjinferior}{PU}{\9054\174}%* U+2C7C

51.2.38 Supplemental Punctuation: U+2E00 to U+2E7F

20360 % U+2E13 DOTTED OBELOS; \slashdiv (MnSymbol)
 20361 \DeclareTextCommand{\textslashdiv}{PU}{\9056\023}%* U+2E13
 20362 % U+2E18 INVERTED INTERROBANG; \textinterrobangdown (textcomp)
 20363 \DeclareTextCommand{\textinterrobangdown}{PU}{\9056\030}% U+2E18
 20364 % U+2E2D FIVE DOT MARK; \fivedots (MnSymbol)
 20365 \DeclareTextCommand{\textfivedots}{PU}{\9056\055}%* U+2E2D

51.2.39 Modifier Tone Letters: U+A700 to U+A71F

20366 % U+A71B MODIFIER LETTER RAISED UP ARROW; \textupstep (tipa)
 20367 \DeclareTextCommand{\textupstep}{PU}{\9247\033}% U+A71B
 20368 % U+A71C MODIFIER LETTER RAISED DOWN ARROW;
 20369 % \textdownstep (tipa)
 20370 \DeclareTextCommand{\textdownstep}{PU}{\9247\034}% U+A71C

51.2.40 Latin Extended-D: U+A720 to U+A7FF

20371 % U+A727 LATIN SMALL LETTER HENG; \textheng (tipx)
 20372 \DeclareTextCommand{\textPUheng}{PU}{\9247\047}% U+A727
 20373 %* \textPUheng -> \textheng (tipx)
 20374 % U+A72C LATIN CAPITAL LETTER CUATRILLO; \textlhookfour (tipx)
 20375 \DeclareTextCommand{\textPULhookfour}{PU}{\9247\054}% U+A72C
 20376 %* \textPULhookfour -> \textlhookfour (tipx)
 20377 % U+A730 LATIN LETTER SMALL CAPITAL F; \textscf (tipx)
 20378 \DeclareTextCommand{\textPUscf}{PU}{\9247\060}% U+A730
 20379 %* \textPUscf -> \textscf (tipx)
 20380 % U+A735 LATIN SMALL LETTER AO; \textaoilig (tipx)
 20381 \DeclareTextCommand{\textPUaolig}{PU}{\9247\065}% U+A735
 20382 %* \textPUaolig -> \textaoilig (tipx)
 20383 % U+A74F LATIN SMALL LETTER OO; \oo (wsuipa)
 20384 \DeclareTextCommand{\textoo}{PU}{\9247\117}%* U+A74F
 20385 % U+A788 MODIFIER LETTER LOW CIRCUMFLEX ACCENT
 20386 \DeclareTextCommand{\textcircumlowlow}{PU}{\9247\210}% U+A788

51.2.41 Alphabetic Presentation Forms: U+FB00 to U+FB4F

20387 % U+FB01 LATIN SMALL LIGATURE FI; fi
 20388 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 20389 % U+FB02 LATIN SMALL LIGATURE FL; fl
 20390 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

51.2.42 Musical Symbols: U+1D100 to U+1D1FF

20391 % U+1D13B MUSICAL SYMBOL WHOLE REST; \GaPa (harmony)
 20392 \DeclareTextCommand{\textGaPa}{PU}{\9330\064\9335\073}%* U+1D13B
 20393 % U+1D13C MUSICAL SYMBOL HALF REST; \HaPa (harmony)
 20394 \DeclareTextCommand{\textHaPa}{PU}{\9330\064\9335\074}%* U+1D13C
 20395 % U+1D13D MUSICAL SYMBOL QUARTER REST; \ViPa (harmony)
 20396 \DeclareTextCommand{\textViPa}{PU}{\9330\064\9335\075}%* U+1D13D
 20397 % U+1D13E MUSICAL SYMBOL EIGHTH REST; \AcPa (harmony)
 20398 \DeclareTextCommand{\textAcPa}{PU}{\9330\064\9335\076}%* U+1D13E
 20399 % U+1D13F MUSICAL SYMBOL SIXTEENTH REST; \SePa (harmony)
 20400 \DeclareTextCommand{\textSePa}{PU}{\9330\064\9335\077}%* U+1D13F
 20401 % U+1D140 MUSICAL SYMBOL THIRTY-SECOND REST; \ZwPa (harmony)
 20402 \DeclareTextCommand{\textZwPa}{PU}{\9330\064\9335\100}%* U+1D140
 20403 % U+1D15D MUSICAL SYMBOL WHOLE NOTE; \fullnote (wasysym)
 20404 \DeclareTextCommand{\textfullnote}{PU}{\9330\064\9335\135}%* U+1D15D

20405 %* \textfullnote -> \Ganz (harmony)
 20406 % U+1D15E MUSICAL SYMBOL HALF NOTE; \halfnote (wasysym)
 20407 \DeclareTextCommand{\texthalfnote}{PU}{\9330\064\9335\136}%* U+1D15E
 20408 %* \texthalfnote -> \Halb (harmony)
 20409 % U+1D15F MUSICAL SYMBOL QUARTER NOTE; \Vier (harmony)
 20410 \DeclareTextCommand{\textVier}{PU}{\9330\064\9335\137}%* U+1D15F
 20411 % U+1D160 MUSICAL SYMBOL EIGHTH NOTE; \Acht (harmony)
 20412 \DeclareTextCommand{\textAcht}{PU}{\9330\064\9335\140}%* U+1D160
 20413 % U+1D161 MUSICAL SYMBOL SIXTEENTH NOTE; \Sech (harmony)
 20414 \DeclareTextCommand{\textSech}{PU}{\9330\064\9335\141}%* U+1D161
 20415 % U+1D162 MUSICAL SYMBOL THIRTY-SECOND NOTE; \Zwdr (harmony)
 20416 \DeclareTextCommand{\textZwdr}{PU}{\9330\064\9335\142}%* U+1D162

51.2.43 Miscellaneous Symbols and Pictographs: U+1F300 to U+1F5FF

20417 % U+1F30D EARTH GLOBE EUROPE-AFRICA; \Mundus (marvosym)
 20418 \DeclareTextCommand{\textMundus}{PU}{\9330\074\9337\015}%* U+1F30D
 20419 % U+1F319 CRESCENT MOON; \Moon (marvosym)
 20420 \DeclareTextCommand{\textMoon}{PU}{\9330\074\9337\031}%* U+1F319
 20421 % U+1F468 MAN; \ManFace (marvosym)
 20422 \DeclareTextCommand{\textManFace}{PU}{\9330\075\9334\150}%* U+1F468
 20423 % U+1F469 WOMAN; \WomanFace (marvosym)
 20424 \DeclareTextCommand{\textWomanFace}{PU}{\9330\075\9334\151}%* U+1F469
 20425 %* \textWomanFace -> \Womanface (marvosym)
 20426 % U+1F4E0 FAX MACHINE; \Fax (marvosym)
 20427 \DeclareTextCommand{\textFax}{PU}{\9330\075\9334\340}%* U+1F4E0
 20428 %* \textFax -> \Faxmachine (marvosym)
 20429 % U+1F525 FIRE; \Fire (ifsym)
 20430 \DeclareTextCommand{\textFire}{PU}{\9330\075\9335\045}%* U+1F525

51.2.44 Transport and Map Symbols: U+1F680 to U+1F6FF

20431 % U+1F6B2 BICYCLE; \Bicycle (marvosym)
 20432 \DeclareTextCommand{\textBicycle}{PU}{\9330\075\9336\262}%* U+1F6B2
 20433 % U+1F6B9 MENS SYMBOL; \Gentsroom (marvosym)
 20434 \DeclareTextCommand{\textGentsroom}{PU}{\9330\075\9336\271}%* U+1F6B9
 20435 % U+1F6BA WOMENS SYMBOL; \Ladiesroom (marvosym)
 20436 \DeclareTextCommand{\textLadiesroom}{PU}{\9330\075\9336\272}%* U+1F6BA

51.2.45 Miscellaneous

20437 \DeclareTextCommand{\SS}{PU}{SS}%
 20438 % \textcopyleft (textcomp)
 20439 \DeclareTextCommand{\textcopyleft}{PU}{\9041\204\9040\335}% U+2184 U+20DD
 20440 % \ccnc (ccllicenses)
 20441 \DeclareTextCommand{\textccnc}{PU}{\80\044\9040\340}%* U+0024 U+20E0
 20442 % \ccnd (ccllicenses)
 20443 \DeclareTextCommand{\textccnd}{PU}{=\9040\335}%* U+003D U+20DD
 20444 % \ccsa (ccllicenses)
 20445 \DeclareTextCommand{\textccsa}{PU}{\9047\362\9040\335}%* U+27F2 U+20DD
 20446 % \Info (marvosym, china2e)
 20447 \DeclareTextCommand{\textInfo}{PU}{\9330\065\9334\042\9040\336}%* U+1D422 U+20DE
 20448 % \CESign (marvosym)
 20449 \DeclareTextCommand{\textCESign}{PU}{\80\103\80\105}%* U+0043 U+0045
 20450 %* \textCESign -> \CESign (marvosym)

51.2.46 Aliases

Aliases (german.sty)

20451 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}%
 20452 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}%

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20453 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}%
20454 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}%
20455 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}%
20456 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}%
20457 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}%
20458 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}%

Aliases (math names)

20459 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}%*
20460 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}%*
20461 \DeclareTextCommand{\textdiv}{PU}{\textdivide}%*
20462 \DeclareTextCommand{\textpm}{PU}{\textplusminus}%*
20463 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}%*

20464 </puenc>

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51.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

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20465 <*puvnenc>

20466 \DeclareTextCommand{\abreve}{PU}{\81\003}% U+0103
20467 \DeclareTextCommand{\acircumflex}{PU}{\80\342}% U+00E2
20468 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}% U+00EA
20469 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}% U+00F4
20470 \DeclareTextCommand{\ohorn}{PU}{\81\241}% U+01A1
20471 \DeclareTextCommand{\uhorn}{PU}{\81\260}% U+01B0
20472 \DeclareTextCommand{\ABREVE}{PU}{\81\002}% U+0102
20473 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}% U+00C2
20474 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}% U+00CA
20475 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}% U+00D4
20476 \DeclareTextCommand{\OHORN}{PU}{\81\240}% U+01A0
20477 \DeclareTextCommand{\UHORN}{PU}{\81\257}% U+01AF

20478 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
20479 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}% U+1EA1
20480 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
20481 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}% U+1EA3
20482 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
20483 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}% U+1EAF
20484 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}% U+1EB7
20485 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}% U+1EB1
20486 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}% U+1EB3
20487 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}% U+1EB5
20488 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}% U+1EA5
20489 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}% U+1EAD
20490 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}% U+1EA7
20491 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}% U+1EA9
20492 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}% U+1EAB
20493 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
20494 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}% U+1EB9
20495 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
20496 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}% U+1EBB
20497 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
20498 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}% U+1EBF
20499 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}% U+1EC7
20500 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}% U+1EC1
20501 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}% U+1EC3
20502 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}% U+1EC5

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20503 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
 20504 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}% U+1ECB
 20505 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
 20506 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}% U+1EC9
 20507 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 20508 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 20509 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}% U+1ECD
 20510 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}% U+00F2
 20511 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}% U+1ECF
 20512 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 20513 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}% U+1ED1
 20514 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}% U+1ED9
 20515 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}% U+1ED3
 20516 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}% U+1ED5
 20517 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}% U+1ED7
 20518 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}% U+1EDB
 20519 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}% U+1EE3
 20520 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}% U+1EDD
 20521 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}% U+1EDF
 20522 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}% U+1EE1
 20523 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 20524 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}% U+1EE5
 20525 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 20526 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}% U+1EE7
 20527 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 20528 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}% U+1EE9
 20529 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}% U+1EF1
 20530 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}% U+1EEB
 20531 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}% U+1EED
 20532 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}% U+1EEF
 20533 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 20534 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}% U+1EF5
 20535 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 20536 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}% U+1EF7
 20537 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9
 20538 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 20539 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}% U+1EA0
 20540 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}% U+00C0
 20541 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}% U+1EA2
 20542 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 20543 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}% U+1EAE
 20544 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}% U+1EB6
 20545 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}% U+1EB0
 20546 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}% U+1EB2
 20547 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}% U+1EB4
 20548 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}% U+1EA4
 20549 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}% U+1EAC
 20550 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}% U+1EA6
 20551 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}% U+1EA8
 20552 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}% U+1EA8
 20553 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
 20554 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}% U+1EB8
 20555 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
 20556 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}% U+1EBA
 20557 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 20558 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}% U+1EBE
 20559 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}% U+1EC6


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20560 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}% U+1EC0
20561 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}% U+1EC2
20562 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}% U+1EC4
20563 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
20564 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}% U+1ECA
20565 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
20566 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}% U+1EC8
20567 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
20568 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
20569 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}% U+1ECC
20570 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
20571 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}% U+1ECE
20572 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
20573 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}% U+1ED0
20574 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}% U+1ED8
20575 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}% U+1ED2
20576 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}% U+1ED4
20577 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}% U+1ED6
20578 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}% U+1EDA
20579 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}% U+1EE2
20580 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}% U+1EDC
20581 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}% U+1EDE
20582 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}% U+1EE0
20583 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
20584 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}% U+1EE4
20585 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
20586 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}% U+1EE6
20587 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
20588 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}% U+1EE8
20589 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}% U+1EF0
20590 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}% U+1EEA
20591 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}% U+1EEC
20592 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}% U+1EEE
20593 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
20594 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}% U+1EF4
20595 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
20596 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}% U+1EF6
20597 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
20598 </puvnenc>

```

51.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

20599 (*puarenc)

20600 % U+0621;afii57409;ARABIC LETTER HAMZA
20601 \DeclareTextCommand{\hamza}{PU}{\86\041}% U+0621
20602 % U+0622;afii57410;ARABIC LETTER ALEF WITH MADDA ABOVE
20603 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% U+0622
20604 % U+0623;afii57411;ARABIC LETTER ALEF WITH HAMZA ABOVE
20605 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% U+0623
20606 % U+0624;afii57412;ARABIC LETTER WAW WITH HAMZA ABOVE
20607 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% U+0624
20608 % U+0625;afii57413;ARABIC LETTER ALEF WITH HAMZA BELOW
20609 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% U+0625
20610 % U+0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
20611 \DeclareTextCommand{\yahamza}{PU}{\86\046}% U+0626

```

20612 % U+0627;afii57415;ARABIC LETTER ALEF
 20613 \DeclareTextCommand{\alef}{PU}{\86\047}% U+0627
 20614 % U+0628;afii57416;ARABIC LETTER BEH
 20615 \DeclareTextCommand{\baa}{PU}{\86\050}% U+0628
 20616 % U+0629;afii57417;ARABIC LETTER TEH MARBUTA
 20617 \DeclareTextCommand{\T}{PU}{\86\051}% U+0629
 20618 % U+062A;afii57418;ARABIC LETTER TEH
 20619 \DeclareTextCommand{\taa}{PU}{\86\052}% U+062A
 20620 % U+062B;afii57419;ARABIC LETTER THEH
 20621 \DeclareTextCommand{\thaa}{PU}{\86\053}% U+062B
 20622 % U+062C;afii57420;ARABIC LETTER JEEM
 20623 \DeclareTextCommand{\jeem}{PU}{\86\054}% U+062C
 20624 % U+062D;afii57421;ARABIC LETTER HAH
 20625 \DeclareTextCommand{\Haa}{PU}{\86\055}% U+062D
 20626 % U+062E;afii57422;ARABIC LETTER KHAH
 20627 \DeclareTextCommand{\kha}{PU}{\86\056}% U+062E
 20628 % U+062F;afii57423;ARABIC LETTER DAL
 20629 \DeclareTextCommand{\dal}{PU}{\86\057}% U+062F
 20630 % U+0630;afii57424;ARABIC LETTER THAL
 20631 \DeclareTextCommand{\dhal}{PU}{\86\060}% U+0630
 20632 % U+0631;afii57425;ARABIC LETTER REH
 20633 \DeclareTextCommand{\ra}{PU}{\86\061}% U+0631
 20634 % U+0632;afii57426;ARABIC LETTER ZAIN
 20635 \DeclareTextCommand{\zay}{PU}{\86\062}% U+0632
 20636 % U+0633;afii57427;ARABIC LETTER SEEN
 20637 \DeclareTextCommand{\seen}{PU}{\86\063}% U+0633
 20638 % U+0634;afii57428;ARABIC LETTER SHEEN
 20639 \DeclareTextCommand{\sheen}{PU}{\86\064}% U+0634
 20640 % U+0635;afii57429;ARABIC LETTER SAD
 20641 \DeclareTextCommand{\sad}{PU}{\86\065}% U+0635
 20642 % U+0636;afii57430;ARABIC LETTER DAD
 20643 \DeclareTextCommand{\dad}{PU}{\86\066}% U+0636
 20644 % U+0637;afii57431;ARABIC LETTER TAH
 20645 \DeclareTextCommand{\Ta}{PU}{\86\067}% U+0637
 20646 % U+0638;afii57432;ARABIC LETTER ZAH
 20647 \DeclareTextCommand{\za}{PU}{\86\070}% U+0638
 20648 % U+0639;afii57433;ARABIC LETTER AIN
 20649 \DeclareTextCommand{\ayn}{PU}{\86\071}% U+0639
 20650 % U+063A;afii57434;ARABIC LETTER GHAIN
 20651 \DeclareTextCommand{\ghayn}{PU}{\86\072}% U+063A
 20652 % U+0640;afii57440;ARABIC TATWEEL
 20653 \DeclareTextCommand{\tatweel}{PU}{\86\100}% U+0640
 20654 % U+0641;afii57441;ARABIC LETTER FEH
 20655 \DeclareTextCommand{\fa}{PU}{\86\101}% U+0641
 20656 % U+0642;afii57442;ARABIC LETTER QAF
 20657 \DeclareTextCommand{\qaf}{PU}{\86\102}% U+0642
 20658 % U+0643;afii57443;ARABIC LETTER KAF
 20659 \DeclareTextCommand{\kaf}{PU}{\86\103}% U+0643
 20660 % U+0644;afii57444;ARABIC LETTER LAM
 20661 \DeclareTextCommand{\lam}{PU}{\86\104}% U+0644
 20662 % U+0645;afii57445;ARABIC LETTER MEEM
 20663 \DeclareTextCommand{\meem}{PU}{\86\105}% U+0645
 20664 % U+0646;afii57446;ARABIC LETTER NOON
 20665 \DeclareTextCommand{\nun}{PU}{\86\106}% U+0646
 20666 % U+0647;afii57470;ARABIC LETTER HEH
 20667 \DeclareTextCommand{\ha}{PU}{\86\107}% U+0647
 20668 % U+0648;afii57448;ARABIC LETTER WAW

20669 \DeclareTextCommand{\waw}{PU}{\86\110}% U+0648
 20670 % U+0649;afii57449;ARABIC LETTER ALEF MAKSURA
 20671 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% U+0649
 20672 % U+064A;afii57450;ARABIC LETTER YEH
 20673 \DeclareTextCommand{\ya}{PU}{\86\112}% U+064A

 20674 % U+064B;afii57451;ARABIC FATHATAN
 20675 \DeclareTextCommand{\nasb}{PU}{\86\113}% U+064B
 20676 % U+064C;afii57452;ARABIC DAMMATAN
 20677 \DeclareTextCommand{\raff}{PU}{\86\114}% U+064C
 20678 % U+064D;afii57453;ARABIC KASRATAN
 20679 \DeclareTextCommand{\jarr}{PU}{\86\115}% U+064D
 20680 % U+064E;afii57454;ARABIC FATHA
 20681 \DeclareTextCommand{\fatha}{PU}{\86\116}% U+064E
 20682 % U+064F;afii57455;ARABIC DAMMA
 20683 \DeclareTextCommand{\damma}{PU}{\86\117}% U+064F
 20684 % U+0650;afii57456;ARABIC KASRA
 20685 \DeclareTextCommand{\kasra}{PU}{\86\120}% U+0650
 20686 % U+0651;afii57457;ARABIC SHADDA
 20687 \DeclareTextCommand{\shadda}{PU}{\86\121}% U+0651
 20688 % U+0652;afii57458;ARABIC SUKUN
 20689 \DeclareTextCommand{\sukun}{PU}{\86\122}% U+0652

 Farsi
 20690 % U+067E ARABIC LETTER PEH; afii57506
 20691 \DeclareTextCommand{\peh}{PU}{\86\176}% U+067E
 20692 % U+0686 ARABIC LETTER TCHEH; afii57507
 20693 \DeclareTextCommand{\tcheh}{PU}{\86\206}% U+0686
 20694 % U+0698 ARABIC LETTER JEH; afii57508
 20695 \DeclareTextCommand{\jeh}{PU}{\86\230}% U+0698
 20696 % U+06A9 ARABIC LETTER KEHEH
 20697 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% U+06A9
 20698 % U+06AF ARABIC LETTER GAF; afii57509
 20699 \DeclareTextCommand{\gaf}{PU}{\86\257}% U+06AF
 20700 % U+06CC ARABIC LETTER FARSI YEH
 20701 \DeclareTextCommand{\farsiya}{PU}{\86\314}% U+06CC

 20702 % U+200C ZERO WIDTH NON-JOINER; afii61664
 20703 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% U+200C
 20704 % U+200D ZERO WIDTH JOINER; afii301
 20705 \DeclareTextCommand{\noboundary}{PU}{\9040\015}% U+200D

 20706 (/puarenc)
 20707 (*psdextra)
 20708 \Hy@VersionCheck{psdextra.def}
 20709 \newcommand*{\psdmapshortnames}{%
 20710 \let\MVPlus\textMVPlus
 20711 \let\MVComma\textMVComma
 20712 \let\MVMinus\textMVMinus
 20713 \let\MVPeriod\textMVPeriod
 20714 \let\MVDivision\textMVDivision
 20715 \let\MVZero\textMVZero
 20716 \let\MVOne\textMVOne
 20717 \let\MVTwo\textMVTwo
 20718 \let\MVThree\textMVThree
 20719 \let\MVFour\textMVFour
 20720 \let\MVFive\textMVFive
 20721 \let\MVSix\textMVSix
 20722 \let\MVSeven\textMVSeven

20723 \let\MVEight\textMVEight
 20724 \let\MVNNine\textMVNNine
 20725 \let\MVAt\textMVAt
 20726 \let\copyright\textcopyright
 20727 \let\twosuperior\texttwosuperior
 20728 \let\threesuperior\textthreesuperior
 20729 \let\onesuperior\textonesuperior
 20730 \let\Thorn\textThorn
 20731 \let\thorn\textthorn
 20732 \let\hbar\texthbar
 20733 \let\hausA\texthausA
 20734 \let\hausD\texthausD
 20735 \let\hausK\texthausK
 20736 \let\barl\textbarl
 20737 \let\inve\textinve
 20738 \let\slashc\textslashc
 20739 \let\scripta\textscripta
 20740 \let\openo\textopeno
 20741 \let\rtaild\textrtaild
 20742 \let\reve\textreve
 20743 \let\schwa\textschwa
 20744 \let\niepsilon\textniepsilon
 20745 \let\repsilon\textrepsilon
 20746 \let\rhookrepsilon\text\rhookrepsilon
 20747 \let\scriptg\textscriptg
 20748 \let\scg\textscg
 20749 \let\ipagamma\textipagamma
 20750 \let\babygamma\textbabygamma
 20751 \let\bari\textbari
 20752 \let\niota\textniota
 20753 \let\sci\textsci
 20754 \let\scn\textscn
 20755 \let\niphi\textniphi
 20756 \let\longleg\textlongleg
 20757 \let\scr\textscr
 20758 \let\invscr\textinvscr
 20759 \let\esh\textesh
 20760 \let\baru\textbaru
 20761 \let\niupsilon\textniupsilon
 20762 \let\scriptv\textscriptv
 20763 \let\turnv\textturnv
 20764 \let\turnw\textturnw
 20765 \let\turny\textturny
 20766 \let\scy\textscy
 20767 \let\yogh\textyogh
 20768 \let\glotstop\textglotstop
 20769 \let\revglotstop\textrevglotstop
 20770 \let\invglotstop\textinvglotstop
 20771 \let\Gamma\textGamma
 20772 \let\Delta\textDelta
 20773 \let\Theta\textTheta
 20774 \let\Lambda\textLambda
 20775 \let\Xi\textXi
 20776 \let\Pi\textPi
 20777 \let\Sigma\textSigma
 20778 \let\Upsilon\textUpsilon
 20779 \let\Phi\textPhi

20780 \let\Psi\textPsi
 20781 \let\Omega\textOmega
 20782 \let\alpha\textalpha
 20783 \let\beta\textbeta
 20784 \let\gamma\textgamma
 20785 \let\delta\textdelta
 20786 \let\epsilon\textepsilon
 20787 \let\zeta\textzeta
 20788 \let\eta\texteta
 20789 \let\theta\texttheta
 20790 \let\iota\textiota
 20791 \let\kappa\textkappa
 20792 \let\lambda\textlambda
 20793 \let\mugreek\textmugreek
 20794 \let\nu\textnu
 20795 \let\xi\textxi
 20796 \let\pi\textpi
 20797 \let\rho\textrho
 20798 \let\varsigma\textvarsigma
 20799 \let\sigma\textsigma
 20800 \let\tau\texttau
 20801 \let\upsilon\textupsilon
 20802 \let\phi\textphi
 20803 \let\chi\textchi
 20804 \let\psi\textpsi
 20805 \let\omega\textomega
 20806 \let\scd\textscd
 20807 \let\scu\textscu
 20808 \let\iinferior\textiinferior
 20809 \let\rinferior\extrinferior
 20810 \let\uiinferior\textuiinferior
 20811 \let\vinferior\textvinferior
 20812 \let\betainferior\textbetainferior
 20813 \let\gammainferior\textgammainferior
 20814 \let\rhoinferior\textrhoinferior
 20815 \let\phiinferior\textphiinferior
 20816 \let\chiinferior\textchiinferior
 20817 \let\barsci\textbarsci
 20818 \let\barp\textbarp
 20819 \let\barscu\textbarscu
 20820 \let\htrtaild\texthtrtaild
 20821 \let\dagger\textdagger
 20822 \let\bullet\textbullet
 20823 \let\hdotfor\texthdotfor
 20824 \let\prime\textprime
 20825 \let\second\textsecond
 20826 \let\third\textthird
 20827 \let\backprime\textbackprime
 20828 \let\lefttherefore\textlefttherefore
 20829 \let\fourth\textfourth
 20830 \let\diamonddots\textdiamonddots
 20831 \let\zerosuperior\textzerosuperior
 20832 \let\isuperior\textisuperior
 20833 \let\foursuperior\textfoursuperior
 20834 \let\fivesuperior\textfivesuperior
 20835 \let\sixsuperior\textsixsuperior
 20836 \let\sevensuperior\textsevensuperior

20837 \let\eightssuperior\texteightssuperior
 20838 \let\ninesuperior\textninesuperior
 20839 \let\plussuperior\textplussuperior
 20840 \let\minussuperior\textminussuperior
 20841 \let\equalsuperior\textequalsuperior
 20842 \let\parenleftssuperior\textparenleftssuperior
 20843 \let\parenrightssuperior\textparenrightssuperior
 20844 \let\textnsuperior\textnsuperior
 20845 \let\zeroinferior\textzeroinferior
 20846 \let\oneinferior\textoneinferior
 20847 \let\twoinferior\texttwoinferior
 20848 \let\threeinferior\textthreeinferior
 20849 \let\fourinferior\textfourinferior
 20850 \let\fiveinferior\textfiveinferior
 20851 \let\sixinferior\textsixinferior
 20852 \let\seveninferior\textseveninferior
 20853 \let\eightinferior\texteightinferior
 20854 \let\nineinferior\textnineinferior
 20855 \let\plusinferior\textplusinferior
 20856 \let\minusinferior\textminusinferior
 20857 \let\equalsinferior\textequalsinferior
 20858 \let\parenleftinferior\textparenleftinferior
 20859 \let\parenrightinferior\textparenrightinferior
 20860 \let\textainferior\textainferior
 20861 \let\texteinferior\texteinferior
 20862 \let\textoinferior\textoinferior
 20863 \let\textxinferior\textxinferior
 20864 \let\textschwainferior\textschwainferior
 20865 \let\texthinferior\texthinferior
 20866 \let\textkinferior\textkinferior
 20867 \let\textlinferior\textlinferior
 20868 \let\textminferior\textminferior
 20869 \let\textnninferior\textnninferior
 20870 \let\textpinferior\textpinferior
 20871 \let\textsinferior\textsinferior
 20872 \let\texttinferior\texttinferior
 20873 \let\Deleatur\textDeleatur
 20874 \let\hslash\texthslash
 20875 \let\Im\textIm
 20876 \let\ell\textell
 20877 \let\wp\textwp
 20878 \let\Re\textRe
 20879 \let\mho\textmho
 20880 \let\riota\textriota
 20881 \let\Finv\textFinv
 20882 \let\aleph\textaleph
 20883 \let\beth\textbeth
 20884 \let\gimel\textgimel
 20885 \let\daleth\textdaleth
 20886 \let\xfax\textfax
 20887 \let\Game\textGame
 20888 \let\leftarrow\textleftarrow
 20889 \let\uparrow\textuparrow
 20890 \let\rightarrow\textrightarrow
 20891 \let\downarrow\textdownarrow
 20892 \let\leftrightarrow\textleftrightarrow
 20893 \let\updownarrow\textupdownarrow

20894 `\let\nwarrow\textnwarrow`
 20895 `\let\nearrow\textnearrow`
 20896 `\let\searrow\textsearrow`
 20897 `\let\swarrow\textswarrow`
 20898 `\let\nleftarrow\textnleftarrow`
 20899 `\let\nrightarrow\textnrightarrow`
 20900 `\let\twoheadleftarrow\texttwoheadleftarrow`
 20901 `\let\ntwoheadleftarrow\textntwoheadleftarrow`
 20902 `\let\twoheaduparrow\texttwoheaduparrow`
 20903 `\let\twoheadrightarrow\texttwoheadrightarrow`
 20904 `\let\ntwoheadrightarrow\textntwoheadrightarrow`
 20905 `\let\twoheaddownarrow\texttwoheaddownarrow`
 20906 `\let\leftarrowtail\textleftarrowtail`
 20907 `\let\rightarrowtail\textrightarrowtail`
 20908 `\let\mapsto\textmapsto`
 20909 `\let\hookrightarrow\texthookrightarrow`
 20910 `\let\hookrightarrow\texthookrightarrow`
 20911 `\let\looparrowleft\textlooparrowleft`
 20912 `\let\looparrowright\textlooparrowright`
 20913 `\let\nleftrightarrow\textnleftrightarrow`
 20914 `\let\lightning\textlightning`
 20915 `\let\dash\textdash`
 20916 `\let\curvearrowleft\textcurvearrowleft`
 20917 `\let\curvearrowright\textcurvearrowright`
 20918 `\let\leftharpoonup\textleftharpoonup`
 20919 `\let\leftharpoondown\textleftharpoondown`
 20920 `\let\upharpoonright\textupharpoonright`
 20921 `\let\upharpoonleft\textupharpoonleft`
 20922 `\let\rightharpoonup\text\rightharpoonup`
 20923 `\let\rightharpoondown\text\rightharpoondown`
 20924 `\let\downharpoonright\textdownharpoonright`
 20925 `\let\downharpoonleft\textdownharpoonleft`
 20926 `\let\rightleftarrows\textrightleftarrows`
 20927 `\let\updownarrows\textupdownarrows`
 20928 `\let\leftrightarrows\textleftrightarrows`
 20929 `\let\leftleftarrows\textleftleftarrows`
 20930 `\let\upuparrows\textupuparrows`
 20931 `\let\righttrightarrows\textrighttrightarrows`
 20932 `\let\downdownarrows\textdowndownarrows`
 20933 `\let\leftrightharpoons\textleftrightharpoons`
 20934 `\let\rightleftharpoons\textrightleftharpoons`
 20935 `\let\NLeftarrow\textNLeftarrow`
 20936 `\let\NLeftrightarrow\textNLeftrightarrow`
 20937 `\let\NRrightarrow\textNRrightarrow`
 20938 `\let\Leftarrow\textLeftarrow`
 20939 `\let\Uparrow\textUparrow`
 20940 `\let\Rightarrow\textRightarrow`
 20941 `\let\Downarrow\textDownarrow`
 20942 `\let\Leftrightarrow\textLeftrightarrow`
 20943 `\let\Updownarrow\textUpdownarrow`
 20944 `\let\Nwarrow\textNwarrow`
 20945 `\let\Nearrow\textNearrow`
 20946 `\let\searrow\textsearrow`
 20947 `\let\swarrow\textswarrow`
 20948 `\let\Lleftarrow\textLleftarrow`
 20949 `\let\Rrightarrow\textRrightarrow`
 20950 `\let\leftsquigarrow\textleftsquigarrow`

20951 $\backslash\mathrm{rightsquigarrow}\text{rightsquigarrow}$
 20952 $\backslash\mathrm{dashleftarrow}\text{dashleftarrow}$
 20953 $\backslash\mathrm{dasheduparrow}\text{dasheduparrow}$
 20954 $\backslash\mathrm{dashrightarrow}\text{dashrightarrow}$
 20955 $\backslash\mathrm{dasheddownarrow}\text{dasheddownarrow}$
 20956 $\backslash\mathrm{pointer}\text{pointer}$
 20957 $\backslash\mathrm{downuparrows}\text{downuparrows}$
 20958 $\backslash\mathrm{leftarrowtriangle}\text{leftarrowtriangle}$
 20959 $\backslash\mathrm{rightarrowtriangle}\text{rightarrowtriangle}$
 20960 $\backslash\mathrm{leftrightarrowtriangle}\text{leftrightarrowtriangle}$
 20961 $\backslash\mathrm{forall}\text{forall}$
 20962 $\backslash\mathrm{complement}\text{complement}$
 20963 $\backslash\mathrm{partial}\text{partial}$
 20964 $\backslash\mathrm{exists}\text{exists}$
 20965 $\backslash\mathrm{nexists}\text{nexists}$
 20966 $\backslash\mathrm{emptyset}\text{emptyset}$
 20967 $\backslash\mathrm{triangle}\text{triangle}$
 20968 $\backslash\mathrm{nabla}\text{nabla}$
 20969 $\backslash\mathrm{in}\text{in}$
 20970 $\backslash\mathrm{notin}\text{notin}$
 20971 $\backslash\mathrm{smallin}\text{smallin}$
 20972 $\backslash\mathrm{ni}\text{ni}$
 20973 $\backslash\mathrm{notowner}\text{notowner}$
 20974 $\backslash\mathrm{smallowns}\text{smallowns}$
 20975 $\backslash\mathrm{prod}\text{prod}$
 20976 $\backslash\mathrm{amalg}\text{amalg}$
 20977 $\backslash\mathrm{sum}\text{sum}$
 20978 $\backslash\mathrm{mp}\text{mp}$
 20979 $\backslash\mathrm{dotplus}\text{dotplus}$
 20980 $\backslash\mathrm{Divides}\text{Divides}$
 20981 $\backslash\mathrm{DividesNot}\text{DividesNot}$
 20982 $\backslash\mathrm{setminus}\text{setminus}$
 20983 $\backslash\mathrm{ast}\text{ast}$
 20984 $\backslash\mathrm{circ}\text{circ}$
 20985 $\backslash\mathrm{surd}\text{surd}$
 20986 $\backslash\mathrm{propto}\text{propto}$
 20987 $\backslash\mathrm{infty}\text{infty}$
 20988 $\backslash\mathrm{angle}\text{angle}$
 20989 $\backslash\mathrm{measuredangle}\text{measuredangle}$
 20990 $\backslash\mathrm{sphericalangle}\text{sphericalangle}$
 20991 $\backslash\mathrm{mid}\text{mid}$
 20992 $\backslash\mathrm{nmid}\text{nmid}$
 20993 $\backslash\mathrm{parallel}\text{parallel}$
 20994 $\backslash\mathrm{nparallel}\text{nparallel}$
 20995 $\backslash\mathrm{wedge}\text{wedge}$
 20996 $\backslash\mathrm{owedge}\text{owedge}$
 20997 $\backslash\mathrm{vee}\text{vee}$
 20998 $\backslash\mathrm{ovee}\text{ovee}$
 20999 $\backslash\mathrm{cap}\text{cap}$
 21000 $\backslash\mathrm{cup}\text{cup}$
 21001 $\backslash\mathrm{int}\text{int}$
 21002 $\backslash\mathrm{iint}\text{iint}$
 21003 $\backslash\mathrm{iiint}\text{iiint}$
 21004 $\backslash\mathrm{oint}\text{oint}$
 21005 $\backslash\mathrm{oiint}\text{oiint}$
 21006 $\backslash\mathrm{ointclockwise}\text{ointclockwise}$
 21007 $\backslash\mathrm{ointctrlockwise}\text{ointctrlockwise}$

21008 \let\therefore\texttherefore
 21009 \let\because\textbecause
 21010 \let\vdotdot\textvdotdot
 21011 \let\squaredots\textsquaredots
 21012 \let\dotminus\textdotminus
 21013 \let\eqcolon\texteqcolon
 21014 \let\sim\textsim
 21015 \let\backsim\textbacksim
 21016 \let\backsim\textnbacksim
 21017 \let\wr\textwr
 21018 \let\sim\textnsim
 21019 \let\eqsim\texteqsim
 21020 \let\neqsim\textneqsim
 21021 \let\simeq\textsimeq
 21022 \let\sim\textnsimeq
 21023 \let\cong\textcong
 21024 \let\cong\textncong
 21025 \let\approx\textapprox
 21026 \let\approx\textnapprox
 21027 \let\approx\textapprox
 21028 \let\approx\textnapprox
 21029 \let\triplesim\texttriplesim
 21030 \let\triplesim\textntriplesim
 21031 \let\backcong\textbackcong
 21032 \let\backcong\textnbackcong
 21033 \let\asymp\textasymp
 21034 \let\asymp\textnasymp
 21035 \let\Bumpeq\textBumpeq
 21036 \let\Bumpeq\textnBumpeq
 21037 \let\bumpeq\textbumpeq
 21038 \let\bumpeq\textnbumpeq
 21039 \let\doteq\textdoteq
 21040 \let\doteq\textndoteq
 21041 \let\doteq\textdoteqdot
 21042 \let\doteq\textndoteq
 21043 \let\fallingdoteq\textfallingdoteq
 21044 \let\fallingdoteq\textnfallingdoteq
 21045 \let\risingdoteq\textrisingdoteq
 21046 \let\risingdoteq\textnrisingdoteq
 21047 \let\colonequals\textcolonequals
 21048 \let\equalscolon\textequalscolon
 21049 \let\eqcirc\texteqcirc
 21050 \let\neqcirc\textneqcirc
 21051 \let\circeq\textcirceq
 21052 \let\ncirceq\textncirceq
 21053 \let\hateq\texthateq
 21054 \let\hateq\textnhateq
 21055 \let\triangleeq\texttriangleeq
 21056 \let\neq\textneq
 21057 \let\ne\textne
 21058 \let\equiv\textequiv
 21059 \let\equiv\textnequiv
 21060 \let\leq\textleq
 21061 \let\le\textle
 21062 \let\geq\textgeq
 21063 \let\ge\textge
 21064 \let\leqq\textleqq

21065 \let\nleqq\textnleqq
 21066 \let\geqq\textgeqq
 21067 \let\ngeqq\textngeqq
 21068 \let\lneqq\textlneqq
 21069 \let\gneqq\textgneqq
 21070 \let\ll\textll
 21071 \let\nll\textnll
 21072 \let\gg\textgg
 21073 \let\ngg\textngg
 21074 \let\between\textbetween
 21075 \let\nless\textnless
 21076 \let\ngtr\textngtr
 21077 \let\nleq\textnleq
 21078 \let\ngel\textngel
 21079 \let\lesssim\textlesssim
 21080 \let\gtrsim\textgtrsim
 21081 \let\nlesssim\textnlesssim
 21082 \let\ngtrsim\textngtrsim
 21083 \let\lessgtr\textlessgtr
 21084 \let\gtrless\textgtrless
 21085 \let\ngtrless\textngtrless
 21086 \let\nlessgtr\textnlessgtr
 21087 \let\prec\textprec
 21088 \let\succ\textsucc
 21089 \let\preccurlyeq\textpreccurlyeq
 21090 \let\succcurlyeq\textsucccurlyeq
 21091 \let\prec\textprec
 21092 \let\prec\textprec
 21093 \let\succsim\textsuccsim
 21094 \let\nsuccsim\textnsuccsim
 21095 \let\prec\textprec
 21096 \let\succ\textsucc
 21097 \let\subset\textsubset
 21098 \let\supset\textsupset
 21099 \let\nsubset\textnsubset
 21100 \let\nsupset\textnsupset
 21101 \let\subseteq\textsubseteq
 21102 \let\supseteq\textsupseteq
 21103 \let\nsubseteq\textnsubseteq
 21104 \let\nsupseteq\textnsupseteq
 21105 \let\subsetneq\textsubsetneq
 21106 \let\supsetneq\textsupsetneq
 21107 \let\cupdot\textcupdot
 21108 \let\cupplus\textcupplus
 21109 \let\squasubset\textsquasubset
 21110 \let\nsquasubset\textnsquasubset
 21111 \let\squasupset\textsquasupset
 21112 \let\nsquasupset\textnsquasupset
 21113 \let\squasubseteq\textsquasubseteq
 21114 \let\nsquasubseteq\textnsquasubseteq
 21115 \let\squasupseteq\textsquasupseteq
 21116 \let\nsquasupseteq\textnsquasupseteq
 21117 \let\squacap\textsquacap
 21118 \let\squacup\textsquacup
 21119 \let\oplus\textoplus
 21120 \let\ominus\textominus
 21121 \let\otimes\textotimes

21122 $\backslash\text{oslash}$
 21123 $\backslash\text{odot}$
 21124 $\backslash\text{circledcirc}$
 21125 $\backslash\text{circledast}$
 21126 $\backslash\text{circleddash}$
 21127 $\backslash\text{boxplus}$
 21128 $\backslash\text{boxminus}$
 21129 $\backslash\text{boxtimes}$
 21130 $\backslash\text{boxdot}$
 21131 $\backslash\text{vdash}$
 21132 $\backslash\text{dashv}$
 21133 $\backslash\text{ndashv}$
 21134 $\backslash\text{top}$
 21135 $\backslash\text{ndownvdash}$
 21136 $\backslash\text{bot}$
 21137 $\backslash\text{nupvdash}$
 21138 $\backslash\text{vDash}$
 21139 $\backslash\text{Vdash}$
 21140 $\backslash\text{Vvdash}$
 21141 $\backslash\text{nVdash}$
 21142 $\backslash\text{VDash}$
 21143 $\backslash\text{nvDash}$
 21144 $\backslash\text{nvDash}$
 21145 $\backslash\text{nVdash}$
 21146 $\backslash\text{nVDash}$
 21147 $\backslash\text{lhs}$
 21148 $\backslash\text{rhs}$
 21149 $\backslash\text{unlhs}$
 21150 $\backslash\text{unrhs}$
 21151 $\backslash\text{multimapdotbothA}$
 21152 $\backslash\text{multimapdotbothB}$
 21153 $\backslash\text{multimap}$
 21154 $\backslash\text{veebar}$
 21155 $\backslash\text{barwedge}$
 21156 $\backslash\text{star}$
 21157 $\backslash\text{divideontimes}$
 21158 $\backslash\text{bowtie}$
 21159 $\backslash\text{ltimes}$
 21160 $\backslash\text{rtimes}$
 21161 $\backslash\text{leftthreetimes}$
 21162 $\backslash\text{rightthreetimes}$
 21163 $\backslash\text{backsimeq}$
 21164 $\backslash\text{nbacksimeq}$
 21165 $\backslash\text{curlyvee}$
 21166 $\backslash\text{curlywedge}$
 21167 $\backslash\text{Subset}$
 21168 $\backslash\text{nSubset}$
 21169 $\backslash\text{Supset}$
 21170 $\backslash\text{nSupset}$
 21171 $\backslash\text{Cap}$
 21172 $\backslash\text{Cup}$
 21173 $\backslash\text{pitchfork}$
 21174 $\backslash\text{lessdot}$
 21175 $\backslash\text{gtrdot}$
 21176 $\backslash\text{lll}$
 21177 $\backslash\text{ggg}$
 21178 $\backslash\text{lesseqgtr}$

21179 \let\gtreqless\textgtreqless
 21180 \let\curlyeqprec\textcurlyeqprec
 21181 \let\ncurlyeqprec\textncurlyeqprec
 21182 \let\curlyeqsucc\textcurlyeqsucc
 21183 \let\ncurlyeqsucc\textncurlyeqsucc
 21184 \let\mpreccurlyeq\textmpreccurlyeq
 21185 \let\msucccurlyeq\textmsucccurlyeq
 21186 \let\nqsubseteq\textnqsubseteq
 21187 \let\nqsupseteq\textnqsupseteq
 21188 \let\sqsubsetneq\textsqssubsetneq
 21189 \let\sqsupsetneq\textsqsupsetneq
 21190 \let\lnsim\textlnsim
 21191 \let\gnsim\textgnsim
 21192 \let\precnsim\textprecnsim
 21193 \let\succnsim\textsuccnsim
 21194 \let\ntriangleleft\textntriangleleft
 21195 \let\ntriangleright\textntriangleright
 21196 \let\ntrianglelefteq\textntrianglelefteq
 21197 \let\ntrianglerighteq\textntrianglerighteq
 21198 \let\vdots\textvdots
 21199 \let\cdots\textcdots
 21200 \let\udots\textudots
 21201 \let\ddots\textddots
 21202 \let\barin\textbarin
 21203 \let\diameter\textdiameter
 21204 \let\backneg\textbackneg
 21205 \let\wasylounge\textwasylounge
 21206 \let\invbackneg\textinvbackneg
 21207 \let\clock\textclock
 21208 \let\ulcorner\textulcorner
 21209 \let\urcorner\texturcorner
 21210 \let\llcorner\textllcorner
 21211 \let\lrcorner\textlrcorner
 21212 \let\frown\textfrown
 21213 \let\smile\textsmile
 21214 \let\Keyboard\textKeyboard
 21215 \let\langle\textlangle
 21216 \let\rangle\textrangle
 21217 \let\APLinv\textAPLinv
 21218 \let\Tumbler\textTumbler
 21219 \let\notslash\textnotslash
 21220 \let\notbackslash\textnotbackslash
 21221 \let\boxbackslash\textboxbackslash
 21222 \let\APLleftarrowbox\textAPLleftarrowbox
 21223 \let\APLrightarrowbox\textAPLrightarrowbox
 21224 \let\APLuparrowbox\textAPLuparrowbox
 21225 \let\APLdownarrowbox\textAPLdownarrowbox
 21226 \let\APLinput\textAPLinput
 21227 \let\Request\textRequest
 21228 \let\Beam\textBeam
 21229 \let\hexagon\texthexagon
 21230 \let\APLbox\textAPLbox
 21231 \let\ForwardToIndex\textForwardToIndex
 21232 \let\RewindToIndex\textRewindToIndex
 21233 \let\bbslash\textbbslash
 21234 \let\CircledA\textCircledA
 21235 \let\CleaningF\textCleaningF

21236 \let\CleaningFF\textCleaningFF
 21237 \let\CleaningP\textCleaningP
 21238 \let\CleaningPP\textCleaningPP
 21239 \let\CuttingLine\textCuttingLine
 21240 \let\UParrow\textUParrow
 21241 \let\bigtriangleup\textbigtriangleup
 21242 \let\Forward\textForward
 21243 \let\triangleright\texttriangleright
 21244 \let\RHD\textRHD
 21245 \let\DOWNarrow\textDOWNarrow
 21246 \let\bigtriangledown\textbigtriangledown
 21247 \let\Rewind\textRewind
 21248 \let\triangleleft\texttriangleleft
 21249 \let\LHD\textLHD
 21250 \let\diamond\textdiamond
 21251 \let\lozenge\textlozenge
 21252 \let\LEFTCIRCLE\textLEFTCIRCLE
 21253 \let\RIGHTCIRCLE\textRIGHTCIRCLE
 21254 \let\openbullet\textopenbullet
 21255 \let\boxbar\textboxbar
 21256 \let\bigcircle\textbigcircle
 21257 \let\Cloud\textCloud
 21258 \let\FiveStar\textFiveStar
 21259 \let\FiveStarOpen\textFiveStarOpen
 21260 \let\Phone\textPhone
 21261 \let\boxempty\textboxempty
 21262 \let\Checkedbox\textCheckedbox
 21263 \let\Crossedbox\textCrossedbox
 21264 \let\Coffeecup\textCoffeecup
 21265 \let\HandCuffLeft\textHandCuffLeft
 21266 \let\HandCuffRight\textHandCuffRight
 21267 \let\HandLeft\textHandLeft
 21268 \let\HandRight\textHandRight
 21269 \let\Radioactivity\textRadioactivity
 21270 \let\Biohazard\textBiohazard
 21271 \let\Ankh\textAnkh
 21272 \let\YinYang\textYinYang
 21273 \let\frownie\textfrownie
 21274 \let\smiley\textsmiley
 21275 \let\blacksmiley\textblacksmiley
 21276 \let\sun\textsun
 21277 \let\leftmoon\textleftmoon
 21278 \let\rightmoon\textrightmoon
 21279 \let\mercury\textmercury
 21280 \let\earth\textearth
 21281 \let\male\textmale
 21282 \let\jupiter\textjupiter
 21283 \let\saturn\textsaturn
 21284 \let\uranus\texturanus
 21285 \let\neptune\textneptune
 21286 \let\pluto\textpluto
 21287 \let\aries\textaries
 21288 \let\taurus\texttaurus
 21289 \let\gemini\textgemini
 21290 \let\cancer\textcancer
 21291 \let\leo\textleo
 21292 \let\virgo\textvirgo

21293 \let\libra\textlibra
 21294 \let\scorpio\textscorpio
 21295 \let\sagittarius\textsagittarius
 21296 \let\capricornus\textcapricornus
 21297 \let\aquarius\textaquarius
 21298 \let\pisces\textpisces
 21299 \let\quarternote\textquarternote
 21300 \let\twonotes\texttwonotes
 21301 \let\sixteenthnote\textsixteenthnote
 21302 \let\flat\textflat
 21303 \let\natural\textnatural
 21304 \let\sharp\textsharp
 21305 \let\recycle\textrecycle
 21306 \let\Wheelchair\textWheelchair
 21307 \let\Flag\textFlag
 21308 \let\MineSign\textMineSign
 21309 \let\ds military\textds military
 21310 \let\ds medical\textds medical
 21311 \let\ds juridical\textds juridical
 21312 \let\ds chemical\textds chemical
 21313 \let\ds biological\textds biological
 21314 \let\ds commercial\textds commercial
 21315 \let\manstar\textmanstar
 21316 \let\danger\textdanger
 21317 \let\FemaleFemale\textFemaleFemale
 21318 \let\MaleMale\textMaleMale
 21319 \let\FemaleMale\textFemaleMale
 21320 \let\Hermaphrodite\textHermaphrodite
 21321 \let\Neutral\textNeutral
 21322 \let\hexstar\texthexstar
 21323 \let\SunClod\textSunClod
 21324 \let\Rain\textRain
 21325 \let\noway\textnoway
 21326 \let\Mountain\textMountain
 21327 \let\Tent\textTent
 21328 \let\ScissorRight\textScissorRight
 21329 \let\ScissorRightBrokenTop\textScissorRightBrokenTop
 21330 \let\ScissorHollowRight\textScissorHollowRight
 21331 \let\PhoneHandset\textPhoneHandset
 21332 \let\Tape\textTape
 21333 \let\Plane\textPlane
 21334 \let\Envelope\textEnvelope
 21335 \let\Peace\textPeace
 21336 \let\WritingHand\textWritingHand
 21337 \let\PencilRightDown\textPencilRightDown
 21338 \let\PencilRight\textPencilRight
 21339 \let\PencilRightUp\textPencilRightUp
 21340 \let\NibRight\textNibRight
 21341 \let\NibSolidRight\textNibSolidRight
 21342 \let\Checkmark\textCheckmark
 21343 \let\CheckmarkBold\textCheckmarkBold
 21344 \let\XSolid\textXSolid
 21345 \let\XSolidBold\textXSolidBold
 21346 \let\XSolidBrush\textXSolidBrush
 21347 \let\PlusOutline\textPlusOutline
 21348 \let\Plus\textPlus
 21349 \let\PlusThinCenterOpen\textPlusThinCenterOpen

21350 \let\PlusCenterOpen\textPlusCenterOpen
 21351 \let\Cross\textCross
 21352 \let\CrossOpenShadow\textCrossOpenShadow
 21353 \let\CrossOutline\textCrossOutline
 21354 \let\CrossMaltese\textCrossMaltese
 21355 \let\DavidStar\textDavidStar
 21356 \let\FourAsterisk\textFourAsterisk
 21357 \let\JackStar\textJackStar
 21358 \let\JackStarBold\textJackStarBold
 21359 \let\ClowerTips\textClowerTips
 21360 \let\FourStar\textFourStar
 21361 \let\FourStarOpen\textFourStarOpen
 21362 \let\FiveStarOpenCircled\textFiveStarOpenCircled
 21363 \let\FiveStarCenterOpen\textFiveStarCenterOpen
 21364 \let\FiveStarOpenDotted\textFiveStarOpenDotted
 21365 \let\FiveStarOutline\textFiveStarOutline
 21366 \let\FiveStarOutlineHeavy\textFiveStarOutlineHeavy
 21367 \let\FiveStarConvex\textFiveStarConvex
 21368 \let\FiveStarShadow\textFiveStarShadow
 21369 \let\AsteriskBold\textAsteriskBold
 21370 \let\AsteriskCenterOpen\textAsteriskCenterOpen
 21371 \let\EightStarTaper\textEightStarTaper
 21372 \let\EightStarConvex\textEightStarConvex
 21373 \let\SixStar\textSixStar
 21374 \let\EightStar\textEightStar
 21375 \let\EightStarBold\textEightStarBold
 21376 \let\TwelveStar\textTwelveStar
 21377 \let\SixteenStarLight\textSixteenStarLight
 21378 \let\SixFlowerPetalRemoved\textSixFlowerPetalRemoved
 21379 \let\SixFlowerOpenCenter\textSixFlowerOpenCenter
 21380 \let\Asterisk\textAsterisk
 21381 \let\SixFlowerAlternate\textSixFlowerAlternate
 21382 \let\FiveFlowerPetal\textFiveFlowerPetal
 21383 \let\FiveFlowerOpen\textFiveFlowerOpen
 21384 \let\EightFlowerPetal\textEightFlowerPetal
 21385 \let\SunshineOpenCircled\textSunshineOpenCircled
 21386 \let\SixFlowerAltPetal\textSixFlowerAltPetal
 21387 \let\SnowflakeChevron\textSnowflakeChevron
 21388 \let\Snowflake\textSnowflake
 21389 \let\SnowflakeChevronBold\textSnowflakeChevronBold
 21390 \let\Sparkle\textSparkle
 21391 \let\SparkleBold\textSparkleBold
 21392 \let\AsteriskRoundedEnds\textAsteriskRoundedEnds
 21393 \let\EightFlowerPetalRemoved\textEightFlowerPetalRemoved
 21394 \let\EightAsterisk\textEightAsterisk
 21395 \let\CircleShadow\textCircleShadow
 21396 \let\SquareShadowBottomRight\textSquareShadowBottomRight
 21397 \let\SquareTopRight\textSquareTopRight
 21398 \let\SquareCastShadowBottomRight\textSquareCastShadowBottomRight
 21399 \let\SquareCastShadowTopRight\textSquareCastShadowTopRight
 21400 \let\DiamandSolid\textDiamandSolid
 21401 \let\RectangleThin\textRectangleThin
 21402 \let\Rectangle\textRectangle
 21403 \let\RectangleBold\textRectangleBold
 21404 \let\perp\textperp
 21405 \let\notperp\textnotperp
 21406 \let\veedot\textveedot

21407 \let\wedgedot\textwedgedot
 21408 \let\leftspoon\textleftspoon
 21409 \let\lbrackdbl\textlbrackdbl
 21410 \let\rbrackdbl\textrbrackdbl
 21411 \let\circlearrowleft\textcirclearrowleft
 21412 \let\circlearrowright\textcirclearrowright
 21413 \let\longleftarrow\textlongleftarrow
 21414 \let\longrightarrow\textlongrightarrow
 21415 \let\longleftarrow\textlongleftarrow
 21416 \let\longrightarrow\textlongrightarrow
 21417 \let\Longleftarrow\textLongleftarrow
 21418 \let\longrightarrow\textlongrightarrow
 21419 \let\longmapsto\textlongmapsto
 21420 \let\Longmapsfrom\textLongmapsfrom
 21421 \let\Longmapsto\textLongmapsto
 21422 \let\nwsearrow\textnwsearrow
 21423 \let\neswarrow\textneswarrow
 21424 \let\hookrightarrow\texthookrightarrow
 21425 \let\rhookrightarrow\texthookrightarrow
 21426 \let\hookrightarrow\texthookrightarrow
 21427 \let\rhookrightarrow\texthookrightarrow
 21428 \let\leadsto\textleadsto
 21429 \let\curvearrowright\textcurvearrowright
 21430 \let\curvearrowleft\textcurvearrowleft
 21431 \let\curvearrowright\textcurvearrowright
 21432 \let\curvearrowright\textcurvearrowright
 21433 \let\curvearrowdown\textcurvearrowdown
 21434 \let\curvearrowdown\textcurvearrowdown
 21435 \let\curvearrowleft\textcurvearrowleft
 21436 \let\curvearrowright\textcurvearrowright
 21437 \let\leftrightharpoon\textleftrightharpoon
 21438 \let\rightleftharpoon\textrightleftharpoon
 21439 \let\updownharpoonright\textupdownharpoonright
 21440 \let\updownharpoonleft\textupdownharpoonleft
 21441 \let\leftleftharpoons\textleftleftharpoons
 21442 \let\upupharpoons\textupupharpoons
 21443 \let\rightleftharpoons\textrightleftharpoons
 21444 \let\downharpoons\textdownharpoons
 21445 \let\leftbarharpoon\textleftbarharpoon
 21446 \let\barleftharpoon\textbarleftharpoon
 21447 \let\rightbarharpoon\textrightbarharpoon
 21448 \let\barharpoon\textbarharpoon
 21449 \let\updownharpoons\textupdownharpoons
 21450 \let\downupharpoons\textdownupharpoons
 21451 \let\moo\textmoo
 21452 \let\llparenthesis\textllparenthesis
 21453 \let\rrparenthesis\textrrparenthesis
 21454 \let\invdiameter\textinvdiameter
 21455 \let\obar\textobar
 21456 \let\obslash\textobslash
 21457 \let\obot\textobot
 21458 \let\NoChemicalCleaning\textNoChemicalCleaning
 21459 \let\olessthan\textolessthan
 21460 \let\ogreaterthan\textogreaterthan
 21461 \let\boxslash\textboxslash
 21462 \let\boxbslash\textboxbslash
 21463 \let\boxast\textboxast

21464 `\let\boxcircle\textboxcircle`
 21465 `\let\boxbox\textboxbox`
 21466 `\let\Valve\textValve`
 21467 `\let\multimapboth\textmultimapboth`
 21468 `\let\shuffle\textshuffle`
 21469 `\let\uplus\textuplus`
 21470 `\let\bigdoublewedge\textbigdoublewedge`
 21471 `\let\bigdoublevee\textbigdoublevee`
 21472 `\let\Join\textJoin`
 21473 `\let\fatsemi\textfatsemi`
 21474 `\let\circplus\textcircplus`
 21475 `\let\minusdot\textminusdot`
 21476 `\let\dotimes\textdotimes`
 21477 `\let\dtimes\textdtimes`
 21478 `\let\odiv\textodiv`
 21479 `\let\invneg\textinvneg`
 21480 `\let\squaredoublecap\textsquaredoublecap`
 21481 `\let\capdot\textcapdot`
 21482 `\let\squaredoublecup\textsquaredoublecup`
 21483 `\let\doublewedge\textdoublewedge`
 21484 `\let\doublevee\textdoublevee`
 21485 `\let\doublebarwedge\textdoublebarwedge`
 21486 `\let\veedoublebar\textveedoublebar`
 21487 `\let\eqdot\texteqdot`
 21488 `\let\neqdot\textneqdot`
 21489 `\let\coloncolonequals\textcoloncolonequals`
 21490 `\let\leqslant\textleqslant`
 21491 `\let\nleqslant\textnleqslant`
 21492 `\let\geqslant\textgeqslant`
 21493 `\let\ngeqslant\textngeqslant`
 21494 `\let\lessapprox\textlessapprox`
 21495 `\let\nlessapprox\textnlessapprox`
 21496 `\let\gtrapprox\textgtrapprox`
 21497 `\let\ngtrapprox\textngtrapprox`
 21498 `\let\lneq\textlneq`
 21499 `\let\gneq\textgneq`
 21500 `\let\lnapprox\textlnapprox`
 21501 `\let\gnapprox\textgnapprox`
 21502 `\let\lesseqqgtr\textlesseqqgtr`
 21503 `\let\gtreqqless\textgtreqqless`
 21504 `\let\eqslantless\texteqslantless`
 21505 `\let\eqslantgtr\texteqslantgtr`
 21506 `\let\leftslice\textleftslice`
 21507 `\let\rightslice\textright slice`
 21508 `\let\preceq\textpreceq`
 21509 `\let\npreceq\textnpreceq`
 21510 `\let\succeq\textsucceq`
 21511 `\let\nsucceq\textnsucceq`
 21512 `\let\precneq\textprecneq`
 21513 `\let\succneq\textsuccneq`
 21514 `\let\preceqq\textpreceqq`
 21515 `\let\npreceqq\textnpreceqq`
 21516 `\let\succeqq\textsucceqq`
 21517 `\let\nsucceqq\textnsucceqq`
 21518 `\let\precneqq\textprecneqq`
 21519 `\let\succneqq\textsuccneqq`
 21520 `\let\precapprox\textprecapprox`

21521 \let\nprecapprox\textnprecapprox
 21522 \let\succapprox\textsuccapprox
 21523 \let\nsuccapprox\textnsuccapprox
 21524 \let\precnapprox\textprecnapprox
 21525 \let\succnapprox\textsuccnapprox
 21526 \let\subseteqq\textsubseteqq
 21527 \let\subsetseteqq\textsubsetseteqq
 21528 \let\supseteqq\textsupseteqq
 21529 \let\supsetseteqq\textsupsetseteqq
 21530 \let\dashV\textdashV
 21531 \let\ndashV\textndashV
 21532 \let\Dashv\textDashv
 21533 \let\ndashv\textndashv
 21534 \let\DashV\textDashV
 21535 \let\ndashV\textndashV
 21536 \let\downmodels\textdownmodels
 21537 \let\ndownmodels\textndownmodels
 21538 \let\upmodels\textupmodels
 21539 \let\nupmodels\textnupmodels
 21540 \let\upspoon\textupspoon
 21541 \let\interleave\textinterleave
 21542 \let\sslash\textsslash
 21543 \let\pentagon\textpentagon
 21544 \let\varhexagon\textvarhexagon
 21545 \let\jinferior\textjinferior
 21546 \let\slashdiv\textslashdiv
 21547 \let\fivedots\textfivedots
 21548 \let\oo\textoo
 21549 \let\GaPa\textGaPa
 21550 \let\HaPa\textHaPa
 21551 \let\ViPa\textViPa
 21552 \let\AcPa\textAcPa
 21553 \let\SePa\textSePa
 21554 \let\ZwPa\textZwPa
 21555 \let\fullnote\textfullnote
 21556 \let\halfnote\texthalfnote
 21557 \let\Vier\textVier
 21558 \let\Acht\textAcht
 21559 \let\Sech\textSech
 21560 \let\Zwdr\textZwdr
 21561 \let\Mundus\textMundus
 21562 \let\Moon\textMoon
 21563 \let\ManFace\textManFace
 21564 \let\WomanFace\textWomanFace
 21565 \let\Fax\textFax
 21566 \let\Fire\textFire
 21567 \let\Bicycle\textBicycle
 21568 \let\Gentsroom\textGentsroom
 21569 \let\Ladiesroom\textLadiesroom
 21570 \let\ccnc\textccnc
 21571 \let\ccsa\textccsa
 21572 \let\Info\textInfo
 21573 \let\CESign\textCESign
 21574 \let\neg\textneg
 21575 \let\times\texttimes
 21576 \let\div\textdiv
 21577 \let\pm\textpm

```

21578 \let\cdot\textcdot
21579 }% \psdmapshortnames
21580 \newcommand*{\psdaliasnames}{%
21581 \let\epsdice\HyPsd@DieFace
21582 \let\fcdice\HyPsd@DieFace
21583 \let\MoonPha\HyPsd@MoonPha
21584 \let\mathdollar\textdollar
21585 \let\EyesDollar\textdollar
21586 \let\binampersand\textampersand
21587 \let\with\textampersand
21588 \let\mathunderscore\textunderscore
21589 \let\textvertline\textbar
21590 \let\mathsterling\textsterling
21591 \let\pounds\textsterling
21592 \let\brokenvert\textbrokenbar
21593 \let\mathsection\textsection
21594 \let\S\textsection
21595 \let\mathparagraph\textparagraph
21596 \let\MultiplicationDot\textperiodcentered
21597 \let\Squaredot\textperiodcentered
21598 \let\vartimes\textmultiply
21599 \let\MVMultiplication\textmultiply
21600 \let\eth\dh
21601 \let\crossd\textcrd
21602 \let\textbard\textcrd
21603 \let\bard\textcrd
21604 \let\textcrh\texthbar
21605 \let\crossh\texthbar
21606 \let\planck\texthbar
21607 \let\eng\ng
21608 \let\engma\ng
21609 \let\crossb\textcrb
21610 \let\textbarb\textcrb
21611 \let\barb\textcrb
21612 \let\Florin\textflorin
21613 \let\hv\texthvlig
21614 \let\hausak\texthtk
21615 \let\crossnilambda\textcrlambda
21616 \let\barlambda\textcrlambda
21617 \let\lambdabar\textcrlambda
21618 \let\lambdaslash\textcrlambda
21619 \let\textnrleg\textPUnrleg
21620 \let\textpipevar\textpipe
21621 \let\textdoublepipevar\textdoublepipe
21622 \let\textdoublebarpipevar\textdoublebarpipe
21623 \let\textcrg\textgslash
21624 \let\textdblig\textPUdblig
21625 \let\textqplig\textPUqplig
21626 \let\textcentoldstyle\textslashc
21627 \let\textbarc\textslashc
21628 \let\inva\textturna
21629 \let\vara\textscripta
21630 \let\invscripta\textturnscripta
21631 \let\rotvara\textturnscripta
21632 \let\hookb\texthtb
21633 \let\hausab\texthtb
21634 \let\varopeno\textopeno

```

21635 \let\curlyc\textctc
 21636 \let\taild\textrtaild
 21637 \let\hookd\texthtd
 21638 \let\hausad\texthtd
 21639 \let\er\textrhooschwa
 21640 \let\epsi\textniepsilon
 21641 \let\hookrepsilon\texthookrepsilon
 21642 \let\closedrepsilon\textcloserepsilon
 21643 \let\barj\textbardotlessj
 21644 \let\hookg\texthtg
 21645 \let\varg\textscriptg
 21646 \let\vod\textipagamma
 21647 \let\invh\textturnh
 21648 \let\udesc\textturnh
 21649 \let\hookh\textthh
 21650 \let\voicedh\textthh
 21651 \let\hookheng\textthheng
 21652 \let\ibar\textbari
 21653 \let\vari\textniota
 21654 \let\tildel\textltilde
 21655 \let\latfric\textbeltl
 21656 \let\tail\textrtail
 21657 \let\lz\textlyoghlig
 21658 \let\invm\textturnm
 21659 \let\rotm\textturnm
 21660 \let\legm\textturnmrleg
 21661 \let\labdentalnas\textltailm
 21662 \let\emgma\textltailm
 21663 \let\nj\textltailn
 21664 \let\enya\textltailn
 21665 \let\tailn\textrtailn
 21666 \let\closedniomega\textcloseomega
 21667 \let\varomega\textcloseomega
 21668 \let\invr\textturnr
 21669 \let\rotr\textturnr
 21670 \let\invlegr\textturnlonglegr
 21671 \let\tailinvr\textturnrrtail
 21672 \let\legr\textlonglegr
 21673 \let\tailr\textrtailr
 21674 \let\flapr\textfishhookr
 21675 \let\flap\textfishhookr
 21676 \let\tails\textrtails
 21677 \let\curlyesh\textctesh
 21678 \let\clickt\textturnt
 21679 \let\tailt\textrtailt
 21680 \let\ubar\textbaru
 21681 \let\rotOmega\textniupsilon
 21682 \let\invv\textturnv
 21683 \let\pwedge\textturnv
 21684 \let\invw\textturnw
 21685 \let\rotw\textturnw
 21686 \let\invy\textturny
 21687 \let\roty\textturny
 21688 \let\tailz\textrtailz
 21689 \let\curlyz\textctz
 21690 \let\curlyyogh\textctyogh
 21691 \let\ejective\textglotstop

21692 \let\glottal\textglotstop
 21693 \let\reveject\textrevglotstop
 21694 \let\clickc\textstretchc
 21695 \let\textstretchcvar\textstretchc
 21696 \let\clickb\textbullseye
 21697 \let\textObullseye\textbullseye
 21698 \let\textctjvar\textctj
 21699 \let\textturnsck\textturnk
 21700 \let\dz\textdzlig
 21701 \let\tesh\textteshlig
 21702 \let\digamma\textdigammagreek
 21703 \let\hardsign\cyrhrdsn
 21704 \let\softsign\cyrsoftsn
 21705 \let\hebsin\hebsin
 21706 \let\textsck\textPUsc
 21707 \let\textscm\textPUscm
 21708 \let\textscp\textPUscp
 21709 \let\textrevscr\textPUrevscr
 21710 \let\textrhooca\textPURhooca
 21711 \let\textrhooke\textPURhooke
 21712 \let\textrhookepsilon\textPURhookepsilon
 21713 \let\texthookopeno\textPURhookopeno
 21714 \let\textdoublevertline\textbardbl
 21715 \let\dag\textdagger
 21716 \let\ddagger\textdaggerdbl
 21717 \let\ddag\textdaggerdbl
 21718 \let\mathellipsis\textellipsis
 21719 \let\EurDig\texteuro
 21720 \let\EURdig\texteuro
 21721 \let\EurHv\texteuro
 21722 \let\EURhv\texteuro
 21723 \let\EurCr\texteuro
 21724 \let\EURcr\texteuro
 21725 \let\EurTm\texteuro
 21726 \let\EURtm\texteuro
 21727 \let\Eur\texteuro
 21728 \let\Denarius\textDeleatur
 21729 \let\agemO\textmho
 21730 \let\EstimatedSign\textestimated
 21731 \let\Ecommerce\textestimated
 21732 \let\bindnasrepma\textinvamp
 21733 \let\parr\textinvamp
 21734 \let\MVRightArrow\textrightarrow
 21735 \let\MVRightarrow\textrightarrow
 21736 \let\MVArrowDown\textdownarrow
 21737 \let\Force\textdownarrow
 21738 \let\textglobrise\textnearrow
 21739 \let\textglobfall\textsearrow
 21740 \let\Lightning\textlightning
 21741 \let\Conclusion\textrightarrow
 21742 \let\dashedleftarrow\textdashleftarrow
 21743 \let\dashedrightarrow\textdashrightarrow
 21744 \let\varnothing\textemptyset
 21745 \let\owns\textni
 21746 \let\notni\textnotowner
 21747 \let\varprop\textpropto
 21748 \let\varangle\textsphericalangle

21749 \let\Anglesign\textsphericalangle
 21750 \let\AngleSign\textsphericalangle
 21751 \let\notdivides\textnmid
 21752 \let\varowedge\textowedge
 21753 \let\varovee\textovee
 21754 \let\varint\textint
 21755 \let\varoint\textoint
 21756 \let\downtherefore\textbecause
 21757 \let\textdotdiv\textdotminus
 21758 \let\AC\textsim
 21759 \let\wreath\textwr
 21760 \let\nthickapprox\textnapprox
 21761 \let\VHF\texttriplesim
 21762 \let\notasymp\textnasymp
 21763 \let\Doteq\textdoteqdot
 21764 \let\corresponds\texthateq
 21765 \let\Corresponds\texthateq
 21766 \let\nequal\textneq
 21767 \let\Congruent\textequiv
 21768 \let\NotCongruent\textnequiv
 21769 \let\notequiv\textnequiv
 21770 \let\LessOrEqual\textleq
 21771 \let\LargerOrEqual\textgeq
 21772 \let\apprle\textlessim
 21773 \let\apprge\textgtrsim
 21774 \let\varoplus\textoplus
 21775 \let\varominus\textominus
 21776 \let\varotimes\textotimes
 21777 \let\varoslash\textoslash
 21778 \let\varodot\textodot
 21779 \let\ocirc\textcircledcirc
 21780 \let\varocircle\textcircledcirc
 21781 \let\varoast\textcircledast
 21782 \let\oasterisk\textcircledast
 21783 \let\rightvdash\textvdash
 21784 \let\leftvdash\textdashv
 21785 \let\leftvdash\textndashv
 21786 \let\downvdash\texttop
 21787 \let\upvdash\textbot
 21788 \let\perp\textnupvdash
 21789 \let\models\textvDash
 21790 \let\rightmodels\textvDash
 21791 \let\rightVdash\textVdash
 21792 \let\rightModels\textVDash
 21793 \let\rightvdash\textnvDash
 21794 \let\rightmodels\textnvDash
 21795 \let\models\textnvDash
 21796 \let\rightVdash\textnVdash
 21797 \let\rightModels\textnVDash
 21798 \let\lessclosed\textlhd
 21799 \let\gtrclosed\textrhd
 21800 \let\leqclosed\textunlhd
 21801 \let\trianglelefteq\textunlhd
 21802 \let\geqclosed\textunrhd
 21803 \let\trianglerighteq\textunrhd
 21804 \let\Bowtie\textbowtie
 21805 \let\varcurlyvee\textcurlyvee

21806 \let\varcurlywedge\textcurlywedge
 21807 \let\doublecap\textCap
 21808 \let\doublecup\textCup
 21809 \let\varsqsubsetneq\textsqsubsetneq
 21810 \let\varsqsupsetneq\textsqsupsetneq
 21811 \let\nlessclosed\textntriangleleft
 21812 \let\ngtrclosed\textntriangleright
 21813 \let\Clocklogo\textclock
 21814 \let\ClockLogo\textclock
 21815 \let\baro\textstmaryrdbaro
 21816 \let\varparallelinv\textbbslash
 21817 \let\CleaningA\textCircledA
 21818 \let\Kutline\textCuttingLine
 21819 \let\CutLine\textCuttingLine
 21820 \let\Cutline\textCuttingLine
 21821 \let\MoveUp\textUParrow
 21822 \let\APLup\textbigtriangleup
 21823 \let\Bleech\textbigtriangleup
 21824 \let\MoveDown\textDOWNarrow
 21825 \let\APLdown\textbigtriangledown
 21826 \let\Diamond\textdiamond
 21827 \let\varbigcirc\textbigcircle
 21828 \let\Telefon\textPhone
 21829 \let\Box\textboxempty
 21830 \let\CheckedBox\textCheckedbox
 21831 \let\XBox\textCrossedbox
 21832 \let\CrossedBox\textCrossedbox
 21833 \let\rightpointleft\textHandLeft
 21834 \let\leftpointright\textHandRight
 21835 \let\PointingHand\textHandRight
 21836 \let\Pointinghand\textHandRight
 21837 \let\Radiation\textRadioactivity
 21838 \let\Yinyang\textYinYang
 21839 \let\YingYang\textYinYang
 21840 \let\Yingyang\textYinYang
 21841 \let\Frowny\textfrownie
 21842 \let\Smiley\textsmiley
 21843 \let\Sun\textsun
 21844 \let\Mercury\textmercury
 21845 \let\textfemale\textPUfemale
 21846 \let\female\textPUfemale
 21847 \let\venus\textPUfemale
 21848 \let\Venus\textPUfemale
 21849 \let\Female\textPUfemale
 21850 \let\Earth\textearth
 21851 \let\mars\textmale
 21852 \let\Mars\textmale
 21853 \let\Male\textmale
 21854 \let\Jupiter\textjupiter
 21855 \let\Saturn\textsaturn
 21856 \let\Uranus\texturanus
 21857 \let\Neptune\textneptune
 21858 \let\Pluto\textpluto
 21859 \let\Aries\textaries
 21860 \let\Taurus\texttaurus
 21861 \let\Gemini\textgemini
 21862 \let\Cancer\textcancer

21863 \let\Leo\textleo
 21864 \let\Virgo\textvirgo
 21865 \let\Libra\textlibra
 21866 \let\Scorpio\textscorpio
 21867 \let\Sagittarius\textsagittarius
 21868 \let\Capricorn\textcapricornus
 21869 \let\Aquarius\textaquarius
 21870 \let\Pisces\textpisces
 21871 \let\spadesuit\textspadesuitblack
 21872 \let\Heart\textheartsuitwhite
 21873 \let\heartsuit\textheartsuitwhite
 21874 \let\diamondsuit\textdiamondsuitwhite
 21875 \let\clubsuit\textclubsuitblack
 21876 \let\eighthnote\textmusicalnote
 21877 \let\Recycling\textrecycle
 21878 \let\VarFlag\textFlag
 21879 \let\textxswup\textdsmilitary
 21880 \let\textuncrfemale\textPUuncrfemale
 21881 \let\Football\textSoccerBall
 21882 \let\CutLeft\textScissorRightBrokenBottom
 21883 \let\Cutright\textScissorRightBrokenBottom
 21884 \let\RightScissors\textScissorRight
 21885 \let\Leftscissors\textScissorRight
 21886 \let\Letter\textEnvelope
 21887 \let\Writinghand\textWritingHand
 21888 \let\checkmark\textCheckmark
 21889 \let\davidstar\textDavidStar
 21890 \let\llbracket\textlbrackdbl
 21891 \let\rrbracket\textrrbrackdbl
 21892 \let\RightTorque\textlcurvearrowdown
 21893 \let\Righttorque\textlcurvearrowdown
 21894 \let\LeftTorque\textrcurvearrowdown
 21895 \let\Lefttorque\textrcurvearrowdown
 21896 \let\textvarobar\textobar
 21897 \let\circledbslash\textobslash
 21898 \let\obackslash\textobslash
 21899 \let\varobslash\textobslash
 21900 \let\odplus\textobot
 21901 \let\varolessthan\textolessthan
 21902 \let\varogreaterthan\textogreaterthan
 21903 \let\divdot\textminusdot
 21904 \let\doublesqcap\textsquaddoublecap
 21905 \let\doublesqcup\textsquaddoublecup
 21906 \let\merge\textdoublevee
 21907 \let\leftVdash\textdashV
 21908 \let\nleftVdash\textndashV
 21909 \let\leftmodels\textDashv
 21910 \let\nleftmodels\textnDashv
 21911 \let\leftModels\textDashV
 21912 \let\nleftModels\textnDashV
 21913 \let\varparallel\textsslash
 21914 \let\textheng\textPUheng
 21915 \let\textlhookfour\textPUlhookfour
 21916 \let\textscf\textPUscf
 21917 \let\textao lig\textPUaolig
 21918 \let\Ganz\textfullnote
 21919 \let\Halb\texthalfnote


```
21920 \let\Womanface\textWomanFace
21921 \let\Faxmachine\textFax
21922 \let\CEsign\textCESign
21923 }% \psdaliasnames
21924 \</psdextra>
```

52 End of file hyccheck.tex

```
21925 \< *check>
21926 \typeout{}
21927 \begin{document}
21928 \end{document}
21929 \< /check>
```

53 Index

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		
\!	198, 223, 2177	16366, 16368, 16482, 16484,
\” 205, 230, 3448, 15182, 15542,		16502, 16504, 16538, 16540,
15554, 15566, 15692, 15778,		16550, 16552, 16612, 16614,
15792, 15800, 15815, 15827,		16735, 16737, 16743, 16745,
15844, 15858, 15869, 15870,		16748, 16751, 17205, 17207,
15884, 15896, 15903, 15954,		17209, 17211, 17213, 17215,
15995, 16022, 16051, 16224,		17217, 17220, 17276, 17278,
16238, 16246, 16260, 16274,		17280, 17282, 17341, 17344,
16291, 16305, 16316, 16317,		17346, 17375, 17395, 17545,
16332, 16344, 16352, 16610,		17565, 18104, 18106, 18128,
17272, 17274, 17285, 17337,		18130, 18168, 18170, 18236,
17339, 17371, 17385, 17541,		18238, 20478, 20483, 20488,
17555, 17799, 17801, 17816,		20493, 20498, 20503, 20508,
17819, 17821, 17823, 17825,		20513, 20518, 20523, 20528,
17827, 17837, 17839, 17841,		20533, 20538, 20543, 20548,
17843, 17850, 17853, 17855,		20553, 20558, 20563, 20568,
17857, 17863, 17865, 17871,		20573, 20578, 20583, 20588,
17873, 17879, 17881, 18088,		20593
18090, 18240, 18242, 18256,		\(. 193, 218, 337, 787, 790, 792,
18258, 18278		2179, 15248, 15612
\# . 566, 2262, 2263, 5070, 5081,		\) . 194, 219, 338, 759, 765, 768,
5083, 5099, 5131, 5191,		2180, 15249, 15614
9389, 9391, 10249, 10258,		* 340
10293, 11134, 12776, 12787,		\+ 203, 228, 341
12823, 13062, 13071, 13111,		\- 204, 229
15102		\. 201, 226, 334, 1322, 3809, 4243,
\\$ 187, 212, 336, 567, 5072, 5190		15545, 15557, 15569, 15633,
\% . 568, 2177, 2237, 2238, 5069,		15927, 15934, 15952, 15998,
5078, 5080, 5132, 9391		16025, 16057, 16134, 16135,
\& . . . 188, 213, 569, 5073, 5084,		16374, 16376, 16404, 16406,
5086, 12833		16424, 16426, 16463, 16494,
\’ 206,		16496, 16616, 16618, 16803,
231, 3388, 3402, 3443, 3445,		16805, 16811, 16813, 18020,
3446, 3447, 3448, 3453,		18022, 18032, 18034, 18072,
3454, 3456, 3461, 3467,		18074, 18080, 18082, 18132,
3471, 3472, 3475, 3518,		18134, 18140, 18142, 18172,
3519, 3524, 3525, 3526,		18174, 18176, 18178, 18188,
3527, 3528, 3529, 3530,		18190, 18196, 18198, 18244,
3531, 3533, 3536, 3543,		18246, 18252, 18254, 18260,
3544, 3545, 3546, 3549,		18262, 18284
3555, 3568, 15180, 15539,		\/. 197, 222, 700, 701, 702, 770,
15551, 15563, 15772, 15788,		1946, 8760
15796, 15809, 15823, 15829,		\: 192, 217
15838, 15854, 15863, 15864,		\; 202, 227, 9083
15878, 15892, 15898, 15922,		\< 199, 224
15924, 15925, 15926, 15929,		\= . . . 170, 176, 183, 186, 15547,
15931, 15932, 15933, 15941,		15559, 15571, 15947, 16002,
15992, 16019, 16048, 16218,		16029, 16056, 16354, 16356,
16234, 16242, 16254, 16270,		16396, 16398, 16448, 16450,
16276, 16285, 16301, 16310,		16451, 16522, 16524, 16582,
16311, 16326, 16340, 16346,		16584, 16815, 16817, 17833,
		17835, 17859, 17861, 18076,
		18078
		\> 200, 225
		\? 342
		\@ 3439
		\@@@ 2618
		\@@BOOKMARK 15163, 15166,
		15224, 15292, 15299
		\@@ListBox 13465, 13496, 14067,
		14101, 14422, 14463
		\@@Menu 13706, 13714
		\@@PasswordField . 13655, 13661
		\@@Radio . 13450, 13471, 13704,
		13728, 14052, 14073, 14407,
		14428
		\@@TextField 13657, 13672
		\@@commahyperpage 8894, 8895
		\@@hyper@@readexternallink . . .
		. . . . . 5446, 5448
		\@@hyperref 5293, 5294
		\@@latextohtmlX . . . 3251, 5663
		\@@wrintindex 8795, 8796
		\@@writetorep 15023, 15029
		\@Alph 7361, 7363
		\@BIBLABEL . 8215, 8221, 8227
		\@BOOKMARK . . 15163, 15165
		\@CITE 8292, 8300
		\@CITEX 8294
		\@CheckBox 6464, 11199, 13585,
		13621, 13759, 14189, 14565
		\@ChoiceMenu 6461, 11202,
		13403, 13624, 13694, 14004,
		14359
		\@Form 6121, 11189, 13156,
		13611, 13638, 13893, 14273
		\@Gauge . . . 6470, 11193, 13340,
		13615, 13643, 13780, 14270
		\@Localurlfalse 11142
		\@Localurltrue 11139
		\@M . . . 1228, 2675, 5177, 7821
		\@MM 7977
		\@PackageError 268
		\@PackageInfo 271
		\@PackageInfoNoLine 272
		\@PackageWarning 269
		\@PackageWarningNoLine . . 270
		\@PushButton 6467, 11205,
		13507, 13627, 13740, 14111,
		14479
		\@Refstar 9198, 9205
		\@Reset 6476, 11208, 13558,
		13630, 13756, 14164, 14536
		\@Roman 661

<code>\@SCTR</code>	8942, 8994	<code>\@citedata@opt</code>	8422, 8428, 8430	<code>\@eqnswtrue</code>	7578, 7587
<code>\@SetMaxRnhefLabel</code>	8289	<code>\@citedatax</code>	8437, 8442	<code>\@esphack</code>	2626, 5344, 8369, 8807
<code>\@Submit</code>	6473, 11211, 13538, 13633, 13753, 14141, 14513	<code>\@citedatax@opt</code>	8434, 8440	<code>\@extra@b@citeb</code>	8200, 8203, 8220, 8225, 8245, 8293, 8315, 8331, 8338
<code>\@TextField</code>	6458, 11196, 13371, 13618, 13646, 13974, 14322	<code>\@citeseppen</code>	8419, 8425	<code>\@extra@binfo</code>	8199, 8202, 8206
<code>\@addchap</code>	15499	<code>\@citex</code>	8321	<code>\@fifthoffive</code>	4567, 5009, 5327, 9149, 9268
<code>\@addtoreset</code>	8689, 8690, 8704, 8939	<code>\@clubpenalty</code>	7823	<code>\@filebordercolor</code>	3852, 4443, 9797, 9799, 10823, 10825, 11342, 11344, 12422
<code>\@afterheading</code>	15516	<code>\@commahyperpage</code>	8889, 8894	<code>\@filecolor</code>	3778, 3790, 9818, 10432, 10449, 10841, 11348
<code>\@alph</code>	7357, 7359	<code>\@ctrerr</code>	7334, 7343	<code>\@firstoffive</code>	5005, 5014, 9188, 9273
<code>\@anchorcolor</code>	3788, 10218, 10313, 11256, 12744, 13032	<code>\@currDisplay</code>	6209, 13415, 13478, 13723, 13737, 14016, 14080, 14371, 14438	<code>\@firstofone</code>	597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 650, 687, 843, 1064, 1075, 1308, 1312, 1316, 1654, 4221, 4896, 6087, 6093, 6359, 7165, 7354, 7366, 7433, 8081, 8163, 8304, 8327, 8509, 8750, 10106, 13847, 14651, 14668, 14686
<code>\@arabic</code>	1198, 1203, 1207, 7269, 7285, 7356	<code>\@currValue</code>	6211, 6213, 13476, 13487, 13723, 13734, 14078, 14088, 14436, 14453	<code>\@firstoftwo</code>	670, 1016, 1190, 1862, 6654, 15465
<code>\@auxout</code>	2612, 5340, 5610, 6684, 6686, 7446, 7474, 8235, 8250, 8266, 8276, 8306, 8329, 8355, 8361, 8385	<code>\@currentHlabel</code>	7407	<code>\@fnsymbol</code>	7355
<code>\@backslashchar</code>	883, 886, 889, 1452, 2139, 2143, 2146, 2284, 2301, 2307, 2311, 2319, 5094, 9404, 9414	<code>\@currentHref</code>	2620, 5639, 6566, 7250, 7387, 7389, 7398, 7400, 7407, 7488, 7490, 7500, 7551, 7562, 7564, 7603, 7622, 7626, 7635, 7661, 7758, 7789, 7814, 7893, 7903, 7905, 7906, 7962, 7990, 8088, 8114, 8118, 8145, 8147, 8364, 8548, 8571, 8584, 8591, 8659, 8683, 8685, 15013, 15404, 15417, 15428, 15458, 15475, 15510	<code>\@footnotemark</code>	7836, 7899, 7917, 7999, 8011, 8013, 8025, 8026, 8056, 8058
<code>\@baseurl</code>	3795, 3797, 5504, 9930, 9933, 10203, 10205, 10491, 10493, 11011, 11021, 11107, 11109, 11645, 11647, 12037, 12051, 12729, 12731, 12930, 12944, 13018, 13020	<code>\@currentlabel</code>	7530, 7980, 8357, 8364, 8664, 8671, 8948, 9000	<code>\@footnotetext</code>	7835, 7842, 7876, 7916, 8012, 8014, 8028, 8029, 8049
<code>\@begintheorem</code>	7723, 7727, 7753, 7760, 7784, 7791	<code>\@currentlabelname</code>	2610, 7894, 7963, 7991, 8093	<code>\@for</code>	3828, 5729, 8301, 8324, 13412, 13474, 13712, 13719, 13729, 14013, 14076, 14368, 14434
<code>\@bibitem</code>	8242, 8273	<code>\@currentlabstr</code>	2609, 2617	<code>\@fourthoffive</code>	5008, 5328, 9263, 9270
<code>\@biblabel</code>	8215, 8262	<code>\@curropt</code>	13412, 13413, 13474, 13475, 13712, 13719, 13720, 13722, 13729, 13730, 13732, 14013, 14014, 14076, 14077, 14368, 14369, 14434, 14435	<code>\@gobble</code>	49, 56, 117, 590, 591, 592, 593, 630, 631, 632, 633, 673, 674, 675, 684, 686, 847, 1023, 1062, 1073, 1214, 1218, 1221, 1591, 1652, 1671, 1684, 1688, 1751, 1814, 1815, 1822, 1827, 1841, 1846, 2465, 2647, 2920, 2932, 4209, 4518, 4555, 4610, 5060, 6072, 6349, 6619, 6623, 6640, 6642, 6658, 6659, 6662, 6663, 6665, 7139, 7159, 7163, 7712, 7740, 7773, 8070, 8160, 8547, 9328, 10108, 11525, 11528, 13894, 14274, 15070, 15071,
<code>\@bookmarkopenstatus</code>	4894, 4911, 15084	<code>\@dblarg</code>	8083, 8165		
<code>\@bookmarksopenlevel</code>	3749, 3751, 4897	<code>\@definecounter</code>	8644, 8645		
<code>\@bsphack</code>	2605, 5333, 8359	<code>\@documentclasshook</code>	4526		
<code>\@capstartfalse</code>	8108	<code>\@ehc</code>	2973, 3088, 3114, 3130, 3165, 3204, 3211, 3222, 3228, 4608, 5239, 5468, 5833, 5957, 6153, 6186, 6396, 6449, 13516, 13569, 14121, 14175, 14489, 14547		
<code>\@caption</code>	8073, 8085, 8128, 8165, 8167	<code>\@ehd</code>	63, 287, 293, 317, 8069, 8159		
<code>\@capytype</code>	2614, 8068, 8072, 8076, 8083, 8090, 8144, 8158, 8162, 8165	<code>\@elt</code>	7257, 7259, 7260, 7265		
<code>\@car</code>	1734, 1750, 1768, 1788, 3728, 5739, 9882, 9893	<code>\@endForm</code>	6122, 11192, 13339, 13614, 13642, 13947, 14300		
<code>\@cdr</code>	9883, 9894	<code>\@endparyenv</code>	7721, 7749, 7780		
<code>\@chapter</code>	15423, 15424	<code>\@eqnncr</code>	7645		
<code>\@cite</code>	8292, 8323, 8420, 8426	<code>\@eqnstarfalse</code>	7617, 7648		
<code>\@cite@opt</code>	8421, 8427, 8431, 8441	<code>\@eqnstartrue</code>	7645		
<code>\@citea</code>	8295, 8302, 8303, 8322, 8325, 8326				
<code>\@citeb</code>	8301, 8304, 8306, 8308, 8312, 8315, 8324, 8327, 8329, 8331, 8335, 8338				
<code>\@citebordercolor</code>	3851, 4445				
<code>\@citecolor</code>	3789				

15072, 15073
\@gobblefour . . . 596, 710, 1348,
1349, 1350, 4005, 9063
\@gobbleopt 6665, 6667
\@gobbletwo 594, 677, 703, 711,
712, 860, 1347, 1769, 1846,
1850, 2805, 4003, 4004,
4559, 6018, 6644, 6653,
6661, 6665, 9251, 15414
\@harvarditem 8374, 8376
\@hyper@Canchor . . 5554, 5555
\@hyper@itemfalse . . 7195, 7213,
7227
\@hyper@itemtrue 7196
\@hyper@launch . . . 5474, 5483,
9822, 10846, 11417, 12440
\@hyper@linkfile . . . 5455, 5458,
5462, 5494
\@hyper@readexternallink 5449,
5453
\@hyperdef 5301, 5302
\@hyperpage 8886, 8887
\@hyperref 5282, 5293
\@ifclasslater 15522, 15527
\@ifclassloaded
. . 2597, 5036, 7418, 7455,
8284, 8922, 8926, 10111,
15521, 15526
\@ifnextchar . . 12, 88, 103, 123,
704, 5184, 5282, 5301, 5402,
6121, 6458, 6461, 6464,
6467, 6470, 6473, 6476,
6665, 6738, 6747, 8015,
8033, 8374, 8432, 12062,
12351, 12365, 15163, 15166
\@ifpackagelater 241, 1084, 2628,
7409, 8714
\@ifpackageloaded 519, 913, 1083,
2600, 3025, 3705, 3709,
4503, 4713, 7236, 7408,
7421, 7483, 7516, 7520,
7540, 7574, 7702, 7706,
7913, 7929, 7969, 8141,
8344, 8417, 8656, 8713,
8755, 8756, 8757, 8932,
9197, 9341, 9345, 13010
\@ifpackagewith 3586, 4501, 8679
\@ifstar . . . 66, 5031, 5034, 5043,
5047, 6601, 6605, 6671,
6675, 9205, 9231, 9251
\@ifundefined 34, 376, 980,
990, 1019, 1022, 1036, 2894,
3043, 3604, 3641, 3649,
3656, 3678, 3726, 4469,
5828, 6148, 7092, 7205,
7240, 7255, 7522, 7543,
7544, 7597, 7628, 7656,
7693, 8074, 8092, 8209,
8292, 8308, 8331, 8653,
8694, 8702, 8703, 8716,
8717, 8724, 9447, 11083,
11725, 11726, 12535, 13894,
14274, 14660, 15080
\@indexfile . . . 8799, 8814, 8829,
8833, 8843
\@inlabelfalse 7802
\@inmathwarn 560, 561
\@inpenc@undefined@ 2339
\@labels 7818
\@latex@ 6769, 6770
\@latex@error 8069, 8159
\@latex@warning . . . 5320, 8311,
8334, 9124, 9144, 9161, 9279
\@lbibitem 8216, 8261
\@linkbordercolor . . 3853, 4440,
9746, 11246
\@linkcolor 3787, 12090
\@linkdim . . . 488, 10267, 10268,
10276, 10277, 10278, 10347,
10348, 10360, 10361, 10362,
10384, 10385, 10398, 10399,
10400, 10424, 10425, 10438,
10439, 10440, 12797, 12798,
12806, 12807, 12808, 13080,
13081, 13094, 13095, 13096
\@listctr 8251, 8277
\@m . . . 1211, 8303, 8326, 11572
\@mainaux 6682, 6683, 7122, 7130,
13840, 13843, 13871, 13886
\@makecaption 8109, 8111, 8178
\@makefnmark 7908, 8061
\@makefntext 7981
\@makeother 169, 170,
182, 183, 185, 186, 191, 192,
193, 194, 195, 196, 197, 198,
199, 200, 201, 202, 203, 204,
205, 206, 5084, 9376, 15252,
15255, 15282, 15285
\@makeschapterhead 15513,
15515
\@mem@titleref 5043
\@mem@titlerefno link 5043
\@menubordercolor . 3854, 4442,
10168, 10170, 10917, 10919,
11455, 11457, 12344
\@menucolor 3792, 10183, 10928,
11461
\@minipagefalse 7798
\@mkboth . . . 677, 9045, 15414,
15502, 15504
\@mpfn 7839, 8034, 8046
\@mpfootnotetext . . 7842, 7855,
7856, 7918
\@mycount 15228, 15238
\@namedef 1328, 2568, 2570, 2572,
2574, 2576, 2578, 2580,
2582, 2584, 2586, 2588,
2589, 2590, 2591, 2592,
2593, 2594, 2595, 2596,
2742, 3053, 3054, 3055,
3056, 3057, 3058, 3059,
3060, 3595, 3607, 5839,
5840, 5841, 5842, 6164,
6165, 7419, 7644, 7647,
8349, 8350, 8351, 8352
\@namerefstar 5047, 9193
\@nameuse 2614, 3050, 5845, 6156
\@ne 1197, 2992, 3153, 4882, 5209,
10754, 10755, 10760, 11624,
12568, 13346, 14309
\@newctr 8649, 8650
\@newl@bel . . . 5593, 6732, 8202
\@newlistfalse 7799
\@nil 298, 325, 505, 509, 514, 518,
533, 1646, 1649, 1657, 1734,
1752, 1770, 1786, 1788,
1791, 1794, 1797, 2348,
2350, 2366, 2368, 3728,
5116, 5120, 5125, 5521,
5529, 5535, 5537, 5739,
6340, 6343, 6362, 6757,
6760, 6767, 6769, 6770,
6882, 6930, 6931, 6933,
6956, 6973, 7027, 7029,
7546, 7555, 7557, 7569,
8873, 8875, 8882, 8905,
8908, 8918, 9128, 9131,
9287, 9318, 9400, 9406,
9410, 9416, 9882, 9883,
9893, 9894, 11490, 11492,
14658, 14671, 14677, 15112,
15115, 15118, 15127, 15130,
15139
\@nbreakfalse 6729, 7821
\@nocnterr 8703, 8717
\@nocounterr 8702, 8716
\@nparitemfalse 7800
\@number 7354, 7433, 8509
\@nx . . . 8706, 8720, 8723, 8725
\@onelevel@sanitize . 2798, 2802,
3007, 3727, 4585, 4615,
4636, 5150, 5516, 5519,
5532, 5546, 5829, 6065,
6149, 6983, 6985, 7394,
8577, 9174, 10612, 15109
\@oparg . 7723, 7727, 7753, 7760,
7784, 7791
\@outlinefile 15082, 15171, 15266,
15268, 15270, 15348, 15350,
15352
\@pagerefstar . . 5034, 9190, 9221

\@pagesetref	9140	14298, 14316, 14319, 14349,	12844, 12862, 12864
\@parboxrestore	7979, 8101, 8173	14444, 14471, 14502, 14527,	\@pdfremotestartview
\@parcount	15230, 15238	14555, 14584, 14595, 14627,	. . . 4247, 4249, 4250, 4251,
\@part	15441, 15448	14635, 15319	4262, 4266, 4268, 4269,
\@pdfauthor	4021, 4448, 9990,	\@pdfmoddate 4060, 4452, 9998,	4271, 4458, 9810, 10832,
10473, 10958, 11698, 11963,	12861	10000, 10469, 10471, 10954,	12430
\@pdfborder . . . . .	. . . 3670, 3866, 3867, 3868,	10956, 11942, 11946, 12857,	\@pdfstartpage 4230, 4232, 4459,
3875, 3879, 3902, 3904,		12859	9938, 9942, 10499, 10504,
4977, 9676, 10630, 11244,		\@pdfnonfullscreenpagemode . . .	11014, 11018, 11637, 11641,
11829, 11924, 12342, 12355,		9952, 10528, 10990, 11656,	11987, 11992, 12880, 12885
12370, 12391, 12419, 12450,		12016, 12909	\@pdfstartview 4237, 4239, 4457,
12479, 12574, 12670, 12838		\@pdfnumcopies . . . 9968, 9970,	9940, 9942, 10501, 10505,
\@pdfborderstyle		10544, 10546, 11006, 11008,	11016, 11018, 11639, 11989,
. . . 3671, 3883, 3884, 3885,		11672, 11674, 12032, 12034,	11993, 12882, 12886
3894, 3898, 3906, 3908,		12925, 12927	\@pdfsubject . . 4067, 4453, 9992,
4978, 6311, 9677, 10631,		\@pdfpageduration 3805, 10050,	10478, 10948, 11700, 11961,
11245, 11830, 11925, 12343,		10054, 10059, 11056, 11058,	12866
12356, 12371, 12392, 12420,		11061, 11581, 11583, 11586,	\@pdftempa . . . 5460, 5461, 5464
12451, 12480, 12575, 12671,		11868, 11870, 11878	\@pdftempwordfile . . 5451, 5461
12839		\@pdfpagelayout . . 9978, 10556,	\@pdftempwordrun . 5452, 5464
\@pdfcreationdate . . 4054, 4451,		11030, 11677, 11679, 12046,	\@pdftitle . . . 4015, 4447, 9991,
9994, 9996, 10465, 10467,		12939	10463, 10947, 11699, 11960,
10950, 10952, 11938, 11940,		\@pdfpagemode	12851
12853, 12855		. . . 4701, 4702, 4907, 4908,	\@pdftrapped
\@pdfcreator . . 4049, 4450, 9993,		4917, 4918, 9932, 10512,	. . . 4078, 4081, 4084, 4093,
10464, 10949, 11701, 11962,		11025, 11644, 12000, 12893	4102, 4455, 10007, 10009,
12852		\@pdfpagescrop 4275, 4456, 9917,	10964, 10966, 11965
\@pdfdirection 9953, 10529,		9921, 10495, 10496, 10517,	\@pdfview . . . 4211, 9658, 9666,
10991, 11657, 12017, 12910		10519, 11037, 11039, 11633,	10580, 10584, 10588, 10592,
\@pdfduplex 9959, 10535, 10997,		11635, 12005, 12007, 12898,	10596, 10600, 10601, 10604,
11663, 12023, 12916		12900	10605, 10608, 10612, 10614,
\@pdfhighlight 3858, 4446, 9696,		\@pdfpagetransition 3801, 10026,	10629, 11243, 11253, 11265,
9698, 9757, 9793, 9795,		10030, 10035, 11045, 11047,	11766, 11786, 12481, 12576,
9830, 9832, 10164, 10166,		11050, 11470, 11472, 11474,	12672, 12952
11828, 11923, 12341, 12390,		11851, 11853, 11861	\@pdfviewarea 9954, 10530,
12418, 12449		\@pdfpicktraybypdfsize . . 9960,	10992, 11658, 12018, 12911
\@pdfhightlight 9755		9962, 10536, 10538, 10998,	\@pdfviewclip 9955, 10531, 10993,
\@pdfkeywords 4073, 4454, 10006,		11000, 11664, 11666, 12024,	11659, 12019, 12912
10462, 10963, 11706, 11964,		12026, 12917, 12919	\@pdfviewparams . . 4213, 4215,
12850		\@pdfprintarea . . . 9956, 10532,	11766, 11786, 12482, 12577,
\@pdflang 4321, 4323, 4324, 4326,		10994, 11660, 12020, 12913	12673, 12953
4328, 4330, 4336, 4366,		\@pdfprintclip 9957, 10533,	\@percentchar 5079, 5080, 5132,
4367, 4369, 4390, 4394,		10995, 11661, 12021, 12914	15086
4396, 4413, 4422, 4429,		\@pdfprintpagerange 3973, 4460,	\@processme . 6197, 6198, 10032,
4461, 9979, 9981, 10557,		9964, 9966, 10540, 10542,	10038, 10056, 10062, 10078,
10559, 11031, 11033, 12047,		11002, 11004, 11668, 11670,	10084, 12065, 12066, 12188,
12049, 12940, 12942		12028, 12030, 12921, 12923	12189, 12192, 12193
\@pdfm@dest 10574, 10633, 10637		\@pdfprintscaling . 9958, 10534,	\@protected@testopt 707
\@pdfm@mark 7110, 10573,		10996, 11662, 12022, 12915	\@protected@testopt@xargs . 708
10625, 10645, 10659, 10661,		\@pdfproducer 4027, 4449, 9858,	\@refstar 5031, 9187
10675, 10677, 10682, 10683,		10002, 10004, 10455, 10456,	\@runbordercolor . . . 3855, 4444,
10713, 10737, 10739, 10744,		10474, 10476, 10934, 10935,	9834, 9836, 10857, 10859,
10762, 10785, 10817, 10851,		10939, 10959, 10961, 11601,	11436, 11438, 12453
10882, 10911, 10945, 11012,		11602, 11606, 11609, 11610,	\@runcolor . . . 3793, 9854, 10873,
11039, 14277, 14278, 14279,		11702, 11704, 11949, 11953,	11442
		12476, 12477, 12567, 12569,	\@safe@activesfalse . . 659, 5011
		12571, 12667, 12668, 12843,	\@safe@activestrue . . . 658, 5010

\@savsf	9661, 9669	\@tempswatruer	8406, 8409, 8412, 8433	15564, 15774, 15790, 15798, 15811, 15825, 15840, 15856, 15866, 15867, 15880, 15894, 15943, 15993, 16020, 16049, 16220, 16236, 16244, 16256, 16272, 16287, 16303, 16313, 16314, 16328, 16342, 16370, 16372, 16416, 16418, 16432, 16434, 16471, 16473, 16474, 16554, 16556, 16602, 16604, 16606, 16608, 18264, 18266
\@schapter	15411, 15412	\@temptokena	3573, 3578, 3581, 3583	_ 190, 215, 571, 5071, 5088, 5089
\@secondoffive	4568, 5006, 5019, 9150, 9151, 9191	\@tfor	7674	\' 169, 175, 182, 185, 3402, 3537, 3542, 3547, 3548, 3551, 3554, 3557, 3559, 3567, 15103, 15538, 15550, 15562, 15770, 15786, 15794, 15807, 15821, 15836, 15852, 15860, 15861, 15876, 15890, 15939, 15991, 16018, 16047, 16216, 16232, 16240, 16252, 16268, 16283, 16299, 16307, 16308, 16324, 16338, 16739, 16741, 17368, 17397, 17538, 17567, 18232, 18234, 18310, 18312, 20480, 20485, 20490, 20495, 20500, 20505, 20510, 20515, 20520, 20525, 20530, 20535, 20540, 20545, 20550, 20555, 20560, 20565, 20570, 20575, 20580, 20585, 20590, 20595
\@secondoftwo	640, 649, 1014, 1193, 1720, 1860, 4567, 4568, 15467	\@the@H@page	8476, 8512, 8514, 8515	\l 191, 216, 339, 2085, 2178, 2219, 3348, 4484, 8759, 9375, 9385
\@sect	15462, 15463	\@thefnmark	7840, 7851, 7942, 7980, 7997, 8004, 8035, 8047, 8054	\~ 570, 1366, 2327, 3460, 3468, 3469, 3470, 4629, 5092, 15541, 15553, 15565, 15776, 15805, 15813, 15842, 15874, 15882, 15945, 15994, 16021, 16050, 16222, 16250, 16258, 16289, 16322, 16330, 16443, 16445, 16446, 16578, 16580, 18224, 18226, 18294, 18296, 18318, 18320, 20482, 20487, 20492, 20497, 20502, 20507, 20512, 20517, 20522, 20527, 20532, 20537, 20542, 20547, 20552, 20557, 20562, 20567, 20572, 20577, 20582, 20587, 20592, 20597
\@seqncr	7645	\@thirdoffive	5007, 9194	
\@serial@counter	15178, 15226, 15228, 15229	\@thm	7703, 7704, 7732, 7733, 7766, 7828, 7829	
\@seteqlabel	8680, 8681	\@topnewpage	15513	
\@setminipage	8103, 8175	\@topsep	7720, 7748, 7779	
\@setref	5014, 5019, 9119, 9120, 9157	\@topsepadd	7721, 7749, 7780	
\@sharp	7546, 7552	\@typeset@protect	15383	
\@skiphyperreffalse	7214, 8231, 8243	\@undefined	165, 389, 392, 713, 3119, 3577, 4789, 6655, 6690, 6703, 6715, 6945, 6963, 7008, 8068, 8132, 8137, 8143, 8158, 9182, 9649, 9862, 9871, 11216, 11612, 11626	
\@skiphyperreftrue	8217, 8243	\@undottedtocline	9109	
\@spaces	275	\@unexpandable@protect	8860	
\@spart	15454, 15455	\@unprocessedoptions	4855	
\@sssect	15397, 15398	\@urlbordercolor	3856, 4441, 9759, 9761, 10888, 10890, 11368, 11370, 12393	
\@startlos	9057, 9064, 9113	\@urlcolor	3791, 9778, 10272, 10285, 10392, 10409, 10902, 11374, 12802, 12815, 13089, 13102	
\@starttoc	6716	\@urltype	10238, 10243, 11112, 11138, 11273, 11287, 12764, 12769, 13051, 13056	
\@tempa	7722, 7723, 7726, 7730, 7752, 7759, 7763, 7783, 7790, 7794, 7931, 7935, 7938, 7950	\@vpageref	9215	
\@tempb	7673, 7677	\@whilenum	1364	
\@tempboxa	10265, 10267, 10276, 10345, 10347, 10350, 10351, 10360, 10366, 10367, 10382, 10384, 10387, 10388, 10398, 10404, 10405, 10422, 10424, 10427, 10428, 10438, 10444, 10445, 12795, 12797, 12806, 13078, 13080, 13094	\@wrintex	8763, 8764, 8795	
\@tempcnta	15035, 15036, 15037, 15038, 15039, 15041, 15044, 15045, 15046, 15052, 15054, 15056, 15147, 15148, 15149, 15152, 15153, 15154, 15155, 15156, 15370, 15371, 15372	\@writefile	8362	
\@tempdima	2678, 6498, 6499, 6500, 6501, 6502, 6503, 6504, 6505, 9651, 13411, 13416, 13418, 13454, 13455, 13456, 13460, 13461, 13462, 13463, 14012, 14017, 14019, 14056, 14057, 14058, 14062, 14063, 14064, 14065, 14367, 14372, 14374, 14411, 14412, 14413, 14417, 14418, 14419, 14420	\@x@sf	7901, 7910, 8060, 8062	
\@tempdimb	13415, 13416, 14016, 14017, 14371, 14372	\@xfootnote	8033	
\@tempswafalse	8436	\@xfootnotemark	7848, 8051	
		\@xfootnotenext	7837, 8044	
		\@xp	8670, 8705, 8706, 8719, 8720, 8722, 8723	
		\@xxxii	5358	
		\[.	195, 220, 335, 3872, 3890, 5251	
		\{	343, 365, 563, 2179, 11757, 15104	
		\}	344, 370, 564, 2180, 11757, 15105	
		\]	196, 221	
		\^	189, 214, 333, 2277, 2278, 3466, 5067, 5068, 5076, 15540, 15552,	

2588, 15247, 15770, 15772,
 15774, 15776, 15778, 15780,
 15782, 15784, 15786, 15788,
 15790, 15792, 15794, 15796,
 15798, 15800, 15802, 15803,
 15805, 15807, 15809, 15811,
 15813, 15815, 15817, 15819,
 15821, 15823, 15825, 15827,
 15829, 15831, 15832, 15834,
 15836, 15838, 15840, 15842,
 15844, 15846, 15848, 15850,
 15852, 15854, 15856, 15858,
 15860, 15861, 15863, 15864,
 15866, 15867, 15869, 15870,
 15872, 15874, 15876, 15878,
 15880, 15882, 15884, 15886,
 15888, 15890, 15892, 15894,
 15896, 15898, 15900, 15901,
 15903, 15988, 16216, 16218,
 16220, 16222, 16224, 16226,
 16228, 16230, 16232, 16234,
 16236, 16238, 16240, 16242,
 16244, 16246, 16248, 16250,
 16252, 16254, 16256, 16258,
 16260, 16262, 16266, 16268,
 16270, 16272, 16274, 16276,
 16278, 16279, 16281, 16283,
 16285, 16287, 16289, 16291,
 16293, 16295, 16297, 16299,
 16301, 16303, 16305, 16307,
 16308, 16310, 16311, 16313,
 16314, 16316, 16317, 16319,
 16322, 16324, 16326, 16328,
 16330, 16332, 16334, 16336,
 16338, 16340, 16342, 16344,
 16346, 16349, 16350, 16352,
 16685, 16689, 16693, 16696,
 16698, 16700, 16702, 16703,
 16705, 16707, 16709, 16711,
 16713, 16715, 16717, 16720,
 16722, 16724, 16726, 16728,
 16730, 16732, 16733, 16735,
 16737, 16739, 16741, 16743,
 16745, 16748, 16751, 17146,
 17149, 17152, 17154, 17157,
 17160, 17163, 17166, 17168,
 17170, 17172, 17174, 17176,
 17178, 17179, 17181, 17183,
 17185, 17187, 17189, 17317,
 17319, 17321, 17323, 17325,
 17327, 17329, 17331, 17333,
 17335, 17337, 17339, 17341,
 17343, 17344, 17346, 17348,
 17350, 17352, 17354, 17357,
 17359, 17361, 17363, 17366,
 17769, 17771, 17773, 17775,
 17777, 17779, 17781, 17783,

17785, 17787, 17789, 17791,
 17793, 17795, 17797, 17799,
 17801, 17803, 17805, 17807,
 17809, 17811, 17813, 17816,
 17819, 17821, 17823, 17825,
 17827, 17829, 17831, 17833,
 17835, 17837, 17839, 17841,
 17843, 17845, 17847, 17850,
 17853, 17855, 17857, 17859,
 17861, 17863, 17865, 17867,
 17869, 17871, 17873, 17875,
 17877, 17879, 17881, 17883,
 17885, 17887, 17889, 17891,
 17893, 17895, 17897, 17899,
 17901, 17903, 17905, 17907,
 17909, 17911, 17913, 17915,
 17917, 17919, 17921, 17923,
 17925, 17927, 17929, 17931,
 17933, 17935, 17937, 17939,
 17942, 17944, 17946, 17948,
 18298, 18300, 18302, 18304,
 18306, 18308, 18310, 18312,
 18314, 18316, 18318, 18320,
 18676, 18679, 18682, 18685,
 18688, 18691, 18694, 18696,
 18698, 18700, 18702, 18705,
 18708, 18711, 18713, 18716,
 18719, 18721, 18724, 18727,
 18730, 18733, 18735, 18737,
 18739, 18741, 18743, 18745,
 18747, 18749, 18752, 18755,
 18757, 18760, 18762, 18765,
 18767, 18769, 18771, 18818,
 18856, 18861, 19234, 19236,
 19238, 19241, 19244, 19246,
 19248, 19250, 19252, 19254,
 19257, 19260, 19262, 19264,
 19266, 19268, 19271, 19274,
 19276, 19278, 19280, 19282,
 19285, 19288, 19290, 19292,
 19294, 19296, 19298, 19300,
 19302, 19304, 19306, 19309,
 19312, 19314, 19316, 19318,
 19320, 19323, 19327, 19330,
 19333, 19335, 19337, 19339,
 19341, 19410, 19413, 19489,
 19491, 19493, 19495, 19497,
 19499, 19501, 19503, 19505,
 19507, 19509, 19511, 19513,
 19515, 19517, 19519, 19521,
 19523, 19525, 19527, 19529,
 19531, 19533, 19535, 19537,
 19539, 19541, 19543, 19545,
 19547, 19549, 19551, 19553,
 19555, 19557, 19559, 19561,
 19563, 19565, 19567, 19569,
 19571, 19573, 19575, 19577,

19606, 19609, 19611, 19613,
 19616, 19618, 19620, 19622,
 19625, 19627, 19845, 19847,
 19849, 19851, 19853, 20024,
 20026, 20028, 20030, 20032,
 20034, 20037, 20041, 20043,
 20045, 20047, 20049, 20051,
 20053, 20055, 20057, 20059,
 20061, 20165, 20168, 20171,
 20173, 20175, 20177, 20179,
 20181, 20183, 20185, 20312,
 20314, 20316, 20318, 20320,
 20323, 20326, 20329, 20333,
 20336, 20339, 20341, 20343,
 20345, 20347, 20350, 20352,
 20427, 20439, 20441, 20443,
 20445, 20447, 20467, 20468,
 20469, 20473, 20474, 20475,
 20478, 20480, 20482, 20493,
 20495, 20499, 20500, 20501,
 20502, 20503, 20504, 20505,
 20506, 20508, 20509, 20510,
 20511, 20512, 20513, 20514,
 20515, 20516, 20517, 20518,
 20519, 20520, 20521, 20522,
 20523, 20524, 20525, 20526,
 20528, 20529, 20530, 20531,
 20532, 20533, 20534, 20535,
 20536, 20537, 20538, 20540,
 20542, 20553, 20555, 20559,
 20560, 20561, 20562, 20563,
 20564, 20565, 20566, 20568,
 20569, 20570, 20571, 20572,
 20573, 20574, 20575, 20576,
 20577, 20578, 20579, 20580,
 20581, 20582, 20583, 20584,
 20585, 20586, 20588, 20589,
 20590, 20591, 20592, 20593,
 20594, 20595, 20596, 20597,
 20701

\9 . 550, 1430, 1433, 1464, 2369,
 2384, 2393, 2421, 2441,
 2478, 2482, 2496, 2500,
 2508, 2513, 2516, 2550,
 2554, 2557, 2560, 2570,
 2572, 2574, 2576, 2578,
 2580, 2582, 2584, 2586,
 2588, 15988, 17950, 17952,
 17954, 17956, 17958, 17960,
 17963, 17966, 17969, 17972,
 17974, 17976, 17978, 17980,
 17982, 17984, 17986, 17988,
 17990, 17993, 17995, 17998,
 18000, 18003, 18005, 18009,
 18013, 18016, 18018, 18020,
 18022, 18024, 18026, 18028,
 18030, 18032, 18034, 18036,

18038, 18040, 18042, 18044,
18046, 18048, 18050, 18053,
18056, 18059, 18062, 18064,
18066, 18068, 18070, 18072,
18074, 18076, 18078, 18080,
18082, 18084, 18086, 18088,
18090, 18092, 18094, 18096,
18098, 18100, 18102, 18104,
18106, 18108, 18110, 18112,
18114, 18116, 18118, 18120,
18122, 18124, 18126, 18128,
18130, 18132, 18134, 18136,
18138, 18140, 18142, 18144,
18146, 18148, 18150, 18152,
18154, 18157, 18160, 18163,
18166, 18168, 18170, 18172,
18174, 18176, 18178, 18180,
18182, 18184, 18186, 18188,
18190, 18192, 18194, 18196,
18198, 18200, 18202, 18204,
18206, 18208, 18210, 18212,
18214, 18216, 18218, 18220,
18222, 18224, 18226, 18228,
18230, 18232, 18234, 18236,
18238, 18240, 18242, 18244,
18246, 18248, 18250, 18252,
18254, 18256, 18258, 18260,
18262, 18264, 18266, 18268,
18270, 18272, 18274, 18276,
18278, 18280, 18282, 18284,
18286, 18288, 18290, 18292,
18294, 18296, 18298, 18300,
18302, 18304, 18306, 18308,
18310, 18312, 18314, 18316,
18318, 18320, 18322, 18324,
18326, 18328, 18331, 18333,
18335, 18337, 18339, 18341,
18343, 18346, 18350, 18352,
18354, 18357, 18359, 18361,
18363, 18365, 18367, 18369,
18371, 18373, 18375, 18377,
18379, 18381, 18383, 18385,
18387, 18389, 18391, 18393,
18395, 18397, 18399, 18401,
18403, 18405, 18407, 18409,
18411, 18413, 18415, 18417,
18419, 18421, 18423, 18425,
18427, 18429, 18431, 18433,
18435, 18437, 18439, 18441,
18443, 18445, 18447, 18449,
18451, 18453, 18455, 18457,
18459, 18461, 18463, 18465,
18467, 18469, 18471, 18473,
18475, 18477, 18479, 18481,
18483, 18485, 18487, 18498,
18501, 18503, 18505, 18507,
18509, 18511, 18513, 18515,

18518, 18520, 18522, 18524,
18526, 18528, 18530, 18533,
18535, 18537, 18541, 18543,
18545, 18547, 18549, 18551,
18553, 18555, 18559, 18561,
18563, 18565, 18567, 18569,
18571, 18573, 18575, 18577,
18579, 18581, 18583, 18585,
18587, 18589, 18591, 18593,
18595, 18597, 18601, 18605,
18607, 18609, 18611, 18614,
18617, 18619, 18621, 18623,
18625, 18627, 18630, 18632,
18634, 18636, 18638, 18640,
18642, 18644, 18646, 18648,
18650, 18652, 18656, 18659,
18661, 18664, 18667, 18670,
18673, 18676, 18679, 18682,
18685, 18688, 18691, 18694,
18696, 18698, 18700, 18702,
18705, 18708, 18711, 18713,
18716, 18719, 18721, 18724,
18727, 18730, 18733, 18735,
18737, 18739, 18741, 18743,
18745, 18747, 18749, 18752,
18755, 18757, 18760, 18762,
18765, 18767, 18769, 18771,
18773, 18775, 18777, 18779,
18781, 18783, 18786, 18788,
18790, 18792, 18794, 18796,
18799, 18802, 18804, 18806,
18808, 18810, 18812, 18814,
18816, 18818, 18820, 18822,
18824, 18826, 18828, 18830,
18833, 18835, 18837, 18839,
18844, 18846, 18849, 18851,
18854, 18856, 18859, 18861,
18864, 18866, 18868, 18871,
18873, 18875, 18878, 18881,
18883, 18885, 18888, 18891,
18893, 18895, 18898, 18900,
18903, 18905, 18907, 18910,
18912, 18914, 18916, 18918,
18920, 18923, 18925, 18927,
18930, 18932, 18934, 18937,
18939, 18941, 18943, 18945,
18948, 18950, 18952, 18954,
18956, 18958, 18961, 18964,
18967, 18969, 18972, 18974,
18976, 18978, 18980, 18982,
18984, 18986, 18988, 18992,
18994, 18996, 18997, 19000,
19003, 19007, 19008, 19012,
19013, 19016, 19018, 19020,
19022, 19024, 19026, 19028,
19030, 19032, 19034, 19036,
19038, 19040, 19043, 19045,

19047, 19050, 19053, 19055,
19057, 19059, 19061, 19063,
19065, 19067, 19069, 19071,
19073, 19075, 19077, 19079,
19081, 19083, 19085, 19087,
19089, 19091, 19093, 19095,
19097, 19099, 19101, 19103,
19105, 19107, 19109, 19111,
19113, 19115, 19117, 19119,
19121, 19123, 19125, 19127,
19129, 19132, 19135, 19138,
19141, 19144, 19148, 19152,
19154, 19156, 19158, 19160,
19162, 19165, 19168, 19171,
19174, 19176, 19179, 19182,
19186, 19189, 19191, 19194,
19197, 19200, 19204, 19207,
19210, 19213, 19216, 19220,
19224, 19226, 19228, 19230,
19232, 19234, 19236, 19238,
19241, 19244, 19246, 19248,
19250, 19252, 19254, 19257,
19260, 19262, 19264, 19266,
19268, 19271, 19274, 19276,
19278, 19280, 19282, 19285,
19288, 19290, 19292, 19294,
19296, 19298, 19300, 19302,
19304, 19306, 19309, 19312,
19314, 19316, 19318, 19320,
19323, 19327, 19330, 19333,
19335, 19337, 19339, 19341,
19343, 19345, 19347, 19349,
19351, 19355, 19357, 19359,
19361, 19363, 19365, 19367,
19369, 19371, 19373, 19375,
19377, 19380, 19383, 19385,
19388, 19391, 19393, 19396,
19399, 19401, 19403, 19405,
19407, 19410, 19413, 19415,
19417, 19419, 19422, 19424,
19426, 19428, 19430, 19432,
19434, 19436, 19438, 19440,
19442, 19444, 19446, 19448,
19450, 19452, 19454, 19456,
19458, 19460, 19462, 19464,
19467, 19469, 19471, 19473,
19475, 19477, 19479, 19481,
19483, 19485, 19487, 19489,
19491, 19493, 19495, 19497,
19499, 19501, 19503, 19505,
19507, 19509, 19511, 19513,
19515, 19517, 19519, 19521,
19523, 19525, 19527, 19529,
19531, 19533, 19535, 19537,
19539, 19541, 19543, 19545,
19547, 19549, 19551, 19553,
19555, 19557, 19559, 19561,

19563, 19565, 19567, 19569, 19571, 19573, 19575, 19577, 19579, 19584, 19588, 19592, 19595, 19597, 19599, 19603, 19606, 19609, 19611, 19613, 19616, 19618, 19620, 19622, 19625, 19627, 19631, 19633, 19635, 19637, 19640, 19643, 19646, 19650, 19652, 19654, 19656, 19659, 19664, 19667, 19669, 19671, 19676, 19679, 19682, 19684, 19687, 19689, 19691, 19694, 19701, 19704, 19709, 19712, 19715, 19718, 19721, 19724, 19727, 19730, 19733, 19736, 19739, 19742, 19745, 19748, 19751, 19754, 19757, 19760, 19763, 19767, 19770, 19773, 19775, 19777, 19779, 19781, 19783, 19786, 19788, 19790, 19792, 19794, 19796, 19799, 19801, 19804, 19806, 19809, 19811, 19813, 19815, 19817, 19819, 19821, 19823, 19825, 19827, 19829, 19831, 19833, 19835, 19837, 19840, 19842, 19845, 19847, 19849, 19851, 19853, 19855, 19859, 19863, 19865, 19867, 19869, 19871, 19873, 19876, 19878, 19881, 19883, 19885, 19887, 19889, 19891, 19894, 19896, 19898, 19900, 19902, 19904, 19906, 19908, 19910, 19912, 19914, 19916, 19918, 19921, 19923, 19925, 19927, 19929, 19931, 19933, 19935, 19937, 19939, 19941, 19943, 19945, 19947, 19949, 19951, 19953, 19955, 19957, 19959, 19961, 19963, 19965, 19968, 19970, 19972, 19974, 19976, 19978, 19980, 19982, 19984, 19986, 19988, 19990, 19992, 19994, 19997, 20000, 20002, 20005, 20008, 20011, 20014, 20016, 20018, 20020, 20022, 20024, 20026, 20028, 20030, 20032, 20034, 20037, 20041, 20043, 20045, 20047, 20049, 20051, 20053, 20055, 20057, 20059, 20061, 20063, 20065, 20067, 20069, 20071, 20073, 20075, 20078, 20081, 20084, 20087, 20089, 20094, 20098, 20101, 20103, 20105, 20108, 20111, 20114, 20117, 20120,	20123, 20126, 20129, 20132, 20135, 20138, 20141, 20143, 20145, 20147, 20149, 20151, 20154, 20160, 20163, 20165, 20168, 20171, 20173, 20175, 20177, 20179, 20181, 20183, 20185, 20187, 20189, 20191, 20194, 20196, 20198, 20200, 20203, 20206, 20208, 20210, 20212, 20215, 20217, 20220, 20222, 20226, 20229, 20231, 20233, 20235, 20237, 20239, 20241, 20243, 20245, 20247, 20249, 20251, 20253, 20256, 20258, 20260, 20263, 20266, 20268, 20270, 20272, 20274, 20276, 20278, 20280, 20282, 20284, 20286, 20288, 20290, 20292, 20294, 20296, 20298, 20300, 20302, 20304, 20306, 20308, 20310, 20312, 20314, 20316, 20318, 20320, 20323, 20326, 20329, 20333, 20336, 20339, 20341, 20343, 20345, 20347, 20350, 20352, 20355, 20357, 20359, 20361, 20363, 20365, 20367, 20370, 20372, 20375, 20378, 20381, 20384, 20386, 20388, 20390, 20392, 20394, 20396, 20398, 20400, 20402, 20404, 20407, 20410, 20412, 20414, 20416, 20418, 20420, 20422, 20424, 20427, 20430, 20432, 20434, 20436, 20439, 20441, 20443, 20445, 20447, 20479, 20481, 20483, 20484, 20485, 20486, 20487, 20488, 20489, 20490, 20491, 20492, 20494, 20496, 20497, 20498, 20499, 20500, 20501, 20502, 20504, 20506, 20509, 20511, 20513, 20514, 20515, 20516, 20517, 20518, 20519, 20520, 20521, 20522, 20524, 20526, 20528, 20529, 20530, 20531, 20532, 20534, 20535, 20536, 20537, 20539, 20541, 20543, 20544, 20545, 20546, 20547, 20548, 20549, 20550, 20551, 20552, 20554, 20556, 20557, 20558, 20559, 20560, 20561, 20562, 20564, 20566, 20569, 20571, 20573, 20574, 20575, 20576, 20577, 20578, 20579, 20580, 20581, 20582, 20584, 20586, 20588, 20589, 20590, 20591, 20592, 20594,	20595, 20596, 20597, 20703, 20705 \l 346, 692, 949, 969, 3483, 3486, 4243, 8303, 8326, 15562, 15563, 15564, 15565, 15566, 15567, 15568, 15569, 15570, 15571, 15572, 15573, 16018, 16019, 16020, 16021, 16022, 16023, 16024, 16025, 16026, 16027, 16028, 16029, 16030, 16031, 16032, 16033, 16034, 16035, 16036, 16037, 16038, 16039, 16040, 16041, 16042, 16043, 16044 A \A 304, 306, 310, 316 \ABREVE . 20472, 20543, 20544, 20545, 20546, 20547 \abreve . . . 20466, 20483, 20484, 20485, 20486, 20487 \AC 18901, 21758 \AccFancyVerbLineautorefname 3510 \Accfootnoteautorefname . . 3490 \Acctheoremautorefname . . 3514 \Acht 20411, 21558 \ACIRCUMFLEX 20473, 20548, 20549, 20550, 20551, 20552 \acircumflex 3559, 20467, 20488, 20489, 20490, 20491, 20492 \AcPa 20397, 21552 \Acrobatmenu 2649, 4564, 6652, 10157, 10907, 11447, 12335 \active . . 1344, 1351, 1956, 5068, 5069, 5070, 5071, 5072, 5073, 5076, 5078, 5081, 5089, 15251, 15281 \add@accent 562 \addcontentsline . . . 8097, 8169, 8545, 8550, 8638, 15518 \AddLineBeginAux 5654 \addtocontents 8590, 8639, 8940, 8992, 15506, 15507 \addtocounter 7430, 7453, 7462, 7473, 7477, 7695 \addvspace 15506, 15507 \adl@LT@array 7544 \advance 486, 487, 1365, 5217, 5367, 5380, 5689, 6017, 6063, 6499, 6500, 6503, 6504, 6855, 6863, 6900, 8448, 8458, 8461, 8475, 9907, 10277, 10361, 10399, 10439, 10754, 10764, 11608, 12807, 13095,
---	---	--

13346, 13418, 13461, 13462, 13956, 14019, 14063, 14064, 14309, 14374, 14418, 14419, 15036, 15038, 15039, 15045, 15054, 15155, 15371	7193, 7203, 7204, 7437, 8647, 8653, 8701, 8715, 8928, 8933, 8935	\barin 19340, 21202
\AE 15782, 16228, 16743	\Aries 19725, 21859	\barj 16893, 21643
\ae 15848, 16295, 16745	\aries 19723, 21287	\barl 16652, 20736
\afterassignment ... 1965, 1971, 1977, 6272	\ast 18821, 20983	\barlambda 16659, 21616
\AfterBeginDocument . 376, 390	\Asterisk 19969, 21380	\barleftharpoon ... 20128, 21446
\aftergroup 7984	\AsteriskBold 19946, 21369	\baro 16968, 16969, 19376, 19378, 21815
\agemO 18531, 21729	\AsteriskCenterOpen 19948, 21370	\barp 17994, 20818
\ainferior 20860	\AsteriskRoundedEnds .. 19993, 21392	\barrightharpoon .. 20134, 21448
\alef 20613	\asympt 18942, 21033	\barsci 17992, 20817
\alefhamza 20605	\AtBeginDocument 377, 1035, 5622, 5626, 6688, 7534, 13124	\barscu 17997, 20819
\aleflowerhamza 20609	\AtBeginShipout ... 6801, 6813, 10196, 10710	\baru 17033, 20760
\alefmadda 20603	\AtBeginShipoutBox 6805, 6808, 10189, 10190, 10711, 10712	\barwedge 19231, 21155
\alefmaqsura 20671	\AtBeginShipoutFirst ... 6818, 11080, 12532, 12663	\baselineskip 2652, 6512, 6513, 6514, 6515, 6516, 6517, 10332, 11782, 11814, 12515
\aleph 18542, 20882	\AtEndDocument 6702	\bbl@cite@choice 8210
\Alph 6949, 7314	\AtEndOfPackage 387	\bbslash 19418, 21233
\alph 6950, 7666, 7697	\AtVeryEndDocument ... 7048, 13903	\Beam 19402, 21228
\alpha 17286, 20782	\author 6737, 6747	\because 18887, 21009
\amalg 18805, 20976	\autopageref 4700, 9230	\BeforeTeXIVht 3095
\AMSautorefname 9350	\autoref . 681, 4699, 9249, 13119	\begin 638, 13145, 21927
\anchor@spot 5559, 5572, 5579, 5585, 5587, 9716, 10218, 10313, 11184, 11256, 11763, 12120, 12123, 12744, 13032	\ayn 20649	\belowpdfbookmark 15151
\angle 18834, 20988		\beta 17288, 20783
\AngleSign 18842, 21750		\betainferior 20812
\Anglesign 18841, 21749		\beth 18544, 20883
\Ankh 19668, 21271		\between 19035, 21074
\APLbox 19406, 21230		\bfseries . 612, 8309, 8332, 9123, 9143, 9160, 9278
\APLdown 19604, 21825		\bgroup . 701, 5184, 7971, 7983, 9618, 10728, 11184, 11803, 13650, 13742, 13763
\APLdownarrowbox 19395, 21225		\bibcite . 8201, 8207, 8211, 8236, 8251, 8267, 8277
\APLinput 19398, 21226		\Bicycle 20431, 21567
\APLinv 19372, 21217		\bigcircle 21256
\APLleftarrowbox . 19387, 21222		\bigdoublevee 20190, 21471
\APLrightarrowbox 19390, 21223		\bigdoublewedge .. 20188, 21470
\APLup 19589, 21822		\bigtriangledown .. 19602, 21246
\APLuparrowbox .. 19392, 21224		\bigtriangleup 19587, 21241
\appendix 7306, 7318		\binampersand ... 16078, 21586
\appendixautorefname 3358, 3376, 3394, 3412, 3430, 3448, 3466, 3498, 3499, 3524, 3542, 3560, 9360		\bindnasrepma ... 18556, 21732
\apprge 19051, 21773		\Biohazard 19666, 21270
\apprle 19048, 21772		\bitsetGetDec 5741, 5874, 5892, 5906, 5919, 5935, 5967, 5992
\approx 18924, 21025		\bitsetGetHex 5742
\approxseq 18929, 21027		\bitsetGetSetBitList 5730
\Aquarius 19755, 21869		\bitsetIsEmpty 5871, 5889, 5903, 5916, 5932, 5964, 5989
\aquarius 19753, 21297		\bitsetReset .. 5844, 5878, 5897, 5911, 5924, 5940, 5972
\arabic . 6946, 7170, 7173, 7176, 7177, 7178, 7180, 7181, 7182, 7183, 7185, 7186, 7187, 7188, 7189, 7190,		\bitsetSetValue 5710, 5720
		\blacksmiley 19681, 21275
		\Bleech 19590, 21823
		\BOOKMARK ... 15083, 15162
		\booknumberline .. 15066, 15071

\bot	19175, 21136	\calculate@pdfview	4207, 4210	\chardef	280, 323, 2884, 2885, 2886, 2887, 3153, 3155, 4850, 4882, 12115, 12118, 12124
\Bowtie	19239, 21804	\Cancer	19734, 21862	\check@bm@number	15304, 15312, 15362, 15370
\bowtie	19237, 21158	\cancer	19732, 21290	\CheckBox	6463
\Box	19641, 21829	\Cap	19267, 21171	\CheckCommand	7930
\box	6506, 6808, 9632, 10742, 12167, 12170	\cap	18863, 20999	\checkcommand	42, 7472, 8044, 8051, 8058, 8157, 8167, 8261, 8273, 8638, 8641, 8701, 9157
\boxast	20174, 21463	\capdot	20214, 21481	\CheckedBox	19644, 21830
\boxbackslash	19384, 21221	\capitalacute	16048	\Checkedbox	19642, 21262
\boxbar	19624, 21255	\capitalbreve	16055	\checklatex	4, 8043, 8156, 8260, 8637, 9156
\boxbox	20178, 21465	\capitalcaron	16054	\Checkmark	19890, 21342
\boxbslash	20172, 21462	\capitalcedilla	16045	\checkmark	19892, 21888
\boxcircle	20176, 21464	\capitalcircumflex	16049	\CheckmarkBold	19893, 21343
\boxdot	19159, 21130	\capitaldieresis	16051	\checkpackage	9, 7471, 8700
\boxempty	19639, 21261	\capitaldotaccent	16057	\chi	17330, 20803
\boxminus	19155, 21128	\capitalgrave	16047	\chiinferior	20816
\boxplus	19153, 21127	\capitalhungarumlaut	16052	\ChoiceBox	6067
\boxslash	20170, 21461	\capitalmacron	16056	\ChoiceMenu	6460
\boxtimes	19157, 21129	\capitalnewtie	16059	\circ	18823, 20984
\brokenvert	16159, 21592	\capitalogonek	16046	\circeq	18983, 21051
\bullet	9075, 9083, 9093, 9101, 18825, 20822	\capitalring	16053	\circlearrowleft	20040, 21411
\Bumpeq	18947, 21035	\capitaltie	16058	\circlearrowright	20042, 21412
\bumpeq	18951, 21037	\capitaltilde	16050	\CircledA	19463, 21234
C		\Capricorn	19752, 21868	\circledast	19147, 21125
\C	15963, 17619, 17622	\capricornus	19750, 21296	\circledbslash	20155, 21897
\c	915, 919, 925, 3460, 3468, 3469, 3470, 6760, 6767, 15546, 15558, 15570, 15784, 15850, 15973, 15999, 16026, 16045, 16230, 16297, 16428, 16430, 16476, 16478, 16486, 16488, 16506, 16508, 16542, 16544, 16558, 16560, 16566, 16568, 16807, 16809, 17679, 17682, 18044, 18046, 18092, 18094	\caption	8067, 8069, 8157, 8159	\circledcirc	19143, 21124
\c@footnote	7850, 7933, 7941, 8053	\catcode	175, 176, 187, 188, 189, 190, 209, 840, 841, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 1044, 1344, 1351, 1956, 2085, 2086, 2219, 2220, 2276, 2277, 2278, 4927, 4929, 5067, 5068, 5069, 5070, 5071, 5072, 5073, 5076, 5078, 5081, 5089, 5099, 5190, 5191, 9375, 11844, 11845, 15180, 15182, 15251, 15254, 15281, 15284	\ccnc	20440, 21570
\c@Hy@AnnotLevel	10754, 10755, 10764	\c	187, 188, 189, 190, 209, 840, 841, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 1044, 1344, 1351, 1956, 2085, 2086, 2219, 2220, 2276, 2277, 2278, 4927, 4929, 5067, 5068, 5069, 5070, 5071, 5072, 5073, 5076, 5078, 5081, 5089, 5099, 5190, 5191, 9375, 11844, 11845, 15180, 15182, 15251, 15254, 15281, 15284	\ccnd	20442
\c@Hy@tempcnt	5202, 5203, 5209, 5217	\ccsa	20444, 21571	\cdots	21578
\c@note	8451	\cdot	21578	\cdots	19334, 21199
\c@overlay	8451	\CESign	20448, 21573	\CESign	20450, 21922
\c@page	6855, 6863, 6880, 6900, 6901, 6905, 6917, 6919, 6924, 6931, 6933, 6935, 6964, 8448, 8452, 8454, 8458, 8461, 8462, 8475, 8505	\cf@encoding	1669	\chapterautorefname	3359, 3377, 3395, 3413, 3431, 3449, 3467, 3496, 3525, 3543, 3561, 9361
\c@secnumdepth	15431, 15449, 15464	\chapternumberline	15068, 15073	\char	13937, 15184, 15221
\c@slide	8451				
\c@slidesection	8941, 9069, 9070				
\c@slidesubsection	8993				
\c@tocdepth	3719, 3724				
\calc@bm@number	15293, 15369				

\CJK@ten	1548, 1549, 1550, 1551, 1628	6041, 6063, 6079, 9902, 9903, 9904, 9905, 9906, 9907, 9910, 11604, 11605, 11606, 11607, 11608, 11611	\cyrabhchdsc	17766
\CJK@tenthousand	1561, 1582		\CYRABHDZE	17829
\CJK@thousand	1598		\cyrabhdze	17831
\CJK@three	1546, 1549, 1663	\Cross	\CYRABHHA	17714
\CJK@two	1546, 1548, 1663	\crossb	\cyrabhha	17716
\CJK@zero	1546, 1564, 1581, 1585, 1601, 1616, 1638	\CrossClowerTips	\CYRAE	17803
\CJKdigits	1423	\crossd	\cyrae	17805
\CJKkern	1335	\CrossedBox	\CYRB	17406
\CJKnumber	1422	\Crossedbox	\cyrb	3494, 17473
\cl@ckpt	7264	\crossh	\CYRBYUS	17594
\CleaningA	19465, 21817	\CrossMaltese	\cyrbyus	17596
\CleaningF	19476, 21235	\crossnilambda	\CYRC	17449
\CleaningFF	19478, 21236	\CrossOpenShadow	\cyrch	17516
\CleaningP	19500, 21237	\CrossOutline	\CYRCH	17451, 17871
\CleaningPP	19502, 21238	\Cube	\cyrch	3486, 3487, 3495, 17518, 17873
\clickb	17090, 21696	\Cup	\CYRCHLDSC	17787
\clickc	17085, 21694	\cup	\cyrchldsc	17789
\clickt	17027, 21678	\cupdot	\CYRCHRDSC	17745
\clock	19350, 21207	\cupplus	\cyrchrdsc	17747
\ClockLogo	19353, 21814	\curlyc	\CYRCHVCRS	17750
\Clocklogo	19352, 21813	\curlyeqprec	\cyrchvcrs	17753
\close@pdfink	9710, 9735, 9744, 9779, 9819, 9855, 10184	\curlyeqsucc	\CYRD	17412
\closedniomega	16976, 21666	\curlyesh	\cyrd	3483, 3486, 3497, 3502, 3503, 17479
\closedrelepsilon	16889, 21642	\curlyvesh	\CYRDJE	17373
\closeout	6682, 15171	\curlyvee	\cyrdje	17543
\Cloud	19630, 21257	\curlywedge	\CYRDZE	17379
\ClowerTips	21359	\curlyyogh	\cyrdze	17549
\clubpenalty	7821, 7823	\curlyz	\CYRDZHE	17402
\clubsuit	19769, 19771, 21875	\CurrentBorderColor	\cyrdzhe	17572
\codeof	8385		\CYRE	17368, 17371, 17414, 17807
\Coffeecup	19649, 21264		\cyre	3480, 3486, 3487, 3500, 3512, 3513, 3514, 17481, 17538, 17541, 17809
\coloncolonequals	20234, 21489	\currentpdfbookmark	\cyreref	17857
\colonequals	18975, 21047	\curu	\CYREREV	17465, 17855
\color@begingroup	9618, 10728	\curvearrowleft	\cyrerev	17532
\color@endgroup	9625, 10735	\curvearrowright	\CYRERY	17460, 17879
\columnwidth	7978	\CutLeft	\cyrery	3478, 3480, 17527, 17881
\comma@entry	6058, 6065, 6067	\CutLine	\CYRF	17445
\comma@parse	6057	\Cutline	\cyrf	17512
\complement	18774, 20962	\Cutright	\CYRFITA	17610
\Conclusion	18725, 21741	\CuttingLine	\cyrfita	17612
\cong	18919, 21023	\cyr	\CYRG	17375, 17410
\Congruent	19001, 21767		\cyrg	3496, 17477, 17545
\contentsline	6691, 6692, 6704, 8591, 8595, 8639, 8641		\CYRGDSC	17875
\copy	5376, 5378, 5389, 5397, 9628, 10190, 10712, 10738		\cyrgdsc	17877
\copyright	20726		\CYRGHCRS	17662
\Corresponds	18990, 21765	\CYRA	\cyrghcrs	17664
\corresponds	18989, 21764	\cyra	\CYRGHK	17667
\count@	879, 881, 882, 885, 888, 891, 894, 1363, 1364, 1365, 1366, 1966, 3735, 3736, 3741, 3742, 5688, 5689, 5704, 6000, 6015, 6017, 6041, 6063, 6079, 9902, 9903, 9904, 9905, 9906, 9907, 9910, 11604, 11605, 11606, 11607, 11608, 11611		\cyrghk	17670
			\CYRGUP	17658
			\cyrgup	17660
			\CYRH	17447
			\cyrh	17514

\CYRHDSC	17736	\cyrm ...	3483, 3487, 3513, 3514, 17496	\CYRSFTSN	17463
\cyrhdsc	17738	\CYRMDSC	17791	\cyrsoftsn ..	17529, 17530, 21704
\CYRHHK	17883	\cyrmdsc	17793	\CYRSH	17453
\cyrhhk	17885	\CYRN	17431	\cyrsh	17520
\CYRHRDSN	17458	\cyrn ...	3480, 3486, 3487, 3489, 3490, 3492, 3500, 3506, 3507, 17498	\CYRSHCH	17455
\cyrhrdsn .	17524, 17525, 21703	\CYRNDSC	17702	\cyrshch	17522
\CYRI	17397, 17420, 17423, 17833, 17837	\cyrndsc	17704	\CYRSHHA	17755
\cyri 3480, 3483, 3487, 3493, 3498, 3500, 17487, 17490, 17567, 17835, 17839		\CYRNG	17706	\cyrshha	17757
\CYRIE	17377	\cyrng	17708	\CYRT	17441
\cyrie	17547	\CYRNHK	17783	\cyrtr ...	3483, 3486, 3492, 3494, 3506, 3507, 3508, 3509, 3510, 3511, 3512, 3513, 3514, 17508
\CYRII	17382, 17385	\cyrnhk	17785	\CYRTDSC	17724
\cyrri	17552, 17555	\CYRNJE	17391	\cyrtdsc	17726
\CYRIOTBYUS	17598	\cyrnje	17561	\CYRTETSE	17740
\cyriotbyus	17600	\CYRO	17433, 17841	\cyrtetse	17742
\CYRIOTE	17582	\cyro ...	3483, 3486, 3489, 3490, 3500, 3509, 3510, 3512, 3513, 3514, 17500, 17843	\cyrthousands	17644
\cyriote	17584	\CYROMEGA	17574	\CYRTSHE	17393
\CYRIOTLYUS	17590	\cyromega	17576	\cyrtshe	17563
\cyriotlyus	17592	\CYROMEGARND	17628	\CYRU ...	17400, 17443, 17859, 17863, 17867
\CYRISHRT	17422	\cyromegarnd	17630	\cyru 3490, 3492, 3506, 3507, 3510, 3514, 17510, 17861, 17865, 17869	
\cyrishrt	17489	\CYROMEGATITLO ...	17632	\CYRUK	17624
\CYRISHRTDSC	17646	\cyromegatitlo	17634	\cyruk	17626
\cyrishrtdsc	17648	\CYROT	17636	\CYRUSHRT	17399
\CYRIZH	17614, 17619	\cyrot	17638	\cyrushrt	17569
\cyrizh	17616, 17622	\CYROTLD	17845, 17850	\CYRV	17408
\CYRJE	17387	\cyrotld	17847, 17853	\cyrv	3478, 3480, 17475
\cyrje	17557	\CYRP	17435	\CYRY	17728
\CYRK	17395, 17425	\cyrp ...	3483, 3486, 3487, 3491, 3492, 3498, 3500, 3504, 3505, 3506, 3507, 17502	\cyry	17730
\cyrk 3489, 3490, 3492, 3506, 3507, 3509, 3510, 3511, 17492, 17565		\CYRpalochka	17769	\CYRYA	17469
\CYRKBEAK	17698	\CYRPHK	17710	\cyrya	17536
\cyrkbeak	17700	\cyrphk	17712	\CYRYAT	17578
\CYRKDSC	17684	\CYRPSI	17606	\cyryat	17580
\cyrkdsc	17686	\cyrpsi	17608	\CYRYHCERS	17732
\CYRKHCERS	17694	\CYRR	17437	\cyryhcrs	17734
\cyrkhcrs	17696	\cyrr ...	3478, 3480, 3483, 3486, 3487, 3493, 3497, 3498, 3500, 3502, 3503, 3508, 3509, 3510, 3511, 3512, 3513, 3514, 17504	\CYRYI	17384
\CYRKHK	17775	\CYRRTICK	17654	\cyryi	17554
\cyrkhk	17777	\cyrrtick	17656	\CYRYO	17370
\CYRKOPPA	17640	\CYRS	17439, 17719	\cyryo	17540
\cyrkoppa	17642	\cyrs ...	3483, 3486, 3489, 3490, 3493, 3508, 3509, 3510, 3511, 3515, 17506, 17722	\CYRYU	17467
\CYRKSI	17602	\CYRSCHWA	17811, 17816	\cyryu	17534
\cyrksi	17604	\cyrschwa	17813, 17819	\CYRZ ...	17418, 17679, 17825
\CYRKVCERS	17689	\CYRSDSC	17718, 17719	\cyrz ..	3497, 3502, 3503, 17485, 17682, 17827
\cyrkvcrs	17692	\cyrstdsc	17721	\CYRZDSC	17678
\CYRL	17427	\CYRSEMISFTSN	17650	\cyrzdsc	17681
\cyrl ...	3494, 3496, 3498, 3500, 17494	\cyrsemisftsn	17652	\CYRZH ...	17416, 17771, 17821
\CYRLDSC	17779			\cyrzh 3480, 3500, 17483, 17773, 17823	
\cyrl dsc	17781			\CYRZHDSC	17673
\CYRLJE	17389			\cyrzhdsc	17676
\cyrlje	17559				
\CYRLYUS	17586				
\cyrl yus	17588				
\CYRM	17429				

D		
\d	916, 920, 926, 3556, 3560, 3562, 3563, 3564, 3565, 3566, 3568, 15549, 15561, 15573, 15967, 16012, 16039, 18024, 18026, 18036, 18038, 18084, 18086, 18108, 18110, 18116, 18118, 18136, 18138, 18144, 18146, 18180, 18182, 18192, 18194, 18200, 18202, 18228, 18230, 18248, 18250, 18268, 18270, 18286, 18288, 18290, 18292, 18298, 18300, 18302, 18304, 18306, 18308, 18314, 18316, 20479, 20484, 20489, 20494, 20499, 20504, 20509, 20514, 20519, 20524, 20529, 20534, 20539, 20544, 20549, 20554, 20559, 20564, 20569, 20574, 20579, 20584, 20589, 20594	
\dad	20643	
\dag	18344, 21715	
\dagger	20821	
\dal	20629	
\daleth	18548, 20885	
\damma	20683	
\danger	19820, 21316	
\dasheddownarrow	18759, 20955	
\dashedleftarrow	18753, 21742	
\dashedrightarrow	18758, 21743	
\dasheduparrow	18754, 20953	
\dashleftarrow	18751, 20952	
\dashrightarrow	18756, 20954	
\DashV	20332, 21534	
\Dashv	20325, 21532	
\dashV	21530	
\dashv	19164, 21132	
\DavidStar	19917, 21355	
\davidstar	19919, 21889	
\ddag	18348, 21717	
\ddagger	15646, 18345, 18347, 21716	
\ddots	19338, 21201	
\declare@shorthand	1098, 1099, 1104, 1105, 1110, 1120, 1121, 1122, 1127, 1128, 1133, 1134, 1139, 1144, 1145, 1150, 1155, 1156, 1157, 1158, 1159, 1160, 1165, 1166, 1171, 1172, 1177, 1178	
\DeclareFontEncoding	15537, 15937	
\DeclareFontFamily	986, 996	
\DeclareFontShape	987, 997	
\DeclareFontSubstitution	988, 998	
\DeclareLocalOptions	4498	
\DeclareRobustCommand	5030, 5033, 5042, 5046, 5181, 5268, 5270, 5272, 5281, 6457, 6460, 6463, 6466, 6469, 6472, 6475, 6600, 6604, 6670, 6674, 9204, 9230, 9249, 15387	
\DeclareTextAccent	15538, 15539, 15540, 15541, 15542, 15543, 15544, 15545, 15546, 15547, 15548, 15549	
\DeclareVoidOption	3092, 3106, 3117, 3133, 3139, 3144, 3158, 3168, 3173, 3179, 3185, 3214, 3231, 3238, 3244, 3249, 3254, 3638, 3646, 3654, 3664	
\DefaultHeightofCheckBox	6512, 13590, 14194, 14570	
\DefaultHeightofChoiceMenu	6514, 13408, 14009, 14364	
\DefaultHeightofReset	6510, 13560, 14166, 14538	
\DefaultHeightofSubmit	6508, 13540, 14143, 14515	
\DefaultHeightofText	6516, 13380, 13983, 14331	
\DefaultHeightofTextMultiline	6517, 13378, 13981, 14329	
\DefaultOptionsofCheckBox	6522, 13592, 14196, 14572	
\DefaultOptionsofComboBox	6525	
\DefaultOptionsofListBox	6524	
\DefaultOptionsofPopdownBox	6526	
\DefaultOptionsofPushButton	6521, 13511, 14115, 14483	
\DefaultOptionsofRadio	6527	
\DefaultOptionsofReset	6520, 13563, 14169, 14541	
\DefaultOptionsofSubmit	6519, 13543, 14146, 14518	
\DefaultOptionsofText	6523, 13385, 13988, 14336	
\DefaultWidthofCheckBox	6513, 13589, 14193, 14569	
\DefaultWidthofChoiceMenu	6515, 13407, 14008, 14363	
\DefaultWidthofReset	6511, 13559, 14165, 14537	
\DefaultWidthofSubmit	6509, 13539, 14142, 14514	
\DefaultWidthofText	6518, 13375, 13978, 14326	
\define@key	2783, 2785, 2828, 2843, 2846, 2849, 2857, 2860, 2870, 2873, 2876, 2893, 2905, 2907, 2910, 2913, 2930, 2934, 2937, 2940, 2943, 2946, 2949, 2952, 2955, 2980, 3036, 3042, 3150, 3261, 3277, 3287, 3290, 3297, 3326, 3345, 3348, 3603, 3661, 3673, 3688, 3713, 3716, 3720, 3748, 3753, 3757, 3760, 3767, 3779, 3786, 3796, 3799, 3802, 3806, 3821, 3830, 3840, 3847, 3858, 3865, 3882, 3972, 3981, 4011, 4017, 4023, 4045, 4051, 4057, 4063, 4069, 4075, 4108, 4115, 4207, 4208, 4228, 4235, 4245, 4275, 4276, 4279, 4282, 4285, 4288, 4291, 4294, 4297, 4320, 4434, 4437, 5198, 5227, 5233, 5245, 5682, 5770, 5826, 6128, 6133, 6146, 6174, 6216, 6219, 6222, 6226, 6229, 6233, 6236, 6240, 6244, 6248, 6251, 6255, 6258, 6261, 6264, 6267, 6304, 6320, 6323, 6326, 6329, 6332, 6335, 6365, 6368, 6371, 6374, 6393, 6399, 6413, 6418, 6424, 6441, 6446, 6452, 7061, 7072, 11683, 11689, 12199, 12201, 12204, 12207, 12209, 12211, 12220, 12228, 12235, 12237, 12239, 12241, 12243, 12245, 12254, 12264, 12266, 12268, 12269, 12275, 12284, 12286, 12288, 12290, 12292, 12294, 12296, 12298, 12300, 12302, 12304, 12306, 12308, 12310, 12312, 12314, 12315, 12316, 12317, 12318, 12319, 12320, 12321, 12322, 12323, 12324, 12325	
\Deleatur	18497, 20873	
\Delta	17227, 20772	
\delta	17292, 20785	
\Denarius	18499, 21728	
\dest@name	5602	
\df@tag	8662, 8668	
\DH	15802, 16248	

<code>\dh</code> . 15872, 16319, 16320, 21600	14013, 14076, 14368, 14434,	<code>\ecircumflex</code> 20468, 20498, 20499,
<code>\dhal</code> 20631	15250, 15280	20500, 20501, 20502
<code>\DiamandSolid</code> 21400	<code>\documentclass</code> 2, 9504	<code>\Ecommerce</code> 18539, 21731
<code>\diameter</code> 19342, 21203	<code>\dospecials</code> 15259, 15289	<code>\EdefEscapeHex</code> 859
<code>\Diamond</code> 19614, 21826	<code>\Doteq</code> 18962, 21763	<code>\EdefEscapeName</code> . . 4139, 4190,
<code>\diamond</code> 19612, 21250	<code>\doteq</code> 18955, 21039	10160, 10910, 11448, 12336,
<code>\diamonddots</code> 18388, 20830	<code>\doteqdot</code> 18960, 21041	13473, 13476, 14075, 14078,
<code>\diamondsuit</code> 19766, 19768, 21874	<code>\dotminus</code> 18894, 21012	14430, 14436
<code>\digamma</code> 17355, 21702	<code>\dotplus</code> 18813, 20979	<code>\EdefEscapeString</code> 813, 823
<code>\dimen@</code> 525, 526,	<code>\dots</code> 574	<code>\EdefUnescapeName</code> 4140
530, 1972, 2049, 2050, 2053,	<code>\dottimes</code> 20202, 21476	<code>\EdefUnescapeString</code> . 808, 8514
2055, 4470, 4471, 4473,	<code>\doublebarwedge</code> . . 20225, 21485	<code>\egroup</code> 702, 9625, 10735, 11184,
4480, 4481, 5366, 5367,	<code>\doublecap</code> 19269, 21807	11839, 13659, 13751, 13776
5370, 5379, 5380, 5384,	<code>\doublecup</code> 19272, 21808	<code>\EightAsterisk</code> 19999, 21394
6273, 6282, 6285, 6298,	<code>\doublesqcap</code> 20213, 21904	<code>\EightFlowerPetal</code> . 19977, 21384
9645, 9647, 11571, 11572,	<code>\doublesqcup</code> 20218, 21905	<code>\EightFlowerPetalRemoved</code>
11574, 12157, 12172, 12175,	<code>\doublevav</code> 17944	. . . . . 19996, 21393
12554, 12556, 12621, 12623,	<code>\doublevee</code> 20221, 21484	<code>\eighthnote</code> 19784, 21876
12715, 12717, 13000, 13002	<code>\doublewedge</code> 20219, 21483	<code>\eighthinferior</code> 20853
<code>\dimexpr</code> . 537, 2345, 2347, 2355,	<code>\doubleyod</code> 17948	<code>\EightStar</code> 19956, 21374
2360, 2363, 2365, 2379,	<code>\DOWNarrow</code> 19598, 21245	<code>\EightStarBold</code> . . . 19958, 21375
2381, 2384, 2385, 2392,	<code>\Downarrow</code> 18726, 20941	<code>\EightStarConvex</code> . 19952, 21372
2395, 2398, 2399, 2400,	<code>\downarrow</code> 20891	<code>\EightStarTaper</code> . . 19950, 21371
2401, 2411, 2416, 2424,	<code>\downdownarrows</code> . 18701, 20932	<code>\eightsuperior</code> 20837
2428, 2433, 2443, 2446,	<code>\downdownharpoons</code> 20122,	<code>\einferior</code> 20861
2451, 2454, 2459, 2460, 6298	21444	<code>\ejective</code> 17073, 21691
<code>\ding</code> 634, 6340, 6343	<code>\downharpoonleft</code> . 18684, 20925	<code>\ell</code> 18510, 20876
<code>\DingObject</code> 14088	<code>\downharpoonright</code> 18681, 20924	<code>\em</code> 618
<code>\directlua</code> 165	<code>\downmodels</code> 20338, 21536	<code>\emgma</code> 16955, 21662
<code>\discretionary</code> 703	<code>\downtherefore</code> . . 18889, 21756	<code>\emph</code> 597
<code>\div</code> 21576	<code>\downuparrows</code> . . 18764, 20957	<code>\empty</code> 1346, 3723
<code>\divdot</code> 20201, 21903	<code>\downupharpoons</code> . 20140, 21450	<code>\emptyset</code> 18782, 20966
<code>\divide</code> 9903, 11605	<code>\downvdash</code> 19172, 21786	<code>\enc@html</code> 6132, 6135
<code>\divideontimes</code> . . . 19235, 21157	<code>\dp</code> 5366, 5374, 5387, 6502, 6505,	<code>\enc@update</code> 559
<code>\Divides</code> 18815, 20980	7976, 10267, 10347, 10384,	<code>\END</code> . . 1694, 1695, 1721, 1722,
<code>\DividesNot</code> 18817, 20981	10424, 12158, 12161, 12797,	1737, 1738, 1755, 1756,
<code>\DJ</code> 3568, 15803, 16386	13080, 14304	1773, 1774, 2158, 2164,
<code>\dj</code> 3565, 3566, 16389	<code>\dsbiological</code> 19814, 21313	2169, 2271, 2273, 10029,
<code>\dlsh</code> 18655, 20915	<code>\dschemical</code> 19812, 21312	10042, 10046, 10053, 10066,
<code>\do</code> 1364, 2800, 2805, 2810, 3828,	<code>\dscommercial</code> 19816, 21314	10070, 10076, 10088, 10092
3860, 3861, 3862, 3863,	<code>\dsjuridical</code> 19810, 21311	<code>\end</code> 639, 21928
3912, 3913, 3914, 3915,	<code>\dsmedical</code> 19808, 21310	<code>\endeqnarray</code> . . 7619, 7641, 7648
3916, 3917, 3920, 3921,	<code>\dsmilitary</code> 19805, 21309	<code>\endequation</code> 7573, 7607
3922, 3923, 3924, 3925,	<code>\dth@counter</code> . 7750, 7751, 7781,	<code>\endForm</code> 6122
3928, 3929, 3932, 3933,	7782, 7809	<code>\endinput</code> . 64, 3103, 3198, 4696,
3934, 3935, 3936, 3939,	<code>\dth@everypar</code> 7797	4806, 9117, 11772, 13143,
3940, 3941, 3942, 3943,	<code>\dtimes</code> 20205, 21477	15377
3946, 3947, 3948, 3949,	<code>\dvipdfm@setdim</code> 14301, 14351,	<code>\endlinechar</code> 934, 955, 5066
3950, 3953, 3954, 3955,	14450, 14473, 14504, 14529,	<code>\endNoHyper</code> 6634
3956, 3957, 3960, 3961,	14557, 14586	<code>\EndPreamble</code> 13146
3964, 3965, 3966, 3969,	<code>\dz</code> 17121, 21700	<code>\endsubeqnarray</code> . . . 7652, 7663
3970, 3976, 3977, 3978,		<code>\eng</code> 16519, 21607
3979, 4313, 4314, 4315,		<code>\engma</code> 16520, 21608
4316, 4317, 4318, 5730,		<code>\ensuremath</code> 687
7677, 8301, 8324, 13412,		<code>\Envelope</code> 19872, 21334
13474, 13712, 13719, 13729,		<code>\enya</code> 16959, 21664
		<code>\epdice</code> 636, 21581

E

<code>\epsi</code>	16878, 21640	<code>\FancyVerbLineautorefname</code>		<code>\flap</code>	17002, 21675
<code>\epsilon</code>	17294, 20786	.. 3365, 3383, 3401, 3419,		<code>\flapr</code>	17001, 21674
<code>\eqcirc</code>	18979, 21049	3437, 3455, 3473, 3508,		<code>\flat</code>	19789, 21302
<code>\eqcolon</code>	18897, 21013	3511, 3531, 3549, 3567, 9367		<code>\Fld@additionalactions</code> . .	14714, 14757, 14761
<code>\eqdot</code>	20230, 21487	<code>\farsikaf</code>	20697	<code>\Fld@@DingDef</code> 6340, 6343, 6362	
<code>\eqnarray</code>	7618, 7620, 7645	<code>\farsiya</code>	20701	<code>\Fld@additionalactions</code> . .	14714, 14805, 14834, 14869, 14904, 14939, 14974, 15006
<code>\eqsim</code>	18911, 21019	<code>\fatha</code>	20681	<code>\Fld@align</code>	6111, 6327, 14783, 14844, 14913
<code>\eqslantgtr</code>	20269, 21505	<code>\fatsemi</code>	20195, 21473	<code>\Fld@altname</code> 6243, 6245, 14693, 14695, 14767, 14769	
<code>\eqslantless</code>	20267, 21504	<code>\Fax</code>	20426, 21565	<code>\Fld@annotflags</code>	5890, 5892, 14778, 14811, 14839, 14873, 14908, 14944, 14980
<code>\equal</code>	8382	<code>\fax</code>	18550, 20886	<code>\Fld@annotnames</code> 14765, 14780, 14813, 14841, 14875, 14910, 14946, 14982	
<code>\equalscolon</code>	18977, 21048	<code>\faxmachine</code>	20428, 21921	<code>\Fld@bcolor</code>	6113, 6369, 14795, 14797, 14860, 14862, 14889, 14891, 14917, 14929, 14931
<code>\equalsinferior</code>	20857	<code>\fbox</code>	13941, 13944	<code>\fld@bcolor</code>	14848
<code>\equalsuperior</code>	20841	<code>\fcdice</code>	637, 21582	<code>\Fld@bordercolor</code>	6114, 6372, 14791, 14793, 14819, 14827, 14829, 14847, 14856, 14858, 14885, 14887, 14916, 14925, 14927, 14952, 14960, 14962, 14988, 14996, 14998
<code>\equation</code> 7572, 7581, 7585, 7594		<code>\Female</code>	19699, 21849	<code>\Fld@bordersep</code>	6115, 6321
<code>\equationautorefname</code> 3352, 3370, 3388, 3406, 3424, 3442, 3460, 3478, 3479, 3518, 3536, 3554, 9350, 9354		<code>\female</code>	19693, 19696, 21846	<code>\Fld@borderstyle</code>	6117, 6305, 6306, 6307, 6317, 14784, 14817, 14845, 14879, 14914, 14950, 15004
<code>\equiv</code>	18999, 21058	<code>\FemaleFemale</code>	19822, 21317	<code>\Fld@borderwidth</code>	6116, 6268, 6496, 6499, 6500, 6503, 6504, 13461, 13462, 14063, 14064, 14418, 14419, 14784, 14817, 14845, 14879, 14914, 14950, 15004
<code>\Equivalence</code>	18731	<code>\FemaleMale</code>	19826, 21319	<code>\Fld@calculate@code</code> 6380, 13360, 13864, 14317, 14727, 14729	
<code>\er</code>	16874, 21639	<code>\Field@addtoks</code> 6196, 6227, 6230, 6419, 6442		<code>\Fld@calculate@sortkey</code> . .	6412, 6414, 13873
<code>\errmessage</code>	3600	<code>\Field@boolkey</code> 5683, 5771, 6190, 6220, 6223		<code>\Fld@cbsymbol</code> 6118, 6333, 14799	
<code>\es@roman</code>	661	<code>\Field@toks</code>	6194, 6195, 6197, 13651, 13668, 13679, 13690, 13700, 13717, 13735, 13743, 13748, 13764, 13773	<code>\Fld@charsize</code> 6108, 6109, 6265, 13460, 14062, 14417, 14801, 14866, 14895, 14935, 14986	
<code>\es@save@dot</code>	1322	<code>\Field@Width</code>	6107, 6253	<code>\Fld@checkedfalse</code>	6104
<code>\escapechar</code> 543, 864, 4643, 7670, 15110, 15291, 15342		<code>\figureautorefname</code>		<code>\Fld@checkequals</code>	6208, 13413, 13475, 13720, 13730, 14014, 14077, 14369, 14435
<code>\esh</code>	17014, 20759	<code>\filename@area</code>	5500	<code>\Fld@choices</code>	5997, 6005, 6007, 6011, 6020, 6028, 6033, 6081, 6083, 6091, 6092, 14868
<code>\EstimatedSign</code>	18538, 21730	<code>\filename@base</code>	5500		
<code>\eta</code>	17298, 20788	<code>\filename@ext</code> 5497, 5498, 5500, 5501			
<code>\eTeX</code>	583, 13151	<code>\filename@parse</code>	5496		
<code>\etex@unexpanded</code>	1897, 1904	<code>\find@pdfink</code>	9679, 9733, 9743		
<code>\eTeXversion</code>	9862, 9864, 9866	<code>\Finv</code>	18540, 20881		
<code>\eth</code>	16320, 21600	<code>\Fire</code>	20429, 21566		
<code>\Eur</code>	18496, 21727	<code>\fivedots</code>	20364, 21547		
<code>\EURcr</code>	18493, 21724	<code>\FiveFlowerOpen</code>	19975, 21383		
<code>\EurCr</code>	18492, 21723	<code>\FiveFlowerPetal</code>	19973, 21382		
<code>\EURdig</code>	18489, 21720	<code>\fiveinferior</code>	20850		
<code>\EurDig</code>	18488, 21719	<code>\FiveStar</code>	19632, 21258		
<code>\EURhvh</code>	18491, 21722	<code>\FiveStarCenterOpen</code>	19934, 21363		
<code>\EurHv</code>	18490, 21721	<code>\FiveStarConvex</code>	19942, 21367		
<code>\EURtm</code>	18495, 21726	<code>\FiveStarOpen</code>	19634, 21259		
<code>\EurTm</code>	18494, 21725	<code>\FiveStarOpenCircled</code>	19932, 21362		
<code>\evensidemargin</code>	8532	<code>\FiveStarOpenDotted</code>	19936, 21364		
<code>\everypar</code>	7823	<code>\FiveStarOutline</code>	19938, 21365		
<code>\ExecuteOptions</code> 4485, 4486, 4490		<code>\FiveStarOutlineHeavy</code>	19940, 21366		
<code>\exists</code>	18778, 20964	<code>\FiveStarShadow</code>	19944, 21368		
<code>\ext@figure</code>	8924	<code>\fivesuperior</code>	20834		
<code>\ext@table</code>	8923	<code>\Flag</code>	19800, 21307		
<code>\extra@b@citeb</code>	8308				
<code>\extravietnam</code>	3647				
<code>\extravietnamese</code>	3639				
<code>\EyesDollar</code>	16073, 21585				
F					
<code>\fa</code>	20655				
<code>\fallingdoteq</code>	21043				
<code>\fallingdotseq</code>	18966				

\Fld@color . . .	6112, 6375, 14802, 14867, 14896, 14936	13770, 13975, 14005, 14112, 14190, 14323, 14360, 14480, 14566, 14692, 14766	14326, 14340, 14343, 14363, 14400, 14411, 14413, 14432, 14466, 14497, 14514, 14522, 14537, 14551, 14569, 14576, 14578
\Fld@default .	6022, 6025, 6027, 6324, 13373, 13389, 13405, 13445, 13473, 13587, 13649, 13667, 13681, 13689, 13696, 13722, 13732, 13762, 13772, 13976, 13993, 14006, 14047, 14075, 14191, 14324, 14341, 14361, 14402, 14430, 14567, 14897, 14901, 14902, 14937	\Fld@norotatefalse	5806
\Fld@DingDef .	6333, 6336, 6338	\Fld@norotatetrue	5805
\Fld@disabledfalse	6105	\Fld@noviewfalse	5809
\Fld@export .	5835, 5838, 5845, 6137	\Fld@noviewtrue	5810
\Fld@findlength . . .	13699, 13710	\Fld@nozoomfalse	5802
\Fld@flags	5904, 5906, 5917, 5919, 5933, 5935, 5965, 5967, 5990, 5992, 14782, 14815, 14843, 14877, 14912, 14948, 14984	\Fld@nozoomtrue	5801
\Fld@format@code .	6378, 14719, 14721	\Fld@onblur@code .	6383, 14735, 14737
\Fld@getmethodfalse	6157	\Fld@onclick@code .	6377, 6453, 14833
\Fld@getmethodtrue	6159	\Fld@onenter@code	6386, 14747, 14749
\Fld@height .	6262, 13376, 13394, 13408, 13463, 13483, 13500, 13540, 13560, 13590, 13600, 13979, 13999, 14009, 14065, 14093, 14107, 14143, 14166, 14194, 14206, 14327, 14343, 14364, 14420, 14432, 14466, 14515, 14538, 14570, 14578	\Fld@onexit@code .	6387, 14751, 14753
\Fld@hiddenfalse	5793	\Fld@onfocus@code	6382, 14731, 14733
\Fld@hiddentrue	5794	\Fld@onmousedown@code	6384, 14739, 14741
\Fld@invisiblefalse	5789	\Fld@onmouseup@code . .	6385, 14743, 14745
\Fld@invisibletrue	5790	\Fld@pageobjref .	13351, 13949, 13960, 14314, 14648, 14779, 14812, 14840, 14874, 14909, 14945, 14981
\Fld@keystroke@code	6381, 14715, 14717	\Fld@printfalse	5798
\Fld@listcount . . .	13472, 13477, 13480, 13485, 13490, 13495, 14074, 14079, 14094, 14100, 14429, 14437, 14441, 14446, 14457, 14462	\Fld@printtrue	5797
\Fld@loc	6217	\Fld@radiosymbol . .	6119, 6336, 14893
\Fld@mappingname .	6247, 6249, 14697, 14699, 14771, 14773	\Fld@rotation	6120, 6366, 14787, 14789, 14818, 14823, 14825, 14846, 14852, 14854, 14881, 14883, 14915, 14921, 14923, 14951, 14956, 14958, 14987, 14992, 14994
\Fld@maxlen .	6110, 6256, 14940	\Fld@submitflags . . .	5872, 5874, 14972
\Fld@menulength . .	6106, 6259, 13410, 13414, 13460, 13711, 13712, 13715, 14011, 14015, 14062, 14366, 14370, 14417	\Fld@temp . .	6339, 6341, 6344, 6345, 6354, 6355
\Fld@name .	6241, 13372, 13404, 13508, 13586, 13648, 13653, 13664, 13665, 13676, 13677, 13686, 13687, 13695, 13716, 13733, 13741, 13746, 13761,	\Fld@validate@code	6379, 14723, 14725
		\Fld@value	6023, 6030, 6032, 6330, 13374, 13389, 13406, 13444, 13445, 13977, 13993, 14007, 14046, 14047, 14325, 14341, 14362, 14401, 14402, 14938
		\Fld@width .	6252, 13375, 13388, 13394, 13407, 13443, 13454, 13456, 13483, 13500, 13523, 13539, 13547, 13559, 13573, 13589, 13595, 13600, 13978, 13992, 13999, 14008, 14045, 14056, 14058, 14093, 14107, 14128, 14142, 14150, 14165, 14179, 14193, 14200, 14206,
			14326, 14340, 14343, 14363, 14400, 14411, 14413, 14432, 14466, 14497, 14514, 14522, 14537, 14551, 14569, 14576, 14578
		\float@caption	8077, 8149
		\float@makebox	8151, 8152
		\floatingpenalty	7977
		\Florin	16642, 21612
		\flq	668
		\flqq	666
		\fmtname	7
		\fmtversion	7
		\font	5354
		\fontencoding	551, 555, 590, 13933
		\fontfamily	591, 13932
		\fontseries	592, 7715, 7743, 7774, 13934
		\fontshape	593, 4993, 13935
		\fontsize	594
		\Football . .	19841, 19843, 21881
		\footins	7971
		\footnote	5659
		\footnoteautorefname	3353, 3371, 3389, 3407, 3425, 3443, 3461, 3482, 3485, 3519, 3537, 3555, 9351, 9355
		\footnotesep	7975, 7982
		\footnotesize	623, 7973
		\footnotetext	7933
		\footref	8001, 8002
		\forall	18772, 20961
		\Force	18603, 21737
		\foreignlanguage	649
		\Form	6121
		\Form@action	6131, 13640, 14970
		\Form@boolkey	6125
		\Form@htmlfalse . . .	6124, 6143
		\Form@htmltrue	6136
		\Form@method	6155, 6163, 13640
		\Forward	19591, 21242
		\ForwardToIndex . .	19409, 21231
		\FourAsterisk	19920, 21356
		\fourinferior	20849
		\FourStar	19928, 21360
		\FourStarOpen . . .	19930, 21361
		\foursuperior	20833
		\fourth	18386, 20829
		\frown	19362, 21212
		\frownie	19675, 21273
		\Frowny	19677, 21841
		\frq	669
		\frqq	667
		\fullnote	20403, 21555
		\futurelet	722, 1688
		\FV@SetLineNo	7411

\FV@StepLineNo . . . 7410, 7412,
7413

G

\G . . 15962, 16001, 16028, 16753,
16755, 16757, 16759, 16765,
16767, 16768, 16775, 16777,
16783, 16785, 16787, 16789

\g@addto@macro
. . 6822, 6994, 8210, 8487,
8490, 8493, 8542, 10096,
11073, 11595, 11895, 12484,
12578, 12648, 12958, 13157

\G@refundefinedtrue 5319, 8310,
8333, 9122, 9142, 9159, 9277

\gaf 20699

\Game 18552, 20887

\Gamma 17225, 20771

\gamma 17290, 20784

\gammainferior 20813

\Ganz 20405, 21918

\GaPa 20391, 21549

\Gauge 6469

\ge 19011, 21063

\Gemini 19731, 21861

\gemini 19729, 21289

\GenericError 710, 4005

\GenericInfo 712, 4003

\GenericWarning . 274, 711, 4004

\Gentsroom 20433, 21568

\geq 19011, 21062

\geqclosed 19221, 21802

\geqq 19019, 21066

\geqslant 20240, 21492

\getpagerefnumber 7525

\getrefbykeydefault . 7481, 7482

\gexmode . 11626, 11627, 11727

\gg 19031, 21072

\ggg 19281, 21177

\ghayn 20651

\gimel 18546, 20884

\Gin@setfile 8739, 8740

\glossary 675

\glotstop 17071, 20768

\glottal 17074, 21692

\glq 664

\glqq 662

\gnapprox 20259, 21501

\gneq 20255, 21499

\gneqq 19025, 21069

\gnsim 19313, 21191

\Greeknumeral 1186

\greeknumeral 1185

\grq 665

\grqq 663

\gtrapprox 20248, 21496

\gtrclosed 19214, 21799

\gtrdot 19277, 21175

\gtreqless 19287, 21179

\gtreqqlless 20265, 21503

\gtrless 19058, 21084

\gtrsim 19049, 21080

\guill@spacing 1115

\guillemotleft 1155, 15729, 15911,
16171, 20455

\guillemotright . . . 1156, 15760,
15912, 16206, 20456

\guilsinglleft 15660, 15913, 18369,
20457

\guilsinglright . . . 15662, 15914,
18371, 20458

H

\H . . 15958, 16003, 16030, 16052,
16530, 16532, 16594, 16596,
17867, 17869

\h . . 3558, 20481, 20486, 20491,
20496, 20501, 20506, 20511,
20516, 20521, 20526, 20531,
20536, 20541, 20546, 20551,
20556, 20561, 20566, 20571,
20576, 20581, 20586, 20591,
20596

\H@@footnotemark . 7836, 7853,
7917, 8006, 8013, 8025, 8036

\H@@footnotetext
. . 7835, 7845, 7877, 7916,
7955, 8014, 8028, 8036

\H@@mpfootnotetext 7843, 7855,
7857, 7918

\H@definecounter . . 8644, 8646

\H@endeqnarray . . . 7619, 7642

\H@endequation . . . 7573, 7613

\H@endsubeqnarray . 7652, 7664

\H@eqnarray 7618, 7623

\H@equation 7572, 7596

\H@item 7191, 7197, 8218, 8243

\H@newctr 8649, 8651

\H@old@part 15441, 15452

\H@old@chapter . . 15411, 15420

\H@old@sect 15462, 15473, 15482

\H@old@spart 15454, 15460

\H@old@ssect 15397, 15402

\H@refstepcounter . . 7208, 7218,
7412, 7536, 7549, 7595,
7756, 7787, 8072, 8938, 8991

\H@seteqlabel 8680, 8682

\H@subeqnarray . . . 7651, 7655

\ha 20667

\Haa 20625

\Halb 20408, 21919

\halfnote 20406, 21556

\halign 684

\hamza 20601

\HandCuffLeft 19651, 21265

\HandCuffRight . . . 19653, 21266

\HandLeft 19655, 21267

\HandRight 19658, 21268

\HaPa 20393, 21550

\HAR@checkcitations 8398

\HAR@citetoaux 8354

\HAR@tempa 8399, 8400, 8401,
8402, 8403, 8404

\hardsign 17525, 21703

\harvardcite 8348, 8385

\harvarditem 8373

\hateq 18987, 21053

\hausab 16631, 20733

\hausab 16850, 21633

\hausad 16635, 20734

\hausad 16864, 21638

\hausak 16646, 20735

\hausak 16650, 21614

\hb@xt@ 5369, 5382

\hbar 16437, 20732

\hbox . . 1964, 1970, 1976, 2682,
3734, 3740, 5370, 5384,
5535, 5537, 6253, 6490,
6491, 6492, 6493, 8338,
8527, 9618, 10189, 10268,
10278, 10348, 10362, 10385,
10400, 10425, 10440, 10711,
10728, 11803, 12161, 12175,
12798, 12808, 13081, 13096,
13788, 14342, 14431, 14465,
14495, 14523, 14552, 14577,
15389

\hc@currentHref 8088

\HCode . . . 13640, 13642, 13653,
13662, 13674, 13682, 13684,
13715, 13721, 13726, 13731,
13745, 13750, 13754, 13757,
13766

\hdotfor 18351, 20823

\headerps@out 7095, 12474,
12485, 12565, 12579, 12640,
12649, 12662, 12676, 12723,
12841, 12959, 13158

\Heart 19764, 21872

\heartsuit . 19762, 19765, 21873

\hebalef 17889

\hebayin 17925

\hebbet 17891

\hebdalet 17895

\hebfinalkaf 17909

\hebfinalmem 17915

\hebfinalnun 17919

\hebfinalpe 17927

\hebfinaltsadi 17931

\hebgimel 17893

\hebhe 17897

<code>\hebhet</code>	17903	<code>\hv</code>	16645, 21613	<code>\Hy@@temp</code>	3764, 3766, 6389, 6391
<code>\heb kaf</code>	17911	<code>\hv@pdf@char</code>	15179, 15244, 15245, 15246, 15247	<code>\Hy@@VersionCheck</code>	296, 325
<code>\heblamed</code>	17913	<code>\hvtex@buffer</code>	11490, 11494, 11502, 11505, 11514, 11518, 11534	<code>\Hy@abspage</code>	6842, 6928, 7044, 7121
<code>\hebmem</code>	17917	<code>\hvtex@gettoken</code>	11489, 11503, 11507, 11516, 11520	<code>\Hy@Acrobatmenu</code>	4581, 4622, 10158, 10908, 11449, 12337
<code>\hebmun</code>	17921	<code>\hvtex@gettoken@</code>	11490, 11492	<code>\Hy@activeanchorfalse</code>	5064, 9724, 10220, 10235, 10314, 10324, 10640, 11169, 11186, 11257, 11270, 11789, 12746, 12761, 13034, 13048
<code>\hebpe</code>	17929	<code>\hvtex@par@dimension</code>	11485, 11526	<code>\Hy@activeanchortrue</code>	9720, 10217, 10231, 10312, 10321, 10636, 11165, 11183, 11255, 11267, 11779, 12743, 12757, 13031, 13044
<code>\hebqof</code>	17935	<code>\hvtex@par@direction</code>	11486, 11529	<code>\Hy@ActiveCarriageReturn</code>	5100, 5103
<code>\hebresh</code>	17937	<code>\hvtex@par@duration</code>	11487, 11521	<code>\Hy@AllowHyphens</code>	5174, 11777, 11809, 12144
<code>\hebsamekh</code>	17923	<code>\hvtex@par@motion</code>	11488, 11523	<code>\Hy@AlphNoErr</code>	7307, 7320, 7322
<code>\hebshin</code>	17939, 17940, 21705	<code>\hvtex@param@dimension</code>	11498, 11527, 11545, 11548	<code>\Hy@AnchorName</code>	5304, 5306, 5309, 5311, 5335, 5337, 5341, 5346, 5348
<code>\hebsin</code>	17940, 21705	<code>\hvtex@param@direction</code>	11499, 11530, 11556, 11564	<code>\Hy@appendixstring</code>	7302, 7324
<code>\hebtav</code>	17942	<code>\hvtex@param@duration</code>	11500, 11522, 11569, 11571	<code>\Hy@AtBeginDocument</code>	379, 1094, 2964, 3024, 3099, 3194, 3251, 3676, 4467, 4536, 4553, 4692, 4698, 4802, 4961, 5051, 6568, 6679, 7128, 7417, 7701, 8345, 9196, 9344, 9613, 10104, 10723, 11238, 12675, 12721, 13805, 13838
<code>\hebtet</code>	17905	<code>\hvtex@param@motion</code>	11501, 11524, 11545, 11552	<code>\Hy@AtBeginDocumentHook</code>	380, 385, 391, 392
<code>\hebttsadi</code>	17933	<code>\hvtex@parse@trans</code>	11474, 11496	<code>\Hy@AtEndOfPackage</code>	382, 922, 2598, 3640, 3648, 3655, 4680, 4706, 4712, 4913
<code>\hebvav</code>	17899	<code>\hvtex@produce@trans</code>	11535, 11541	<code>\Hy@AtEndOfPackageHook</code>	383, 386, 388, 389
<code>\hebyod</code>	17907	<code>\hvtex@token</code>	11493, 11504, 11510, 11517, 11522, 11525, 11528, 11530	<code>\Hy@author</code>	6749, 6753
<code>\hebzayin</code>	17901	<code>\hvtex@trans@code</code>	11478, 11479, 11480, 11481, 11482, 11483, 11484, 11497, 11543, 11544, 11546, 11548, 11550, 11552, 11554, 11556, 11558, 11559, 11560, 11561, 11562, 11564	<code>\Hy@babelnormalise</code>	5282, 5284
<code>\Hermaphrodite</code>	19828, 21320	<code>\hvtex@trans@effect@Blinds</code>	11478	<code>\Hy@backout</code>	5060, 6619, 6623, 8184
<code>\hexagon</code>	19404, 21229	<code>\hvtex@trans@effect@Box</code>	11479	<code>\Hy@backreffalse</code>	447, 3317, 3339, 4704
<code>\hexstar</code>	19839, 21322	<code>\hvtex@trans@effect@Dissolve</code>	11480	<code>\Hy@backreftrue</code>	3310, 3314, 3336
<code>\hfill</code>	6490, 6491, 6492, 6493, 8229, 8262	<code>\hvtex@trans@effect@Glitter</code>	11481	<code>\Hy@BeginAnnot</code>	10753, 10770, 10811, 10848, 10880, 10909
<code>\Hfootnoteautorefname</code>	9351	<code>\hvtex@trans@effect@OR</code>	11484	<code>\Hy@bibcite</code>	8207, 8211
<code>\hhyperref</code>	5664	<code>\hvtex@trans@effect@Split</code>	11482	<code>\Hy@bookmarksdepth</code>	3719, 3724, 3736, 3742, 15021
<code>\hinferior</code>	20865	<code>\hvtex@trans@effect@Wipe</code>	11483	<code>\Hy@bookmarksnumberedfalse</code>	448
<code>\hoffset</code>	8528	<code>\hvtex@trans@par</code>	11517, 11521, 11523, 11526, 11529	<code>\Hy@bookmarksopenfalse</code>	449
<code>\hookb</code>	16849, 21632	<code>\hvtex@trans@params</code>	11511, 11513, 11537		
<code>\hookd</code>	16863, 21637	<code>\Hy@@CleanupFile</code>	5535, 5537		
<code>\hookg</code>	16896, 21644	<code>\Hy@@DefNameKey</code>	2825, 2827		
<code>\hookh</code>	16916, 21649	<code>\Hy@@escapeform</code>	14658, 14671, 14677		
<code>\hookheng</code>	16920, 21651	<code>\Hy@@SectionAnchor</code>	15384, 15387		
<code>\hookleftarrow</code>	18641, 20909				
<code>\hookrelepsilon</code>	16885, 21641				
<code>\hookrightarrow</code>	18643, 20910				
<code>\hphantom</code>	633				
<code>\href</code>	676, 5181, 5658, 5659, 6660				
<code>\href@</code>	5184, 5187, 5192				
<code>\href@split</code>	5192, 5193				
<code>\hsize</code>	7978				
<code>\hskip</code>	1975, 2062, 2723, 2724, 5178, 6496, 13788				
<code>\hslash</code>	18506, 20874				
<code>\hspace</code>	672, 8388, 8389				
<code>\hss</code>	5371, 5383, 8536, 15394				
<code>\ht</code>	5375, 5379, 5388, 6498, 6501, 10276, 10351, 10360, 10367, 10388, 10398, 10405, 10428, 10438, 10445, 12157, 12806, 13094, 14302				
<code>\htmladdimg</code>	5657				
<code>\htmladdnormallink</code>	5658				
<code>\htmladdnormallinkfoot</code>	5659				
<code>\htmlref</code>	5660				
<code>\htrtaild</code>	20820				
<code>\Huge</code>	620				
<code>\huge</code>	624				
<code>\Hurl</code>	5267, 5269, 5271				

\Hy@bookmarkstrue	450		
\Hy@bookmarkstype 3754, 3756,			
8558, 15032			
\Hy@boolkey . 2752, 2844, 2847,			
2850, 2871, 2874, 2877,			
2908, 2911, 2914, 2931,			
2935, 2938, 2941, 2944,			
2947, 2950, 2953, 2956,			
3037, 3288, 3291, 3346,			
3662, 3674, 3689, 3714,			
3717, 3758, 3761, 3822,			
3982, 4277, 4280, 4283,			
4286, 4289, 4292, 4295,			
4303, 4435, 4438, 7062			
\Hy@BorderArrayPatch . .	12215,		
12218, 12483, 12957			
\Hy@breaklinks@unsupported . .			
.	2919, 11755		
\Hy@breaklinksfalse	451		
\Hy@breaklinksunhbox . .	12111,		
12165			
\Hy@CatcodeWrapper . . .	4922,		
4981, 5025, 5054			
\Hy@chapapp 7303, 7324, 7351,			
15415, 15426, 15508			
\Hy@chapterstring . .	7298, 7300,		
7303, 7350			
\Hy@CheckOptionValue . .	2795,		
2832			
\Hy@CJKbookmarksfalse . . .	453		
\Hy@cjkpu	1357, 1359, 1380		
\Hy@CleanupFile . . .	5533, 9785,		
10813, 11334, 12409			
\Hy@colorlink 3668, 4985, 4993,			
4997, 9614, 9705, 9778,			
9818, 9854, 10183, 10218,			
10241, 10272, 10285, 10313,			
10329, 10354, 10370, 10392,			
10409, 10432, 10449, 10724,			
10802, 10841, 10873, 10902,			
10928, 11256, 11278, 11348,			
11374, 11409, 11442, 11461,			
11807, 12090, 12092, 12744,			
12767, 12802, 12815, 13032,			
13054, 13089, 13102			
\Hy@colorlinksfalse	3665		
\Hy@ColorList	3827, 3828		
\Hy@CounterExists . 7156, 7169,			
7172			
\Hy@currentbookmarklevel 15027,			
15037, 15038, 15044, 15051,			
15144, 15147, 15152, 15156			
\Hy@debugfalse	443		
\Hy@debugtrue	442		
\Hy@defaultbp	6268, 6270		
\Hy@defaultbpAux . 6272, 6277,			
6291			
\Hy@defaultdriver . .	4787, 4816,		
4826, 4837			
\Hy@DefFormAction 6129, 6131			
\Hy@DefNameKey . .	2824, 3859,		
3911, 3919, 3927, 3931,			
3938, 3945, 3952, 3959,			
3963, 3968, 3975, 4312			
\Hy@DEST	12112, 12179		
\Hy@destlabelfalse	454		
\Hy@DestName	9666, 9673		
\Hy@DestRename . .	5598, 5623,		
5627			
\Hy@DisableOption			
.	2781, 4573, 4574, 4575,		
4577, 4580, 4685, 4711,			
4857, 4858, 4859, 4860,			
4861, 4862, 4863, 4864,			
4865, 4866, 4867, 4868,			
4869, 4870, 4871, 4872,			
4873, 4874, 4875, 4876,			
4921, 4974, 5002, 5003,			
5062, 5063, 5653, 6572,			
6573, 6574, 6575, 6576,			
6577, 6578, 6579, 6580,			
6581, 6582, 6583, 6584,			
6585, 6586, 6587, 6588,			
6589, 6590, 6591, 6592,			
6593, 6594, 6595, 6773,			
6996, 8040, 8744, 8869,			
8870, 9537, 9641, 10014,			
10015, 10016, 10017, 10018,			
10019, 10020, 10021, 10022,			
10023, 10153, 10479, 10480,			
10481, 10482, 10483, 10484,			
10485, 10486, 10487, 10488,			
10751, 10971, 10972, 10973,			
10974, 10975, 10976, 10977,			
10978, 10979, 10980, 11098,			
11240, 11707, 11708, 11709,			
11710, 11711, 11712, 11713,			
11714, 11715, 11716, 11974,			
11975, 11976, 11977, 11978,			
11979, 11980, 11981, 11982,			
11983, 12550, 12867, 12868,			
12869, 12870, 12871, 12872,			
12873, 12874, 12875, 12876			
\Hy@DistillerDestFix	8501,		
11720, 11722			
\Hy@draftfalse	409		
\Hy@drafttrue	410		
\Hy@driver 489, 2924, 3096, 3108,			
3120, 3123, 3135, 3141,			
3146, 3160, 3170, 3175,			
3181, 3188, 3191, 3217,			
3233, 3240, 3246, 3256,			
4036, 4714, 4717, 4721,			
4724, 4728, 4731, 4733,			
4737, 4743, 4747, 4750,			
4754, 4759, 4763, 4766,			
4770, 4773, 4775, 4779,			
4785, 4790, 4792, 4796,			
4799, 4810, 4813, 4816,			
4825, 4826, 4837, 4839,			
4847, 4849, 4851, 4853			
\Hy@dth@currentHref 7758, 7789,			
7814			
\Hy@DviErrMsg . . .	3063, 3065,		
3068, 3074, 3087			
\Hy@DviModetrue . .	3072, 3077		
\Hy@DvipdfmxOutlineOpentru			
.	4883, 4890		
\Hy@EndAnnot . .	10759, 10805,		
10844, 10876, 10905, 10931			
\Hy@endcolorlink			
.	3669, 4989, 4994, 4998,		
9623, 9711, 10218, 10255,			
10279, 10287, 10313, 10337,			
10358, 10372, 10396, 10411,			
10436, 10451, 10733, 10761,			
11256, 11329, 11350, 11376,			
11411, 11444, 11463, 11834,			
12104, 12744, 12783, 12809,			
12817, 13032, 13068, 13093,			
13104			
\Hy@EndWrap 4923, 4925, 4926,			
4959			
\Hy@Error	268, 284, 290,		
313, 2968, 3085, 3111, 3127,			
3162, 3201, 3208, 3219,			
3225, 4606, 5235, 5466,			
5830, 5954, 6150, 6182,			
6394, 6447, 13514, 13567,			
14119, 14173, 14487, 14545			
\Hy@escapeform . 13393, 13479,			
13498, 13527, 13548, 13574,			
13599, 13997, 14083, 14105,			
14132, 14153, 14181, 14204,			
14348, 14440, 14469, 14501,			
14525, 14553, 14583, 14652,			
14682, 14689			
\Hy@escapestring 14649, 14717,			
14721, 14725, 14729, 14733,			
14737, 14741, 14745, 14749,			
14753, 14799, 14833, 14893,			
14937, 14938, 14970			
\Hy@EveryPageAnchor . .	8500,		
8543			
\Hy@EveryPageBoxHook			
.	6799, 6803, 6807, 8542,		
11073, 11595, 11895			
\Hy@EveryPageHook 6798, 6802,			
6994, 10096			
\Hy@ExchangeLeftParenthesis . .			
.	9400, 9406		

\Hy@ExchangeRightParenthesis	9410, 9416	6531, 6534, 6536, 6539, 6541, 6544, 6546, 6549, 6551, 6554, 6556, 6559, 6561, 8285, 8346, 8563, 8580	\Hy@Message	273, 3098, 3193, 4691, 4801, 4849, 11190, 11194, 11197, 11200, 11203, 11206, 11209, 11212, 13341, 13612, 13616, 13619, 13622, 13625, 13628, 13631, 13634, 13644, 13781, 14271
\Hy@false 2646, 2762, 3302, 3338, 6179			\Hy@naturalnamesfalse	465
\Hy@finalfalse	410		\Hy@nestingfalse	466
\Hy@finaltrue	409		\Hy@newline@author	6792
\Hy@FirstPage	4592		\Hy@newline@title	6791
\Hy@FirstPageHook	6800, 6814, 6815, 6819, 6822, 7093, 7094, 12484, 12578, 12648, 12958, 13157	\Hy@InfoNoLine 272, 4687, 4689, 9462, 13011	\Hy@next	6944, 6954, 6959, 15425, 15434, 15437
\Hy@FixNotFirstPage	10187, 10188, 10196	\Hy@IsEmpty	\Hy@nextfalse	4624, 8754
\Hy@float@caption	8078, 8128, 8142	\Hy@LastPage	\Hy@NextPage	4586
\Hy@float@currentHref	8132, 8135, 8137, 8143, 8145, 8147	\Hy@level	\Hy@nexttrue 4625, 4626, 4627, 8755, 8756, 8757	
\Hy@footnote@currentHref	6567, 7865, 7870, 7885, 7890, 7893, 7905, 7907, 7946, 7987, 7990	\Hy@levelcheck	\Hy@NIL	4510, 4523, 4526
\Hy@FormObjects 13897, 14212, 14266, 14276, 14594, 14644		\Hy@Linkcounter	\Hy@number	4220, 4224, 4232
\Hy@frenchlinksfalse	3667	493, 7381, 7382, 7404, 7405, 8683, 8980, 8981, 8985, 9031, 9032, 9036	\Hy@numberline	15028, 15065, 15066, 15067, 15068
\Hy@Gin@setfile	8739, 8741	\Hy@Linkfileprefix	\Hy@ObsoletePaperOption 2853, 2861	
\Hy@GlobalStepCount 487, 6928, 7381, 7404, 8518, 8980, 9031		3798, 5485, 10258, 11134, 12787, 13071	\Hy@ocgcolor 9617, 9631, 10727, 10741	
\Hy@gtemp	837, 838, 4644, 4650, 4652, 6027, 6028, 6032, 6033, 6044, 6058, 7922, 7927, 9424, 9426, 14710, 14712	\Hy@LinkMath	\Hy@ocgcolorlinksfalse 3666, 4969	
\Hy@href	5184, 5186	11798, 11800, 11805, 11837, 12136, 12138, 12143, 12145, 12151, 12153	\Hy@org@chapter	15423, 15438
\Hy@href@nextactionraw	5221, 5244, 5246, 5247, 5249, 5254, 5258, 5260, 9774, 9814, 9850, 10179, 10798, 10837, 10869, 10898, 10924, 11293, 11363, 11431, 12434, 12463	\Hy@linktoc	\Hy@OrgMakeLabel 13126, 13133	
\Hy@hyperfiguresfalse	456	2879, 2881, 2889, 2891, 2901, 8604	\Hy@OutlineName	15303, 15358
\Hy@hyperfootnotetrue	458	\Hy@linktoc@all	\Hy@OutlineRerunCheck	15168, 15267, 15349
\Hy@hyperindextrue	459	2887	\Hy@PageAnchorSlide	8460, 8498, 8511
\Hy@hypertextnamesfalse	2602	\Hy@linktoc@none	\Hy@PageAnchorSlidesPlain 8447, 8497, 8506	
\Hy@hypertextnamestrue	460	2884	\Hy@pageanchortrue	469
\Hy@IfStringEndsWith	5501, 5513	\Hy@linktoc@page	\Hy@pagecounter 492, 494, 7443, 8518, 8520	
\Hy@implicittrue	461	2889	\Hy@pageheight	4481, 12580, 12677
\Hy@Info	271, 2770, 4655, 4657, 4660, 4662, 4665, 4667, 4670, 4672, 4675, 4677, 4906, 4912, 4990, 4995, 4999, 5143, 5170, 5737, 6529,	\Hy@linktoc@section 2881, 2885, 2891	\Hy@param	4511, 4512, 4515, 4516, 7349, 7350, 7351, 7378, 7382
		\Hy@linktocpagefalse	\Hy@pdfafalse	485
		\Hy@localanchornamefalse	\Hy@pdfcenterwindowfalse	452
		\Hy@LookForParentCounter 7273	\Hy@pdfdisplaydoctitlefalse	484
		\Hy@LT@currentHref 7551, 7562	\Hy@pdfencoding@pdfdoc	3019
		\Hy@LT@footnotetext 7945, 7954	\Hy@pdfescapeformfalse	455
		\Hy@make@anchor	\Hy@pdffitwindowfalse	457
		8669	\Hy@pdfmarkererrorfalse	12064
		\Hy@make@df@tag@@ 8661, 8676	\Hy@pdfmarkererrortrue	12248, 12257
		\Hy@make@df@tag@@@	\Hy@pdfmenubartrue	464
		8677	\Hy@pdfminorversion	9436, 9442, 9445, 9453, 9472, 9495, 9516, 9531, 9535
		\Hy@MakeCurrentHref		
		7405		
		\Hy@MakeCurrentHrefAuto 7403, 7485, 8658, 15012, 15399, 15415, 15426, 15456, 15470, 15508		
		\Hy@MakeRemoteAction		
		5204, 9788, 10816, 12412		
		\Hy@maketitle@end		
		8024		
		\Hy@maketitle@optarg 8015, 8020		
		\Hy@Match 329, 331, 3264, 3808, 3868, 3885, 4251, 4330, 4336, 4366, 4367, 4370, 4381, 4396, 5249, 6307		
		\Hy@MaybeStopNow 3184, 4491, 4494		

\Hy@pdfnewwindowfalse . . .	468	\Hy@pstringP	9825, 9848, 10850,	5133, 5141, 5169, 5286,
\Hy@pdfnewwindowsetfalse	467,		10867, 11419, 11429, 12443,	5591, 5601, 7348, 8597,
4300			12461	9172, 9255, 13808, 13867,
\Hy@pdfnewwindowsettrue	4302,	\Hy@pstringURI . . .	9749, 9770,	15260, 15290
5223			10881, 10894, 11277, 11289,	\Hy@SaveCatcodeSettings .
\Hy@pdfnewwindowtrue . .	5224		11355, 11359, 12384, 12396	981, 991, 1005
\Hy@pdfpagehiddenfalse . . .	471	\Hy@PutCatalog	6990, <u>6998</u> , <u>7110</u>	\Hy@saved@currentHref . .
\Hy@pdfpagelabelsfalse . . .	6829	\Hy@raisedlink	2670, 7249, 7487,	7906
\Hy@pdfpagelabelstrue	470		7508, 7509, 7510, 7513,	\Hy@saved@footnotemark
\Hy@pdfstringdef	<u>836</u> , 6002,		7563, 7603, 7608, 7611,	8011,
6010, 6330			7634, 7811, 7868, 7888,	8026
\Hy@pdfstringfalse . .	472, 6597		7959, 7985, 8116, 8195,	\Hy@saved@footnotetext .
\Hy@pdfstringtrue . . .	689, 6569		8219, 8224, 8244, 8659,	8029
\Hy@pdftoolbartrue	478		8684, 12472, 12563, 12837,	\Hy@saved@hook . . .
\Hy@pdfusetitlefalse	481		13009, 15013, 15391, 15416,	\Hy@saved@refstepcounter
\Hy@pdfversion	3050, 3061, 6004,		15427, 15457, 15509	7537
9458, 9466, 9472, 9495,		\Hy@raiselinksfalse . .	474, 8347	\Hy@SavedSpaceFactor
9498, 9516, 9518, 9532,		\Hy@RemoveDurPageAttr	10053,	. . . 2653, 2655, 2660, 2661,
9535, 14704		<u>10066</u>		2667, 13131
\Hy@pdfwindowuitrue	483	\Hy@RemoveHidPageAttr	10076,	\Hy@savedthm
\Hy@pkg	4509, 4516	<u>10088</u>		7829
\Hy@plainpagesfalse	473	\Hy@RemovePercentCr . .	5116,	\Hy@SaveLastskip . .
\Hy@PrevPage	4589	5120, 5125		2691, 9663,
\Hy@ProvideTheHCounter	<u>7254</u>	\Hy@RemoveTransPageAttr	10028, <u>10042</u>	10209, 10224, 10306, 10318,
\Hy@ps@CR	<u>12630</u> , <u>12637</u> , <u>12642</u> ,	\Hy@reserved@a	5401, 7621, 7654,	10575, 11157, 11173, 11248,
12643, 12660, 12681, 12682,		13647, 13697, 13760		11261, 11760, 11774, 12736,
12683, 12689, 12696, 12703,		\Hy@RestoreCatcodes	<u>208</u> , 4487,	12750, 13024, 13038
12710		4856		\Hy@SaveSavedSpaceFactor
\Hy@psdextrafalse	477	\Hy@RestoreCatcodeSettings	<u>976</u> ,	2665,
\Hy@pstringB	9930, 9935, 11011,	983, 993, 1007		10264, 10344, 10381, 10421,
11023, 12037, 12053, 12930,		\Hy@RestoreLastskip	2691, 9667,	12794, 13077
12946		10221, 10236, 10315, 10325,		\Hy@SaveSpaceFactor
\Hy@pstringD	9787, 9812, 10815,	10627, 11170, 11187, 11258,		2654, 2674,
10834, 12411, 12432		11271, 11770, 11790, 12747,		2685, 10263, 10275, 10343,
\Hy@pstringdef	<u>9371</u> , 9665, 9689,	12762, 13035, 13049		10357, 10380, 10395, 10420,
9749, 9786, 9787, 9824,		\Hy@RestoreSavedSpaceFactor .		10435, 11802, 11838, 12134,
9825, 9930, 10578, 10779,		2666, 10266, 10346, 10383,		12146, 12154, 12793, 12805,
10814, 10815, 10849, 10850,		10423, 12796, 13079		13076, 13092, 13129, 13136
10881, 11011, 11277, 11355,		\Hy@RestoreSpaceFactor .	2657,	\Hy@scanauthor . . .
11418, 11419, 12037, 12246,		2683, 2688, 10265, 10273,		6747, 6752
12255, 12384, 12410, 12411,		10280, 10345, 10355, 10363,		\Hy@scanoptauthor .
12442, 12443, 12930, 14675,		10382, 10393, 10401, 10422,		6747, 6748
15302, 15318		10433, 10441, 11804, 11840,		\Hy@scanopttitle . . .
\Hy@pstringDest . . .	9665, 9666,	12142, 12150, 12177, 12795,		6738, 6739
10578, 10625, 12246, 12247,		12803, 12810, 13078, 13090,		\Hy@scantitle
12251, 12255, 12256, 12260		13097, 13134, 13138		6738, 6743
\Hy@pstringF		\Hy@ReturnAfterElseFiFiEnd . .		\Hy@secnum@part
. . . 9784, 9785, 9786, 9806,		. . . . . 497, 1931		15444, 15446,
9824, 9843, 9848, 10812,		\Hy@ReturnAfterFiFiEnd .	496,	15449
10813, 10814, 10829, 10849,		1923, 1937, 2030, 2037		\Hy@SectionAnchorHref . .
10862, 10867, 11333, 11334,		\Hy@ReturnEnd .	495, 496, 497,	686,
11338, 11418, 11425, 11429,		1943, 2042		15382, 15404, 15475
12408, 12409, 12410, 12427,		\Hy@safe@activesfalse	<u>498</u> , 5015,	\Hy@SectionHShift
12442, 12458, 12461		5020, 5434, 9266		15381, 15390,
\Hy@pstringName	15302, 15303,	\Hy@safe@activetrue		15400, 15471
15318, 15332		<u>498</u> , 4633, 5013, 5018, 5096,		\Hy@seminarslidesfalse . . .
				8930
				\Hy@seminarssidetrue
				8927
				\Hy@setbreaklinks . .
				2916, 2920,
				2932, 9432, 10568
				\Hy@SetCatcodes
				<u>184</u> , 234, 4489
				\Hy@SetNewWindow
				4306, 9808,
				9845, 10836, 10864, 11426,
				12426, 12457
				\Hy@setouterhbox .
				12110, 12141
				\Hy@setpagesizetrue
				475
				\Hy@setpdfborder
				. . . 3901, 9695, 9754, 9792,
				9829, 10163, 10790, 10822,

10856, 10887, 10916, 11297, 11318, 11341, 11367, 11401, 11435, 11454	7575, 7581, 7707, 7732, 7995, 8001, 8611, 8612, 8620, 8621, 8824, 8826, 8830, 8861, 8862, 8863, 8878, 8879, 9474, 9477, 9478, 9494, 9512, 9945, 9974, 9976, 10498, 10503, 10509, 10513, 10516, 10521, 10552, 10554, 10983, 11026, 11028, 11937, 11940, 11944, 11945, 11951, 11952, 11958, 11986, 11991, 11997, 12001, 12004, 12009, 12042, 12044, 12116, 12117, 12121, 12212, 12213, 12221, 12222, 12326, 12327, 12879, 12884, 12890, 12894, 12897, 12902, 12935, 12937, 13868, 13880, 14657, 14658, 15300, 15306, 15314, 15329	\Hy@tempb 5414, 5416, 5437, 6935, 6936, 6975, 6976, 15056, 15057, 15085 \Hy@tempcolor . . 11816, 11818, 11831, 11907, 11909, 11921 \Hy@TempPageAnchor . . 8449, 8505, 8515, 8519, 8535 \Hy@Test@Alph 7337, 7361 \Hy@Test@alph 7328, 7357 \Hy@testname 9681, 9682, 9687, 9689, 9690, 9704, 10771, 10772, 10777, 10779, 10781, 10797, 11305, 11306, 11311, 11315, 11388, 11389, 11394, 11398, 11912, 11913, 11918, 11929 \Hy@texhtfalse 476 \Hy@texhttrue 3093, 4715 \Hy@TheSlideOptionalPage 8464, 8468, 8473, 8482 \Hy@title 6740, 6744 \Hy@tocdestname . . 8599, 8601, 8608, 8616, 8623, 8627, 8629 \Hy@toclevel . . 8568, 8572, 8585 \Hy@true 2645, 2758, 2760, 3332, 3334, 6176 \Hy@typexmlfalse 479 \Hy@undefinedname 9678, 9685, 9687, 10766, 10775, 10777, 11274, 11309, 11311, 11392, 11394, 11903, 11916, 11918 \Hy@unicodfalse 480, 816, 826, 2975, 2976, 2984, 4053, 4059, 7439, 8510, 14706 \Hy@unicodettrue . . . 2976, 7055, 7069 \Hy@UseHidKeyfalse 3820 \Hy@UseHidKeytrue 3824 \Hy@UseMaketitleInfos . . 6793, 9987, 10460, 10943, 11696, 11935, 12848 \Hy@UseMaketitleString . 6774, 6794, 6795 \Hy@UseNameKey 2837, 9952, 9953, 9954, 9955, 9956, 9957, 9958, 9959, 9978, 10528, 10529, 10530, 10531, 10532, 10533, 10534, 10535, 10556, 10990, 10991, 10992, 10993, 10994, 10995, 10996, 10997, 11030, 11656, 11657, 11658, 11659, 11660, 11661, 11662, 11663, 12016, 12017, 12018, 12019, 12020, 12021, 12022, 12023, 12046, 12909, 12910, 12911,
\Hy@setpdfversiontrue 3049 \Hy@setref@link 9128, 9131 \Hy@SlidesFormatOptionalPage . 6858, 8446, 8465, 8469 \Hy@SlidesPage 6865, 8479, 8480, 8486, 8488, 8491, 8494 \Hy@slidetitle 8957, 8959, 8966, 8974, 8984, 9008, 9010, 9017, 9025, 9035 \Hy@StartlinkName . 9693, 9707 \Hy@StepCount 486, 6905, 13414, 13477, 13712, 14015, 14079, 14370, 14437, 15148, 15153, 15229 \Hy@stoppedearlyfalse 4496, 7155 \Hy@stoppedearlytrue 4493, 7152 \Hy@StringLocalhost 5531, 5532, 5547 \Hy@tabularx@hook 7915, 7923 \Hy@temp 717, 724, 840, 912, 1082, 1085, 1093, 1094, 2859, 2864, 2865, 2866, 2867, 2868, 2869, 3763, 3772, 3773, 3774, 3775, 3776, 3777, 3778, 3828, 3829, 3830, 3833, 3835, 3838, 3848, 3851, 3852, 3853, 3854, 3855, 3856, 3866, 3879, 3883, 3898, 4035, 4036, 4076, 4077, 4080, 4083, 4086, 4111, 4119, 4120, 4121, 4122, 4123, 4124, 4125, 4126, 4127, 4298, 4299, 4322, 4323, 4369, 4370, 4377, 4381, 4613, 4617, 4618, 4619, 4620, 4719, 4721, 4726, 4728, 4731, 4745, 4747, 4752, 4754, 4761, 4763, 4768, 4770, 4773, 4838, 4839, 5727, 5731, 5732, 5743, 5827, 5828, 5829, 5831, 5835, 6147, 6148, 6149, 6151, 6155, 6156, 6305, 6317, 6388, 6404, 6405, 6406, 6407, 6408, 6409, 6410, 6411, 6417, 6423, 6429, 6430, 6431, 6432, 6433, 6434, 6435, 6436, 6437, 6438, 6439, 6885, 6888, 6897, 6899, 6903, 6907, 6951, 6953, 7257, 7258, 7279, 7437, 7440, 7443, 7449,	\Hy@temp@A 749, 750, 1915, 1917, 1928, 1930, 1935, 1936, 1939, 4112, 4114, 4510, 4523, 4526, 7274, 7277, 7278, 7279, 7280, 8773, 8774, 8775, 8782, 8810, 8811, 8812, 8821, 8848, 9475, 9486, 9487, 9488, 9489, 9492, 9497, 9500, 9526 \Hy@temp@B 1916, 1917 \Hy@temp@menu . 10160, 10178, 10910, 10923, 11448, 11451, 12336, 12345 \Hy@tempa . . 2753, 2755, 2757, 2758, 2760, 2762, 2764, 2767, 2770, 2771, 3298, 3299, 3300, 3302, 3303, 3305, 3306, 3308, 3312, 3316, 3327, 3329, 3331, 3332, 3334, 3338, 5102, 5103, 5114, 5118, 5287, 5291, 5413, 5415, 6134, 6135, 6175, 6176, 6179, 6183, 6934, 6936, 6974, 6976, 7121, 7123, 7672, 7674, 7675, 7678, 7679, 7680, 8073, 8078, 8083, 8557, 8558, 8576, 8577, 8583, 8944, 8945, 8996, 8997, 10242, 10243, 11138, 11286, 11287, 12768, 12769, 13055, 13056, 15031, 15032, 15055, 15057, 15076, 15077, 15085, 15109, 15111, 15112, 15114, 15115, 15498, 15523, 15528, 15531, 15534	

12912, 12913, 12914, 12915,
 12916, 12939
 \Hy@varioref@refstepcounter . . .
 7528, 7535
 \Hy@varioref@undefined . 7519,
 7523, 9261
 \Hy@VerboseAnchor 5166, 9664,
 10210, 10225, 10307, 10319,
 10576, 11158, 11174, 11249,
 11262, 11761, 11775, 12737,
 12751, 13025, 13039
 \Hy@verbosefalse 443, 482
 \Hy@VerboseGlobalTemp 5142,
 5143, 5144, 5145, 5149
 \Hy@VerboseLinkInfo 5149, 5150,
 5153, 5160
 \Hy@VerboseLinkStart . . 5138,
 9727, 9737, 10240, 10292,
 10328, 10340, 10768, 11114,
 11137, 11276, 11381, 11793,
 11905, 12766, 12822, 13053,
 13110
 \Hy@VerboseLinkStop 5154, 9712
 \Hy@verbosetrue 442
 \Hy@VersionCheck . . 281, 4853,
 20708
 \Hy@VersionChecked . . 280, 323,
 4850, 4852
 \Hy@vt@PutCatalog 7027, 7029
 \Hy@VTeXversion . . 7007, 7019,
 11337, 11467, 11603, 15181
 \Hy@WarnHTMLFieldOption . .
 . 6201, 6234, 6237, 6425
 \Hy@Warning 269,
 354, 520, 1855, 2775, 2790,
 2815, 2895, 3003, 3008,
 3268, 3281, 3680, 3732,
 3811, 3874, 3893, 4029,
 4037, 4088, 4135, 4143,
 4261, 4384, 4407, 4417,
 4425, 4965, 5210, 5253,
 5410, 5417, 5557, 5784,
 6139, 6202, 6310, 7065,
 7080, 8549, 9241, 9291,
 9683, 10609, 10613, 10773,
 11307, 11390, 11684, 11690,
 11914, 12249, 12258, 15040,
 15058
 \Hy@WarningNoLine 270,
 307, 2854, 2922, 3029, 3783,
 3844, 3988, 4104, 4474,
 4571, 4723, 4732, 4749,
 4765, 4774, 6721, 6830,
 7021, 7135, 7424, 8559,
 8731, 9508, 12073
 \Hy@WarningPageBorderColor .
 . . . 3841, 3843, 3845
 \Hy@WarningPageColor . 3780,
 3782, 3784
 \Hy@WarnOptionDisabled 2787,
 2789
 \Hy@WarnOptionValue . . 2768,
 2774, 3319, 3341
 \Hy@wrapper@babel 4631, 4649
 \Hy@WrapperDef . . 4641, 9659,
 10208, 10223, 10305, 10317,
 10574, 11156, 11172, 11247,
 11260, 11759, 11773, 12735,
 12749, 13023, 13037
 \Hy@writebookmark 2650, 8569,
 8964, 8972, 8982, 9015,
 9023, 9033, 15017, 15159
 \Hy@xspace@end
 . . 4534, 4539, 4543, 4548,
 4551, 4556, 4557, 4558,
 4560, 4561, 4562, 4563,
 4564, 6608, 6609, 6611,
 6614, 6616, 6617, 6618,
 6622, 6625, 6628, 6630,
 6631, 6632, 9743, 9778,
 9818, 9854, 10285, 10356,
 10371, 10394, 10410, 10434,
 10450, 10807, 10843, 10875,
 10904, 10930, 11118, 11128,
 11349, 11375, 11410, 11443,
 11462, 12144, 12152, 12804,
 12815, 13091, 13103, 13135
 \HyAnn@AbsPageLabel . . 13948,
 13955, 13996, 14082, 14104,
 14131, 14152, 14180, 14203
 \HyAnn@Count . . 13953, 13954,
 13956, 13957, 13958, 13961,
 13963, 13965
 \HyC@cmd 87, 109, 122
 \HyC@check 68, 71, 74
 \HyC@checkcommand 50, 57, 59
 \HyC@checkFailed . . . 146, 157
 \HyC@checkItem . 132, 133, 134,
 135, 138
 \HyC@checklong 45, 53
 \HyC@checkOk 144, 154
 \HyC@checkPackage . 12, 16, 18
 \HyC@cmd . 62, 75, 87, 95, 118,
 131
 \HyC@date . . . 11, 15, 23, 29, 31
 \HyC@DeclareRobustCommand
 114
 \HyC@def 125
 \HyC@defcmd 47, 54, 93
 \HyC@doCheck 99, 130
 \HyC@edef 125
 \HyC@getDate 12, 14
 \HyC@meaning 152, 160
 \HyC@nc@default . . . 103, 105
 \HyC@nc@noopt 88, 91, 103, 112,
 123, 127
 \HyC@nc@opt 88, 101, 123
 \HyC@newcommand 86
 \HyC@next 48, 55, 60, 83
 \HyC@noValue 80, 81, 82, 85, 139
 \HyC@optcmd 107, 111
 \HyC@org@cmd 76
 \HyC@org@optcmd 80, 111
 \HyC@org@robustcmd . . 81, 120
 \HyC@org@robustoptcmd . . 82
 \HyC@package 10, 22, 28, 34, 37,
 38
 \HyC@param 78, 96, 102
 \HyC@robustcmd 115, 120, 121,
 122
 \HyC@star 67, 70, 94
 \HyC@string . 131, 152, 155, 158
 \HyC@Toks . 79, 90, 96, 106, 126
 \HyCal@do 514, 518
 \HyCal@scan 505, 509, 533
 \HyCnt@LookForParentCounter
 7261, 7273
 \HyCnt@ProvideTheHCounter . .
 7245, 7254
 \HyColor@FieldBColor . . 6369,
 6372
 \HyColor@FieldColor 6375
 \HyColor@HyperrefBorderColor
 3831, 3849
 \HyColor@HyperrefColor
 . . 3768, 3787, 3788, 3789,
 3790, 3791, 3792, 3793
 \HyColor@UseColor . 4987, 9620,
 9631, 10730, 10741
 \HyField@@AddToFields . 13861,
 13883
 \HyField@@PDFChoices . 6022,
 6023, 6038
 \HyField@@SetFlag . 5717, 5719
 \HyField@@UseFlag . 5707, 5709
 \HyField@ABD@AuxAddTo-
 CoFields 13806,
 13858
 \HyField@AddCoField . . . 13816,
 13829, 13832
 \HyField@AddToFields . . 13352,
 13400, 13491, 13505, 13534,
 13555, 13581, 13606, 13794,
 13860, 14000, 14095, 14109,
 14136, 14161, 14185, 14208,
 14315, 14355, 14458, 14477,
 14509, 14533, 14561, 14590
 \HyField@AdvanceAnnotCount .
 13345, 13390, 13481,
 13499, 13524, 13549, 13575,
 13596, 14308, 14345, 14442,

14470, 14498, 14526, 14554, 14580
 \HyField@afields . 13790, 13849, 13850, 13852, 13906
 \HyField@AfterAuxOpen . 13805, 13847, 13884
 \HyField@AnnotCount . . 13343, 13344, 13346, 13349, 14306, 14309, 14312
 \HyField@AuxAddToCoFields . . 13804, 13844, 13858, 13872
 \HyField@AuxAddToFields 13803, 13841, 13848, 13887
 \HyField@cofields 13791, 13810, 13811, 13831, 13833, 13907, 13909
 \HyField@FlagsAnnot 5877, 5896, 5910, 5923, 5939, 5971
 \HyField@FlagsCheckBox 5909, 13594, 14199, 14575
 \HyField@FlagsChoice . . . 5970, 13453, 14055, 14410
 \HyField@FlagsPushButton 5895, 13522, 13545, 13572, 14127, 14148, 14178, 14496, 14520, 14550
 \HyField@FlagsRadioButton . . . 5922, 13449, 14051, 14406
 \HyField@FlagsSubmit . . 5843, 13546, 14149, 14521
 \HyField@FlagsText 5938, 13387, 13991, 14339
 \HyField@NeedAppearancesfalse 6167, 6180
 \HyField@NeedAppearancetrue . . . 6170, 6173, 6177
 \HyField@NewBitsetFlag . 5675, 5678, 5686
 \HyField@NewFlag . 5673, 5749, 5750, 5751, 5752, 5753, 5754, 5755, 5756, 5757, 5758, 5759, 5760, 5761, 5762, 5763, 5764, 5765, 5766, 5767, 5768, 5773, 5774, 5775, 5776, 5777, 5778, 5779, 5780, 5781, 5814, 5816, 5817, 5819, 5820, 5822, 5823, 5824, 5825
 \HyField@NewFlagOnly . 5677, 5815, 5818, 5821
 \HyField@NewOption 5674, 5680
 \HyField@PDFAFlagWarning 5783, 5791, 5795, 5799, 5803, 5807, 5811
 \HyField@PDFChoices . . 5995, 13497, 14102, 14464
 \HyField@PrintFlags 5724, 5870, 5888, 5902, 5915, 5931, 5963, 5988
 \HyField@SetFlag . . 5716, 5856, 5862, 5867, 5901, 5929
 \HyField@SetKeys . 6099, 13384, 13420, 13423, 13442, 13510, 13542, 13562, 13591, 13987, 14021, 14024, 14043, 14114, 14145, 14168, 14195, 14335, 14376, 14379, 14398, 14482, 14517, 14540, 14571
 \HyField@TheAnnotCount 13348, 13357, 13366, 13396, 13485, 13502, 13530, 13552, 13578, 13602, 14311, 14316, 14319, 14350, 14447, 14472, 14503, 14528, 14556, 14585
 \HyField@UseFlag 5706, 5847, 5848, 5849, 5850, 5851, 5852, 5853, 5854, 5857, 5858, 5859, 5860, 5863, 5864, 5865, 5868, 5879, 5880, 5881, 5882, 5883, 5884, 5885, 5886, 5887, 5898, 5899, 5900, 5912, 5913, 5914, 5925, 5926, 5927, 5928, 5930, 5941, 5942, 5943, 5944, 5945, 5946, 5947, 5948, 5959, 5962, 5973, 5974, 5975, 5976, 5978, 5980, 5981, 5984, 5987
 \HyInd@@@wrrindex . 8769, 8772, 8803, 8809
 \HyInd@@hyperpage 8876, 8886
 \HyInd@@wrrindex . . 8764, 8765
 \HyInd@DefKey 8822, 8836, 8849, 8858
 \HyInd@EncapChar . 3349, 4484, 8759
 \HyInd@hyperpage . 8873, 8875, 8882
 \HyInd@key . . 8823, 8827, 8838, 8851, 8863
 \HyInd@org@wrrindex 8763, 8767, 8777, 8783, 8785, 8788
 \HyInd@pagelink . . . 8891, 8897, 8899, 8902
 \HyInd@ParenLeft . . 8746, 8774, 8811, 8848
 \HyInd@ParenRight . 8747, 8775, 8782, 8812, 8821
 \HyInd@removespaces 8905, 8908, 8918
 \HyInfo@AddonHandler . . 4130, 4133
 \HyInfo@AddonList . 4164, 4165, 4199, 4206
 \HyInfo@Addons . . . 4185, 4201, 10011, 10968, 11967, 11971
 \HyInfo@AddonUnsupportedtrue . . 10458, 11682, 12846
 \HyInfo@do . . . 4132, 4166, 4189
 \HyInfo@GenerateAddons 4183, 9988, 10944, 11936
 \HyInfo@Key . 4140, 4141, 4160, 4162, 4163, 4166, 4169, 4176, 4190, 4194
 \HyInfo@KeyEscaped 4139, 4140
 \HyInfo@tmp 4149, 4160
 \HyInfo@trapped@false . . 4080, 4099
 \HyInfo@trapped@true 4077, 4098
 \HyInfo@trapped@unknown 4083, 4100
 \HyInfo@TrappedUnsupported . . 4101, 4105, 10461, 11697, 12849
 \HyInfo@Value 4154, 4157
 \HyLang@addto 3571, 3587, 3605, 3639, 3647
 \HyLang@afrikaans 3351
 \HyLang@catalan 3535
 \HyLang@DeclareLang 3585, 3614, 3615, 3616, 3617, 3618, 3619, 3620, 3621, 3622, 3623, 3624, 3625, 3626, 3627, 3628, 3629, 3630, 3631, 3632, 3633, 3634, 3635, 3636, 3637
 \HyLang@english 3369
 \HyLang@french 3387
 \HyLang@german 3405
 \HyLang@italian 3423
 \HyLang@magyar 3441
 \HyLang@portuges 3459
 \HyLang@russian 3477
 \HyLang@spanish 3517
 \HyLang@vietnamese 3553, 3639, 3647
 \HyLinguex@OrgB . . . 914, 918
 \HyLinguex@OrgC . . . 915, 919
 \HyLinguex@OrgD . . . 916, 920
 \HyLinguex@Restore . . 917, 930, 984, 994
 \HyNew@float@makebox . 8129, 8152
 \HyOpt@CheckDvi 3081, 3134, 3140, 3145, 3169, 3174, 3180, 3232, 3239, 3245, 3250, 3255
 \HyOpt@CustomDriver . . . 305, 3276, 3279, 4784, 4847

\HyOpt@DriverFallback . . .	3260, 3263, 3264, 3272, 4815, 4820	
\HyOpt@DriverType	4783, 4786, 4817, 4827, 4829, 4846, 4849	
\HyOrg@addtoreset . . .	8689, 8691, 8718	
\HyOrg@appendix . . .	7306, 7325	
\HyOrg@author	6737, 6750, 6754	
\HyOrg@elt	7259, 7265	
\HyOrg@float@makebox . .	8130, 8151	
\HyOrg@hyperpage . . .	8749, 8751, 8752	
\HyOrg@languageshorthands . . .	1053, 1067, 1078, 1088	
\HyOrg@make@df@tag@@ . .	8674	
\HyOrg@make@df@tag@@@	8675	
\HyOrg@maketitle . . .	8009, 8016, 8021	
\HyOrg@subequations	7689, 7696	
\HyOrg@title . . .	6736, 6741, 6745	
\HyOrg@TX@endtabularx . .	7914	
\HyOrg@url	5266	
\HyPat@NonNegativeReal	3869, 3870, 3871, 3872, 3888, 3890, 4242, 4252, 4253, 4254, 4256, 4257, 4258	
\HyPat@ObjRef	5250, 5251, 5264, 9433, 10569, 11756	
\hyper@@anchor	4555, 5276, 5278, 5309, 5311, 5346, 5348, 5554, 6609, 6624, 6640, 7864, 7869, 7884, 7889, 7957, 7960, 7986, 8114, 8117, 8134, 8450, 8505, 8515, 8520, 8963, 8971, 8981, 9014, 9022, 9032	
\hyper@Qlink	5136, 5194, 5299, 5327, 5401, 8203, 8349, 8350, 8351, 8399, 8401, 8403, 9133, 9148, 9251	
\hyper@Qnormalise	5105, 5109, 5113	
\hyper@Qanchor	5581, 6612, 6626, 6690, 6703, 9715, 10208, 10305, 10632, 11172, 11247, 11759, 12735, 13023	
\hyper@Qanchorend	4543, 4551, 4558, 6596, 6614, 6628, 6643, 7250, 7489, 7564, 7609, 7611, 7635, 7661, 7815, 8197, 8222, 8225, 8245, 8378, 8659, 8685, 9722, 10233, 10323, 10639, 11167, 11269, 11781, 12759, 13046, 15013, 15160, 15392, 15417, 15428, 15458, 15510	
\hyper@Qanchorstart	4557, 6596, 6613, 6627, 6642, 7250, 7488, 7564, 7603, 7635, 7661, 7812, 8195, 8220, 8225, 8245, 8378, 8659, 8685, 9718, 10223, 10317, 10635, 11156, 11260, 11773, 12749, 13037, 15013, 15160, 15392, 15417, 15428, 15458, 15510	
\hyper@Qchars	5130, 9750, 10213, 10227, 10247, 10269, 10283, 10297, 10377, 10417, 11123, 11144, 11160, 11177, 11252, 11264, 11356, 12385, 12753, 12773, 12799, 12813, 12827, 13041, 13060, 13083, 13100, 13115	
\hyper@Qcurrentanchor	11778, 11787, 11810, 11827	
\hyper@Qcurrentlinktype	11811, 11815, 11819	
\hyper@Qdestlabel@hook	5597, 5604	
\hyper@Qhash	5082, 5083, 5131, 5477, 5489, 5506, 5509, 6563, 11117	
\hyper@Qimage	5272, 5273, 10295, 11414, 11900, 12825, 13113	
\hyper@Qlast	6710, 6715	
\hyper@Qlink	4556, 5425, 6610, 6611, 6625, 6635, 6641, 9736, 10291, 10339, 10806, 11113, 11380, 11904, 12821, 13109	
\hyper@Qlink@	4563, 5402, 5408, 6608, 6622, 6648	
\hyper@Qlinkend	4543, 4551, 4560, 6616, 6630, 6645, 7909, 8189, 8192, 8608, 8616, 8623, 8627, 8629, 9735, 10253, 10336, 10805, 10807, 11149, 11327, 11813, 12781, 13066	
\hyper@Qlinkfile	4562, 5502, 6618, 6632, 6647, 9782, 10257, 10415, 10809, 11133, 11331, 12406, 12785, 13070	
\hyper@Qlinkstart	4559, 6615, 6629, 6644, 7907, 8185, 8192, 8608, 8616, 8623, 8627, 8629, 9726, 10239, 10327, 10767, 10807, 11136, 11275, 11792, 12765, 13052	
\hyper@Qlinkurl	4561, 5271, 5477, 5484, 5505, 5509, 6617, 6631, 6646, 9747, 10258, 10260, 10293, 10375, 10878, 11121, 11134, 11353, 11415, 11901, 12382, 12786, 12790, 12823, 13071, 13073, 13111	
\hyper@Qlivelink	6610, 6635	
\hyper@Qmakecurrent	7246, 7346, 7550, 7601, 7632, 7660, 7757, 7788, 7904, 8090, 8144	
\hyper@Qnormalise	5097, 5101	
\hyper@Qnat@current	8186	
\hyper@Qnatanchorend	8197	
\hyper@Qnatanchorstart	8194	
\hyper@Qnatlinkbreak	8191	
\hyper@Qnatlinkend	8188	
\hyper@Qnatlinkstart	8183	
\hyper@Qnewdestlabel	5589, 5611, 5650, 5655	
\hyper@Qnormalise	4485, 4490, 5074, 5184, 5187, 5268, 5270, 5272, 5293, 6129	
\hyper@Qpageduration	10049, 10098, 11055, 11075, 11580, 11597, 11867, 11897	
\hyper@Qpagehidden	10073, 10099, 11066, 11076, 11590, 11598, 11884, 11898	
\hyper@Qpagetransition	10025, 10097, 11044, 11074, 11469, 11596, 11850, 11896	
\hyper@Qquote	6565, 10215, 10229, 10244, 10249, 10270, 10284, 10298, 11117, 11127, 11140, 11163, 11181, 12741, 12755, 12770, 12776, 12800, 12814, 12828, 13029, 13042, 13057, 13062, 13085, 13101, 13116	
\hyper@Qreadexternallink	5431, 5442	
\hyper@Qrefstepcounter	7226, 7229, 7237	
\hyper@Qtilde	5091, 5092, 5093, 6564	
\hyperbaseurl	3795, 3796, 6659	
\hypercaltcbp	500, 500	
\hypercaltcbpdef	502, 539, 4239, 4249	
\hyperdef	5301, 6661	
\HyperDestLabelReplace	5641, 5648, 5651	
\HyperDestNameFilter	4466, 5170, 5648, 9665, 9690, 10215, 10229, 10249, 10293, 10578, 10780, 11117,	

11127, 11145, 11163, 11181,
 11253, 11265, 11314, 11397,
 12246, 12255, 12741, 12755,
 12776, 12823, 13029, 13042,
 13062, 13111, 15238, 15302,
 15318
 \HyperDestRename . 5621, 5639,
 5652
 \HyperFirstAtBeginDocument . .
 . 6687, 6689, 6711, 6714
 \hypergetpageref 7482
 \hypergetref 7481
 \HyperGlobalCurrentHref 7367,
 7369, 7377, 7378, 7382,
 7385, 7389, 7395, 7396, 7400
 \hyperimage . . 5272, 5657, 8741
 \hyperindexformat 8748
 \hyperlink . . . 5135, 6662, 8914,
 9053, 9061, 9076, 9084,
 9094, 9102, 9109
 \hyperlinkfileprefix . 3798, 3799,
 3800, 13015
 \HyperLocalCurrentHref
 . . 7385, 7387, 7393, 7394,
 7395, 7396, 7398
 \hyperpage . . 6668, 8749, 8750,
 8752, 8872
 \HyperRaiseLinkDefault . 2652,
 2679
 \HyperRaiseLinkHook 2651, 2680
 \HyperRaiseLinkLength . . 2678,
 2679, 2682
 \hyperref 5281, 5664, 5665, 6664,
 9208, 9212, 9222, 9236
 \hypersetup . . 2996, 3040, 3623,
 4116, 4486, 6658
 \hypertarget 5274, 6663
 \HyPL@@@CheckThePage 6955,
 6973
 \HyPL@@CheckThePage . 6931,
 6933
 \HyPL@Alph 6850
 \HyPL@alph 6851
 \HyPL@arabic 6847
 \HyPL@CheckThePage . . 6882,
 6930
 \HyPL@Entry 7123, 7131, 7139,
 7141
 \HyPL@EveryPage . 6870, 6994
 \HyPL@Format 6946, 6947, 6948,
 6949, 6950, 6962
 \HyPL@found 6945, 6952, 6956,
 6963, 6973, 6975
 \HyPL@Labels 6841, 6985, 6986,
 6988, 6990, 7041, 7042,
 7134, 7142, 7143
 \HyPL@LastNumber 6845, 6901,
 6924
 \HyPL@LastPrefix . . 6846, 6895,
 6926
 \HyPL@LastType . . 6844, 6886,
 6925
 \HyPL@page . 6864, 6873, 6876,
 6882, 6891
 \HyPL@Prefix
 . . 6891, 6893, 6895, 6909,
 6912, 6914, 6926, 6940, 6978
 \HyPL@Roman 6848
 \HyPL@roman 6849
 \HyPL@SetPageLabels . . . 6984,
 7049, 7137
 \HyPL@SlidesOptionalPage 6857,
 6861, 6866
 \HyPL@SlidesSetPage 6852, 6854,
 6874, 6881
 \HyPL@storePageLabel . . 6909,
 6911, 6981, 7039, 7118
 \HyPL@thisLabel . . 6838, 6840,
 6872, 6876, 6877
 \HyPL@Type . 6879, 6886, 6890,
 6908, 6916, 6925, 6939, 6977
 \HyPL@Useless 6982, 6988
 \HyPsd@@@autoref . 1776, 1778,
 1781
 \HyPsd@@@CJKdigits . . . 1646,
 1649, 1657
 \HyPsd@@@nameref 1758, 1760,
 1763
 \HyPsd@@@pageref . 1740, 1742,
 1745
 \HyPsd@@@ref . 1724, 1726, 1729
 \HyPsd@@@UTFviii@four 2394,
 2397
 \HyPsd@@AppendItalcorr . 1945
 \HyPsd@@autoref . . 1773, 1774
 \HyPsd@@autorefname . . 1794,
 1797
 \HyPsd@@CJKdigits 1638, 1640,
 1643
 \HyPsd@@CJKnumber
 . . 1539, 1541, 1544, 1597,
 1612, 1625, 1627, 1631
 \HyPsd@@ConvertToUnicode . .
 2273
 \HyPsd@@ding 2532, 2536, 2547
 \HyPsd@@GetNextTwoTokens . .
 2271
 \HyPsd@@GlyphProcessWarning
 2131, 2134
 \HyPsd@@@GreekNum 1201, 1210,
 1309, 1313, 1317
 \HyPsd@@@hspace . . . 1694, 1695
 \HyPsd@@@LetCommand . 1818,
 1839
 \HyPsd@@@nameref . . 1755, 1756
 \HyPsd@@@pageref . . 1737, 1738
 \HyPsd@@@ProtectSpacesFi 1867,
 1871, 1889, 1895, 1900
 \HyPsd@@@ref 1721, 1722
 \HyPsd@@@RemoveBraces . . 1913
 \HyPsd@@@RemoveBracesFi 1910,
 1913
 \HyPsd@@@RemoveCmdPrefix . . .
 2088, 2091
 \HyPsd@@@ReplaceFi 2158, 2164,
 2169
 \HyPsd@@@UTFviii@four . . 2378,
 2383
 \HyPsd@add@accent . 562, 1683
 \HyPsd@AfterCountRemove 1965,
 2045
 \HyPsd@AfterDimenRemove . . .
 1971, 2048
 \HyPsd@AfterSkipRemove 1977,
 2060
 \HyPsd@AMSclassfix . 671, 1704,
 1706
 \HyPsd@AppendItalcorr . 1929,
 1936, 1945
 \HyPsd@autoref 681, 1773
 \HyPsd@autorefname 1785, 1791
 \HyPsd@babel@danish 1097
 \HyPsd@babel@dutch 1103
 \HyPsd@babel@finnish 1109
 \HyPsd@babel@frenchb 1114
 \HyPsd@babel@german 1119
 \HyPsd@babel@macedonian 1126
 \HyPsd@babel@ngerman 1132
 \HyPsd@babel@portuges 1138
 \HyPsd@babel@russian 1143
 \HyPsd@babel@slovene 1149
 \HyPsd@babel@spanish 1154
 \HyPsd@babel@swedish 1164
 \HyPsd@babel@ukrainian 1170
 \HyPsd@babel@usorbian 1176
 \HyPsd@BabelPatch . 657, 1052,
 1087
 \HyPsd@CatcodeWarning 1981,
 2005, 2008, 2011, 2014, 2072
 \HyPsd@Char 2275
 \HyPsd@CharOctByte . . . 2295,
 2297, 2300, 2309, 2314
 \HyPsd@CharSurrogate . . 2289,
 2306
 \HyPsd@CharTwoByte . . 2287,
 2294
 \HyPsd@CheckCatcodes . . 735,
 1955

\HyPsd@CJK@Unicode .. 1421, 1425
\HyPsd@CJKActiveChars 1361, 1376
\HyPsd@CJKdigit .. 1650, 1660
\HyPsd@CJKdigits .. 1423, 1636
\HyPsd@CJKhook ... 688, 1332, 1343
\HyPsd@CJKhook@bookmarks 1338, 1372
\HyPsd@CJKhook@unicode 1340, 1420
\HyPsd@CJKnumber 1422, 1536
\HyPsd@CJKnumberFour 1554, 1558, 1562, 1575, 1579, 1583, 1589
\HyPsd@CJKnumberLarge 1567, 1574
\HyPsd@CJKnumberThree 1595, 1599, 1605
\HyPsd@CJKnumberTwo 1610, 1614, 1620
\HyPsd@ConvertToUnicode 804, 2221
\HyPsd@DecimalToOctal . 1353, 1384
\HyPsd@DecimalToOctalFirst 1427, 1463
\HyPsd@DecimalToOctalSecond 1428, 1437, 1500, 2551, 2557, 2560
\HyPsd@DefCommand 718, 719, 720, 721, 1807
\HyPsd@DieFace . 635, 636, 637, 2472, 21581, 21582
\HyPsd@DieFaceLarge 2480, 2489
\HyPsd@ding 634, 2522
\HyPsd@DisableCommands 1028, 1030
\HyPsd@DoConvert . 2223, 2233
\HyPsd@DoEscape 2247
\HyPsd@doxspace . . . 776, 2194
\HyPsd@empty . . 761, 763, 767, 768, 770, 778, 785
\HyPsd@end 735, 739, 1868, 1871, 1874, 1877, 1880, 1893, 1903, 1910, 1913, 1958, 1966, 1972, 1978, 2031, 2038, 2045, 2048, 2060
\HyPsd@endWithElse 1673, 1682
\HyPsd@EscapeTeX . . 815, 825, 2176
\HyPsd@fi 1885, 1891, 1895, 1901
\HyPsd@GetNextTwoTokens 2271
\HyPsd@GetOneByte 2266
\HyPsd@GetTwoBytes 2262
\HyPsd@GLYPHERR 741, 1670, 1684, 1691
\HyPsd@GlyphProcess 743, 2119, 2132
\HyPsd@GlyphProcessWarning 2126, 2130
\HyPsd@GobbleFiFi 1675, 1681
\HyPsd@GreekNum . 1190, 1193, 1195
\HyPsd@Greeknumeral . . 1186, 1192
\HyPsd@greeknumeral 1185, 1189
\HyPsd@GreekNumI 1213, 1239, 1282, 1308
\HyPsd@GreekNumII 1217, 1261, 1305, 1312
\HyPsd@GreekNumIII . . . 1220, 1284, 1316
\HyPsd@GreekNumIV 1229, 1307
\HyPsd@GreekNumV 1232, 1311
\HyPsd@GreekNumVI 1234, 1315
\HyPsd@GreekPatch . 654, 1182, 1184
\HyPsd@HighA 1431, 1440
\HyPsd@HighB 1441, 1446
\HyPsd@HighC 1447, 1450
\HyPsd@HighD 1443, 1455
\HyPsd@href 676, 1720
\HyPsd@hspace 672, 1694
\HyPsd@hspacetest . 1697, 1699, 1702
\HyPsd@ifnextchar 704, 705, 706, 1844
\HyPsd@ignorespaces 685, 1043
\HyPsd@inmathwarn . 561, 1667
\HyPsd@ITALCORR . . 696, 700, 1691
\HyPsd@langshort@system 1058, 1061
\HyPsd@LanguageShorthands 1054, 1059, 1071
\HyPsd@LetCommand 722, 723, 1807
\HyPsd@LetUnexpandableSpace 691, 692, 693, 694, 1687, 1690
\HyPsd@LoadExtra . . 999, 1002, 3038
\HyPsd@LoadStringEnc . . 3000, 3020, 3022, 3026, 3028, 7060
\HyPsd@LoadUnicode 989, 2959, 2965, 2967, 2974, 7054
\HyPsd@MoonPha . . 2503, 2521, 21583
\HyPsd@nameref 680, 1755
\HyPsd@pageref 679, 1737
\HyPsd@pdfencoding 805, 2958, 2961, 2983, 2995, 2998, 2999, 3004, 3019, 7056, 7058, 7075, 7078
\HyPsd@pdfencoding@auto 805, 2989, 2999, 3016, 7058, 7077
\HyPsd@pdfencoding@pdfdoc 2982, 3004, 3017
\HyPsd@pdfencoding@unicode 2986, 3018, 7056, 7074
\HyPsd@pdfstringdefDisableCommands 1034, 1037
\HyPsd@PrerenderUnicode 3998, 4014, 4020, 4026, 4048, 4066, 4072, 4153
\HyPsd@protected@testopt 707, 708, 1848
\HyPsd@ProtectSpaces 728, 1865, 1886, 1935
\HyPsd@ref 678, 1721
\HyPsd@RemoveBraces . . . 730, 1907, 1924, 1932, 1938
\HyPsd@RemoveCmdPrefix 2081, 2087
\HyPsd@RemoveMask 738, 1874, 1880, 1893, 1903
\HyPsd@RemoveSpaceWarning 2055, 2067, 2093
\HyPsd@ReplaceSpaceWarning 2050, 2062, 2106
\HyPsd@Rest 1959, 2027, 2035, 2038, 2046, 2051, 2057, 2063, 2069
\HyPsd@RussianPatch 656, 1325
\HyPsd@SanitizeForOutFile 15077, 15108
\HyPsd@SanitizeOut@BraceLeft 15112, 15118, 15127
\HyPsd@SanitizeOut@BraceRight 15115, 15130, 15139
\HyPsd@SPACEOPTI . 732, 748, 749, 751, 753, 755, 756, 795, 797, 2001, 2205
\HyPsd@spaceopti . . . 797, 2150
\HyPsd@SpanishPatch 655, 1319
\HyPsd@String 729, 731, 734, 736, 742, 744, 1918, 1919, 1929, 1989, 1991, 1995, 1996, 2000, 2001, 2016, 2017, 2049, 2061, 2120, 2121
\HyPsd@StringSubst . . 745, 747, 753, 759, 762, 765, 768, 787, 790, 792, 2173
\HyPsd@Subst 741, 750, 754, 760, 766, 770, 774, 779, 780, 781, 782, 783, 784, 788,

791, <u>2157</u> , 2174, 2189, 2190, 2191	\HyRef@autopagerefname 9232, 9236, 9238	\if@nobreak 7820
\HyPsd@temp 808, 810, 811, 813, 814, 821, 823, 824, 2981, 2982, 2983, 2986, 2989, 2995, 3007, 3011, 7073, 7074, 7075, 7077, 7078, 7083	\HyRef@autoref 9251, 9253	\if@skiphyperref . . . 7212, 7222
\HyPsd@ToBigChar 865, 866, 875	\HyRef@autosetref . . 9256, 9259	\if@twocolumn 15512
\HyPsd@ToBigChars . . 818, 857	\HyRef@CaseStar . . . 9320, 9326	\if@twoside 15501
\HyPsd@tocsection 1707, 1708, 1709, 1710, 1711, 1712, 1713, 1715	\HyRef@currentHtag 9272, 9290, 9293, 9299, 9306, 9312, 9327	\ifcase 347, 1246, 1268, 1291, 1385, 1434, 1456, 1459, 1465, 1501, 1545, 1661, 2372, 2504, 2986, 3729, 4852, 5845, 5950, 6079, 6156, 7329, 7338, 8604, 8774, 8811, 9068, 9261, 11616, 12129, 14818, 14846, 14915, 14951, 14987, 15185
\HyPsd@UnescapedString . 810, 859, 860, 866	\HyRef@MakeUppercaseFirstOf- Five 9199, 9201	\ifcat 1960, 1987, 1994, 1999, 2004, 2007, 2010, 2013, 5565, 5567
\HyPsd@UnexpandableSpace <u>1690</u> , 1876, 1900, 2051, 2063	\HyRef@name 9288, 9289, 9294, 9301, 9319, 9320, 9321, 9323	\ifdim . . . 1702, 2049, 2053, 2061, 2065, 2694, 2713, 4471, 4880, 10117, 10121, 10126, 10130, 10137, 10140, 10144, 10147, 11084, 11085, 11090, 11091, 11223, 11226, 11230, 11233, 12158, 12172, 12536, 12537, 12542, 12543, 13416, 13454, 13455, 14017, 14056, 14057, 14372, 14411, 14412
\HyPsd@unichar . . . 2336, 2403, 2409, 2414	\HyRef@Ref 9205, 9207	\ifetex@unexpanded 1859
\HyPsd@unichar@first@byte 2422, 2442	\HyRef@ShowKeysInit . . . 9329, 9342, 9346	\iffalse 852, 6168
\HyPsd@unichar@octtwo . 2444, 2452, 2458	\HyRef@ShowKeysRef 9260, <u>9328</u>	\ifFileExists . . . 235, 3278, 6720, 9499, 13143
\HyPsd@unichar@second@byte 2430, 2450	\HyRef@StripStar . . . 9287, 9318	\ifFld@checked . . . 6102, 13767, 14804
\HyPsd@UnicodeReplace- mentCharacter 2406, 2441, 2475, 2505, 2510, 2518, 2525, 2528, 2538, 2596	\HyRef@testreftype . . 9265, 9284	\ifFld@comb 5949
\HyPsd@Utf@viii@undeferr . 558, <u>2464</u>	\HyRef@thisref 9262, 9265	\ifFld@combo 5977, 5982, 13429, 13458, 14030, 14060, 14385, 14415
\HyPsd@UTFviii 552, 2324, 2329	\HyTmp@found 6049, 6059, 6062	\ifFld@disabled 6103, 13768
\HyPsd@UTFviii@three . 2359, 2368	\HyTmp@key 6043, 6044	\ifFld@edit 5983
\HyPsd@UTFviii@two . . 2344, 2350	\HyTmp@optitem . . . 5999, 6015, 6042, 6047, 6053, 6074, 6085	\ifFld@fileselect 5952
\HyPsd@UTFviii@ccxliv@def 2334, 2340	\HyTmp@optlist 5998, 6013, 6014, 6045, 6046, 6051, 6052, 6060, 6061, 6081, 6083, 6090, 6093	\ifFld@hidden . . . 13388, 13443, 13523, 13547, 13573, 13595, 13666, 13678, 13688, 13771, 13992, 14045, 14128, 14150, 14179, 14200, 14340, 14400, 14497, 14522, 14551, 14576
\HyPsd@UTFviii@ccxliv@undef 2333, 2339	\HyXeTeX@CheckUnicode 3984, 3995, 4012, 4018, 4024, 4046, 4064, 4070, 4151, 7088	\ifFld@multiline . . . 5950, 13377, 13673, 13980, 14328
\HyPsd@UTFviii@four 2332, 2377	I	\ifFld@multiselect 6021
\HyPsd@UTFviii@three . . 2331, 2358	\i . . . 15697, 15861, 15864, 15867, 15870, 16134, 16308, 16311, 16314, 16317, 16446, 16451, 16456, 16461, 16465, 16702, 16767, 16773	\ifFld@password . . . 5951, 13654
\HyPsd@UTFviii@two 2330, 2343	\ibar 16924, 21652	\ifFld@popdown . . . 5769, 13430, 14031, 14386
\HyPsd@Warning . . . <u>1852</u> , 2073, 2094, 2107, 2136, 2142	\if 1716, 2639, 6899, 6907, 7678, 7679, 11543, 11546, 11550, 11554, 11558, 11560, 11562, 14757	\ifFld@radio 13426, 13448, 13703, 14027, 14050, 14382, 14405
\HyPsd@XeTeXBigCharsfalse 832, 846, 851	\if@eqnstar 7616, 7624	\ifFld@readonly . . . 13675, 13685, 13769
\HyPsd@XeTeXBigCharstrue 845, 854, 4013, 4019, 4025, 4047, 4065, 4071, 4152, 14709, 15075	\if@filesw 2607, 5339, 5609, 6680, 6725, 7119, 7129, 7431, 8232, 8247, 8263, 8275, 8305, 8328, 8355, 8360, 8379, 8797, 13839, 13870, 13885, 15078, 15265, 15347	\ifForm@html 6123
\HyPsd@XSPACE 698, 775, <u>1691</u>	\if@hyper@item 7211, 7224	\ifhmode 2655, 2659, 2712, 2721, 5176, 7704, 7708, 7734,
\HyPsd@xspace . . . 773, 775, 776	\if@inlabel 7801	
\HyRef@StarSetRef 9176, 9181	\if@Localurl 11104, 11150	
\HyRef@autopageref 9233, 9235	\if@mid@expandable 670	
	\if@minipage 8102, 8174	
	\if@nmbrlist 7196	

7767, 7829, 7901, 7910, 8060, 8062, 9660, 9668, 12164, 13128	14486, 14544, 14759, 14807, 14976	\ifHy@useHidKey . . 3819, 10074, 11067, 11591, 11885
\ifHy@activeanchor . . 398, 5578	\ifHy@pdfcenterwindow . . . 404, 9950, 10526, 10988, 11654, 12014, 12907	\ifHy@verbose . 441, 5139, 5155, 5167, 5725, 8574, 9461
\ifHy@backref . 399, 4674, 5057, 6543, 8356, 8392	\ifHy@pdfdisplaydoctitle . . 445, 9951, 10527, 10989, 11655, 12015, 12908	\ifHyField@NeedAppearances 6166, 6168, 6171, 13324, 13920, 14292
\ifHy@bookmarks . . . 400, 4905	\ifHy@pdfescapeform 411, 14653, 14683	\ifHyInfo@AddonUnsupported 4128, 4142, 4184
\ifHy@bookmarksnumbered 401, 8956, 9007, 15064	\ifHy@pdffitwindow . . 413, 9949, 10525, 10987, 11653, 12013, 12906	\IfHyperBoolean 2743
\ifHy@bookmarksopen 402, 4895	\ifHy@pdfmarkerror 12061, 12070	\IfHyperBooleanExists 2737, 2744
\ifHy@breaklinks 403, 2921, 11794, 11835, 12140, 12163	\ifHy@pdfmenubar . . . 421, 9947, 10523, 10985, 11651, 12011, 12904	\ifHyPsd@XeTeXBigChars . 850, 852, 855, 858
\ifHy@CJKbookmarks 405, 1337	\ifHy@pdfnewwindow 425, 4309, 11337	\ifin@ 7281
\ifHy@colorlinks 406, 4976, 6548, 12722	\ifHy@pdfnewwindowset . . 424, 4307	\ifmeasuring@ 7236, 7247
\ifHy@destlabel 407, 5588	\ifHy@pdfpagehidden . 429, 3823, 10077, 11069, 11592, 11890	\ifmmode 11797, 12135
\ifHy@draft 408, 4554	\ifHy@pdfpagelabels . 428, 6826, 7039, 7117	\ifnum . . 247, 882, 885, 888, 891, 894, 1072, 1197, 1200, 1211, 1212, 1216, 1224, 1228, 1231, 1241, 1263, 1286, 1426, 1537, 1553, 1557, 1577, 1590, 1593, 1606, 1608, 1621, 1623, 1629, 2283, 2286, 2362, 2405, 2408, 2420, 2474, 2477, 2490, 2524, 2527, 2530, 2534, 2549, 2553, 2556, 2660, 3187, 3190, 3216, 3730, 3731, 4889, 4896, 5209, 6004, 6075, 6086, 6856, 6880, 6901, 6917, 7019, 7308, 7311, 8452, 8462, 9070, 9108, 9453, 9458, 9472, 9476, 9481, 9498, 9518, 9866, 9873, 9879, 9887, 10755, 10760, 11337, 11467, 11603, 11611, 11613, 11614, 11624, 11627, 11725, 11727, 11847, 12568, 13480, 13485, 13490, 13821, 13898, 14094, 14441, 14446, 14457, 14704, 14787, 14818, 14823, 14846, 14852, 14881, 14915, 14921, 14940, 14951, 14956, 14987, 14992, 15021, 15037, 15181, 15251, 15254, 15281, 15284, 15322, 15431, 15449, 15464
\ifHy@dviMode 3062, 3082, 3262	\ifHy@pdfstring . 430, 1013, 7216	\ifodd 2386, 2391, 8529
\ifHy@dviPdfmxOutlineOpen 4878, 15320	\ifHy@pdftoolbar 438, 9946, 10522, 10984, 11650, 12010, 12903	\ifpdf 245, 3064, 3107, 3118, 4720, 4788
\ifHy@frenchlinks . . . 414, 4992	\ifHy@pdfusetitle 440, 6735	\ifpdfstringunicode . . . 553, 556
\ifHy@href@ismap . . 5232, 9771, 10895, 11290, 11360, 12397	\ifHy@pdfwindowui . . 444, 9948, 10524, 10986, 11652, 12012, 12905	\ifportrait 10116
\ifHy@hyperfigures . . 412, 4654, 6528, 8738	\ifHy@plainpages 431, 4669, 7436, 8504	\ifthenelse 8382
\ifHy@hyperfootnotes 415, 7833	\ifHy@psdextra . . 437, 643, 1003	\iftrue . . . 855, 1866, 1888, 2168, 6171, 15433
\ifHy@hyperindex . . . 416, 4664, 6538, 8745	\ifHy@psize 432	\ifvmode 2671, 2693, 2702
\ifHy@hypertextnames 417, 7353, 7435, 8503, 8961, 9012	\ifHy@raiselinks 433, 10262, 10342, 10379, 10419, 12792, 13075	
\ifHy@implicit . 418, 4686, 15375	\ifHy@seminarslides 434	
\ifHy@linktocpage . . . 419, 2878, 2888	\ifHy@setpagesize . . 435, 10105, 11081, 11220, 12533	
\ifHy@localanchorname . . . 420, 7386, 7397	\ifHy@setpdfversion . 3041, 9457	
\ifHy@naturalnames . 422, 7365, 8962, 9013	\ifHy@stoppedearyl 396	
\ifHy@nesting . 423, 4659, 5275, 5308, 5345, 5563, 6533, 7858, 7878, 7956, 8113	\ifHy@texht 436, 4741, 5004, 5052, 6193, 6225, 6416, 6440, 6596, 9116	
\ifHy@next . . . 1095, 4628, 8762	\ifHy@typexml 397, 4679, 4979, 5023, 6681, 15269, 15351	
\ifHy@ocgcolorlinks 426, 3679, 4962, 4972, 6553, 9452, 9538, 9616, 9624, 10643, 10726, 10734	\ifHy@unicode . . . 439, 548, 581, 584, 644, 746, 758, 786, 794, 803, 1196, 1356, 2075, 2096, 2109, 2138, 2144, 2404, 2473, 2523, 2957, 2997, 3986, 7063, 14705	
\ifHy@pageanchor . . . 427, 7422, 7434, 7449, 8502		
\ifHy@pdfa 446, 4578, 4964, 5465, 5782, 6392, 6445, 6558, 9694, 9766, 9804, 9841, 10175, 10789, 10821, 10855, 10886, 10915, 11296, 11317, 11340, 11366, 11400, 11434, 11453, 12270, 13322, 13513, 13566, 13918, 14118, 14172, 14290,		

<code>\lambdash</code>	16661, 21618	<code>\Leftarrow</code>	18718, 20938	<code>\lightning</code>	18651, 20914
<code>\langle</code>	19368, 21215	<code>\leftarrow</code>	20888	<code>\limits</code>	5122
<code>\language@group</code>	652	<code>\leftarrowtail</code>	18635, 20906	<code>\linferior</code>	20867
<code>\languageshorthands</code>	1053, 1054, 1088	<code>\leftarrowtriangle</code>	18766, 20958	<code>\listofslides</code>	9042
<code>\LARGE</code>	621	<code>\leftbarharpoon</code>	20125, 21445	<code>\listslidenam</code>	9041, 9044, 9046, 9048
<code>\Large</code>	622	<code>\LEFTCIRCLE</code>	19617, 21252	<code>\literalps@out</code>	2647, 11719, 11724, 11776, 11782, 11808, 11814, 12080, 12096, 12130, 12131, 12159, 12161, 12173, 12175, 12473, 12555, 12564, 12622, 12635, 12716, 12840, 13001
<code>\large</code>	625, 9073, 9081, 9091, 9099	<code>\leftharpoondown</code>	18666, 20919	<code>\ll</code>	19027, 21070
<code>\LargerOrEqual</code>	19014, 21771	<code>\leftharpoonup</code>	18663, 20918	<code>\llap</code>	5368
<code>\lastbox</code>	7804	<code>\leftleftarrows</code>	18695, 20929	<code>\llbracket</code>	20035, 21890
<code>\lastpage@putlabel</code>	7417	<code>\leftleftharpoons</code>	20113, 21441	<code>\llcorner</code>	19358, 21210
<code>\lastskip</code>	2694, 2698, 2705, 2713, 2717, 2724	<code>\leftModels</code>	20334, 21911	<code>\Lleftarrow</code>	18742, 20948
<code>\LaTeX</code>	578, 580, 13149, 13150	<code>\leftmodels</code>	20327, 21909	<code>\lll</code>	19279, 21176
<code>\LaTeXe</code>	579, 13150	<code>\leftmoon</code>	19686, 21277	<code>\llparenthesis</code>	20144, 21452
<code>\latfric</code>	16936, 21655	<code>\leftpointright</code>	19660, 21834	<code>\lnapprox</code>	20257, 21500
<code>\LayoutCheckField</code>	6484, 13597, 14201, 14581	<code>\Leftrightarrow</code>	18729, 20942	<code>\lneq</code>	20252, 21498
<code>\LayoutChoiceField</code>	6481, 13447, 14049, 14404	<code>\leftrightharpoonup</code>	18604, 20892	<code>\lneqq</code>	19023, 21068
<code>\LayoutPushButtonField</code>	6487, 13517, 13525, 14122, 14129, 14490, 14499	<code>\leftrightharpoons</code>	18693, 20928	<code>\lnsim</code>	19311, 21190
<code>\LayoutTextField</code>	6478, 13391, 13994, 14346	<code>\leftrightarrowtriangle</code>	18770, 20960	<code>\Longleftarrow</code>	20050, 21416
<code>\lbrackdbl</code>	21409	<code>\leftrightharpoon</code>	20102, 21437	<code>\longleftarrow</code>	20044, 21413
<code>\lccode</code>	365, 370, 881, 1366, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2327, 6352, 8759, 8760, 15095, 15096, 15097, 15098, 15099, 15100, 15101, 15102, 15103, 15104, 15105	<code>\leftrightharpoons</code>	18704, 20933	<code>\Longleftrightarrow</code>	20054, 21418
<code>\lcurvearrowdown</code>	20088, 21433	<code>\Leftscissors</code>	19861, 21885	<code>\longleftarrow</code>	20048, 21415
<code>\lcurvearrowse</code>	20080, 21430	<code>\leftslice</code>	20271, 21506	<code>\longlegr</code>	20756
<code>\lcurvearrowsw</code>	20083, 21431	<code>\leftspoon</code>	20031, 21408	<code>\Longmapsfrom</code>	20058, 21420
<code>\ldots</code>	573	<code>\leftsquigarrow</code>	18746, 20950	<code>\Longmapsto</code>	20060, 21421
<code>\le</code>	19006, 21061	<code>\lefttherefore</code>	18384, 20828	<code>\longmapsto</code>	20056, 21419
<code>\leadsto</code>	20074, 21428	<code>\leftthreetimes</code>	19245, 21161	<code>\Longrightarrow</code>	20052, 21417
<code>\leavevmode</code>	682, 2649, 4564, 4582, 4622, 5363, 5395, 5470, 6652, 7900, 8059, 8296, 9211, 9219, 9250, 9680, 9751, 9789, 9826, 10159, 10261, 10341, 10378, 10418, 10769, 10810, 10847, 10879, 11115, 11124, 11178, 11332, 11357, 11387, 11420, 11796, 12133, 12386, 12413, 12444, 12791, 13074, 13392, 13518, 13526, 13565, 13598, 13995, 14081, 14103, 14123, 14130, 14151, 14171, 14202, 14347, 14439, 14468, 14491, 14500, 14524, 14543, 14582, 15388	<code>\LeftTorque</code>	20095, 21894	<code>\longrightarrow</code>	20046, 21414
		<code>\Lefttorque</code>	20096, 21895	<code>\looparrowleft</code>	18645, 20911
		<code>\leftVdash</code>	20321, 21907	<code>\looparrowright</code>	18647, 20912
		<code>\leftvdash</code>	19166, 21784	<code>\lower</code>	5370, 10268, 10348, 10385, 10425, 12161, 12798, 13081
		<code>\legm</code>	16951, 21660	<code>\lowercase</code>	366, 371, 901, 1367, 2187, 2328, 2754, 3298, 3328, 4076, 4112, 5674, 5675, 5678, 5683, 5707, 5717, 5771, 5827, 6147, 6220, 6223, 6353, 8761, 11846, 15106
		<code>\legr</code>	16994, 21672	<code>\lozenge</code>	19615, 21251
		<code>\Leo</code>	19737, 21863	<code>\lrcorner</code>	19360, 21211
		<code>\leo</code>	19735, 21291	<code>\lslide@flag</code>	9068, 9071, 9089, 9108, 9112
		<code>\leq</code>	19006, 21060	<code>\LT@array</code>	7542
		<code>\leqclosed</code>	19217, 21800	<code>\LT@foot</code>	7557, 7561
		<code>\leqq</code>	19015, 21064	<code>\LT@p@ftn</code>	7932, 7935, 7939, 7949
		<code>\leqslant</code>	20236, 21490	<code>\LT@p@ftntext</code>	7930, 7937
		<code>\lessapprox</code>	20244, 21494	<code>\LT@start</code>	7559, 7569
		<code>\lessclosed</code>	19211, 21798	<code>\ltimes</code>	19240, 21159
		<code>\lessdot</code>	19275, 21174	<code>\ltx@backslashchar</code>	333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 345, 4382
		<code>\lesseqgtr</code>	19284, 21178		
		<code>\lesseqqgtr</code>	20262, 21502		
		<code>\lessgtr</code>	19056, 21083		
		<code>\LessOrEqual</code>	19009, 21770		
		<code>\lessssim</code>	19046, 21079		
		<code>\LetLtxMacro</code>	6599, 6603, 6669, 6673		
		<code>\Letter</code>	19874, 21886		
		<code>\LHD</code>	19610, 21249		
		<code>\lhd</code>	19209, 21147		
		<code>\hooknwarrow</code>	20066, 21424		
		<code>\hooksearrow</code>	20070, 21426		
		<code>\Libra</code>	19743, 21865		
		<code>\libra</code>	19741, 21293		
		<code>\Lightning</code>	18653, 21740		

<code>\merge</code>	20223, 21906	<code>\multimapdotbothA</code>	19223, 21151	<code>\neg</code>	21574
<code>\message</code>	9069	<code>\multimapdotbothB</code>	19225, 21152	<code>\Neptune</code>	19719, 21857
<code>\MessageBreak</code>	285,	<code>\MultiplicationDot</code>	16197, 21596	<code>\neptune</code>	19717, 21285
	291, 308, 309, 314, 315, 355,	<code>\multiply</code>	9906, 11572, 11607	<code>\neq</code>	18995, 21056
	356, 521, 2081, 2102, 2115,	<code>\Mundus</code>	20417, 21561	<code>\neqcirc</code>	18981, 21050
	2138, 2143, 2145, 2776,	<code>\MVARrowDown</code> . .	18602, 21736	<code>\neqdot</code>	20232, 21488
	2777, 2791, 2813, 2816,	<code>\MVAt</code>	16122, 20725	<code>\neqsim</code>	18913, 21020
	2818, 2896, 2897, 2923,	<code>\MVComma</code>	16090, 20711	<code>\nequal</code>	18998, 21766
	2924, 2969, 2970, 2971,	<code>\MVDivision</code>	16096, 20714	<code>\nequiv</code>	19002, 21059
	3009, 3010, 3030, 3045,	<code>\MVEight</code>	16114, 20723	<code>\neswarrow</code>	20064, 21423
	3086, 3112, 3128, 3163,	<code>\MVFive</code>	16108, 20720	<code>\netscape</code>	10304
	3202, 3209, 3220, 3226,	<code>\MVFour</code>	16106, 20719	<code>\Neural</code>	19830
	3269, 3282, 3320, 3681,	<code>\MVMinus</code>	16092, 20712	<code>\Neutral</code>	21321
	3812, 3813, 3875, 3876,	<code>\MVMultiplication</code>	16264, 21599	<code>\new@ifnextchar</code>	706
	3894, 3895, 3989, 4031,	<code>\MVNine</code>	16116, 20724	<code>\new@pdfink</code>	9659, 9716, 9719
	4039, 4089, 4144, 4145,	<code>\MVOne</code>	16100, 20716	<code>\new@refstepcounter</code>	7571, 7605
	4262, 4263, 4385, 4386,	<code>\MVPeriod</code>	16094, 20713	<code>\newblock</code>	8393
	4387, 4408, 4410, 4418,	<code>\MVPlus</code>	16088, 20710	<code>\newcommand</code>	4, 9,
	4419, 4426, 4476, 4724,	<code>\MVRightArrow</code> . .	18598, 21734		42, 2648, 5355, 5361, 5393,
	4725, 4733, 4734, 4750,	<code>\MVRightarrow</code> . . .	18599, 21735		5598, 5621, 6656, 6660,
	4751, 4766, 4767, 4775,	<code>\MVSeven</code>	16112, 20722		8129, 8701, 15143, 15146,
	4776, 4966, 5211, 5212,	<code>\MVSix</code>	16110, 20721		15151, 20709, 21580
	5236, 5237, 5253, 5254,	<code>\MVThree</code>	16104, 20718	<code>\newcount</code>	491,
	5728, 5733, 5742, 5785,	<code>\MVTwo</code>	16102, 20717		492, 2653, 5202, 6106, 6842,
	5831, 5955, 6068, 6140,	<code>\MVZero</code>	16098, 20715		13343, 13495, 13953, 14100,
	6151, 6183, 6184, 6203,				14306, 14462, 15178
	6311, 6312, 6313, 6314,			<code>\newcounter</code>	7192, 7834, 10642,
	6831, 7066, 7081, 7082,				15093
	7425, 8551, 8581, 8582,			<code>\newdimen</code>	488, 5351, 6107, 6108
	8583, 8584, 8585, 8733,			<code>\newif</code>	396, 397, 398, 399, 400,
	9464, 9482, 9501, 9503,				401, 402, 403, 404, 405, 406,
	9509, 9511, 9514, 9521,				407, 408, 411, 412, 413, 414,
	9684, 10774, 11308, 11391,				415, 416, 417, 418, 419, 420,
	11685, 11691, 11915, 13797,				421, 422, 423, 424, 425, 426,
	13799, 15042, 15060, 15173				427, 428, 429, 430, 431, 432,
<code>\MF</code>	588, 13152				433, 434, 435, 436, 437, 438,
<code>\mho</code>	20879				439, 440, 441, 444, 445, 446,
<code>\mid</code>	18843, 20991				850, 1095, 3041, 3062, 3819,
<code>\MineSign</code>	19803, 21308				4128, 4878, 5232, 5681,
<code>\mininferior</code>	20868				5769, 6102, 6103, 6123,
<code>\minusdot</code>	20199, 21475				6166, 7211, 7212, 7236,
<code>\minusinferior</code>	20856				7616, 11104, 12061
<code>\minussuperior</code>	20840			<code>\newlabel</code>	2613, 5341, 6696, 6697,
<code>\models</code>	19183, 21789				6705, 6732, 7447, 7475
<code>\moo</code>	21451			<code>\newlabelxx</code>	6698, 6699
<code>\Moon</code>	20419, 21562			<code>\newlength</code>	15381
<code>\MoonPha</code>	2507, 2512, 2515,			<code>\newline</code>	576, 6780
	2521, 21583			<code>\newname</code>	7242, 7599, 7630, 7658,
<code>\Mountain</code>	19850, 21326				7671, 7680
<code>\MoveDown</code>	19600, 21824			<code>\newsavebox</code>	10572, 12109
<code>\MoveUp</code>	19585, 21821			<code>\newtie</code>	15576, 15577, 16014,
<code>\MP</code>	589, 13153				16041, 16059
<code>\mp</code>	18811, 20978			<code>\newtoks</code>	90, 6194, 11933, 12184,
<code>\mu</code>	17308				12185
<code>\mugreek</code>	20793			<code>\newwrite</code>	6726, 15266, 15348
<code>\multimap</code>	19227, 21153			<code>\nexists</code>	18780, 20965
<code>\multimapboth</code>	20182, 21467				

<code>\next</code>	8383, 8384, 8385, 11535, 11537, 11539	<code>\noexpand</code>	22, 93, 95, 108, 116, 172, 174, 175, 176, 179, 209, 870, 1041, 1380, 1813, 1830, 1960, 1987, 2341, 2701, 2702, 2703, 2706, 2720, 2721, 2722, 2725, 3599, 3601, 3603, 3604, 3605, 3607, 3623, 3830, 3831, 3833, 4201, 4645, 4649, 4650, 4822, 5116, 5289, 5565, 5567, 5593, 5737, 6284, 6297, 6955, 6956, 6965, 6967, 6970, 7095, 7261, 7262, 7279, 7459, 7460, 7462, 7487, 7488, 7489, 7490, 7491, 7499, 7500, 7501, 7674, 7923, 7933, 7941, 7942, 7943, 7945, 8069, 8159, 8234, 8249, 8265, 8450, 8599, 8693, 8695, 9176, 9177, 9294, 9295, 9300, 9302, 9307, 9308, 9313, 9314, 9909, 10510, 11998, 12065, 12632, 12891, 13422, 13423, 13424, 13425, 14023, 14024, 14025, 14026, 14378, 14379, 14380, 14381, 14655	<code>\noway</code>	19848, 21325
<code>\nfallingdotseq</code>	21044	<code>\noexpandQ</code>	1987	<code>\nparallel</code>	18850, 20994
<code>\nfallingdotseq</code>	18968	<code>\nofrenchguillemets</code>	713, 715	<code>\nperp</code>	19180, 21788
<code>\nfss@text</code>	9123, 9143, 9160, 9278	<code>\NoHy@OrgPageRef</code>	6603, 6605, 6673, 6675	<code>\nprec</code>	19080, 21095
<code>\NG</code>	16516	<code>\NoHy@OrgRef</code>	6599, 6601, 6669, 6671	<code>\nprecapprox</code>	20301, 21521
<code>\ng</code>	16518, 16519, 16520, 21607, 21608	<code>\NoHyper</code>	6607	<code>\nprec curlyeq</code>	19297, 21184
<code>\ngeq</code>	19044, 21078	<code>\nohyperpage</code>	6651, 8871, 8873, 8875	<code>\npreceq</code>	20277, 21509
<code>\ngeqq</code>	19021, 21067	<code>\nolinkurl</code>	5268	<code>\npreceqq</code>	20289, 21515
<code>\ngeqslang</code>	20242	<code>\nolinkurl@</code>	5268, 5269	<code>\nprec sim</code>	19074, 21092
<code>\ngeqslant</code>	21493	<code>\NomFancyVerbLineautorefname</code>	3509	<code>\nqsubseteq</code>	21186
<code>\ngg</code>	19033, 21073	<code>\Nomfootnoteautorefname</code>	3489	<code>\nqsupseteq</code>	21187
<code>\ngtr</code>	19039, 21076	<code>\Nomtheoremautorefname</code>	3513	<code>\NR@getttitle</code>	8095
<code>\ngtrapprox</code>	20250, 21497	<code>\nonumber</code>	7645, 7648	<code>\nRrightarrow</code>	18715, 20937
<code>\ngtrclosed</code>	19324, 21812	<code>\normalfont</code>	608, 7709, 7737, 7770	<code>\nrightarrow</code>	18620, 20899
<code>\ngtrless</code>	19060, 21085	<code>\normalsize</code>	626, 8105, 8177	<code>\nrightModels</code>	19208, 21797
<code>\ngtrsim</code>	19054, 21082	<code>\notasymp</code>	18946, 21762	<code>\nrightmodels</code>	19201, 21794
<code>\nhateq</code>	18991, 21054	<code>\notbackslash</code>	19382, 21220	<code>\nrightVdash</code>	19205, 21796
<code>\ni</code>	18795, 20972	<code>\NotCongruent</code>	19004, 21768	<code>\nrightvdash</code>	19198, 21793
<code>\NibRight</code>	19886, 21340	<code>\notdivides</code>	18847, 21751	<code>\nrisingdotseq</code>	18973, 21046
<code>\NibSolidRight</code>	19888, 21341	<code>\note</code>	8493	<code>\nsim</code>	18909, 21018
<code>\niepsilon</code>	16876, 20744	<code>\notequiv</code>	19005, 21769	<code>\nsimeq</code>	18917, 21022
<code>\niota</code>	16925, 20752	<code>\notin</code>	18791, 20970	<code>\nsqsubset</code>	19110, 21110
<code>\nineinferior</code>	20854	<code>\notni</code>	18800, 21746	<code>\nsqsubseteq</code>	19118, 19301, 21114
<code>\ninesuperior</code>	20838	<code>\notowner</code>	18798, 20973	<code>\nsqsupset</code>	19114, 21112
<code>\ninferior</code>	20869	<code>\notperp</code>	20025, 21405	<code>\nsqsupseteq</code>	19122, 19303, 21116
<code>\niphy</code>	16978, 20755	<code>\notslash</code>	19379, 21219	<code>\nSubset</code>	19261, 21168
<code>\niupsi</code>	17036, 20761			<code>\nsubset</code>	19088, 21099
<code>\nj</code>	16958, 21663			<code>\nsubseteq</code>	19096, 21103
<code>\nLeftarrow</code>	18710, 20935			<code>\nsubseteqqq</code>	20313, 21527
<code>\nleftarrow</code>	18618, 20898			<code>\nsucc</code>	19082, 21096
<code>\nleftModels</code>	20337, 21912			<code>\nsuccapprox</code>	20305, 21523
<code>\nleftmodels</code>	20330, 21910			<code>\nsucc curlyeq</code>	19299, 21185
<code>\nLeftrightarrow</code>	18712, 20936			<code>\nsucceq</code>	20281, 21511
<code>\nleftrightharpoonup</code>	18649, 20913			<code>\nsucceqq</code>	20293, 21517
<code>\nleftVdash</code>	20324, 21908			<code>\nsuccsim</code>	19078, 21094
<code>\nleftvdash</code>	19169, 21785			<code>\nsuperior</code>	20844
<code>\nleq</code>	19042, 21077			<code>\nSupset</code>	19265, 21170
<code>\nleqq</code>	19017, 21065			<code>\nsupset</code>	19090, 21100
<code>\nleqslant</code>	20238, 21491			<code>\nsupseteq</code>	19098, 21104
<code>\nless</code>	19037, 21075			<code>\nsupseteqq</code>	20317, 21529
<code>\nlessapprox</code>	20246, 21495			<code>\nthickapprox</code>	18928, 21760
<code>\nlessclosed</code>	19321, 21811			<code>\ntriangleleft</code>	19319, 21194
<code>\nlessgtr</code>	19062, 21086			<code>\ntrianglelefteq</code>	19326, 21196
<code>\nlesssim</code>	19052, 21081			<code>\ntriangleright</code>	19322, 21195
<code>\nll</code>	19029, 21071			<code>\ntrianglerighteq</code>	19329, 21197
<code>\nmid</code>	18845, 20992			<code>\ntriplesim</code>	18936, 21030
<code>\nmodels</code>	19202, 21795			<code>\ntwoheadleftarrow</code>	18624, 20901
<code>\noboundary</code>	20705			<code>\ntwoheadrightarrow</code>	18631, 20904
<code>\nobreak</code>	2695, 2703, 2714, 2722, 7901, 8060			<code>\nu</code>	17310, 20794
<code>\nobreakspace</code>	694, 9214, 9243, 9246			<code>\null</code>	8374, 8382, 9165, 9274
<code>\NoChemicalCleaning</code>	20162, 21458			<code>\number</code>	1214, 1218, 1221, 1229, 1232, 1234, 1539, 1541, 1568, 1569, 2287, 2345, 2346, 2347, 2348, 2352, 2353, 2354, 2355, 2356, 2360, 2361, 2362, 2363,

2364, 2365, 2366, 2370,
 2371, 2372, 2373, 2374,
 2375, 2378, 2380, 2384,
 2385, 2387, 2389, 2391,
 2394, 2398, 2399, 2400,
 2401, 2410, 2411, 2415,
 2416, 2423, 2424, 2428,
 2431, 2432, 2433, 2443,
 2445, 2446, 2451, 2453,
 2454, 2459, 2460, 4221,
 4880, 4897, 5695, 7309,
 7312, 7355, 7356, 7359,
 7363, 9532, 9535, 10332,
 10350, 10351, 10366, 10367,
 10387, 10388, 10404, 10405,
 10427, 10428, 10444, 10445
 \numberline .. 8098, 8170, 15065,
 15070
 \numberwithin 8698
 \numexpr 2352, 2353, 2354, 2356,
 2362, 2370, 2371, 2372,
 2373, 2374, 2375, 2379,
 2381, 2385, 2387, 2389,
 2391, 2395, 2398, 2399,
 2401, 2410, 2415, 2432,
 2446, 2454, 2460, 4225
 \nun 20665
 \nupmodels 20344, 21539
 \nupvdash 19178, 21137
 \nVDash 19206, 21146
 \nVdash 19203, 21145
 \nvDash 19199, 21144
 \nvdash 19196, 21143
 \nVvash 19190, 21141
 \Nwarrow 18734, 20944
 \nwarrow 18608, 20894
 \nwsearrow 20062, 21422

O

\O 15819, 16266, 16748
 \o 15888, 16336, 16751
 \oasterisk 19150, 21782
 \obackslash 20156, 21898
 \obar 20150, 21455
 \obeylines 12631
 \OBJ@acroform ... 13926, 13927
 \OBJ@Helv 13901, 13914, 14265
 \OBJ@OCG@print .. 9569, 9572,
 9580, 9607, 10660, 10662,
 10675, 10679, 10688, 10717
 \OBJ@OCG@view .. 9554, 9572,
 9606, 10644, 10646, 10659,
 10679, 10716
 \OBJ@OCGs . 9575, 9578, 9584,
 9589, 9594, 10676, 10678,
 10682, 10686, 10692, 10697,
 10702

\OBJ@pdfdocencoding .. 13899,
 14246, 14262
 \OBJ@ZaDb 13900, 13913, 14255
 \obot 20159, 21457
 \obslash 20153, 21456
 \ocirc 19145, 21779
 \OCIRCUMFLEX 20475, 20573,
 20574, 20575, 20576, 20577
 \ocircumflex 20469, 20513, 20514,
 20515, 20516, 20517
 \oddsidemargin 8530
 \odiv 20207, 21478
 \odot 19140, 21123
 \odplus 20161, 21900
 \OE 15688, 16534
 \oe 15701, 16536
 \offinterlineskip 6806
 \ogreaterthan 20167, 21460
 \OHORN .. 20476, 20578, 20579,
 20580, 20581, 20582
 \ohorn 3554, 3561, 20470, 20518,
 20519, 20520, 20521, 20522
 \oint 18877, 21005
 \oinferior 20862
 \oint 18874, 21004
 \ointclockwise 18880, 21006
 \ointctrclockwise .. 18882, 21007
 \oldb 924
 \oldc 925
 \oldcontentsline 6691, 6694, 6704
 \oldd 926
 \oldnewlabel .. 6696, 6701, 6705
 \olessthan 20164, 21459
 \OMEGA 13148
 \Omega 17268, 20781
 \omega 17334, 20805
 \ominus 19131, 21120
 \on@line 8578, 8579
 \oneinferior 20846
 \onesuperior 20729
 \oo 20383, 21548
 \openbullet 21254
 \openo 16852, 20740
 \openout 6683, 6727, 15268,
 15350
 \oplus 19128, 21119
 \OpMode 3187, 3190, 3203, 3216,
 3221, 11624, 11727, 12568
 \or 350, 1248, 1249, 1250, 1251,
 1252, 1253, 1254, 1255,
 1256, 1270, 1271, 1272,
 1273, 1274, 1275, 1276,
 1277, 1278, 1293, 1294,
 1295, 1296, 1297, 1298,
 1299, 1300, 1301, 1386,
 1387, 1388, 1389, 1390,
 1391, 1392, 1393, 1394,

1395, 1396, 1397, 1398,
 1399, 1400, 1401, 1402,
 1403, 1404, 1405, 1406,
 1407, 1408, 1409, 1410,
 1411, 1412, 1413, 1414,
 1415, 1416, 1417, 1435,
 1457, 1460, 1466, 1467,
 1468, 1469, 1470, 1471,
 1472, 1473, 1474, 1475,
 1476, 1477, 1478, 1479,
 1480, 1481, 1482, 1483,
 1484, 1485, 1486, 1487,
 1488, 1489, 1490, 1491,
 1492, 1493, 1494, 1495,
 1496, 1497, 1502, 1503,
 1504, 1505, 1506, 1507,
 1508, 1509, 1510, 1511,
 1512, 1513, 1514, 1515,
 1516, 1517, 1518, 1519,
 1520, 1521, 1522, 1523,
 1524, 1525, 1526, 1527,
 1528, 1529, 1530, 1531,
 1532, 1533, 1546, 1547,
 1548, 1549, 1550, 1662,
 1663, 1664, 2506, 2509,
 2511, 2514, 5855, 5861,
 5866, 6080, 7329, 7330,
 7331, 7332, 7338, 7339,
 7340, 7341, 8606, 8610,
 9088, 9097, 11617, 15186,
 15187, 15188, 15189, 15190,
 15191, 15192, 15193, 15194,
 15195, 15196, 15197, 15198,
 15199, 15200, 15201, 15202,
 15203, 15204, 15205, 15206,
 15207, 15208, 15209, 15210,
 15211, 15212, 15213, 15214,
 15215, 15216, 15217
 \OrnamentDiamondSolid . 20015
 \oslash 19137, 21122
 \otimes 19134, 21121
 \ovee 18860, 20998
 \overlay 8490
 \owedge 18855, 20996
 \owns 18797, 21745

P

\P 572
 \p@ 2411, 2416, 6109, 6115, 7717,
 7745, 7776, 10277, 10361,
 10399, 10439, 11571, 12807,
 13095, 13418, 14019, 14374,
 15506, 15507
 \p@equation 8670
 \PackageError 61
 \PackageInfo . 9448, 9530, 13795
 \PackageWarning .. 3044, 6066

\pageautorefname	\pdf@defaulttoks . 12065, 12185, 12186, 12196	\PDFForm@Push . 13527, 13531, 14132, 14133, 14501, 14505, 14807
.. 3367, 3385, 3403, 3421, 3439, 3457, 3475, 3515, 3533, 3551, 3569, 9246, 9369	\pdf@docset 11933	\PDFForm@Radio 13479, 13487, 14083, 14085, 14440, 14452, 14871
\pagename 9243	\pdf@endanchor 9672, 9716, 9723	\PDFForm@Reset 13574, 13579, 14181, 14182, 14553, 14558, 14976
\pageref	\pdf@escapestring 9424	\PDFForm@Submit 13548, 13553, 14153, 14155, 14525, 14530, 14942
679, 4700, 5033, 6603, 6604, 6673, 6674, 7425, 9232, 9236	\PDF@FinishDoc	\PDFForm@Text . 13393, 13397, 13997, 13998, 14348, 14351, 14906
\paperheight 4469, 10121, 10123, 10126, 10128, 10140, 10141, 11085, 11086, 11223, 11224, 11226, 12537, 12538	.. 3100, 3101, 3195, 3196, 4463, 4566, 4693, 4694, 4803, 4804, 6650, 6823, 6824, 9985, 10201, 10459, 10942, 11105, 11695, 11934, 12847, 13016	\pdfhorigin 10113
\paperwidth 10117, 10119, 10130, 10132, 10137, 10138, 11084, 11086, 11227, 12536, 12538	\pdf@ifdraftmode 243, 246, 254, 6999, 9539, 9986, 10095, 13896, 15278	\pdfinfo 9989
\par 7708, 7735, 7768, 8097, 8125, 8168, 8178, 8376, 8396	\pdf@linktype . . . 12089, 12093, 12201, 12202	\pdflastannot 9489
\paragraphautorefname	\pdf@objdef 12068, 12082, 12084, 12098, 12100, 12204, 12205	\pdflastform 9653
.. 3363, 3381, 3399, 3417, 3435, 3453, 3471, 3504, 3506, 3529, 3547, 3565, 9365	\pdf@rect . 12076, 12095, 12113	\pdflastlink . 9492, 13862, 13875
\parallel 18848, 20993	\PDF@SetupDoc	\pdflastmatch 4378
\parenleftinferior 20858	.. 4462, 4565, 6570, 6571, 6649, 9916, 10202, 10490, 10982, 11106, 11632, 11985, 12728, 12878, 13017	\pdflastobj 9486, 9554, 9569, 9575, 13926, 14246, 14255, 14265
\parenleftsuperior 20842	\PDF@SetupDox 9916	\pdflastxform 9487, 9653, 13786, 13788
\parenrightinferior 20859	\pdf@strcmp 1072	\pdfastximimage 9488
\parenrightsuperior 20843	\pdf@toks . 12065, 12086, 12102, 12184, 12188, 12192	\pdfinkmargin 9647, 9651, 9656
\parr 18557, 21733	\pdf@type . 12067, 12072, 12086, 12102, 12179, 12199	\pdfliteral 9627, 9629, 9634
\parskip 6719	\pdfannotlink 9650	\pdfm@box 10572, 14302, 14303, 14304, 14342, 14354, 14431, 14456, 14465, 14476, 14495, 14508, 14523, 14532, 14552, 14560, 14577, 14589
\partautorefname	\pdfbookmark 2648, 6655, 6656, 15144, 15149, 15154, 15158	\pdfmark . . . 7113, 10510, 10519, 10549, 11763, 11783, 11822, 11857, 11874, 11886, 11920, 11957, 11969, 11998, 12007, 12038, 12062, 12338, 12353, 12368, 12380, 12387, 12414, 12445, 12891, 12900, 12931, 13353, 13362, 13394, 13483, 13500, 13528, 13550, 13576, 13600, 15310
.. 3357, 3375, 3393, 3411, 3429, 3447, 3465, 3495, 3523, 3541, 3559, 9359	\pdfcatalog . . 7002, 9576, 9931, 9973, 13927	\pdfmark@ 12062, 12063
\partial 18776, 20963	\PDFdefaults 12195	\pdfmatch 347
\partnumberline . . 15067, 15072	\pdfdest 9674	\pdfminorversion 9445
\PassOptionsToPackage	\pdfdraftmode 247	\PDFNextPage 12351
.. 3109, 3121, 3124, 3136, 3147, 3176, 3235, 3241, 3257, 3309, 3313, 3335, 4504, 4517, 4528, 4841	\pdfendlink . 9713, 13999, 14093, 14108, 14135, 14160, 14184, 14207	\PDFNextPage@ . . 12351, 12352
\pdf@addtoks . . . 12187, 12209, 12215, 12224, 12231, 12235, 12237, 12239, 12241, 12243, 12251, 12260, 12264, 12266, 12268, 12271, 12280, 12284, 12286, 12288, 12290, 12292, 12294, 12296, 12298, 12300, 12302, 12304, 12306, 12308, 12310, 12312, 12314, 12315, 12316, 12317, 12318, 12319, 12320, 12321, 12322, 12323, 12324, 12329	\pdfescapestring 14684	\pdfobj 9540, 9555, 9570, 13904, 14213, 14247, 14256
\pdf@addtoksx . . 12181, 12191, 12207	\pdfextension 3119, 4789	\pdfobjcompresslevel 9469, 9523
\pdf@box . . 12109, 12141, 12149, 12157, 12158, 12161, 12165, 12167, 12170	\pdfform 9652	\PDFOpen 12379
	\PDFForm@@Name 14692, 14695, 14699, 14702	\pdfoptionpdfminorversion 9442
	\PDFForm@Check 13599, 13603, 14204, 14205, 14583, 14587, 14776	\pdfoutline 15359
	\PDFForm@List . 13498, 13503, 14105, 14106, 14469, 14474, 14837	\pdfpageattr 10029, 10033, 10034, 10044, 10053, 10057, 10058,
	\PDFForm@Name 13990, 14044, 14117, 14198, 14338, 14399, 14485, 14574, 14691	

10068, 10076, 10079, 10080, 10090	\Phone 19636, 21260	\protected@xdef ... 7942, 8035
\pdfpageheight .. 10123, 10132, 10141, 10148	\PhoneHandset ... 19866, 21331	\providecommand 2629, 2630, 3706, 3707, 3710, 3711, 4787, 5010, 5011, 5130, 5273, 5597, 5655, 6687, 6981, 7006, 7131, 7170, 7173, 7176, 7177, 7178, 7180, 7181, 7182, 7183, 7185, 7186, 7187, 7188, 7189, 7190, 7199, 7200, 7201, 7202, 7203, 7204, 7666, 8199, 8200, 8215, 8293, 8923, 8924, 8928, 8933, 8934, 9041, 9350, 9351, 9352, 9353, 9354, 9355, 9356, 9357, 9358, 9359, 9360, 9361, 9362, 9363, 9364, 9365, 9366, 9367, 9368, 9369, 9431, 9658, 9676, 9677, 10200, 10303, 10304, 10567, 10629, 10630, 10631, 11102, 11221, 11243, 11244, 11245, 11720, 12110, 12111, 12471, 12479, 12480, 12481, 12482, 12562, 12574, 12575, 12576, 12577, 12629, 12670, 12671, 12672, 12673, 12836, 12838, 12839, 12952, 12953, 13008, 13841, 13844, 14648
\pdfpageref 13964	\Pi 20776	\psdaliasnames ... 21580, 21923
\pdfpageresources .. 9603, 9604	\pi 17316, 20796	\psdmapshortnames 20709, 21579
\pdfpagesattr . 9920, 9922, 9924	\pinferior 20870	\Psi 17265, 20780
\pdfpagewidth ... 10119, 10128, 10138, 10145	\Pisces 19758, 21870	\psi 17332, 20804
\PDFPreviousPage 12364	\pisces 19756, 21298	\PushButton 6466
\PDFPreviousPage@ 12365, 12367	\pitchfork 19273, 21173	\put@me@back 5560, 5573, 5583
\pdfrefform 9654	\planck 16441, 21606	\pwedge 17045, 21683
\pdfrefobj . 13899, 13900, 13901	\Plane 19870, 21333	\pxfonts 20353
\pdfrefxform 9654, 13788	\Plus 19903, 21348	
\pdfstartlink 9649, 9650, 9708, 9752, 9790, 9827, 10161, 13998, 14084, 14106, 14133, 14154, 14182, 14205	\PlusCenterOpen .. 19907, 21350	
\pdfstrcmp 13821	\plusinferior 20855	
\pdfstringdef 541, 837, 4015, 4021, 4027, 4049, 4054, 4060, 4067, 4073, 4154, 6027, 6032, 6058, 6783, 6891, 6893, 7440, 8476, 8512, 14710, 15076	\PlusOutline 19901, 21347	
\pdfstringdefDisableCommands 923, 1025, 1034, 1037, 6653, 6778	\plussuperior 20839	
\pdfstringdefPostHook 833, 1019	\PlusThinCenterOpen ... 19905, 21349	
\pdfstringdefPreHook 690, 1019, 1031, 6777, 6787	\Pluto 19722, 21858	
\pdfstringdefWarn 575, 576, 684, 1040, 1821, 1826, 1845, 1849	\pluto 19720, 21286	
\pdfTeXrevision 9876, 9884, 9895	\pm 21577	
\pdfTeXversion 9871, 9873, 9876, 9879, 9882, 9883, 9887, 9893, 9894, 13898	\pointer 18761, 20956	
\pdfvorigin 10114	\PointingHand 19661, 21835	
\pdfxform 9652, 13784	\Pointinghand 19662, 21836	
\Peace 19875, 21335	\pounds 16152, 21591	
\peh 20691	\Preamble 13144	
\penalty 1963, 2675, 5177, 8303, 8326	\prec 19064, 21087	
\PencilRight 19882, 21338	\precapprox 20299, 21520	
\PencilRightDown . 19880, 21337	\preccurlyeq 19068, 21089	
\PencilRightUp ... 19884, 21339	\preceq 20275, 21508	
\pentagon 20354, 21543	\preceqq 20287, 21514	
\perp 20023, 21404	\precnapprox 20307, 21524	
\phantom 631	\precneq 20283, 21512	
\phantomsection ... 4464, 6657, 8553, 15011, 15062, 15450	\precneqq 20295, 21518	
\Phi 17261, 20779	\precnsim 19315, 21192	
\phi 17328, 20802	\precsim 19072, 21091	
\phiinferior 20815	\PrerenderUnicode 4006	
	\prime 18360, 20824	
	\process@me . 6757, 6769, 6770, 9919, 9928	
	\ProcessKeyvalOptions ... 4533	
	\prod 18803, 20975	
	\propto 18829, 20986	
	\protect 1961, 5319, 8098, 8170, 8234, 8249, 8265, 8381, 8388, 8389, 8591, 8639, 8860, 8941, 8993, 9122, 9142, 9148, 9159, 9277, 10212, 10309, 11176, 11251, 12739, 13027, 15083, 15383, 15506, 15507	
	\protected@edef 5413, 6857, 6951, 7530, 7672, 7692, 8464, 8468, 9681, 10771, 11305, 11388, 11912	
	\protected@write ... 2612, 5340, 5610, 8361, 8799, 8814, 8829, 8833, 8843, 15082	
		Q
		\Q 1956, 13909
		\qaf 20657
		\quaternote 19780, 21299
		\quotedblbase ... 15668, 15907, 18341, 20451
		\quotesinglbase .. 15678, 15909, 18335, 20453
		R
		\r ... 895, 15543, 15555, 15567, 15780, 15846, 15956, 15996, 16023, 16053, 16226, 16293, 16590, 16592, 18280, 18282
		\ra 20633
		\Radiation 19665, 21837
		\Radioactivity 19663, 21269
		\raff 20677
		\Rain 19846, 21324

<code>\raise</code> .	2682, 5384, 10278, 10362, 10400, 10440, 12175, 12808, 13096
<code>\rangle</code>	19370, 21216
<code>\rbrackdbl</code>	21410
<code>\rcurvearrowdown</code> .	20093, 21434
<code>\rcurvearrowleft</code> . . .	20097, 21435
<code>\rcurvearrowne</code> . . .	20077, 21429
<code>\rcurvearrowright</code> .	20100, 21436
<code>\rcurvearrowse</code>	20086, 21432
<code>\Re</code>	18519, 20878
<code>\ReadBookmarks</code> . . . . .	.. 4532, 4569, 4707, 4914, 5054, 15242, 15277
<code>\real@setref</code>	9119, 9185
<code>\realfootnote</code>	8032
<code>\Rectangle</code>	20019, 21402
<code>\RectangleBold</code> . . .	20021, 21403
<code>\RectangleThin</code> . . .	20017, 21401
<code>\recycle</code>	19795, 21305
<code>\Recycling</code>	19797, 21877
<code>\Ref</code>	9204, 9208, 9213
<code>\ref</code>	678, 4699, 5030, 5669, 6599, 6600, 6669, 6670, 7997, 8004, 9223, 13119
<code>\ref@one</code>	5295, 5296
<code>\rEfLiNK</code>	13120, 13121
<code>\refstepcounter</code> . . . . .	.. 7208, 7215, 7235, 7512, 7535, 7536, 7537, 7546, 7571, 7595, 7605, 7725, 8162
<code>\rem@ptetc</code>	11847, 11849
<code>\renewcommand</code> . . .	2604, 8715, 15158
<code>\Request</code>	19400, 21227
<code>\RequirePackage</code> . . .	22, 166, 236, 238, 239, 240, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 395, 1331, 1858, 2598, 3021, 3095, 4510, 4526, 4681, 4682, 4982, 5026, 5058, 5265, 5672, 6639, 6797, 7047, 9502, 11103, 13013, 15168
<code>\RerunFileCheck</code>	15170
<code>\Reset</code>	6475
<code>\reset@font</code> . . .	8309, 8332, 9123, 9143, 9160, 9278
<code>\reve</code>	16866, 20742
<code>\reveject</code>	17079, 21693
<code>\revepsilon</code>	16880, 20745
<code>\revglotstop</code>	17077, 20769
<code>\revtex@checking</code>	8286
<code>\Rewind</code>	19605, 21247
<code>\RewindToIndex</code> . .	19412, 21232
<code>\RHD</code>	19596, 21244
<code>\rhd</code>	19212, 21148
<code>\rho</code>	17318, 20797
<code>\rhoinferior</code>	20814
<code>\rhohooknearrow</code>	20068, 21425
<code>\rhohookrepsilon</code>	20746
<code>\rhohookswarrow</code> . . .	20072, 21427
<code>\Rightarrow</code>	9075, 18723, 20940
<code>\rightarrow</code>	20890
<code>\rightarrowtail</code>	18637, 20907
<code>\rightarrowtriangle</code> . . .	18768, 20959
<code>\rightbarharpoon</code> . .	20131, 21447
<code>\RIGHTCIRCLE</code> . . .	19619, 21253
<code>\rightharpoondown</code> . .	18678, 20923
<code>\rightharpoonup</code> . . .	18675, 20922
<code>\rightleftarrows</code> . . .	18687, 20926
<code>\rightleftharpoon</code> . . .	20104, 21438
<code>\rightleftharpoons</code> . .	18707, 20934
<code>\rightModels</code>	19195, 21792
<code>\rightmodels</code>	19184, 21790
<code>\rightmoon</code>	19688, 21278
<code>\rightpointleft</code>	19657, 21833
<code>\rightrightarrows</code> . .	18699, 20931
<code>\rightrightarpoons</code> . .	20119, 21443
<code>\RightScissors</code>	19860, 21884
<code>\rightslice</code>	20273, 21507
<code>\rightsquigarrow</code> . . .	18748, 20951
<code>\rightthreetimes</code> . . .	19247, 21162
<code>\RightTorque</code>	20090, 21892
<code>\Righttorque</code>	20091, 21893
<code>\rightVdash</code>	19187, 21791
<code>\rightvdash</code>	19163, 21783
<code>\rinferior</code>	20809
<code>\riota</code>	18532, 20880
<code>\risingdoteq</code>	21045
<code>\risingdotseq</code>	18971
<code>\rlap</code>	5381, 9628, 10738
<code>\rm</code>	619
<code>\rmfamily</code>	609
<code>\Roman</code>	6947
<code>\roman</code>	6948
<code>\romannumeral</code> . . .	1047, 1048, 13909
<code>\rotm</code>	16947, 21659
<code>\rotOmega</code>	17038, 21681
<code>\rotr</code>	16983, 21669
<code>\rotrvar</code>	16846, 21631
<code>\rotrw</code>	17049, 21685
<code>\roty</code>	17053, 21687
<code>\rrbracket</code>	20038, 21891
<code>\Rrightarrow</code>	18744, 20949
<code>\rrparenthesis</code>	20146, 21453
<code>\rtaild</code>	20741
<code>\rtimes</code>	19243, 21160
<code>\rule</code>	7982
S	
<code>\S</code>	16163, 21594
<code>\sad</code>	20641
<code>\Sagittarius</code>	19749, 21867
<code>\sagittarius</code>	19747, 21295
<code>\Saturn</code>	19713, 21855
<code>\saturn</code>	19711, 21283
<code>\sbox</code>	4002, 5364, 5396, 6495, 10265, 10345, 10382, 10422, 12110, 12149, 12795, 13078, 13783
<code>\scd</code>	17953, 20806
<code>\scg</code>	16901, 20748
<code>\schwa</code>	16869, 20743
<code>\schwainferior</code>	20864
<code>\sci</code>	16928, 20753
<code>\ScissorHollowRight</code> . . .	19864, 21330
<code>\ScissorRight</code>	19858, 21328
<code>\ScissorRightBrokenBottom</code> . . .	19854
<code>\ScissorRightBrokenTop</code> . .	19862, 21329
<code>\scn</code>	16964, 20754
<code>\Scorpio</code>	19746, 21866
<code>\scorpio</code>	19744, 21294
<code>\scr</code>	17006, 20757
<code>\scr@LT@array</code>	7545
<code>\scripta</code>	16839, 20739
<code>\scriptg</code>	16898, 20747
<code>\scriptsize</code>	627
<code>\scriptstyle</code>	8299
<code>\scriptv</code>	17040, 20762
<code>\scrollmode</code> . . .	1873, 1898, 1908, 1921, 2028, 2161
<code>\scshape</code>	615, 7714, 7742
<code>\scu</code>	17971, 20807
<code>\scy</code>	17054, 20766
<code>\Searrow</code>	18738, 20946
<code>\searrow</code>	18613, 20896
<code>\Sech</code>	20413, 21559
<code>\second</code>	18362, 20825
<code>\section</code>	9043
<code>\sectionautorefname</code> . . . . .	.. 3360, 3378, 3396, 3414, 3432, 3450, 3468, 3497, 3526, 3544, 3562, 9362
<code>\seen</code>	20637
<code>\selectfont</code>	595, 4993, 13936
<code>\SePa</code>	20399, 21553
<code>\set@display@protect</code>	4634
<code>\setbox</code>	1964, 1970, 1976, 3734, 3740, 5368, 5381, 6253, 6805, 7804, 9618, 10189, 10711, 10728, 14342, 14431, 14465, 14495, 14523, 14552, 14577
<code>\setcounter</code>	5208
<code>\setkeys</code>	5183, 5228
<code>\setlength</code>	525, 526, 2679, 5352, 6265, 9645, 10113, 10114, 10119, 10123,

10128, 10132, 10138, 10141, 10145, 10148, 11224, 11227, 11231, 11234, 11571, 12554, 12621, 12715, 13000, 15400, 15471	\smash 2676	\strip@period 2617
\setminusminus 18819, 20982	\smile 19364, 21213	\strip@prefix 62, 2610, 4378, 6759, 7378, 7675, 15306, 15314, 15329
\setpdfinkmargin . . 4208, 4209, 9643, 12552, 12619, 12713, 12998	\Smiley 19680, 21842	\strip@pt . . 530, 537, 4481, 6285, 6298, 10119, 10123, 10128, 10132, 11574, 12556, 12623, 12717, 13002, 14801, 14866, 14895, 14935, 14986
\settowidth 13415, 14016, 14371	\smiley 19678, 21274	\strip@pt@and@otherjunk 11782, 11814, 11849
\SetupKeyvalOptions 2733, 4497	\Snowflake 19985, 21388	\strutbox 7976
\seveninferior 20852	\SnowflakeChevron 19983, 21387	\sub@label 2604
\sevensuperior 20836	\SnowflakeChevronBold . . 19987, 21389	\subeqnarray 7651, 7653
\sffamily 610	\sofpasuq 17887	\subequations 7689, 7690
\shadda 20687	\softsign 17530, 21704	\subfig@oldlabel 2606
\sharp 19793, 21304	\spacefactor . . 2655, 2661, 7901, 7910, 8060, 8062, 9661, 9669	\Submit 6472
\sheen 20639	\spadesuit . . 19759, 19761, 21871	\SubmitObject 14156
\shortciteN 8424	\Sparkle 19989, 21390	\SubmitPObject 14156
\shuffle 20184, 21468	\SparkleBold 19991, 21391	\subparagraphautorefname 3364, 3382, 3400, 3418, 3436, 3454, 3472, 3505, 3507, 3530, 3548, 3566, 9366
\Sigma 17255, 20777	\special@paper 4465	\subpdfbookmark 15146
\sigma 17322, 20799	\SpecialDvipdfmxOutlineOpen . . 3153, 3155, 4882, 4889	\subsection 12832
\sim 18899, 21014	\sphericalangle . . . 18838, 20990	\subsectionautorefname 3361, 3379, 3397, 3415, 3433, 3451, 3469, 3502, 3527, 3545, 3563, 9363
\simeq 18915, 21021	\splitmaxdepth 7976	\Subset 19259, 21167
\sinferior 20871	\splittopskip 7975	\subset 19084, 21097
\SixFlowerAlternate 19971, 21381	\sqcap 19124, 21117	\subseteq 19092, 21101
\SixFlowerAltPetal 19981, 21386	\sqcup 19126, 21118	\subseteqq 20311, 21526
\SixFlowerOpenCenter . . 19967, 21379	\sqdoublecap 20211, 21480	\subsetneq 19100, 21105
\SixFlowerPetalRemoved . 19964, 21378	\sqdoublecup 20216, 21482	\subsubsectionautorefname 3362, 3380, 3398, 3416, 3434, 3452, 3470, 3503, 3528, 3546, 3564, 9364
\sixinferior 20851	\sqsubset 19108, 21109	\succ 19066, 21088
\SixStar 19954, 21373	\sqsubseql 19116, 21113	\succapprox 20303, 21522
\sixsuperior 20835	\sqsubseql 19305, 21188	\succcurlyeq 19070, 21090
\SixteenStarLight . 19962, 21377	\sqsupset 19112, 21111	\succeq 20279, 21510
\sixteenthnote 19787, 21301	\sqsupseteq 19120, 21115	\succeqq 20291, 21516
\SK@ 9336	\sqsupseteqq 19308, 21189	\succnapprox 20309, 21525
\SK@@ref 9336	\SquareCastShadowBottomRight 20010, 21398	\succneq 20285, 21513
\SK@ref 9333	\SquareCastShadowTopRight 20013, 21399	\succneqq 20297, 21519
\skip@ . . 1978, 2061, 2062, 2065, 2067, 2698, 2704, 2717, 2723	\Squaredot 16198, 21597	\succnsim 19317, 21193
\slashc 16830, 20738	\squaredots 18892, 21011	\succsim 19076, 21093
\slashdiv 20360, 21546	\SquareShadowBottomRight 20004, 21396	\sukun 20689
\slide 8487	\SquareShadowTopRight . 20007	\sum 18807, 20977
\slide@cline . . 9061, 9074, 9082, 9092, 9100	\SquareTopRight 21397	\Sun 19685, 21843
\Slide@contents 9066	\SS 15905, 20437	\sun 19683, 21276
\slide@contents 9059	\ss . . . 3407, 15834, 15920, 16281	\SunCloud 21323
\slide@heading 8937	\sslash 20351, 21542	\SunCloud 19844
\slide@subheading 8990	\st@rredfalse 7578, 7587	\SunshineOpenCircled . . . 19979, 21385
\slide@undottedcline 9052	\star 19233, 21156	\Supset 19263, 21169
\slidenumberline . . . 9053, 9061, 9075, 9083, 9093, 9101	\stepcounter . 7225, 7460, 7529, 7691, 7902, 8034, 15079	
\SliTeX 587	\stockheight 4469, 10147, 10148, 11091, 11092, 11230, 11231, 12543, 12544	
\slshape 616	\stockwidth 10144, 10145, 11090, 11092, 11233, 11234, 12542, 12544	
\small 628	\stop@hyper 6621	
\smallin 18793, 20971	\StringEncodingConvertTest 811, 821	
\smallowns 18801, 20974		

<code>\supseteq</code>	19086, 21098	<code>\textamalg</code>	18806, 20976	<code>\textbackneg</code>	19345, 21204
<code>\supseteqeq</code>	19094, 21102	<code>\textampersand</code>	569, 15610, 16077, 16078, 16079, 21586, 21587	<code>\textbackprime</code>	18367, 20827
<code>\supseteqqq</code>	20315, 21528	<code>\textangle</code>	18835, 20988	<code>\textbacksim</code>	18903, 21015
<code>\supsetneq</code>	19102, 21106	<code>\textangstrom</code>	18535	<code>\textbacksimeq</code>	19250, 21163
<code>\surd</code>	9083, 20985	<code>\textAnkh</code>	19669, 21271	<code>\textbackslash</code>	565, 745, 2467, 15622, 15624, 16125
<code>\Swarrow</code>	18740, 20947	<code>\textaoilig</code>	20380, 20382, 21917	<code>\textbaht</code>	17950
<code>\swarrow</code>	18616, 20897	<code>\textAPLbox</code>	19407, 21230	<code>\textbar</code>	15637, 16139, 16140, 21589
T					
<code>\T</code>	20617	<code>\textAPLdownarrowbox</code>	19396, 21225	<code>\textbarb</code>	16629, 21610
<code>\t</code>	15575, 15986, 16013, 16040, 16058	<code>\textAPLinput</code>	19399, 21226	<code>\textbarc</code>	16834, 21627
<code>\T@nameref</code>	5047	<code>\textAPLinv</code>	19373, 21217	<code>\textbard</code>	16393, 21602
<code>\T@pageref</code>	5017, 5034, 9221	<code>\textAPLleftarrowbox</code>	19388, 21222	<code>\textbardbl</code>	18328, 18329, 21714
<code>\T@ref</code>	5012, 5031	<code>\textAPLrightarrowbox</code>	19391, 21223	<code>\textbardotlessj</code>	16891, 16892, 16893, 21643
<code>\T@temp</code>	8287, 8290	<code>\textAPLuparrowbox</code>	19393, 21224	<code>\textbarglotstop</code>	17113, 17114
<code>\Ta</code>	20645	<code>\textapprox</code>	18925, 21025	<code>\textbari</code>	16922, 16923, 16924, 20751, 21652
<code>\taa</code>	20619	<code>\textapproxex</code>	18930, 21027	<code>\textbarin</code>	19341, 21202
<code>\tableautorefname</code> . . . . .	. . . . .	<code>\textaquarius</code> . . . . .	19754, 19755, 21297, 21869	<code>\textbarl</code>	16652, 16653, 20736
	. . . . .	<code>\textaries</code> . . . . .	19724, 19725, 21287, 21859	<code>\textbarleftharpoon</code>	20129, 21446
	. . . . .	<code>\textasciicute</code> . . . . .	16189	<code>\textbaro</code>	16968, 16970
<code>\tagform@</code>	8669	<code>\textasciibreve</code>	15586, 16000, 16027, 17168	<code>\textbarp</code>	17995, 20818
<code>\taild</code>	16860, 21636	<code>\textasciicaron</code>	15544, 15556, 15568, 15588, 15997, 16024, 17154	<code>\textbarrevglotstop</code>	17117, 17118
<code>\tailinvr</code>	16991, 21671	<code>\textasciicircum</code>	15540, 15552, 15564, 15626, 15993, 16020, 16127	<code>\textbarriightharpoon</code>	20135, 21448
<code>\taill</code>	16940, 21656	<code>\textasciidieresis</code>	15542, 15554, 15566, 15723, 15995, 16022, 16165	<code>\textbarsci</code>	17993, 20817
<code>\tailn</code>	16963, 21665	<code>\textasciigrave</code>	15538, 15550, 15562, 15631, 15991, 16018, 16132	<code>\textbarscu</code>	17998, 20819
<code>\tailr</code>	16997, 21673	<code>\textasciimacron</code>	15547, 15559, 15571, 15736, 16002, 16029, 16178	<code>\textbaru</code>	17033, 17034, 17035, 20760, 21680
<code>\tails</code>	17013, 21676	<code>\textasciitilde</code>	570, 5093, 15641, 16144	<code>\textbarwedge</code>	19232, 21155
<code>\tailt</code>	17031, 21679	<code>\textast</code>	18822, 20983	<code>\textbb\</code>	19419, 19420, 21233, 21816
<code>\tailz</code>	17059, 21688	<code>\textAsterisk</code>	19970, 21380	<code>\textBeam</code>	19403, 21228
<code>\Tape</code>	19868, 21332	<code>\textAsteriskBold</code>	19947, 21369	<code>\textbecause</code>	18888, 18889, 21009, 21756
<code>\tatweel</code>	20653	<code>\textasteriskcentered</code>	16087	<code>\textbeltl</code>	16934, 16935, 16936, 21655
<code>\tau</code>	17324, 20800	<code>\textAsteriskCenterOpen</code>	19949, 21370	<code>\textBeta</code>	1249, 17224
<code>\Taurus</code>	19728, 21860	<code>\textAsteriskRoundedEnds</code>	19994, 21392	<code>\textbeta</code>	1249, 15920, 17289, 20783
<code>\taurus</code>	19726, 21288	<code>\textasymp</code>	18943, 21033	<code>\textbetainferior</code>	17982, 20812
<code>\tcheh</code>	20693	<code>\textbabygamma</code>	16909, 20750	<code>\textbeth</code>	18545, 20883
<code>\Telefon</code>	19638, 21828	<code>\textbackcong</code>	18939, 21031	<code>\textbetween</code>	19036, 21074
<code>\temp@online</code>	8578, 8581	<code>\textbackepsilon</code>	17366	<code>\textbf</code>	602
<code>\Tent</code>	19852, 21327			<code>\textBicycle</code>	20432, 21567
<code>\tesh</code>	17131, 21701			<code>\textbigcircle</code>	16015, 16042, 19627, 19628, 21256, 21827
<code>\TeX</code>	577, 578, 585, 587, 13147, 13149, 13151			<code>\textbigdoublevee</code>	20191, 21471
<code>\texorpdfstring</code>	1012, 6654			<code>\textbigdoublewedge</code>	20189, 21470
<code>\textAcht</code>	20412, 21558			<code>\textbigtriangledown</code>	19603, 19604, 21246, 21825
<code>\textAcPa</code>	20398, 21552			<code>\textbigtriangleup</code>	19588, 19589, 19590, 21241, 21822, 21823
<code>\textacute</code>	15539, 15551, 15563, 15746, 15992, 16019, 16188			<code>\textBiohazard</code>	19667, 21270
<code>\textacutedbl</code>	17179			<code>\textblacksmiley</code>	19682, 21275
<code>\textacutemacron</code>	15989, 16016, 16043, 18059, 18062, 18163, 18166				
<code>\textainferior</code>	18449, 20860				
<code>\textaleph</code>	18543, 20882				
<code>\textAlpha</code>	1248, 17205, 17222				
<code>\textalpha</code>	1248, 17276, 17287, 20782				

<code>\textblank</code>	19415	<code>\textChi</code>	1298, 17264	<code>\textCoffeecup</code>	19650, 21264
<code>\textbot</code>	19176, 19177, 21136, 21787	<code>\textchi</code>	1298, 17331, 20803	<code>\textcoloncolonequals</code> . . .	20235, 21489
<code>\textbowtie</code>	19238, 19239, 21158, 21804	<code>\textchiinferior</code> . . .	17990, 20816	<code>\textcolonequals</code> . . .	18976, 21047
<code>\textboxast</code>	20175, 21463	<code>\textcirc</code>	18824, 20984	<code>\textcolonmonetary</code>	18475
<code>\textboxbackslash</code>	19385, 21221	<code>\textcirceq</code>	18984, 21051	<code>\textcolor</code>	640, 13894, 13941, 13944, 14274
<code>\textboxbar</code>	19625, 21255	<code>\textcirclearrowleft</code>	20041, 21411	<code>\textcommatailz</code>	16800, 16801
<code>\textboxbox</code>	20179, 21465	<code>\textcirclearrowright</code>	20043, 21412	<code>\textcomplement</code>	18775, 20962
<code>\textboxbslash</code>	20173, 21462	<code>\textcircled</code>	15988, 16015, 16042, 19422, 19424, 19426, 19428, 19430, 19432, 19434, 19436, 19438, 19440, 19442, 19444, 19446, 19448, 19450, 19452, 19454, 19456, 19458, 19460, 19462, 19467, 19469, 19471, 19473, 19475, 19481, 19483, 19485, 19487, 19489, 19491, 19493, 19495, 19497, 19499, 19505, 19507, 19509, 19511, 19513, 19515, 19517, 19519, 19521, 19523, 19525, 19527, 19529, 19531, 19533, 19535, 19537, 19539, 19541, 19543, 19545, 19547, 19549, 19551, 19553, 19555, 19557, 19559, 19561, 19563, 19565, 19567, 19569, 19571, 19573, 19575, 19577	<code>\textcompwordmark</code>	18322
<code>\textboxcircle</code>	20177, 21464	<code>\textCircledA</code>	19464, 19465, 21234, 21817	<code>\textcong</code>	18920, 21023
<code>\textboxdot</code>	19160, 21130	<code>\textcircledast</code>	19148, 19149, 19150, 21125, 21781, 21782	<code>\textcopyright</code>	15725, 16167, 20726
<code>\textboxempty</code>	19640, 19641, 21261, 21829	<code>\textcircledcirc</code>	19144, 19145, 19146, 21124, 21779, 21780	<code>\textcorner</code>	17188, 17189
<code>\textboxminus</code>	19156, 21128	<code>\textcircleddash</code>	19152, 21126	<code>\textCR</code>	15584, 16065
<code>\textboxplus</code>	19154, 21127	<code>\textcircledP</code>	18515	<code>\textcrb</code>	16625, 16626, 16627, 16629, 16630, 21609, 21610, 21611
<code>\textboxslash</code>	20171, 21461	<code>\textCircleShadow</code>	20002, 21395	<code>\textcrd</code>	16388, 16390, 16391, 16393, 16394, 21601, 21602, 21603
<code>\textboxtimes</code>	19158, 21129	<code>\textcircRplus</code>	20198, 21474	<code>\textcrg</code>	16718, 21623
<code>\textbraceleft</code>	563, 2468, 15635, 16137	<code>\textcircRflex</code>	15590	<code>\textcrh</code>	16439, 21604
<code>\textbraceright</code>	564, 2468, 15639, 16142	<code>\textcircRlow</code>	16008, 16035, 20386	<code>\textcrinvglotstop</code>	16679, 16680
<code>\textbrokenbar</code>	15719, 16158, 16159, 21592	<code>\textcircRm</code>	19477, 21235	<code>\textcrlambda</code>	16656, 16657, 16658, 16659, 16660, 16661, 21615, 21616, 21617, 21618
<code>\textbullet</code>	15643, 18350, 20822	<code>\textCleaningF</code>	19477, 21235	<code>\textCross</code>	19910, 21351
<code>\textbulletoperator</code>	18826	<code>\textCleaningFF</code>	19479, 21236	<code>\textCrossedbox</code>	19646, 19647, 19648, 21263, 21831, 21832
<code>\textbullseye</code>	17088, 17089, 17090, 17091, 21696, 21697	<code>\textCleaningP</code>	19501, 21237	<code>\textCrossMaltese</code>	19916, 21354
<code>\textBumpeq</code>	18948, 21035	<code>\textCleaningPP</code>	19503, 21238	<code>\textCrossOpenShadow</code>	19912, 21352
<code>\textbumpeq</code>	18952, 21037	<code>\textclock</code>	19351, 19352, 19353, 21207, 21813, 21814	<code>\textCrossOutline</code>	19914, 21353
<code>\textcancer</code>	19733, 19734, 21290, 21862	<code>\textcloseepsilon</code>	17095, 17096	<code>\textcrtwo</code>	16676, 16677
<code>\textCap</code>	19268, 19269, 21171, 21807	<code>\textcloseomega</code>	16974, 16975, 16976, 16977, 21666, 21667	<code>\textctc</code>	16855, 16856, 16857, 21635
<code>\textcap</code>	18864, 20999	<code>\textcloserevepsilon</code>	16887, 16888, 16889, 21642	<code>\textctd</code>	16798, 16799
<code>\textcapdot</code>	20215, 21481	<code>\textCloud</code>	19631, 21257	<code>\textctesh</code>	17022, 17023, 17024, 21677
<code>\textcapricornus</code>	19751, 19752, 21296, 21868	<code>\textClowerTips</code>	19927, 21359	<code>\textctj</code>	17103, 17104, 21698
<code>\textccnc</code>	20441, 21570	<code>\textclubsuitblack</code>	2589, 19770, 19771, 21875	<code>\textctjvar</code>	17104, 21698
<code>\textccnd</code>	20443	<code>\textclubsuitwhite</code>	19779	<code>\textctn</code>	16818, 16819
<code>\textccsa</code>	20445, 21571			<code>\textctt</code>	16820, 16821
<code>\textcdj</code>	17102			<code>\textctyogh</code>	17067, 17068, 17069, 21690
<code>\textcdot</code>	15919, 20463, 21578			<code>\textctz</code>	17060, 17061, 17062, 21689
<code>\textcdots</code>	19335, 21199			<code>\textCup</code>	19271, 19272, 21172, 21808
<code>\textcedilla</code>	15546, 15558, 15570, 15754, 15999, 16026, 16200			<code>\textcup</code>	18866, 21000
<code>\textcelsius</code>	15906, 18505			<code>\textcupdot</code>	19105, 21107
<code>\textcent</code>	15711, 16148			<code>\textcupplus</code>	19107, 21108
<code>\textcentoldstyle</code>	16832, 21626			<code>\textcurlyeqprec</code>	19290, 21180
<code>\textCESign</code>	20449, 20450, 21573, 21922			<code>\textcurlyeqsucc</code>	19294, 21182
<code>\textCheckedbox</code>	19643, 19644, 21262, 21830				
<code>\textCheckmark</code>	19891, 19892, 21342, 21888				
<code>\textCheckmarkBold</code>	19894, 21343				

<code>\textcurlyvee</code>	19254, 19255, 21165, 21805	<code>\textdivide</code>	15886, 15917, 16334, 20461	<code>\textdsbiological</code> . .	19815, 21313
<code>\textcurlywedge</code> . .	19257, 19258, 21166, 21806	<code>\textdivideontimes</code>	19236, 21157	<code>\textdschemical</code> . . .	19813, 21312
<code>\textcurrency</code>	15715, 16154	<code>\textDivides</code>	18816, 20980	<code>\textdscommercial</code> .	19817, 21314
<code>\textcurvearrowleft</code>	18659, 20916	<code>\textDividesNot</code> . . .	18818, 20981	<code>\textdsjuridical</code> . . .	19811, 21311
<code>\textcurvearrowright</code>	18661, 20917	<code>\textdivorced</code>	19835	<code>\textdsmedical</code>	19809, 21310
<code>\textCuttingLine</code> .	19579, 19580, 19581, 19582, 21239, 21818, 21819, 21820	<code>\textdlsh</code>	18656, 20915	<code>\textdsmilitary</code> . .	19806, 19807, 21309, 21879
<code>\textdagger</code>	15645, 18343, 18344, 20821, 21715	<code>\textdollar</code> . . .	567, 15606, 16071, 16072, 16073, 21584, 21585	<code>\textdtimes</code>	20206, 21477
<code>\textdaggerdbl</code> . . .	15647, 18346, 18347, 18348, 21716, 21717	<code>\textdong</code>	18485	<code>\textdyoghlig</code>	17122, 17123
<code>\textdaleth</code>	18549, 20885	<code>\textdotaccent</code> . . .	15545, 15557, 15569, 15592, 15998, 16025, 17170	<code>\textdzlig</code> .	17119, 17120, 17121, 21700
<code>\textdanger</code>	19821, 21316	<code>\textdotbelow</code> . . .	15549, 15561, 15573, 15616, 16012, 16039, 17195	<code>\textearth</code> .	19701, 19702, 21280, 21850
<code>\textdasheddownarrow</code> . .	18760, 20955	<code>\textdotdiv</code>	18896, 21757	<code>\textEightAsterisk</code> .	20000, 21394
<code>\textdasheduparrow</code>	18755, 20953	<code>\textdoteq</code>	18956, 21039	<code>\textEightFlowerPetal</code> . . .	19978, 21384
<code>\textdashleftarrow</code>	18752, 18753, 20952, 21742	<code>\textdoteqdot</code> . . .	18961, 18962, 21041, 21763	<code>\textEightFlowerPetalRemoved</code> .	19997, 21393
<code>\textdashrightarrow</code>	18757, 18758, 20954, 21743	<code>\textdotminus</code> . . .	18895, 18896, 21012, 21757	<code>\texteightinferior</code> . .	18435, 20853
<code>\textDashV</code>	20333, 20334, 21534, 21911	<code>\textdotplus</code>	18814, 20979	<code>\textEightStar</code>	19957, 21374
<code>\textDashv</code>	20326, 20327, 21532, 21909	<code>\textdottimes</code>	20203, 21476	<code>\textEightStarBold</code>	19959, 21375
<code>\textdashV</code>	20320, 20321, 21530, 21907	<code>\textdoublebarpipe</code>	16692, 16693, 16694, 21622	<code>\textEightStarConvex</code> . . .	19953, 21372
<code>\textdashv</code> .	19165, 19166, 21132, 21784	<code>\textdoublebarpipevar</code> . . .	16694, 21622	<code>\textEightStarTaper</code>	19951, 21371
<code>\textDavidStar</code> . .	19918, 19919, 21355, 21889	<code>\textdoublebarwedge</code>	20226, 21485	<code>\teightsuperior</code> .	18403, 20837
<code>\textdblig</code> .	16824, 16826, 21624	<code>\textdoublegrave</code> .	16001, 16028, 17191	<code>\teinferior</code>	18451, 20861
<code>\textdctzlig</code>	17125, 17126	<code>\textdoublepipe</code> . .	16688, 16689, 16690, 21621	<code>\textell</code>	18511, 20876
<code>\textddagger</code>	15648	<code>\textdoublepipevar</code>	16690, 21621	<code>\textellipsis</code> . . .	573, 574, 15650, 18354, 18355, 21718
<code>\textddots</code>	19339, 21201	<code>\textdoublevee</code> . . .	20222, 20223, 21484, 21906	<code>\textemdash</code> .	779, 15652, 18326
<code>\textdegree</code>	15738, 15906, 16180	<code>\textdoublevertline</code>	18329, 21714	<code>\textemptyset</code> . . .	18783, 18784, 20966, 21744
<code>\textDeleatur</code> . . .	18498, 18499, 20873, 21728	<code>\textdoublewedge</code> .	20220, 21483	<code>\textendash</code> . .	780, 15654, 18324
<code>\textDelta</code> . .	1251, 17228, 20772	<code>\textDOWNarrow</code>	19599, 19600, 21245, 21824	<code>\textEnvelope</code> . . .	19873, 19874, 21334, 21886
<code>\textdelta</code> . .	1251, 17293, 20785	<code>\textDownarrow</code> . .	18727, 20941	<code>\textEpsilon</code>	1252, 17207, 17230
<code>\textDiamondSolid</code>	20016, 21400	<code>\textdownarrow</code> . .	18601, 18602, 18603, 20891, 21736, 21737	<code>\textepsilon</code>	581, 584, 1252, 17278, 17295, 20786
<code>\textdiameter</code>	19343, 21203	<code>\textdownarrowdownarrows</code> . . .	18702, 20932	<code>\texteqcirc</code>	18980, 21049
<code>\textdiamond</code> . . .	19613, 19614, 21250, 21826	<code>\textdownarrowdownharpoons</code> .	20123, 21444	<code>\texteqcolon</code>	18898, 21013
<code>\textdiamonddots</code> .	18389, 20830	<code>\textdownarrowharpoonleft</code> . . .	18685, 20925	<code>\texteqdot</code>	20231, 21487
<code>\textdiamondsuitblack</code> . . .	2590, 19777	<code>\textdownarrowharpoonright</code> . .	18682, 20924	<code>\texteqsim</code>	18912, 21019
<code>\textdiamondsuitwhite</code> . .	19767, 19768, 21874	<code>\textdownmodels</code> . .	20339, 21536	<code>\texteqslantgtr</code> . . .	20270, 21505
<code>\textDigammagreek</code>	17352	<code>\textdownstep</code>	20369, 20370	<code>\texteqslantless</code> . . .	20268, 21504
<code>\textdigammagreek</code>	17354, 17355, 21702	<code>\textdownuparrows</code>	18765, 20957	<code>\textequalscolon</code> . .	18978, 21048
<code>\textdiscount</code>	18383	<code>\textdownupharpoons</code> . . .	20141, 21450	<code>\textequalsinferior</code> .	18443, 20857
<code>\textdiv</code> . . .	15917, 20461, 21576			<code>\textequalssuperior</code> .	18411, 20841
				<code>\textequiv</code> .	19000, 19001, 21058, 21767
				<code>\textEreversed</code>	16638
				<code>\textesh</code> . . .	17014, 17015, 20759
				<code>\textestimated</code> . . .	18537, 18538, 18539, 21730, 21731
				<code>\textEta</code> . . .	1255, 17209, 17234
				<code>\texteta</code>	1255, 17280, 17299, 20788

<code>\texteuro</code> .. 15707, 18487, 18488, 18489, 18490, 18491, 18492, 18493, 18494, 18495, 18496, 21719, 21720, 21721, 21722, 21723, 21724, 21725, 21726, 21727	<code>\textForward</code> 19592, 21242	<code>\textgtreqqlless</code> ... 20266, 21503
<code>\textexclamdown</code> 783, 1159, 15709, 16146	<code>\textForwardToIndex</code> 19410, 21231	<code>\textgttrless</code> 19059, 21084
<code>\textexists</code> 18779, 20964	<code>\textFourAsterisk</code> . 19921, 21356	<code>\textgttrsim</code> 19050, 19051, 21080, 21773
<code>\textfallingdoteq</code> .. 18967, 21043	<code>\textfourfifths</code> 18575	<code>\textguarani</code> 18503
<code>\textfatsemi</code> 20196, 21473	<code>\textfourinferior</code> .. 18427, 20849	<code>\texthalflength</code> ... 17165, 17166
<code>\textFax</code> .. 20427, 20428, 21565, 21921	<code>\textFourStar</code> 19929, 21360	<code>\texthalfnote</code> 20407, 20408, 21556, 21919
<code>\textfax</code> 18551, 20886	<code>\textFourStarOpen</code> 19931, 21361	<code>\textHandCuffLeft</code> . 19652, 21265
<code>\textfemale</code> 19695, 21845	<code>\textfoursuperior</code> .. 18395, 20833	<code>\textHandCuffRight</code> 19654, 21266
<code>\textFemaleFemale</code> 19823, 21317	<code>\textfourth</code> 18387, 20829	<code>\textHandLeft</code> ... 19656, 19657, 21267, 21833
<code>\textFemaleMale</code> .. 19827, 21319	<code>\textfractionsolidus</code> 15658, 18377	<code>\textHandRight</code> .. 19659, 19660, 19661, 19662, 21268, 21834, 21835, 21836
<code>\textfi</code> 781, 15682, 20388	<code>\textfrown</code> 19363, 21212	<code>\textHaPa</code> 20394, 21550
<code>\TextField</code> 6457	<code>\textfrownie</code> 19676, 19677, 21273, 21841	<code>\texthateq</code> . 18988, 18989, 18990, 21053, 21764, 21765
<code>\textFinv</code> 18541, 20881	<code>\textfrq</code> 669, 15914, 20458	<code>\texthausaB</code> 16632, 20733
<code>\textFire</code> 20430, 21566	<code>\textfrqq</code> 667, 15912, 20456	<code>\texthausaD</code> 16636, 20734
<code>\textfishhookr</code> ... 16999, 17000, 17001, 17002, 21674, 21675	<code>\textfullnote</code> 20404, 20405, 21555, 21918	<code>\texthausaK</code> 16647, 20735
<code>\textfivedots</code> 20365, 21547	<code>\textGame</code> 18553, 20887	<code>\texthbar</code> .. 16438, 16439, 16440, 16441, 20732, 21604, 21605, 21606
<code>\textfiveeighths</code> 18585	<code>\textGamma</code> 1250, 17226, 20771	<code>\texthdotfor</code> 18352, 20823
<code>\textFiveFlowerOpen</code> ... 19976, 21383	<code>\textgamma</code> . 1250, 17291, 20784	<code>\textheartsuitblack</code> . 2591, 19775
<code>\textFiveFlowerPetal</code> 19974, 21382	<code>\textgammainferior</code> 17984, 20813	<code>\textheartsuitwhite</code> 19763, 19764, 19765, 21872, 21873
<code>\textfiveinferior</code> ... 18429, 20850	<code>\textGaPa</code> 20392, 21549	<code>\textheng</code> . 20371, 20373, 21914
<code>\textfivesixths</code> 18579	<code>\textge</code> 19013, 21063	<code>\textHermaphrodite</code> 19829, 21320
<code>\textFiveStar</code> 19633, 21258	<code>\textgemini</code> 19730, 19731, 21289, 21861	<code>\texthexagon</code> 19405, 21229
<code>\textFiveStarCenterOpen</code> 19935, 21363	<code>\textGentsroom</code> ... 20434, 21568	<code>\texthexstar</code> 19840, 21322
<code>\textFiveStarConvex</code> 19943, 21367	<code>\textgeq</code> ... 19012, 19014, 21062, 21771	<code>\texthinferior</code> 18459, 20865
<code>\textFiveStarOpen</code> 19635, 21259	<code>\textgeqq</code> 19020, 21066	<code>\texthookleftarrow</code> . 18642, 20909
<code>\textFiveStarOpenCircled</code> 19933, 21362	<code>\textgeqslant</code> 20241, 21492	<code>\texthookrightarrow</code> 18644, 20910
<code>\textFiveStarOpenDotted</code> 19937, 21364	<code>\textgg</code> 19032, 21072	<code>\textHslash</code> 16436
<code>\textFiveStarOutline</code> 19939, 21365	<code>\textggg</code> 19282, 21177	<code>\texthslash</code> 18507, 20874
<code>\textFiveStarOutlineHeavy</code> 19941, 21366	<code>\textgimel</code> 18547, 20884	<code>\textHT</code> 15580, 16061
<code>\textFiveStarShadow</code> 19945, 21368	<code>\textglobfall</code> 18615, 21739	<code>\texthtb</code> .. 16847, 16848, 16849, 16850, 21632, 21633
<code>\textfivesuperior</code> .. 18397, 20834	<code>\textglobrise</code> 18612, 21738	<code>\texthtbardotlessj</code> . 17017, 17018
<code>\textfl</code> 782, 15684, 20390	<code>\textgloststop</code> 17071, 17072, 17073, 17074, 20768, 21691, 21692	<code>\texthtc</code> 16633, 16634
<code>\textFlag</code> .. 19801, 19802, 21307, 21878	<code>\textglq</code> 664, 15909, 20453	<code>\texthtd</code> ... 16861, 16862, 16863, 16864, 21637, 21638
<code>\textflat</code> 19790, 21302	<code>\textglqq</code> 662, 15907, 20451	<code>\texthtg</code> ... 16894, 16895, 16896, 21644
<code>\textflorin</code> . 15656, 16641, 16642, 21612	<code>\textgnapprox</code> 20260, 21501	<code>\texthth</code> .. 16914, 16915, 16916, 16917, 21649, 21650
<code>\textflq</code> 668, 15913, 20457	<code>\textgneq</code> 20256, 21499	<code>\texththeng</code> 16918, 16919, 16920, 21651
<code>\textflqq</code> 666, 15911, 20455	<code>\textgneqq</code> 19026, 21069	<code>\texthtk</code> .. 16648, 16649, 16650, 21614
<code>\textforall</code> 18773, 20961	<code>\textgnsim</code> 19314, 21191	<code>\texthtp</code> 16666, 16667
	<code>\textgravedbl</code> 17183	<code>\texthtq</code> 17110, 17111
	<code>\textgravemacron</code> 15990, 16017, 16044, 18053, 18056, 18157, 18160	<code>\texthtrtaild</code> 18002, 18003, 20820
	<code>\textgreater</code> 15620, 16121	<code>\texhtscg</code> 17098, 17099
	<code>\textgrq</code> 665, 15910, 20454	<code>\texhttt</code> 16671, 16672
	<code>\textgrqq</code> 663, 15908, 20452	
	<code>\textGslash</code> 16715	
	<code>\textgslash</code> 16717, 16718, 21623	
	<code>\textgtrapprox</code> 20249, 21496	
	<code>\textgtrdot</code> 19278, 21175	
	<code>\textgtreqless</code> 19288, 21179	

<code>\texthungarumlaut</code>	15594, 16003, 16030, 17178	<code>\textlbrackdbl</code> . . .	20034, 20035, 21409, 21890	<code>\textlhookfour</code> . . .	20374, 20376, 21915
<code>\texthvlig</code> .	16643, 16644, 16645, 21613	<code>\textlcurvearrowdown</code> . . .	20089, 20090, 20091, 21433, 21892, 21893	<code>\textlhooknarrow</code>	20067, 21424
<code>\textiint</code>	18873, 21003	<code>\textlcurvearrowse</code> .	20081, 21430	<code>\textlhooksearrow</code> .	20071, 21426
<code>\textiinferior</code>	17974, 20808	<code>\textlcurvearrowsw</code>	20084, 21431	<code>\textlhookt</code>	16669, 16670
<code>\textiint</code>	18871, 21002	<code>\textle</code>	19008, 21061	<code>\textlhtlongi</code>	17004, 17005
<code>\textIm</code>	18509, 20875	<code>\textleadsto</code>	20075, 21428	<code>\textlhtlongy</code>	17136, 17137
<code>\textin</code>	18790, 20969	<code>\textLeftarrow</code>	18719, 20938	<code>\textlibra</code> . .	19742, 19743, 21293, 21865
<code>\textInfo</code>	20447, 21572	<code>\textleftarrow</code>	18593, 20888	<code>\textlightning</code> . . .	18652, 18653, 20914, 21740
<code>\textinfty</code>	18833, 20987	<code>\textleftarrowtail</code> . .	18636, 20906	<code>\textlinferior</code>	18463, 20867
<code>\textint</code> . . .	18868, 18869, 21001, 21754	<code>\textleftarrowtriangle</code> . . .	18767, 20958	<code>\textlira</code>	18477
<code>\textinterleave</code>	20350, 21541	<code>\textleftbarharpoon</code>	20126, 21445	<code>\textll</code>	19028, 21070
<code>\textinterrobang</code>	18375	<code>\textLEFTCIRCLE</code>	19618, 21252	<code>\textllcorner</code>	19359, 21210
<code>\textinterrobangdown</code> . . .	20362, 20363	<code>\textleftharpoon</code>	18667, 20919	<code>\textLleftarrow</code>	18743, 20948
<code>\textinvamp</code>	18555, 18556, 18557, 21732, 21733	<code>\textleftharpoonup</code>	18664, 20918	<code>\textlll</code>	19280, 21176
<code>\textinvbackneg</code> . . .	19349, 21206	<code>\textleftleftarrows</code> .	18696, 20929	<code>\textllparentthesis</code> . .	20145, 21452
<code>\textinvbreve</code>	15965, 16005, 16032, 16761, 16763, 16770, 16772, 16773, 16779, 16781, 16791, 16793	<code>\textleftlefttharpoons</code>	20114, 21441	<code>\textlnapprox</code>	20258, 21500
<code>\textinvdiameter</code> . .	20149, 21454	<code>\textleftmoon</code>	19687, 21277	<code>\textlneq</code>	20253, 21498
<code>\textinve</code>	16713, 20737	<code>\textLeftrightarrow</code>	18730, 20942	<code>\textlneqq</code>	19024, 21068
<code>\textinvglotstop</code> . .	17081, 17082, 20770	<code>\textleftrightharpoon</code> .	2594, 18605, 20892	<code>\textlnot</code>	15732, 16174
<code>\textinvneg</code>	20210, 21479	<code>\textleftrightharpoons</code>	18694, 20928	<code>\textlnsim</code>	19312, 21190
<code>\textinvscr</code> .	17009, 17010, 20758	<code>\textleftrightharpoontriangle</code>	18771, 20960	<code>\textlogicalnot</code> . . .	15731, 15915, 16173, 20459
<code>\textIota</code> . . .	1270, 17211, 17238, 17272	<code>\textlefttharpoon</code>	20103, 21437	<code>\textLongleftarrow</code>	20051, 21416
<code>\textiota</code> . . .	1270, 17282, 17303, 17337, 20790	<code>\textleftrightharpoons</code> . . .	18705, 20933	<code>\textlongleftarrow</code> .	20045, 21413
<code>\textIotadieresis</code> . .	17220, 17271	<code>\textleftslice</code>	20272, 21506	<code>\textLongleftrightharpoon</code> . .	20055, 21418
<code>\textipagamma</code> . .	16905, 16906, 20749, 21646	<code>\textleftspoon</code>	20032, 21408	<code>\textlongleftrightharpoon</code> . .	20049, 21415
<code>\textisuperior</code>	18393, 20832	<code>\textleftsquigarrow</code>	18747, 20950	<code>\textlonglegr</code>	16992, 16993, 16994, 20756, 21672
<code>\textit</code>	604	<code>\textlefttherefore</code> . .	18385, 20828	<code>\textLongmapsfrom</code>	20059, 21420
<code>\textJackStar</code>	19923, 21357	<code>\textleftthreetimes</code> .	19246, 21161	<code>\textLongmapsto</code> . .	20061, 21421
<code>\textJackStarBold</code> .	19925, 21358	<code>\textlengthmark</code> . .	17162, 17163	<code>\textlongmapsto</code> . .	20057, 21419
<code>\textjinferior</code>	20359, 21545	<code>\textleo</code> . . .	19736, 19737, 21291, 21863	<code>\textLongrightarrow</code>	20053, 21417
<code>\textJoin</code>	20194, 21472	<code>\textleq</code> . . .	19007, 19009, 21060, 21770	<code>\textlongrightarrow</code>	20047, 21414
<code>\textjupiter</code>	19709, 19710, 21282, 21854	<code>\textleqq</code>	19016, 21064	<code>\textlongs</code>	16624, 18284
<code>\textKappa</code>	1271, 17240	<code>\textleqslant</code>	20237, 21490	<code>\textlooparrowleft</code> .	18646, 20911
<code>\textkappa</code> .	1271, 17305, 20791	<code>\textless</code>	15618, 16119	<code>\textlooparrowright</code>	18648, 20912
<code>\textKeyboard</code>	19367, 21214	<code>\textlessapprox</code> . . .	20245, 21494	<code>\textlozenge</code>	19616, 21251
<code>\textkinferior</code>	18461, 20866	<code>\textlessdot</code>	19276, 21174	<code>\textlptr</code>	17148, 17149
<code>\textKoppagreek</code> . . .	1278, 17357	<code>\textlesseqgtr</code>	19285, 21178	<code>\textlquill</code>	18379
<code>\textkoppagreek</code> . . .	1278, 17359	<code>\textlesseqqgtr</code> . . .	20263, 21502	<code>\textlrcorner</code>	19361, 21211
<code>\textkra</code>	16480	<code>\textlessgtr</code>	19057, 21083	<code>\textltailm</code> .	16952, 16953, 16954, 16955, 21661, 21662
<code>\textLadiesroom</code> . .	20436, 21569	<code>\textlessssim</code>	19047, 19048, 21079, 21772	<code>\textltailn</code> .	16956, 16957, 16958, 16959, 21663, 21664
<code>\textLambda</code>	1272, 17242, 20774	<code>\textLF</code>	15582, 16063	<code>\texttilde</code> .	16931, 16932, 16933, 21654
<code>\textlambda</code>	1272, 17307, 20792	<code>\textLHD</code>	19611, 21249	<code>\textltimes</code>	19241, 21159
<code>\textlangle</code>	19369, 21215	<code>\textlhd</code> . . .	19210, 19211, 21147, 21798	<code>\texttlyoghlig</code>	16941, 16942, 16943, 21657
<code>\textlatin</code>	650, 7366			<code>\textmacronbelow</code>	15548, 15560, 15572, 15629, 16011, 16038, 17197

<code>\textmale</code> . 19704, 19705, 19706, 19707, 21281, 21851, 21852, 21853	<code>\textnabla</code> 18788, 20968	<code>\textnhateq</code> 18992, 21054
<code>\textMaleMale</code> 19825, 21318	<code>\textnaira</code> 18479	<code>\textni</code> 18796, 18797, 20972, 21745
<code>\textManFace</code> 20422, 21563	<code>\textnapostrophe</code> 16514	<code>\textNibRight</code> 19887, 21340
<code>\textmanstar</code> 19819, 21315	<code>\textnapprox</code> 18927, 18928, 21026, 21760	<code>\textNibSolidRight</code> 19889, 21341
<code>\textmapsto</code> 18640, 20908	<code>\textnapproxeq</code> 18932, 21028	<code>\textniepsilon</code> 16877, 16878, 20744, 21640
<code>\textmarried</code> 19833	<code>\textnasymp</code> . 18945, 18946, 21034, 21762	<code>\textniota</code> . 16926, 16927, 20752, 21653
<code>\textmd</code> 603	<code>\textnatural</code> 19792, 21303	<code>\textnineinferior</code> . . 18437, 20854
<code>\textmeasuredangle</code> . 18837, 20989	<code>\textnbackcong</code> 18941, 21032	<code>\textninesuperior</code> . . 18405, 20838
<code>\textmercury</code> 19691, 19692, 21279, 21844	<code>\textnbacksim</code> 18905, 21016	<code>\textninferior</code> 18467, 20869
<code>\textmho</code> . . 18530, 18531, 20879, 21729	<code>\textnbacksimeq</code> . . 19252, 21164	<code>\textnphi</code> 16979, 20755
<code>\textmid</code> 18844, 20991	<code>\textnBumpeq</code> 18950, 21036	<code>\textniupsilon</code> 17037, 17038, 20761, 21681
<code>\textMineSign</code> 19804, 21308	<code>\textnbumpeq</code> 18954, 21038	<code>\textnLeftarrow</code> 18711, 20935
<code>\textminferior</code> 18465, 20868	<code>\textncirceq</code> 18986, 21052	<code>\textnleftarrow</code> 18619, 20898
<code>\textminus</code> 15664, 18810	<code>\textncong</code> 18923, 21024	<code>\textnLeftrightarrow</code> 18713, 20936
<code>\textminusdot</code> 20200, 20201, 21475, 21903	<code>\textncurlyeqsucc</code> . . 19292, 21181	<code>\textnleq</code> 19043, 21077
<code>\textminusinferior</code> . . 18441, 20856	<code>\textncurlyeqsucc</code> . . 19296, 21183	<code>\textnleqq</code> 19018, 21065
<code>\textminussuperior</code> . 18409, 20840	<code>\textnDashV</code> . 20336, 20337, 21535, 21912	<code>\textnleqslant</code> 20239, 21491
<code>\textmoo</code> 20143, 21451	<code>\textnDashv</code> . 20329, 20330, 21533, 21910	<code>\textnless</code> 19038, 21075
<code>\textMoon</code> 20420, 21562	<code>\textndashV</code> . 20323, 20324, 21531, 21908	<code>\textnlessapprox</code> . . 20247, 21495
<code>\textMountain</code> 19851, 21326	<code>\textndashv</code> . 19168, 19169, 21133, 21785	<code>\textnlessgtr</code> 19063, 21086
<code>\textmp</code> 18812, 20978	<code>\textnDoteq</code> 18964, 21042	<code>\textnlesssim</code> 19053, 21081
<code>\textMu</code> 1273, 17244	<code>\textndoteq</code> 18958, 21040	<code>\textnll</code> 19030, 21071
<code>\textmu</code> 1273, 15748, 16191	<code>\textndownmodels</code> . . 20341, 21537	<code>\textnmid</code> . . 18846, 18847, 20992, 21751
<code>\textmugreek</code> 17309, 20793	<code>\textndownvdash</code> . . 19174, 21135	<code>\textNoChemicalCleaning</code> . 20163, 21458
<code>\textmultimap</code> 19228, 21153	<code>\textne</code> 18997, 21057	<code>\textnormal</code> 598
<code>\textmultimapboth</code> . 20183, 21467	<code>\textNearrow</code> 18737, 20945	<code>\textnotbackslash</code> . . 19383, 21220
<code>\textmultimapdotbothA</code> . 19224, 21151	<code>\textnearrow</code> 18611, 18612, 20895, 21738	<code>\textnotin</code> 18792, 20970
<code>\textmultimapdotbothB</code> . 19226, 21152	<code>\textneg</code> . . 15915, 20459, 21574	<code>\textnotowner</code> 18799, 18800, 20973, 21746
<code>\textmultiply</code> 15817, 15916, 16262, 16263, 16264, 20460, 21598, 21599	<code>\textneptune</code> 19718, 19719, 21285, 21857	<code>\textnotperp</code> 20026, 21405
<code>\textMundus</code> 20418, 21561	<code>\textneq</code> . . 18996, 18998, 21056, 21766	<code>\textnotslash</code> 19380, 21219
<code>\textmusicalnote</code> . . 19782, 19783, 19784, 21876	<code>\textneqcirc</code> 18982, 21050	<code>\textnoway</code> 19849, 21325
<code>\textMVAAt</code> 16123, 20725	<code>\textneqdot</code> 20233, 21488	<code>\textnparallel</code> . 18851, 18852, 20994
<code>\textMVComma</code> . . 16091, 20711	<code>\textneqsim</code> 18914, 21020	<code>\textnprec</code> 19081, 21095
<code>\textMVDivision</code> . . 16097, 20714	<code>\textnequiv</code> . 19003, 19004, 19005, 21059, 21768, 21769	<code>\textnprecapprox</code> . . 20302, 21521
<code>\textMVEight</code> 16115, 20723	<code>\textneswarrow</code> . . . 20065, 21423	<code>\textnpreccurlyeq</code> . . 19298, 21184
<code>\textMVFive</code> 16109, 20720	<code>\textNeutral</code> 19831, 21321	<code>\textnpreceq</code> 20278, 21509
<code>\textMVFour</code> 16107, 20719	<code>\textnewtie</code> . 16014, 16041, 17193	<code>\textnpreceqq</code> 20290, 21515
<code>\textMVMinus</code> 16093, 20712	<code>\textnexists</code> 18781, 20965	<code>\textnprecsim</code> 19075, 21092
<code>\textMVNine</code> 16117, 20724	<code>\textnfallingdoteq</code> . . 18969, 21044	<code>\textnqsubseteq</code> 19302, 21186
<code>\textMVOne</code> 16101, 20716	<code>\textngeq</code> 19045, 21078	<code>\textnqsupseteq</code> 19304, 21187
<code>\textMVPeriod</code> 16095, 20713	<code>\textngeqq</code> 19022, 21067	<code>\textnrightarrow</code> . . 18716, 20937
<code>\textMVPlus</code> 16089, 20710	<code>\textngeqslant</code> 20243, 21493	<code>\textnrightarrow</code> . . 18621, 20899
<code>\textMVSeven</code> 16113, 20722	<code>\textngg</code> 19034, 21073	<code>\textnrisingdoteq</code> . . 18974, 21046
<code>\textMVSix</code> 16111, 20721	<code>\textngtr</code> 19040, 21076	<code>\textnrleg</code> . . 16663, 16665, 21619
<code>\textMVThree</code> 16105, 20718	<code>\textngtrapprox</code> . . . 20251, 21497	<code>\textnsim</code> 18910, 21018
<code>\textMVTwo</code> 16103, 20717	<code>\textngtrless</code> 19061, 21085	<code>\textnsimeq</code> 18918, 21022
<code>\textMVZero</code> 16099, 20715	<code>\textngtrsim</code> 19055, 21082	<code>\textnsqsubset</code> 19111, 21110
		<code>\textnsqsubseq</code> 19119, 21114

<code>\textnqsupset</code>	19115, 21112	<code>\textobslash</code> 20154, 20155, 20156,	<code>\textowedge</code> 18856, 18857, 20996,
<code>\textnqsupseteq</code> . .	19123, 21116	20157, 21456, 21897, 21898,	21752
<code>\textnSubset</code>	19262, 21168	21899	<code>\textparagraph</code>
<code>\textnsubset</code>	19089, 21099	<code>\textObullseye</code>	572, 15750,
<code>\textnsubsepeq</code>	19097, 21103	17091, 21697	16193, 16194, 21595
<code>\textnsubseteqq</code> . . .	20314, 21527	<code>\textodiv</code>	18849, 20993
<code>\textnsucc</code>	19083, 21096	<code>\textodot</code>	<code>\textparenleft</code>
<code>\textnsuccapprox</code> . .	20306, 21523	19141, 19142, 21123,	787, 788, 15612,
<code>\textnsucccurlyeq</code> . .	19300, 21185	21778	16083
<code>\textnsucceq</code>	20282, 21511	<code>\textogonek</code> 15596, 16004, 16031,	<code>\textparenleftinferior</code>
<code>\textnsucceqq</code>	20294, 21517	17174	18445,
<code>\textnsuccsim</code>	19079, 21094	<code>\textogreaterthan</code> 20168, 20169,	20858
<code>\textnSuperior</code>	18417, 20844	21460, 21902	<code>\textparenleftsuperior</code> . . .
<code>\textnSupset</code>	19266, 21170	<code>\textohm</code>	18413,
<code>\textnupset</code>	19091, 21100	18528	20842
<code>\textnupseteq</code>	19099, 21104	<code>\textoiint</code>	<code>\textparenright</code>
<code>\textnupseteqq</code> . . .	20318, 21529	18878, 21005	15614, 16085
<code>\textntriangleleft</code> . .	19320, 19321,	<code>\textoinferior</code>	<code>\textparenrightinferior</code> . . .
21194, 21811		18453, 20862	18447,
<code>\textntriangleleftteq</code> 19327, 21196		<code>\textoint</code>	20859
<code>\textntriangleright</code> 19323, 19324,		18875, 18876, 21004,	<code>\textparenrightsuperior</code> . .
21195, 21812		21755	18415,
<code>\textntrianglerightteq</code>	19330,	<code>\textointclockwise</code> . 18881, 21006	20843
19331, 21197		<code>\textointctrlockwise</code>	<code>\textpartial</code>
<code>\textntripleleftarrow</code> . . .	18937, 21030	18883,	18777, 20963
<code>\textntwoheadleftarrow</code> . .	18625,	21007	<code>\textPeace</code>
20901		<code>\textolessthan</code>	19876, 21335
<code>\textntwoheadrightarrow</code> .	18632,	20165, 20166,	<code>\textPencilRight</code> . . .
20904		21459, 21901	19883, 21338
<code>\textNu</code>	1274, 17246	<code>\textOmega</code>	<code>\textPencilRightDown</code> . . .
<code>\textnu</code>	1274, 17311, 20794	1300, 17217, 17269,	21337
<code>\textnumbersign</code> . . .	566, 15604,	20781	<code>\textPencilRightUp</code> 19885, 21339
16069		<code>\textomega</code>	<code>\textpentagon</code>
<code>\textnumeralsigngreek</code> . . .	1225,	1300, 17335, 17346,	20355, 21543
17201		20805	<code>\textpercent</code>
<code>\textnumeralsignlowergreek</code> 1242,		<code>\textOmicron</code> 1276, 17213, 17250	568, 15608, 16075
1264, 1287, 17203		<code>\textomicron</code> 1276, 17315, 17341	<code>\textperiodcentered</code> 15752, 15919,
<code>\textnumero</code>	18513	<code>\textominus</code> 19132, 19133, 21120,	16196, 16197, 16198, 20463,
<code>\textnupmodels</code>	20345, 21539	21775	21596, 21597
<code>\textnupvdash</code>	19179, 19180,	<code>\textoneeighth</code>	<code>\textperp</code>
21137, 21788		18581	20024, 21404
<code>\textnVDash</code> 19207, 19208, 21146,		<code>\textonefifth</code>	<code>\textpertenthousand</code>
21797		18569	18359
<code>\textnVdash</code> 19204, 19205, 21145,		<code>\textonehalf</code>	<code>\textperthousand</code>
21796		15764, 16210	15666, 18357
<code>\textnvDash</code> 19200, 19201, 19202,		<code>\textoneinferior</code>	<code>\textpeseta</code>
21144, 21794, 21795		18421, 20846	18501
<code>\textnvdash</code> 19197, 19198, 21143,		<code>\textoneninth</code>	<code>\textPhi</code>
21793		18561	1297, 17262, 20779
<code>\textnVdash</code>	19191, 21141	<code>\textonequarter</code>	1297, 17329, 20802
<code>\textNwarrow</code>	18735, 20944	15762, 16208	<code>\textphiinferior</code>
<code>\textnwnarrow</code>	18609, 20894	<code>\textoneseventh</code>	17988, 20815
<code>\textnwsearrow</code>	20063, 21422	<code>\textonesixth</code>	<code>\textPhone</code> 19637, 19638, 21260,
<code>\textobar</code>	20151, 20152, 21455,	18577	21828
21896		<code>\textonesuperior</code> . . .	<code>\textPhoneHandset</code> 19867, 21331
<code>\textobot</code>	20160, 20161, 21457,	15756, 16202,	<code>\textPi</code>
21900		20729	1277, 17252, 20776
		<code>\textonetenth</code>	<code>\textpi</code>
		18563	1277, 17317, 20796
		<code>\textonethird</code>	<code>\textpinferior</code>
		18565	18469, 20870
		<code>\textoo</code>	<code>\textpipe</code>
		20384, 21548	16684, 16685, 16686,
		<code>\textopenbullet</code>	21620
		19622, 21254	<code>\textpipevar</code>
		<code>\textopencorner</code>	16686, 21620
		17186, 17187	<code>\textpisces</code>
		<code>\textopeno</code> 16852, 16853, 16854,	19757, 19758, 21298,
		20740, 21634	21870
		<code>\textoplus</code>	<code>\textpitchfork</code>
		19129, 19130, 21119,	19274, 21173
		21774	<code>\textPlane</code>
		<code>\textordfeminine</code> . . .	19871, 21333
		15727, 16169	<code>\textPlus</code>
		<code>\textordmasculine</code> . . .	19904, 21348
		15758, 16204	<code>\textPlusCenterOpen</code> . . .
		<code>\textoslash</code> 19138, 19139, 21122,	19908,
		21777	21350
		<code>\textotimes</code> 19135, 19136, 21121,	<code>\textplusinferior</code>
		21776	18439, 20855
		<code>\textovee</code>	<code>\textplusminus</code>
		18861, 18862, 20998,	15740, 15918,
		21753	16182, 20462
			<code>\textPlusOutline</code>
			19902, 21347
			<code>\textplussuperior</code>
			18407, 20839

<code>\textPlusThinCenterOpen</code> 19906, 21349	<code>\textquotedblright</code> . 15672, 18339	<code>\textrhookreveysilon</code> 16883, 16884, 16885, 20746, 21641
<code>\textpluto</code> . 19721, 19722, 21286, 21858	<code>\textquoteleft</code> 15674, 15910, 18331, 20454	<code>\textrhookschwa</code> . 16872, 16873, 16874, 21639
<code>\textpm</code> . . . 15918, 20462, 21577	<code>\textquoteright</code> . . . 15676, 18333	<code>\textrhookswarrow</code> 20073, 21427
<code>\textpointer</code> 18762, 20956	<code>\textquotesingle</code> 16081	<code>\textRightarrow</code> . 18724, 18725, 20940, 21741
<code>\textprec</code> 19065, 21087	<code>\textRadioactivity</code> 19664, 19665, 21269, 21837	<code>\textrightarrow</code> . . . 2593, 18597, 18598, 18599, 20890, 21734, 21735
<code>\textprecapprox</code> . . . 20300, 21520	<code>\textRain</code> 19847, 21324	<code>\textrightarrowtail</code> . 18638, 20907
<code>\textpreccurlyeq</code> . . 19069, 21089	<code>\textraiseglotstop</code> . 17145, 17146	<code>\textrightarrowtriangle</code> . . 18769, 20959
<code>\textpreceq</code> 20276, 21508	<code>\textriangle</code> 19371, 21216	<code>\textrightbarharpoon</code> 20132, 21447
<code>\textpreceqq</code> 20288, 21514	<code>\textrbrackdbl</code> . . . 20037, 20038, 21410, 21891	<code>\textRIGHTCIRCLE</code> 19620, 21253
<code>\textprecnapprox</code> . . 20308, 21524	<code>\textrcurvearrowdown</code> . . . 20094, 20095, 20096, 21434, 21894, 21895	<code>\textrightharpoondown</code> . . 18679, 20923
<code>\textprecneq</code> 20284, 21512	<code>\textrcurvearrowleft</code> 20098, 21435	<code>\textrightharpoonup</code> 18676, 20922
<code>\textprecneqq</code> 20296, 21518	<code>\textrcurvearrowne</code> 20078, 21429	<code>\textrightleftarrows</code> 18688, 20926
<code>\textprecsim</code> 19316, 21192	<code>\textrcurvearrowright</code> . . . 20101, 21436	<code>\textrightleftharpoon</code> 20105, 21438
<code>\textprecsim</code> 19073, 21091	<code>\textrcurvearrowse</code> 20087, 21432	<code>\textrightleftharpoons</code> . . . 18708, 20934
<code>\textprime</code> 18361, 20824	<code>\textRe</code> 18520, 20878	<code>\textrightmoon</code> . . . 19689, 21278
<code>\textprimstress</code> . . . 17156, 17157	<code>\textrecipe</code> 18522	<code>\textrightrightarrow</code> 18700, 20931
<code>\textprod</code> 18804, 20975	<code>\textRectangle</code> . . . 20020, 21402	<code>\textrighttrigharpoons</code> . . 20120, 21443
<code>\textpropto</code> 18830, 18831, 20986, 21747	<code>\textRectangleBold</code> 20022, 21403	<code>\textrightstac</code> 20274, 21507
<code>\textPsi</code> 1299, 17266, 20780	<code>\textRectangleThin</code> 20018, 21401	<code>\textrightstacurarrow</code> 18749, 20951
<code>\textpsi</code> 1299, 17333, 20804	<code>\textrecycle</code> 19796, 19797, 21305, 21877	<code>\textrightthreetimes</code> 19248, 21162
<code>\textPUaolig</code> 20381, 20382, 21917	<code>\textreferencemark</code> 18373	<code>\textrinferior</code> 17976, 20809
<code>\textPUdblig</code> 16825, 16826, 21624	<code>\textregistered</code> 15734, 16176	<code>\textring</code> . . 15543, 15555, 15567, 15598, 15996, 16023, 17172
<code>\textPUfemale</code> . . . 19694, 19695, 19696, 19697, 19698, 19699, 21845, 21846, 21847, 21848, 21849	<code>\textRequest</code> 19401, 21227	<code>\textringlow</code> 16007, 16034, 17181
<code>\textPUheng</code> 20372, 20373, 21914	<code>\textrevapostrophe</code> 17142, 17143	<code>\textriota</code> 18533, 20880
<code>\textPUhookfour</code> 20375, 20376, 21915	<code>\textrevc</code> 18589	<code>\textrisingdoteq</code> . . . 18972, 21045
<code>\textPUNrleg</code> 16664, 16665, 21619	<code>\textrevE</code> 16639	<code>\textrm</code> 599
<code>\textPUqplig</code> 16828, 16829, 21625	<code>\textreve</code> . . 16866, 16867, 20742	<code>\textrptr</code> 17151, 17152
<code>\textPUrevscr</code> . . . 17969, 17970, 21709	<code>\textrevepsilon</code> . . 16880, 16881, 20745	<code>\textrquill</code> 18381
<code>\textPURhooka</code> . . 18000, 18001, 21710	<code>\textrevglotstop</code> . 17077, 17078, 17079, 20769, 21693	<code>\textRrightarrow</code> . . 18745, 20949
<code>\textPURhooke</code> . . 18005, 18006, 21711	<code>\textrevscr</code> 17968, 17970, 21709	<code>\textrrparenthesis</code> . 20147, 21453
<code>\textPURhookepsilon</code> 18009, 18010, 21712	<code>\textrevyogh</code> 16674, 16675	<code>\textrtail</code> . 16858, 16859, 16860, 20741, 21636
<code>\textPURhookopeno</code> 18013, 18014, 21713	<code>\textRewind</code> 19606, 21247	<code>\textrtaill</code> . 16938, 16939, 16940, 21656
<code>\textPUscf</code> . 20378, 20379, 21916	<code>\textRewindToIndex</code> 19413, 21232	<code>\textrtailn</code> . 16961, 16962, 16963, 21665
<code>\textPUsck</code> 17960, 17961, 21706	<code>\textRHD</code> 19597, 21244	<code>\textrtailr</code> . 16995, 16996, 16997, 21673
<code>\textPUscm</code> 17963, 17964, 21707	<code>\textrhd</code> . . 19213, 19214, 21148, 21799	<code>\textrtails</code> . 17011, 17012, 17013, 21676
<code>\textPUscp</code> 17966, 17967, 21708	<code>\textRho</code> 1293, 17254	<code>\textrtailt</code> . 17029, 17030, 17031, 21679
<code>\textPUuncrfemale</code> 19837, 19838, 21880	<code>\textrho</code> . . . 1293, 17319, 20797	
<code>\textqplig</code> . 16827, 16829, 21625	<code>\textrhoinferior</code> . . . 17986, 20814	
<code>\textquaternnote</code> . . 19781, 21299	<code>\textrhooka</code> 17999, 18001, 21710	
<code>\textquestiondown</code> . . 784, 1160, 15768, 16214	<code>\textrhooke</code> 18004, 18006, 21711	
<code>\textquotedbl</code> 15602, 16067	<code>\textrhookepsilon</code> 18008, 18010, 21712	
<code>\textquotedblleft</code> . 15670, 15908, 18337, 20452	<code>\textrhooknearrow</code> . 20069, 21425	
	<code>\textrhookopeno</code> . 18012, 18014, 21713	

<code>\texttrtailz</code> . 17057, 17058, 17059, 21688	<code>\textsetminusminus</code> 15624, 18820, 20982	<code>\textsqdoublecup</code> . 20217, 20218, 21482, 21905
<code>\texttrtimes</code> 19244, 21160	<code>\textseveneighths</code> 18587	<code>\textsqsubset</code> 19109, 21109
<code>\texttsagittarius</code> . . 19748, 19749, 21295, 21867	<code>\textseveninferior</code> . 18433, 20852	<code>\textsqsubsetq</code> . . . 19117, 21113
<code>\textSampigreek</code> . . . 1301, 17361	<code>\textsevensuperior</code> . 18401, 20836	<code>\textsqsubsetneq</code> . 19306, 19307, 21188, 21809
<code>\textsampigreek</code> . . . 1301, 17363	<code>\textsf</code> 600, 13941, 13944	<code>\textsqsupset</code> 19113, 21111
<code>\textsaturn</code> 19712, 19713, 21283, 21855	<code>\textsharp</code> 19794, 21304	<code>\textsqsupseteq</code> . . . 19121, 21115
<code>\textsc</code> 605	<code>\textshuffle</code> 20185, 21468	<code>\textsqsupsetneq</code> . 19309, 19310, 21189, 21810
<code>\textscA</code> 17951, 17952	<code>\textSigma</code> . 1294, 17256, 20777	<code>\textSquareCastShadowBottom-Right</code> 20011, 21398
<code>\textscB</code> 17092, 17093	<code>\textsigma</code> . . 1294, 17323, 20799	<code>\textSquareCastShadowTopRight</code> 20014, 21399
<code>\textscD</code> 17954, 20806	<code>\textsim</code> . . 18900, 18901, 21014, 21758	<code>\textSquaredots</code> . . . 18893, 21011
<code>\textscE</code> 17955, 17956	<code>\textsimeq</code> 18916, 21021	<code>\textSquareShadowBottomRight</code> 20005, 21396
<code>\textscF</code> . . . 20377, 20379, 21916	<code>\textsinferior</code> 18471, 20871	<code>\textSquareTopRight</code> 20008, 21397
<code>\textscG</code> . . . 16901, 16902, 20748	<code>\textSixFlowerAlternate</code> . 19972, 21381	<code>\textsslash</code> . 20352, 20353, 21542, 21913
<code>\textsch</code> 17100, 17101	<code>\textSixFlowerAltPetal</code> . . 19982, 21386	<code>\textstar</code> 19234, 21156
<code>\textschwa</code> . 16869, 16870, 20743	<code>\textSixFlowerOpenCenter</code> 19968, 21379	<code>\textsterling</code> 15713, 16150, 16151, 16152, 21590, 21591
<code>\textschwainferior</code> . 18457, 20864	<code>\textSixFlowerPetalRemoved</code> 19965, 21378	<code>\textStigmagreek</code> . . . 1253, 17348
<code>\textsci</code> . . . 16928, 16929, 20753	<code>\textsixinferior</code> . . . 18431, 20851	<code>\textstigmagreek</code> . . . 1253, 17350
<code>\textScissorHollowRight</code> . 19865, 21330	<code>\textSixStar</code> 19955, 21373	<code>\textstmarydbaro</code> 19377, 19378, 21815
<code>\textScissorRight</code> . 19859, 19860, 19861, 21328, 21884, 21885	<code>\textsixsuperior</code> . . . 18399, 20835	<code>\textstretchc</code> 17083, 17084, 17085, 17086, 21694, 21695
<code>\textScissorRightBrokenBottom</code> 19855, 19856, 19857, 21882, 21883	<code>\textSixteenStarLight</code> . . . 19963, 21377	<code>\textstretchcvar</code> . . . 17086, 21695
<code>\textScissorRightBrokenTop</code> 19863, 21329	<code>\textsixteenthnote</code> . 19788, 21301	<code>\textsubbreve</code> . . . 15980, 16009, 16036, 18096, 18098
<code>\textscj</code> 17957, 17958	<code>\textsl</code> 606	<code>\textsubcircum</code> . . 15977, 15978, 16008, 16035, 18048, 18050, 18064, 18066, 18124, 18126, 18152, 18154, 18208, 18210, 18220, 18222
<code>\textscK</code> . . . 17959, 17961, 21706	<code>\textslasc</code> . 16831, 16832, 16834, 20738, 21626, 21627	<code>\textsubbring</code> 15970, 15971, 16007, 16034, 18016, 18018
<code>\textscL</code> 17108, 17109	<code>\textslashdiv</code> 20361, 21546	<code>\textSubset</code> 19260, 21167
<code>\textscM</code> . . 17962, 17964, 21707	<code>\textsmallin</code> 18794, 20971	<code>\textsubset</code> 19085, 21097
<code>\textscN</code> . . . 16964, 16965, 20754	<code>\textsmallowns</code> . . . 18802, 20974	<code>\textsubseteq</code> 19093, 21101
<code>\textscOelig</code> 16971, 16972	<code>\textsmile</code> 19365, 21213	<code>\textsubseteqq</code> 20312, 21526
<code>\textscorpio</code> 19745, 19746, 21294, 21866	<code>\textsmiley</code> 19679, 19680, 21274, 21842	<code>\textsubsetneq</code> 19101, 21105
<code>\textscP</code> . . . 17965, 17967, 21708	<code>\textSnowflake</code> . . . 19986, 21388	<code>\textsubtilde</code> 15981, 15982, 16010, 16037, 18068, 18070, 18100, 18102, 18216, 18218
<code>\textscr</code> . . . 17006, 17007, 20757	<code>\textSnowflakeChevron</code> . . 19984, 21387	<code>\textsubumlaut</code> . . 15968, 15969, 16006, 16033, 18212, 18214
<code>\textscripta</code> 16839, 16840, 16841, 20739, 21629	<code>\textSnowflakeChevronBold</code> 19988, 21389	<code>\textsucc</code> 19067, 21088
<code>\textscriptg</code> 16898, 16899, 16900, 20747, 21645	<code>\textSoccerBall</code> . . 19842, 19843, 21881	<code>\textsuccapprox</code> . . . 20304, 21522
<code>\textscriptv</code> 17040, 17041, 20762	<code>\textspadesuitblack</code> 2592, 19760, 19761, 21871	<code>\textsucccurlyeq</code> . . 19071, 21090
<code>\textscu</code> . . . 17971, 17972, 20807	<code>\textspadesuitwhite</code> 19773	<code>\textsucceq</code> 20280, 21510
<code>\textscy</code> . . . 17054, 17055, 20766	<code>\textSparkle</code> 19990, 21390	<code>\textsucceqq</code> 20292, 21516
<code>\textSearrow</code> 18739, 20946	<code>\textSparkleBold</code> . . 19992, 21391	<code>\textsuccnapprox</code> . . 20310, 21525
<code>\textsearrow</code> 18614, 18615, 20896, 21739	<code>\textSphericalangle</code> 18839, 18840, 18841, 18842, 20990, 21748, 21749, 21750	
<code>\textSech</code> 20414, 21559	<code>\textsqcap</code> 19125, 21117	
<code>\textsecond</code> 18363, 20825	<code>\textsqcup</code> 19127, 21118	
<code>\textsecstress</code> 17159, 17160	<code>\textsqdoublecap</code> . 20212, 20213, 21480, 21904	
<code>\textsection</code> 15721, 16161, 16162, 16163, 21593, 21594		
<code>\textSePa</code> 20400, 21553		
<code>\textservicemark</code> 18524		

<code>\textsuccneq</code>	20286, 21513	<code>\texttriplesim</code> . . .	18934, 18935, 21029, 21761	<code>\textunlhd</code> .	19216, 19217, 19218, 21149, 21800, 21801
<code>\textsuccneqq</code>	20298, 21519	<code>\textTslash</code>	16574	<code>\textunrhd</code>	19220, 19221, 19222, 21150, 21802, 21803
<code>\textsuccnsim</code>	19318, 21193	<code>\textttslash</code>	16576	<code>\textup</code>	607
<code>\textsuccsim</code>	19077, 21093	<code>\textttslig</code>	17127, 17128	<code>\textUParrow</code> . . .	19584, 19585, 21240, 21821
<code>\textsum</code>	18808, 20977	<code>\textttt</code>	601	<code>\textUparrow</code>	18721, 20939
<code>\textsun</code> . .	19684, 19685, 21276, 21843	<code>\textTumbler</code>	19375, 21218	<code>\textuparrow</code>	18595, 20889
<code>\textSunCloud</code>	19845, 21323	<code>\textturna</code> .	16835, 16836, 16837, 21628	<code>\textUpdownarrow</code>	18733, 20943
<code>\textSunshineOpenCircled</code>	19980, 21385	<code>\textturnh</code> .	16910, 16911, 16912, 16913, 21647, 21648	<code>\textupdownarrow</code> .	2595, 18607, 20893
<code>\textSupset</code>	19264, 21169	<code>\textturnk</code> .	17105, 17106, 17107, 21699	<code>\textupdownarrows</code>	18691, 20927
<code>\textsupset</code>	19087, 21098	<code>\textturnlonglegr</code> .	16985, 16986, 16987, 21670	<code>\textupdownharpoonleftright</code> . . .	. . . . . 20111, 21440
<code>\textsupseteq</code>	19095, 21102	<code>\textturnm</code>	16944, 16945, 16946, 16947, 21658, 21659	<code>\textupdownharpoonrightleft</code> . . .	. . . . . 20108, 21439
<code>\textsupseteqq</code>	20316, 21528	<code>\textturnmrleg</code> . .	16949, 16950, 16951, 21660	<code>\textupdownharpoons</code> . . .	20138, 21449
<code>\textsupsetneq</code>	19103, 21106	<code>\textturnr</code> .	16980, 16981, 16982, 16983, 21668, 21669	<code>\textupharpoonleft</code>	18673, 20921
<code>\textsurd</code>	18828, 20985	<code>\textturnrrtail</code> . . .	16989, 16990, 16991, 21671	<code>\textupharpoonright</code>	18670, 20920
<code>\textSwarrow</code>	18741, 20947	<code>\textturnsck</code>	17107, 21699	<code>\textupplus</code>	20187, 21469
<code>\textswarrow</code>	18617, 20897	<code>\textturnscripta</code> . .	16843, 16844, 16845, 16846, 21630, 21631	<code>\textupmodels</code>	20343, 21538
<code>\TextSymbolUnavailable</code> .	15574, 15575, 15577	<code>\textturnt</code> .	17025, 17026, 17027, 21678	<code>\textUpsilon</code>	1296, 17215, 17260, 17274, 20778
<code>\textTape</code>	19869, 21332	<code>\textturnv</code> .	17042, 17043, 17044, 17045, 20763, 21682, 21683	<code>\textupsilon</code> .	1296, 17327, 17339, 17344, 20801
<code>\textTau</code>	1295, 17258	<code>\textturnw</code>	17046, 17047, 17048, 17049, 20764, 21684, 21685	<code>\textupsilonacute</code> .	17285, 17343
<code>\texttau</code> . . .	1295, 17325, 20800	<code>\textturny</code> .	17050, 17051, 17052, 17053, 20765, 21686, 21687	<code>\textupspoon</code>	20347, 21540
<code>\texttaurus</code>	19727, 19728, 21288, 21860	<code>\textTwelveStar</code> . . .	19961, 21376	<code>\textupstep</code>	20366, 20367
<code>\texttctclig</code>	17133, 17134	<code>\texttwofifths</code>	18571	<code>\textupstararrows</code> . .	18698, 20930
<code>\textTent</code>	19853, 21327	<code>\texttwoheaddownarrow</code> .	18634, 20905	<code>\textupstarharpoons</code>	20117, 21442
<code>\texttेशlig</code>	17129, 17130, 17131, 21701	<code>\texttwoheadleftarrow</code> . . .	18623, 20900	<code>\texturanus</code>	19715, 19716, 21284, 21856
<code>\texttherefore</code> . . .	18885, 18886, 21008	<code>\texttwoheadrightarrow</code> . .	18630, 20903	<code>\texturcorner</code>	19357, 21209
<code>\textTheta</code> .	1256, 17236, 20773	<code>\texttwoheaduparrow</code> . . .	18627, 20902	<code>\textValve</code>	20181, 21466
<code>\texttheta</code> . .	1256, 17301, 20789	<code>\texttwoinferior</code> . . .	18423, 20847	<code>\textvarhexagon</code> . .	20357, 21544
<code>\textthird</code>	18365, 20826	<code>\texttwoonotes</code>	19786, 21300	<code>\textvarobar</code>	20152, 21896
<code>\textThorn</code>	15832, 16279, 20730	<code>\texttwosuperior</code> .	15742, 16184, 20727	<code>\textvarsigma</code>	17321, 20798
<code>\textthorn</code> .	15901, 16348, 16350, 20731	<code>\texttwothirds</code>	18567	<code>\textVDash</code>	19194, 19195, 21142, 21792
<code>\textthreeighths</code>	18583	<code>\texttudots</code>	19337, 21200	<code>\textVdash</code>	19186, 19187, 21139, 21791
<code>\textthreeifths</code>	18573	<code>\texttuinferior</code>	17978, 20810	<code>\textvDash</code>	19182, 19183, 19184, 21138, 21789, 21790
<code>\textthreeinferior</code> . .	18425, 20848	<code>\texttulcorner</code>	19355, 21208	<code>\textvdash</code> .	19162, 19163, 21131, 21783
<code>\textthreequarters</code> .	15766, 16212	<code>\texttuncrfemale</code> . .	19836, 19838, 21880	<code>\textvdotdot</code>	18891, 21010
<code>\textthreesuperior</code>	15744, 16186, 20728	<code>\textunderscore</code>	571, 5087, 5088, 5090, 15628, 16129, 16130, 21588	<code>\textvdots</code>	19333, 21198
<code>\texttie</code> . . .	16013, 16040, 17199			<code>\textvee</code>	18859, 20997
<code>\texttilde</code> . . .	4629, 15541, 15553, 15565, 15600, 15994, 16021, 17176			<code>\textveebar</code>	19230, 21154
<code>\texttildelow</code>	16010, 16037, 17185			<code>\textveedot</code>	20028, 21406
<code>\texttimes</code> .	15916, 20460, 21575			<code>\textveedoublebar</code> .	20229, 21486
<code>\texttinferior</code>	18473, 20872			<code>\textvertline</code>	16140, 21589
<code>\texttop</code> . .	19171, 19172, 21134, 21786			<code>\textvibyi</code>	17020, 17021
<code>\texttrademark</code> . . .	15680, 18526			<code>\textvibyy</code>	17139, 17140
<code>\texttriangle</code>	18786, 20967				
<code>\texttriangleleft</code> . . .	18994, 21055				
<code>\texttriangleleft</code> . . .	19609, 21248				
<code>\texttriangleright</code> . .	19595, 21243				

<code>\textVier</code>	20410, 21557	<code>\theHHmpfootnote</code>	7206	<code>\thm@indent</code>	7713, 7741
<code>\textvinferior</code>	17980, 20811	<code>\theHlItem</code>	7193, 7199, 7200, 7201, 7202	<code>\thm@notefont</code>	7715, 7743, 7774
<code>\textViPa</code>	20396, 21551	<code>\theHllisting</code>	3710	<code>\thm@postskip</code>	7721, 7749, 7780
<code>\textvirgo</code>	19739, 19740, 21292, 21864	<code>\theHlstlisting</code>	3706	<code>\thm@preskip</code>	7720, 7748, 7779
<code>\textvisiblespace</code>	19417	<code>\theHmpfootnote</code>	7204	<code>\thm@space@setup</code>	7718, 7746, 7777
<code>\textVvdash</code>	19189, 21140	<code>\theHpage</code>	8469	<code>\thm@swap</code>	7712, 7740, 7773
<code>\textwasylozenge</code>	19347, 21205	<code>\theHparagraph</code>	7187, 7188	<code>\thmheadnl</code>	7711, 7739, 7772
<code>\textwedge</code>	18854, 20995	<code>\theHparentequation</code>	7692, 7697	<code>\Thorn</code>	15830, 16277, 20730
<code>\textwedgedot</code>	20030, 21407	<code>\theHpart</code>	7173	<code>\thorn</code>	15899, 16348, 20731
<code>\textWheelchair</code>	19799, 21306	<code>\theHsection</code>	7170, 7176, 7183, 7185, 7189, 7190, 7320	<code>\threeinferior</code>	20848
<code>\textWomanFace</code>	20424, 20425, 21564, 21920	<code>\theHslide</code>	8928	<code>\threesuperior</code>	20728
<code>\textwon</code>	18483	<code>\theHslidesection</code>	8933, 8935, 8971, 8975	<code>\tildel</code>	16933, 21654
<code>\textwtp</code>	18518, 20877	<code>\theHslidesubsection</code>	8934, 9022, 9026	<code>\times</code>	21575
<code>\textwr</code>	18907, 18908, 21017, 21759	<code>\theHsubequation</code>	7666	<code>\tinferior</code>	20872
<code>\textWritingHand</code>	19878, 19879, 21336, 21887	<code>\theHsubparagraph</code>	7188	<code>\tiny</code>	629
<code>\textwynn</code>	16681, 16682	<code>\theHsubsection</code>	7185, 7186	<code>\title</code>	6736, 6738
<code>\textXi</code>	1275, 17248, 20775	<code>\theHsubsubsection</code>	7186, 7187	<code>\TMP@EnsureCode</code>	4924, 4931, 4932, 4933, 4934, 4935, 4936, 4937, 4938, 4939, 4940, 4941, 4942, 4943, 4944, 4945, 4946, 4947, 4948, 4949, 4950, 4951, 4952, 4953, 4954, 4955, 4956, 4957
<code>\textxi</code>	1275, 17313, 20795	<code>\theHtable</code>	7178, 7182	<code>\tocappendix</code>	1709
<code>\textxinferior</code>	18455, 20863	<code>\theHtheorem</code>	7189	<code>\tocchapter</code>	1708
<code>\textXSolid</code>	19896, 21344	<code>\theHthm</code>	7190	<code>\toclevel@chapter</code>	3697
<code>\textXSolidBold</code>	19898, 21345	<code>\theHy@tempcnt</code>	5203, 5211, 5218	<code>\toclevel@figure</code>	3703
<code>\textXSolidBrush</code>	19900, 21346	<code>\thelisting</code>	3710	<code>\toclevel@listing</code>	3711
<code>\textxswup</code>	19807, 21879	<code>\thelstlisting</code>	3706	<code>\toclevel@lstlisting</code>	3707
<code>\textyen</code>	15717, 16156	<code>\thempfn</code>	7840, 7943, 8035, 8047	<code>\toclevel@paragraph</code>	3701
<code>\textYinYang</code>	19671, 19672, 19673, 19674, 21272, 21838, 21839, 21840	<code>\theoremautorefname</code>	3366, 3384, 3402, 3420, 3438, 3456, 3474, 3512, 3532, 3550, 3568, 9368	<code>\toclevel@part</code>	3693, 3695
<code>\textyogh</code>	17064, 17065, 20767	<code>\thepage</code>	2615, 5321, 6832, 6858, 6873, 7440, 7448, 7475, 8312, 8335, 8364, 8465, 8512, 8591, 8639, 8800, 8817, 8830, 8834, 8846, 9125, 9145, 9162, 9280	<code>\toclevel@section</code>	3698
<code>\textzeroinferior</code>	18419, 20845	<code>\therefore</code>	18884, 21008	<code>\toclevel@subfigure</code>	2629
<code>\textzerosuperior</code>	18391, 20831	<code>\theslideheading</code>	8954	<code>\toclevel@subparagraph</code>	3702
<code>\textzerothirds</code>	18591	<code>\theslidesection</code>	8942, 8949, 8957, 8963, 8965, 8967, 8973, 8983	<code>\toclevel@subsection</code>	3699
<code>\textZeta</code>	1254, 17232	<code>\theslidesubheading</code>	8955, 9006	<code>\toclevel@subsubsection</code>	3700
<code>\textzeta</code>	1254, 17297, 20787	<code>\theslidesubsection</code>	8994, 9001, 9008, 9014, 9016, 9018, 9024, 9034	<code>\toclevel@subtable</code>	2630
<code>\textZwdr</code>	20416, 21560	<code>\Theta</code>	17235, 20773	<code>\toclevel@table</code>	3704
<code>\textZwPa</code>	20402, 21554	<code>\theta</code>	17300, 20789	<code>\tocparagraph</code>	1713
<code>\TH</code>	15830, 15831, 16277, 16278	<code>\third</code>	18364, 20826	<code>\tocpart</code>	1707
<code>\th</code>	15899, 15900, 16348, 16349	<code>\This@name</code>	7219, 7220, 7238, 7239	<code>\tocsection</code>	1710
<code>\thaa</code>	20621	<code>\thispdfpagelabel</code>	6837	<code>\tocsubsection</code>	1711
<code>\thebookmark@seq@number</code>	15086	<code>\ThisShouldNotHappen</code>	14662	<code>\tocsubsubsection</code>	1712
<code>\theequation</code>	7241, 7598, 7629, 7657, 7693	<code>\thm@headfont</code>	7714, 7742	<code>\toks</code>	9133, 9134, 9136, 15403, 15408, 15474, 15479
<code>\thefootnote</code>	7851, 8054	<code>\thm@headpunct</code>	7716, 7744, 7775	<code>\toks@</code>	174, 211, 504, 507, 510, 528, 529, 863, 870, 902, 903, 1345, 1368, 1371, 1373, 1881, 1882, 3580, 3581, 3583, 4188, 4192, 4193, 4201, 4637, 4638, 4820, 4822, 5418, 5423, 5429, 5435, 5436, 5439, 5539, 5544, 5548, 5552, 6953, 6955, 7041, 7043, 7093,
<code>\theHchapter</code>	7180, 7181, 7182, 7183, 7322	<code>\thm@headsep</code>	7717, 7745, 7776		
<code>\theHenumi</code>	7199				
<code>\theHenumii</code>	7200				
<code>\theHenumiii</code>	7201				
<code>\theHenumiv</code>	7202				
<code>\theHequation</code>	7170, 7242, 7599, 7630, 7658, 7666, 7693, 7697				
<code>\theHfigure</code>	7177, 7181				
<code>\theHHfootnote</code>	7203, 7206				

7105, 7457, 7461, 7497,
7502, 7921, 7924, 8670,
8671, 8904, 8909, 8911,
8914, 15402, 15408, 15473,
15479

\top 19170, 21134
\topmargin 8525
\triangle 18785, 20967
\triangleleft 18993, 21055
\trianglelefteq 19608, 21248
\trianglelefteq 19218, 21801
\triangleright 19594, 21243
\trianglerighteq 19222, 21803
\triplesim 18933, 21029
\trivlist 7710, 7738, 7771
\tryhyper@link 5296, 5298
\ttfamily 611
\ttl@b 7508, 7513
\ttl@gobblecontents 7517
\ttl@Hy@PatchSaveWrite . 7491,
7495
\ttl@Hy@refstepcounter ... 7507
\ttl@Hy@saveanchor 7486, 7510
\ttl@Hy@SavedCurrentHref 7490,
7501
\ttl@Hy@steplink 7484
\ttl@savewrite 7497, 7499
\Tumbler 19374, 21218
\turnv 20763
\turnw 20764
\turny 20765
\tw@ 5368, 5374, 5375, 5376, 5381,
5387, 5388, 5389, 15403,
15408, 15474, 15479
\TwelveStar 19960, 21376
\twoheaddownarrow 18633, 20905
\twoheadleftarrow . 18622, 20900
\twoheadrightarrow 18629, 20903
\twoheaduparrow . 18626, 20902
\twoinferior 20847
\twonotes 19785, 21300
\twosuperior 20727
\TX@endtabularx .. 7914, 7921,
7927
\typeout 5, 6, 7, 19, 26, 27,
36, 131, 155, 158, 159, 160,
5569, 15500, 21926

U

\U .. 15950, 17400, 17423, 17490,
17570, 17771, 17773, 17795,
17797, 17807, 17809
\u .. 15949, 16000, 16027, 16055,
16358, 16360, 16400, 16402,
16420, 16422, 16453, 16455,
16456, 16526, 16528, 16586,
16588

\ubar 17035, 21680
\udesc 16913, 21648
\udots 19336, 21200
\UHOORN .. 20477, 20588, 20589,
20590, 20591, 20592
\uhorn 3554, 3561, 20471, 20528,
20529, 20530, 20531, 20532
\uinferior 20810
\ulcorner 19354, 21208
\UnDef 13120
\unhbox ... 7818, 12111, 14354,
14476, 14508, 14532, 14560,
14589
\unhcopy 14456
\unichar 2336
\Unicode 1421
\unlhd 19215, 21149
\unrestored@protected@xdef 7840,
7851, 7997, 8004, 8047, 8054
\unrhd 19219, 21150
\unskip . 7704, 7708, 7735, 7768,
7829, 8297, 9211, 9215,
9219, 9224
\UParrow 19583, 21240
\Uparrow 18720, 20939
\uparrow 20889
\Updownarrow ... 18732, 20943
\updownarrow 18606, 20893
\updownarrows ... 18690, 20927
\updownharpoonleftright . 20110,
21440
\updownharpoonrightleft . 20107,
21439
\updownharpoons . 20137, 21449
\upharpoonleft ... 18672, 20921
\upharpoonright .. 18669, 20920
\uplus 20186, 21469
\upmodels 20342, 21538
\upshape . 617, 7715, 7743, 7774
\Upsilon 17259, 20778
\upsilon 17326, 20801
\upspoon 20346, 21540
\upuparrows 18697, 20930
\upupharpoons ... 20116, 21442
\upvdash 19177, 21787
\Uranus 19716, 21856
\uranus 19714, 21284
\urcorner 19356, 21209
\Url 5267
\url 5266, 5270
\url@ 5270, 5271
\use@file 5500, 5502, 5509
\usefont 596
\utf@viii@undeferr 558
\UTFviii@four@octets 2332, 2341
\UTFviii@three@octets ... 2331
\UTFviii@two@octets 2330

V

\v .. 15544, 15556, 15568, 15690,
15695, 15703, 15705, 15960,
15997, 16024, 16054, 16378,
16380, 16382, 16384, 16412,
16414, 16490, 16492, 16510,
16512, 16546, 16548, 16562,
16564, 16570, 16572, 16620,
16622, 16696, 16698, 16700,
16702, 16703, 16705, 16707,
16709, 16711, 16720, 16722,
16724, 16726, 16732, 16733,
16795, 16797
\V@@@footnotetext 7984
\V@@footnotetext 7970
\value .. 6856, 7308, 7309, 7311,
7312, 8251, 8277, 8529,
8695, 10760
\Valve 20180, 21466
\vara 16841, 21629
\varangle 18840, 21748
\varbigcirc 19628, 21827
\varcurlyvee 19255, 21805
\varcurlywedge ... 19258, 21806
\VarFlag 19802, 21878
\varg 16900, 21645
\varhexagon 20356, 21544
\vari 16927, 21653
\varint 18869, 21754
\varnothing 18782, 18784, 21744
\varoast 19149, 21781
\varobslash 20157, 21899
\varocircle 19146, 21780
\varodot 19142, 21778
\varogreatherthan .. 20169, 21902
\varoint 18876, 21755
\varolessthan 20166, 21901
\varomega 16977, 21667
\varominus 19133, 21775
\varopeno 16854, 21634
\varoplus 19130, 21774
\varoslash 19139, 21777
\varotimes 19136, 21776
\varovee 18862, 21753
\varowedge 18857, 21752
\varparallel 20353, 21913
\varparallelinv 19420, 21816
\varprop 18831, 21747
\varsigma 20798
\varsqsubsetneq ... 19307, 21809
\varsqsupsetneq ... 19310, 21810
\vartimes 16263, 21598
\vavyod 17946
\vbox .. 6490, 6491, 6492, 6493,
6805, 8523
\VDash 19193, 21142
\Vdash 19185, 21139

[illegible]

10126, 10130, 10137, 10140,	14992, 15097, 15098, 15099,	<code>\zref@extractdefault</code>
10144, 10147, 11084, 11085,	15100, 15101, 15102, 15103,	<code>\zref@ifrefcontainsprop</code> . .
11090, 11091, 11603, 11627,	15104, 15105, 15322, 15444	<code>\zref@ifrefundefined</code>
11847, 12158, 12172, 12536,	<code>\z@skip</code> 5178	<code>\zref@labelbyprops</code>
12537, 12542, 12543, 13344,	<code>\za</code> 20647	<code>\zref@refused</code>
13411, 14012, 14307, 14367,	<code>\zay</code> 20635	<code>\Zwdr</code> 20415,
14787, 14818, 14823, 14846,	<code>\zeroinferior</code> 20845	<code>\ZWNJ</code>
14852, 14881, 14915, 14921,	<code>\zerosuperior</code> 20831	<code>\ZwPa</code> 20401,
14940, 14951, 14956, 14987,	<code>\zeta</code> 17296, 20787	