

Hypertext marks in L^AT_EX

Sebastian Rahtz

Email: [sebastian.rahtz at oucs.ox.ac.uk](mailto:sebastian.rahtz@oucs.ox.ac.uk)

Heiko Oberdiek

Email: [heiko.oberdiek at googlemail.com](mailto:heiko.oberdiek@gmail.com)

2010/03/19 v6.80r

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 EuroT_EX 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 L^AT_EX”

2 Contents

1	Documentation overview for hyperref	1
2	Contents	2
3	File hycheck.tex	7
4	Package options and setup	10
4.1	Save catcodes	10
4.2	Compatibility with format dumps	12
4.3	Switches	12
5	Common help macros	14
5.1	Macros for recursions	14
5.2	Babel's protection of shorthand characters	14
5.3	Coordinate transformations	15
6	Dealing with PDF strings	16
6.1	Description of PDF strings	16
6.2	Definition of <code>\pdfstringdef</code>	16
6.2.1	Preprocessing	17
6.2.2	Expansion	22
6.2.3	Postprocessing	23
6.3	Encodings	27
6.3.1	XeTeX	27
6.3.2	Workaround for package linguex	29
6.3.3	PD1 encoding	29
6.3.4	PU encoding	29
6.4	Additional user commands	30
6.4.1	<code>\texorpdfstring</code>	30
6.4.2	Hooks for <code>\pdfstringdef</code>	30
6.5	Help macros for expansion	31
6.5.1	<code>\ignorespaces</code>	31
6.5.2	Babel languages	31
6.5.3	CJK patch	36
6.5.4	CJK bookmarks	37
6.5.5	CJK unicode	38
6.5.6	<code>\@inmathwarn-Patch</code>	43
6.5.7	Unexpandable spaces	44
6.5.8	Marker for commands	44
6.5.9	<code>\hspace fix</code>	44
6.5.10	Fix for AMS classes	45
6.5.11	Reference commands	45
6.5.12	Redefining the defining commands	47
6.5.13	<code>\ifnextchar</code>	48
6.5.14	<code>\@protected@testoptifnextchar</code>	49
6.6	Help macros for postprocessing	49
6.6.1	Generic warning.	49
6.6.2	Protecting spaces	49
6.6.3	Remove grouping braces	50
6.6.4	Catcode check	51
6.6.5	Check for wrong glyphs	55
6.6.6	Replacing tokens	56

6.6.7	Support for package <code>xspace</code>	56
6.6.8	Converting to Unicode	57
6.6.9	Support for UTF-8 input encoding	59
7	Support of other packages	62
7.1	Class memoir	62
7.2	Package subfigure	62
7.3	Package xr and xr-hyper	63
8	Help macros for links	64
9	Options	65
9.1	Help macros	65
9.2	Defining the options	67
10	Options for different drivers	71
11	Options to add extra features	73
12	Language options	75
13	Options to change appearance of links	81
14	Bookmarking	81
15	PDF-specific options	83
15.1	PDF/A	93
15.2	Patch for babel's <code>\texttilde</code>	94
15.2.1	Driver loading	95
15.2.2	Bookmarks	98
16	User hypertext macros	101
17	Underlying basic hypertext macros	105
18	Compatibility with the <i>BT_EX2html</i> package	108
19	Forms creation	108
19.1	Field flags	109
19.1.1	Declarations of field flags	110
19.1.2	Set submit flags	113
19.1.3	Set annot flags in fields	113
19.1.4	Pushbutton field	114
19.1.5	Check box field	114
19.1.6	Radio button field	114
19.1.7	Text fields	115
19.1.8	Choice fields	115
19.2	Choice field	116
19.3	Forms	118
20	Setup	123
21	Low-level utility macros	124
22	Localized nullifying of package	125

23 Package nohyperref	126
24 The Mangling Of Aux and Toc Files	127
25 Title strings	128
26 Page numbers	129
27 Every page	129
27.1 PDF /PageLabels	130
27.1.1 pdfTeX and VTeX	133
27.1.2 xetex	134
27.1.3 pdfmarkbase, dvipdfm, xetex	135
28 Automated L^AT_EX hypertext cross-references	136
29 Package lastpage support	140
30 Package ifthen support	142
31 Package titlesec and titletoc support	142
32 Package varioref support	143
33 Package longtable support	143
34 Equations	144
35 Footnotes	147
36 Float captions	151
37 Bibliographic references	154
37.1 Package harvard	157
37.2 Package chicago	158
38 Page numbers	159
39 Table of contents	160
40 New counters	162
41 AMSL^AT_EX compatibility	162
41.1 \@addtoreset and \numberwithin patches	163
42 Included figures	164
43 hyperindex entries	164
44 Compatibility with foiltex	167
45 Compatibility with seminar slide package	167

46	Configuration files	176
46.1	PS/PDF strings	176
46.2	pdftex	177
46.2.1	Fix for problem with different nesting levels	190
46.3	hypertex	190
46.4	dviwindo	192
46.5	dvipdfm/xetex dvi to PDF converter	197
46.6	VT _E X typesetting system	205
46.7	Fix for Adobe bug number 466320	217
46.8	Direct pdfmark support	217
46.9	Rokicki's dvips	230
46.10	VT _E X's vtexpdfmark driver	232
46.11	Textures	233
46.12	dvipsone	237
46.13	TeX4ht	240
47	Driver-specific form support	242
47.1	pdfmarks	242
47.2	HyperTeX	249
47.3	TeX4ht	250
47.4	pdfTeX	252
47.5	dvipdfm, xetex	259
47.6	Common forms part	267
48	Bookmarks in the PDF file	273
48.1	Bookmarks	273
48.1.1	Rerun warning	276
48.1.2	Driver stuff	276
49	Compatibility with koma-script classes	282
50	Encoding definition files for encodings of PDF strings	282
50.1	PD1 encoding	283
50.2	PU encoding	290
50.2.1	NFSS2 accents	290
50.2.2	Basic Latin: U+0000 to U+007F	292
50.2.3	Latin-1 Supplement: U+0080 to U+00FF	294
50.2.4	Latin Extended-A: U+0080 to U+017F	297
50.2.5	Latin Extended-B: U+0180 to U+024F	302
50.2.6	Spacing Modifier Letters: U+02B0 to U+02FF	304
50.2.7	Combining Diacritical Marks: U+0300 to U+036F	304
50.2.8	Greek and Coptic: U+0370 to U+03FF	305
50.2.9	Cyrillic: U+0400 to U+04FF	307
50.2.10	Thai: U+0E00 to U+0E7F	318
50.2.11	Latin Extended Additional: U+1E00 to U+1EFF	318
50.2.12	General Punctuation: U+2000 to U+206F	320
50.2.13	Superscripts and Subscripts: U+2070 to U+209F	321
50.2.14	Currency Symbols: U+20A0 to U+20CF	322
50.2.15	Letterlike Symbols: U+2100 to U+214F	323
50.2.16	Arrows: U+2190 to U+21FF	323
50.2.17	Mathematical Operators: U+2200 to U+22FF	323
50.2.18	Miscellaneous Technical: U+2300 to U+23FF	323
50.2.19	Control Pictures: U+2400 to U+243F	323

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF	324
50.2.21 Box Drawing: U+2500 to U+257F	326
50.2.22 Miscellaneous Symbols: U+2600 to U+26FF	326
50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF	326
50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F	327
50.2.25 Miscellaneous	327
50.2.26 Aliases	327
50.3 PU encoding, additions for VnT _E X	327
50.4 PU encoding, additions for Arabi	330
51 End of file hycheck.tex	331
52 Index	332

3 File hyccheck.tex

Many commands of \LaTeX 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 \LaTeX '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 \LaTeX .

```
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 }\typeout{\%
36 \space\space Loaded: '\HyC@package' \%
37 \csname ver@\HyC@package.sty\endcsname
38 }\%
39 }\%
40 }\%
41 }
```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX 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 \LaTeX '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#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 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.

```

165 \begingroup
166 \makeother\'%
167 \makeother\=%
168 \edef\x{%
169   \edef\noexpand\x{%
170     \endgroup
171     \noexpand\toks@{%
172       \catcode 96=\noexpand\the\catcode'\noexpand\' \relax
173       \catcode 61=\noexpand\the\catcode'\noexpand\= \relax
174     }%
175   }%
176   \noexpand\x
177 }%
178 \x
179 \makeother\'
180 \makeother\=

```

\Hy@SetCatcodes

```

181 \def\Hy@SetCatcodes{%
182   \makeother\'%
183   \makeother\=%
184   \catcode'\$=3 %
185   \catcode'\&=4 %
186   \catcode'\^=7 %
187   \catcode'\_ =8 %
188   \makeother\| %
189   \makeother\: %
190   \makeother\(%
191   \makeother\)%
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 }

```

\Hy@RestoreCatcodes

```

205 \begingroup
206 \def\x#1{\catcode'\noexpand#1=\the\catcode'#1\relax}%
207 \xdef\Hy@RestoreCatcodes{%
208   \the\toks@
209   \x\$%
210   \x\&%
211   \x\^%
212   \x\_ %
213   \x\| %
214   \x\: %
215   \x\(%

```

```

216 \x\)%
217 \x\[%
218 \x\l%
219 \x\/%
220 \x\!%
221 \x\<%
222 \x\>%
223 \x\.%
224 \x\;%
225 \x\+%
226 \x\-%
227 \x\"%
228 \x\'%
229 }%
230 \endgroup

```

```

231 \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!

```

232 \RequirePackage{ltxcmds}[2010/03/09]
233 \RequirePackage{keyval}[1997/11/10]
234 \RequirePackage{kvsetkeys}[2007/09/29]
235 \RequirePackage{pdfescape}[2007/11/11]
236 \RequirePackage{ifpdf}[2006/02/20]
237 \RequirePackage{ifvtex}
238 \RequirePackage{ifxetex}[2006/08/21]
239 \RequirePackage{hycolor}
240 \RequirePackage{letltxmacro}[2008/06/13]
241 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
242 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
243 \def\Hy@Info#1{\PackageInfo{hyperref}{#1}}

```

4.2 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`.

```

244 \@ifundefined{AfterBeginDocument}{%
245   \def\AfterBeginDocument{\AtBeginDocument}%
246 }{}%

```

4.3 Switches

```

247 \newif\ifHy@typexml
248 \newif\ifHy@activeanchor
249 \newif\ifHy@backref
250 \newif\ifHy@bookmarks
251 \newif\ifHy@bookmarksnumbered
252 \newif\ifHy@bookmarksopen
253 \newif\ifHy@breaklinks
254 \newif\ifHy@centerwindow
255 \newif\ifHy@CJKbookmarks

```

```

256 \newif\ifHy@colorlinks
257 \newif\ifHy@draft
258 \let\Hy@finaltrue\Hy@draftfalse
259 \let\Hy@finalfalse\Hy@drafttrue
260 \newif\ifHy@escapeform
261 \newif\ifHy@figures
262 \newif\ifHy@fitwindow
263 \newif\ifHy@frenchlinks
264 \newif\ifHy@hyperfootnotes
265 \newif\ifHy@hyperindex
266 \newif\ifHy@hypertexnames
267 \newif\ifHy@implicit
268 \newif\ifHy@linktopage
269 \newif\ifHy@localanchorname
270 \newif\ifHy@menubar
271 \newif\ifHy@naturalnames
272 \newif\ifHy@nesting
273 \newif\ifHy@newwindowset
274 \newif\ifHy@newwindow
275 \newif\ifHy@ocgcolorlinks
276 \newif\ifHy@pageanchor
277 \newif\ifHy@pagelabels
278 \newif\ifHy@pdfpagehidden
279 \newif\ifHy@pdfstring
280 \newif\ifHy@plainpages
281 \newif\ifHy@psize
282 \newif\ifHy@raiselinks
283 \newif\ifHy@seminarslides
284 \newif\ifHy@setpagesize
285 \newif\ifHy@texht
286 \newif\ifHy@toolbar
287 \newif\ifHy@unicode
288 \newif\ifHy@usetitle
289 \newif\ifHy@verbose
290 \newif\ifHy@windowui
291 \newif\ifHy@displaydoctitle
292 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

293 \Hy@backreffalse
294 \Hy@bookmarksnumberedfalse
295 \Hy@bookmarksopenfalse
296 \Hy@bookmarkstrue
297 \Hy@breaklinksfalse
298 \Hy@centerwindowfalse
299 \Hy@CJKbookmarksfalse
300 \Hy@escapeformfalse
301 \Hy@figuresfalse
302 \Hy@fitwindowfalse
303 \Hy@hyperfootnotetrue
304 \Hy@hyperindextrue
305 \Hy@hypertexnametrue
306 \Hy@implicittrue
307 \Hy@linktopagefalse
308 \Hy@localanchornamefalse
309 \Hy@menubartrue
310 \Hy@naturalnamesfalse
311 \Hy@nestingfalse

```

```

312 \Hy@newwindowsetfalse
313 \Hy@newwindowfalse
314 \Hy@pageanchortrue
315 \Hy@pagelabelstrue
316 \Hy@pdfpagehiddenfalse
317 \Hy@pdfstringfalse
318 \Hy@plainpagesfalse
319 \Hy@raiselinksfalse
320 \Hy@setpagesizetrue
321 \Hy@texhtfalse
322 \Hy@toolbartrue
323 \Hy@typexmlfalse
324 \Hy@unicodefalse
325 \Hy@usetitlefalse
326 \Hy@verbosefalse
327 \Hy>windowuitrue
328 \Hy@displaydoctitlefalse
329 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

332 \newdimen\@linkdim
333 \let\Hy@driver\@empty
334 \let\MaybeStopEarly\relax
335 \newcount\Hy@linkcounter
336 \newcount\Hy@pagecounter
337 \Hy@linkcounter0
338 \Hy@pagecounter0

```

5.1 Macros for recursions

\Hy@ReturnAfterElseFi The commands \Hy@ReturnAfterElseFi and \Hy@ReturnAfterFi avoid a too deep
 \Hy@ReturnAfterFi \if-nesting especially for recursive macros.

```

339 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
340 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

341 \let\Hy@ReturnEnd\@empty
342 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
343 \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
 \Hy@safe@activesfalse babel is not loaded.

```

344 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
345 \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).

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalcbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalcbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalcbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalcbpdef`. Limitations:
 - Works only in options that use `\hypercalcbpdef` (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 \hypercalcbp{\paperheight-\topmargin-1in
    -\headheight-\headsep}
}
```

`\hypercalcbp`

```
346 \begingroup\expandafter\expandafter\expandafter\endgroup
347 \expandafter\ifx\csname dimexpr\endcsname\relax
348   \def\hypercalcbpdef#1#2{%
349     \begingroup
350       \toks@{}%
351       \HyCal@scan#2\hypercalcbp\@nil
352     \expandafter\endgroup
353     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
354   }%
355 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
356   \toks@\expandafter{\the\toks@ #1}%
357   \ifx\#2\%
358     \else
359       \Hy@ReturnAfterFi{%
360         \HyCal@do#2\@nil
361       }%
362     \fi
363   }%
364 \def\HyCal@do#1#2\@nil{%
365   \ifpackageloaded{calc}{}%
366   \Hy@Warning{%
367     For calculations \string\hypercalcbp\space needs\MessageBreak
368     package calc or e-TeX%
369   }%
370 }%
371 \setlength{\dimen@}{#1}%
```

```

372 \setlength{\dimen@}{0.99626401\dimen@}%
373 \edef\x{%
374   \toks@{%
375     \the\toks@
376     \strip@pt\dimen@
377   }%
378   }\x
379   \HyCal@scan#2\@nil
380 }%
381 \else
382 \def\hypercalcbp#1{%
383   \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
384 }%
385 \def\hypercalcbpdef{\def}%
386 \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 <i>ddd</i>
- Strings are stored either in `PDFDocEncoding`, which is a superset of `ISOLatin1` 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 catcodes 10 until 12.

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

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

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

```
388 \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.

```
389 \escapechar'\%
```

From the view of \TeX an 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.

```
390 \edef\0{\string\0}%
391 \edef\1{\string\1}%
392 \edef\2{\string\2}%
393 \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.

```
394 \ifHy@unicode
395 \edef\8{\string\8}%
396 \edef\9{\string\9}%
397 \fontencoding{PU}%
398 \HyPsd@UTFviii
399 \def\ifpdfstringunicode##1##2{##1}%
400 \else
401 \fontencoding{PD1}%
402 \def\ifpdfstringunicode##1##2{##2}%
403 \fi
404 \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).

```
405 \let\@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).

```
406 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
407 \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.

```
408 \let\{\textbraceleft
409 \let\}\textbraceright
410 \let\\\textbackslash
411 \let\#\textnumbersign
412 \let\$\textdollar
413 \let\%\textpercent
414 \let\&\textampersand
415 % \let\~\textasciitilde
416 \let\_ \textunderscore
417 \let\P\textparagraph
418 \let\ldots\textellipsis
419 \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.

```
420 \def\\{\pdfstringdefWarn\\}%
421 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
422 \def\TeX{\TeX}%
423 \def\LaTeX{\LaTeX}%
424 \def\LaTeXe{\LaTeX2e}%
```

```

425 \def\TeX{e-TeX}%
426 \def\SLiTeX{SLiTeX}%
427 \def\MF{Metafont}%
428 \def\MP{Metapost}%

```

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

```

429 \let\fontencoding\@gobble
430 \let\fontfamily\@gobble
431 \let\fontseries\@gobble
432 \let\fontshape\@gobble
433 \let\fontsize\@gobbletwo
434 \let\selectfont\@empty
435 \let\usefont\@gobblefour
436 \let\emph\@firstofone
437 \let\textnormal\@firstofone
438 \let\textrm\@firstofone
439 \let\textsf\@firstofone
440 \let\texttt\@firstofone
441 \let\textbf\@firstofone
442 \let\textmd\@firstofone
443 \let\textit\@firstofone
444 \let\textsc\@firstofone
445 \let\textsl\@firstofone
446 \let\textup\@firstofone
447 \let\normalfont\@empty
448 \let\rmfamily\@empty
449 \let\sfamily\@empty
450 \let\ttfamily\@empty
451 \let\bfseries\@empty
452 \let\mdseries\@empty
453 \let\itshape\@empty
454 \let\scshape\@empty
455 \let\slshape\@empty
456 \let\upshape\@empty
457 \let\em\@empty
458 \let\rm\@empty
459 \let\Huge\@empty
460 \let\LARGE\@empty
461 \let\Large\@empty
462 \let\footnotesize\@empty
463 \let\huge\@empty
464 \let\large\@empty
465 \let\normalsize\@empty
466 \let\scriptsize\@empty
467 \let\small\@empty
468 \let\tiny\@empty
469 \let\mathversion\@gobble
470 \let\phantom\@gobble
471 \let\vphantom\@gobble
472 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```
474 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%  
475 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%
```

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

```
476 \let\textlatin\@firstofone  
477 \let\IfUndefined\language@group\@firstofone  
478 \csname HyPsd@babel@\language@group\endcsname  
479 }%  
480 \HyPsd@GreekPatch  
481 \HyPsd@SpanishPatch  
  
482 \HyPsd@BabelPatch  
  
483 \let\@safe@activetrue\relax  
484 \let\@safe@activesfalse\relax
```

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

```
485 \let\cyr\relax
```

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

```
486 \let\es@roman\@Roman
```

Package german.

```
487 \let\glqq\textglqq  
488 \let\grqq\textgrqq  
489 \let\glq\textglq  
490 \let\grq\textgrq  
491 \let\flqq\textflqq  
492 \let\frqq\textfrqq  
493 \let\flq\textflq  
494 \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}
```

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

AMS classes.

```
496 \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.

```
497 \let\hspace\HyPsd@hspace
```

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

```
498 \let\label\@gobble
499 \let\index\@gobble
500 \let\glossary\@gobble
501 \let\href\@secondoftwo
502 \let\@mkboth\@gobbletwo
```

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

```
503 \let\ref\HyPsd@ref
504 \let\pageref\HyPsd@pageref
505 \let\nameref\HyPsd@nameref
506 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
507 \let\leavevmode\@empty
508 \let\mbox\@empty
```

`\halign` causes error messages because of the template character `#`.

```
509 \def\halign{\pdfstringdefWarn\halign\@gobble}%
510 \let\ignorespaces\HyPsd@ignorespaces
511 \let\Hy@SectionAnchorHref\@gobble
```

Patch for cjk bookmarks.

```
512 \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 \TeX '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 `\pdfstringdefPreHook`.

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`).

```
513 \Hy@pdfstringtrue
514 \pdfstringdefPreHook
```

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

```
515 \HyPsd@LetUnexpandableSpace\space
516 \HyPsd@LetUnexpandableSpace\ %
517 \HyPsd@LetUnexpandableSpace~%
518 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
519 \ltx@ifundefined{@xspace}{%
520 \let\xspace\HyPsd@ITALCORR
521 }{%
522 \let\xspace\HyPsd@XSPACE
523 }%
524 \let\/\HyPsd@ITALCORR
525 \let\bgroup\/%
526 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
527 \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:

```
528 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
529 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
530 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
531 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
532 \let\@protected@testopt@xargs\HyPsd@protected@testopt
```

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

`\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 \TeX 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. \TeX 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 \LaTeX '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 \LaTeX 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 \TeX , 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).

```
533 \begingroup
534 \let\GenericError\@gobblefour
535 \let\GenericWarning\@gobbletwo
536 \let\GenericInfo\@gobbletwo
```

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

```
537 \ifx\nofrenchguillemets\@undefined
538 \else
539 \nofrenchguillemets
540 \fi
```

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

```
541 \let\Hy@temp\xdef
542 \let\def\HyPsd@DefCommand
543 \let\gdef\HyPsd@DefCommand
544 \let\edef\HyPsd@DefCommand
545 \let\xdef\HyPsd@DefCommand
546 \let\futurelet\HyPsd@LetCommand
547 \let\let\HyPsd@LetCommand
548 \Hy@temp#1{#2}%
549 \endgroup
```

6.2.3 Postprocessing

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

```
550 \ifx#1\@empty
551 \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 take the following into account, that makes things a little 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 found 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 a 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.

```

552 \HyPsd@ProtectSpaces#1%
553 \let\HyPsd@String\@empty
554 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
555 \global\let#1\HyPsd@String

```

Check tokens. After removing the spaces and the grouping characters the string now should only consist 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.

```

556 \let\HyPsd@SPACEOPTI\relax
557 {%
558 \let\HyPsd@String\@empty
559 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
560 \global\let#1\HyPsd@String
561 }%
562 \expandafter\HyPsd@RemoveMask\expandafter
563 |\expandafter\@empty#1\HyPsd@end#1%

```

`\HyPsd@CheckCatcodes` should not have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause too 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.

```

564 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
565 \let\HyPsd@String\@empty
566 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
567 \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.

```
568 \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.

```

569 \ifHy@unicode
570 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
571 \HyPsd@SPACEOPTI#1%
572 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
573 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
574 {\HyPsd@SPACEOPTI\80\273}#1%
575 \else
576 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
577 \expandafter\HyPsd@Subst\expandafter{%
578 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
579 \string\273}\HyPsd@SPACEOPTI\273}#1%
580 \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.

```

581 \ifHy@unicode
582 \HyPsd@StringSubst{\}){\80\051}#1%
583 \HyPsd@Subst){\80\051}#1%
584 \let\HyPsd@empty\relax
585 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
586 {\HyPsd@empty\80\051}#1%
587 \else
588 \HyPsd@StringSubst{\}){\051}#1%
589 \HyPsd@Subst){\051}#1%
590 \let\HyPsd@empty\relax
591 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
592 \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`.

```

593 \expandafter\HyPsd@Subst\expandafter{\/\}\HyPsd@empty#1%
594 \ltx@ifundefined{xspace}{%
595 }{%
596 \let\HyPsd@xspace\relax
597 \expandafter\HyPsd@Subst\expandafter
598 {\HyPsd@XSPACE}\HyPsd@xspace#1%
599 \let\HyPsd@xspace\HyPsd@doxspace
600 }%
601 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. T_EX forms ligatures in its stomach, but the PDF strings are treated only by T_EX'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.

```
602 \HyPsd@Subst{---}\textendash#1%
603 \HyPsd@Subst{--}\textendash#1%
604 % \HyPsd@Subst{fi}\textfi#1%
605 % \HyPsd@Subst{fl}\textfl#1%
606 \HyPsd@Subst{'}\textexclamdown#1%
607 \HyPsd@Subst{'}\textquestiondown#1%
```

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

```
608 \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 T_EX memory and time.

```
609 \ifHy@unicode
610 \HyPsd@StringSubst{\textparenleft#1%
611 \HyPsd@Subst(\textparenleft#1%
612 \else
613 \HyPsd@StringSubst({\050}#1%
614 \HyPsd@Subst({\050}#1%
615 \HyPsd@StringSubst{\050}{\string\{ }#1%
616 \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.

```
617 \ifHy@unicode
618 \edef\HyPsd@SPACEOPTI{\80\040}%
619 \else
620 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
621 \fi
622 \xdef#1{#1\@empty}%
623 \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.

```
624 \endgroup
625 \begingroup
626 \ifHy@unicode
627 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
628 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
629 \ltx@ifundefined{StringEncodingConvertTest}{%
630 }{%
631 \EdefUnescapeString\HyPsd@temp#1%
632 \ifxetex
633 \let\HyPsd@UnescapedString\HyPsd@temp
634 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
635 {utf16be}{ascii-print}{%
636 \EdefEscapeString\HyPsd@temp\HyPsd@temp
637 \global\let#1\HyPsd@temp
638 \Hy@unicodetrue
639 }{%
640 \HyPsd@ToBigChars#1%
641 }%
642 \else
643 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
644 {utf16be}{pdfdoc}{%
645 \EdefEscapeString\HyPsd@temp\HyPsd@temp
646 \global\let#1\HyPsd@temp
647 \Hy@unicodetrue
648 }{%}%
649 \fi
650 }%
651 \fi
652 \fi
653 \HyPsd@XeTeXBigCharsfalse
```

User hook. The hook `\pdfstringdefPostHook` can be used for the purpose to post-process the string further.

```
654 \pdfstringdefPostHook#1%
655 \endgroup
656 }
```

`\Hy@pdfstringdef`

```
657 \def\Hy@pdfstringdef#1#2{%
658 \pdfstringdef\Hy@gtemp{#2}%
659 \let#1\Hy@gtemp
660 }
```

6.3 Encodings

6.3.1 XeTeX

```
661 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
662 \catcode\z@=12 %
663 \ifxetex
664 \expandafter\@firstofone
665 \else
666 \let\HyPsd@XeTeXBigCharstrue\@empty
667 \let\HyPsd@XeTeXBigCharsfalse\@empty
668 \expandafter\@gobble
669 \fi
670 {%
671 \newif\ifHyPsd@XeTeXBigChars
672 \def\HyPsd@XeTeXBigCharsfalse{%
```

```

673 \global\let\ifHyPsd@XeTeXBigChars\iffalse
674 }%
675 \def\HyPsd@XeTeXBigCharstrue{%
676 \global\let\ifHyPsd@XeTeXBigChars\iftrue
677 }%
678 \def\HyPsd@ToBigChars#1{%
679 \ifHyPsd@XeTeXBigChars
680 \EdefEscapeHex\HyPsd@UnescapedString{%
681 \expandafter\@gobbletwo\HyPsd@UnescapedString
682 }%
683 \begingroup
684 \toks@{%}%
685 \escapechar=92\relax
686 \let\x\HyPsd@ToBigChar
687 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
688 \relax\relax\relax\relax\relax\relax\relax
689 \edef\x{%
690 \endgroup
691 \gdef\noexpand#1{\the\toks@}%
692 }%
693 \x
694 \fi
695 }%
696 \def\HyPsd@ToBigChar#1#2#3#4{%
697 \ifx\relax#1\relax
698 \let\x\relax
699 \else
700 \count@=#1#2#3#4\relax
701 \let\y\@empty
702 \lccode\z@=\count@
703 \ifnum\count@=40 % (
704 \let\y\@backslashchar
705 \else
706 \ifnum\count@=41 % )
707 \let\y\@backslashchar
708 \else
709 \ifnum\count@=92 % backslash
710 \let\y\@backslashchar
711 \else
712 \ifnum\count@=10 % newline
713 \edef\y##1{\string\n}%
714 \else
715 \ifnum\count@=13 % carriage return
716 \edef\y##1{\string\r}%
717 \fi
718 \fi
719 \fi
720 \fi
721 \fi
722 \lowercase{%
723 \toks@\expandafter{%
724 \the\expandafter\toks@
725 \y
726 ^^@%
727 }%
728 }%
729 \fi

```

```

730 \x
731 }%
732 }
733 \Hy@temp

```

6.3.2 Workaround for package linguex

```

734 \@ifpackageloaded{linguex}{%
735 \let\HyLinguex@OrgB\b
736 \let\HyLinguex@OrgC\c
737 \let\HyLinguex@OrgD\d
738 \def\HyLinguex@Restore{%
739 \let\b\HyLinguex@OrgB
740 \let\c\HyLinguex@OrgC
741 \let\d\HyLinguex@OrgD
742 }%
743 \AtEndOfPackage{%
744 \pdfstringdefDisableCommands{%
745 \let\x\IfUndefined{oldb}{\let\b\oldb}%
746 \let\x\IfUndefined{oldc}{\let\c\oldc}%
747 \let\x\IfUndefined{oldd}{\let\d\oldd}%
748 }%
749 }%
750 }{%
751 \let\HyLinguex@Restore\relax
752 }%

```

6.3.3 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.

```

753 \@ifundefined{T@PD1}{%
754 \input{pdlenc.def}%
755 \HyLinguex@Restore
756 }{}
757 \DeclareFontFamily{PD1}{pdf}{}
758 \DeclareFontShape{PD1}{pdf}{m}{n}{<-> cmr10 }{}
759 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

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

```

760 \def\HyPsd@InitUnicode{%
761 \@ifundefined{T@PU}{%
762 \input{puenc.def}%
763 \HyLinguex@Restore
764 }{}%
765 \DeclareFontFamily{PU}{pdf}{}%

```

```

766 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
767 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
768 \let\HyPsd@InitUnicode\relax
769 }

```

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 expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by \TeX 's stomach, the second contains the replacement for PDF strings.

```

770 \def\texorpdfstring{%
771   \ifHy@pdfstring
772     \expandafter\@secondoftwo
773   \else
774     \expandafter\@firstoftwo
775   \fi
776 }

```

6.4.2 Hooks for `\pdfstringdef`

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

```

777 \@ifundefined{pdfstringdefPreHook}{%
778   \let\pdfstringdefPreHook\empty
779 }{}
780 \@ifundefined{pdfstringdefPostHook}{%
781   \let\pdfstringdefPostHook\@gobble
782 }{}

```

`\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 \LaTeX commands like `\@gobble` or `\@firstofone`.

```

783 \def\pdfstringdefDisableCommands{%
784   \begingroup
785   \makeatletter
786   \HyPsd@DisableCommands
787 }

```

`\HyPsd@DisableCommands`

```

788 \long\def\HyPsd@DisableCommands#1{%

```

```

789 \toks0=\expandafter{\pdfstringdefPreHook}%
790 \toks1={#1}%
791 \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
792 \endgroup
793 }

```

`\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`.

```

794 \def\pdfstringdefWarn#1{%
795 \expandafter\noexpand\csname<>-string#1\endcsname
796 }

```

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.

```

797 \begingroup
798 \catcode0=12 %
799 \def\x{\endgroup
800 \def\HyPsd@ignorespaces{%
801 \romannumeral\expandafter'\expandafter^^@%
802 \romannumeral'^^@%
803 }%
804 }%
805 \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`.

```

806 \def\HyPsd@BabelPatch{%
807 \let\HyOrg@languageshorthands\languageshorthands
808 \let\languageshorthands\HyPsd@LanguageShorthands
809 }
810 \RequirePackage{pdfTeXcmds}[2009/04/10]
811 \begingroup\expandafter\expandafter\expandafter\endgroup
812 \expandafter\ifx\csname pdf@strcmp\endcsname\relax

```

```

813 \let\HyPsd@langshort@system\@empty
814 \def\HyPsd@LanguageShorthands#1{%
815   \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
816     \HyPsd@langshort@system
817   \expandafter\@gobble
818 \else
819   \expandafter\@firstofone
820 \fi
821 {%
822   \HyOrg@languageshorthands{#1}%
823 }%
824 }%
825 \else
826 \def\HyPsd@LanguageShorthands#1{%
827   \ifnum\pdf@strcmp{#1}{system}=\z@
828     \expandafter\@gobble
829   \else
830     \expandafter\@firstofone
831   \fi
832   {%
833     \HyOrg@languageshorthands{#1}%
834   }%
835 }%
836 \fi
837 \def\Hy@temp{%
838   \@ifpackageloaded{babel}{%
839     \@ifpackagelater{babel}{2008/03/16}{%
840       \let\Hy@temp\@empty
841     }{%
842       \def\HyPsd@BabelPatch{%
843         \let\HyOrg@languageshorthands\languageshorthands
844       }%
845     }%
846   }{}%
847 }
848 \Hy@temp
849 \expandafter\AtBeginDocument\expandafter{\Hy@temp}
850 \newif\ifHy@next

  Nothing to do for english.
851 \ltx@ifundefined{danish@sh@"@sel}{}{%
852   \def\HyPsd@babel@danish{%
853     \declare@shorthand{danish}{"}{}%
854     \declare@shorthand{danish}{"}~{}%
855   }%
856 }
857 \ltx@ifundefined{dutch@sh@"@sel}{}{%
858   \def\HyPsd@babel@dutch{%
859     \declare@shorthand{dutch}{"}{}%
860     \declare@shorthand{dutch}{"}~{}%
861   }%
862 }
863 \ltx@ifundefined{finnish@sh@"@sel}{}{%
864   \def\HyPsd@babel@finnish{%
865     \declare@shorthand{finnish}{"}{}%
866   }%
867 }

```



```

868 \ltx@ifundefined{french@sh@:@sel}{-}{%
869   \def\HyPsd@babel@frenchb{%
870     \def\guill@spacing{ }%
871   }%
872 }
873 \ltx@ifundefined{german@sh@"@sel}{-}{%
874   \def\HyPsd@babel@german{%
875     \declare@shorthand{german}{f}{f}%
876     \declare@shorthand{german}{"}{|}%
877     \declare@shorthand{german}{~}{-}%
878   }%
879 }
880 \ltx@ifundefined{macedonian@sh@"@sel}{-}{%
881   \def\HyPsd@babel@macedonian{%
882     \declare@shorthand{macedonian}{"}{|}%
883     \declare@shorthand{macedonian}{~}{-}%
884   }%
885 }{}
886 \ltx@ifundefined{ngerman@sh@"@sel}{-}{%
887   \def\HyPsd@babel@ngerman{%
888     \declare@shorthand{ngerman}{"}{|}%
889     \declare@shorthand{ngerman}{~}{-}%
890   }%
891 }
892 \ltx@ifundefined{portuges@sh@"@sel}{-}{%
893   \def\HyPsd@babel@portuges{%
894     \declare@shorthand{portuges}{"}{|}%
895   }%
896 }
897 \ltx@ifundefined{russian@sh@"@sel}{-}{%
898   \def\HyPsd@babel@russian{%
899     \declare@shorthand{russian}{"}{|}%
900     \declare@shorthand{russian}{~}{-}%
901   }%
902 }
903 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
904   \def\HyPsd@babel@slovene{%
905     \declare@shorthand{slovene}{"}{|}%
906   }%
907 }

```

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

```

908 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
909   \def\HyPsd@babel@spanish{%
910     \declare@shorthand{spanish}{<<}{\guillemotleft}%
911     \declare@shorthand{spanish}{>>}{\guillemotright}%
912     \declare@shorthand{spanish}{=}{-}%
913     \declare@shorthand{spanish}{~}{-}%
914     \declare@shorthand{spanish}{!}{\textexclamdown}%
915     \declare@shorthand{spanish}{?}{\textquestiondown}%
916   }%
917 }
918 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
919   \def\HyPsd@babel@swedish{%
920     \declare@shorthand{swedish}{"}{|}%
921     \declare@shorthand{swedish}{~}{-}%
922   }%
923 }

```

```

924 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
925   \def\HyPsd@babel@ukrainian{%
926     \declare@shorthand{ukrainian}{-}{-}%
927     \declare@shorthand{ukrainian}{-}{-}%
928   }%
929 }
930 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
931   \def\HyPsd@babel@usorbian{%
932     \declare@shorthand{usorbian}{-}{-}%
933     \declare@shorthand{usorbian}{-}{-}%
934   }%
935 }
936 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
937   \let\HyPsd@GreekPatch\@empty
938 }{-}%
939 \def\HyPsd@GreekPatch{%
940   \let\greeknumeral\HyPsd@greeknumeral
941   \let\Greeknatural\HyPsd@Greeknatural
942 }%
943 }
944 \def\HyPsd@greeknumeral#1{%
945   \HyPsd@GreekNum\@firstoftwo{#1}%
946 }
947 \def\HyPsd@Greeknatural#1{%
948   \HyPsd@GreekNum\@secondoftwo{#1}%
949 }
950 \def\HyPsd@GreekNum#1#2{%
951   \ifHy@unicode
952     \ifnum#2<\@ne
953       \@arabic{#2}%
954     \else
955       \ifnum#2<1000000 %
956         \HyPsd@@GreekNum#1{#2}%
957       \else
958         \@arabic{#2}%
959       \fi
960     \fi
961   \else
962     \@arabic{#2}%
963   \fi
964 }
965 \def\HyPsd@@GreekNum#1#2{%
966   \ifnum#2<\@m
967     \ifnum#2<10 %
968       \expandafter\HyPsd@GreekNumI
969       \expandafter\@gobble\expandafter#1\number#2%
970     \else
971       \ifnum#2<100 %
972         \expandafter\HyPsd@GreekNumII
973         \expandafter\@gobble\expandafter#1\number#2%
974       \else
975         \expandafter\HyPsd@GreekNumIII
976         \expandafter\@gobble\expandafter#1\number#2%
977       \fi
978     \fi
979   \ifnum#2>\z@
980     \textnumeralsigngreek

```

```

981 \fi
982 \else
983 \ifnum#2<\@M
984 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
985 \else
986 \ifnum#2<100000 %
987 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
988 \else
989 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
990 \fi
991 \fi
992 \fi
993 }
994 \def\HyPsd@GreekNumI#1#2#3{%
995 #1{%
996 \ifnum#3>\z@
997 \textnumeralsignlowergreek
998 \fi
999 }%
1000 \expandafter#2%
1001 \ifcase#3 %
1002 {}{}%
1003 \or\textalpha\textAlpha
1004 \or\textbeta\textBeta
1005 \or\textgamma\textGamma
1006 \or\textdelta\textDelta
1007 \or\textepsilon\textEpsilon
1008 \or\textstigmagreek\textStigmagreek
1009 \or\textzeta\textZeta
1010 \or\texteta\textEta
1011 \or\texttheta\textTheta
1012 \else
1013 {}{}%
1014 \fi
1015 }
1016 \def\HyPsd@GreekNumII#1#2#3#4{%
1017 #1{%
1018 \ifnum#3>\z@
1019 \textnumeralsignlowergreek
1020 \fi
1021 }%
1022 \expandafter#2%
1023 \ifcase#3 %
1024 {}{}%
1025 \or\textiota\textIota
1026 \or\textkappa\textKappa
1027 \or\textlambda\textLambda
1028 \or\textmu\textMu
1029 \or\textnu\textNu
1030 \or\textxi\textXi
1031 \or\textomicron\textOmicron
1032 \or\textpi\textPi
1033 \or\textkoppagreek\textKoppagreek
1034 \else
1035 {}{}%
1036 \fi
1037 \HyPsd@GreekNumI#1#2#4%

```

```

1038 }
1039 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1040   #1{%
1041     \ifnum#3>\z@
1042       \textnumeralsignlowergreek
1043     \fi
1044   }%
1045   \expandafter#2%
1046   \ifcase#3 %
1047     {}{}%
1048   \or\textrho\textRho
1049   \or\textsigma\textSigma
1050   \or\texttau\textTau
1051   \or\textupsilon\textUpsilon
1052   \or\textphi\textPhi
1053   \or\textchi\textChi
1054   \or\textpsi\textPsi
1055   \or\textomega\textOmega
1056   \or\textsampigreek\textSampigreek
1057   \else
1058     {}{}%
1059   \fi
1060   \HyPsd@GreekNumII#1#2#4#5%
1061 }
1062 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1063   \HyPsd@GreekNumI\@firstofone#1#2%
1064   \HyPsd@@GreekNum#1{#3#4#5}%
1065 }
1066 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1067   \HyPsd@GreekNumII\@firstofone#1#2#3%
1068   \HyPsd@@GreekNum#1{#4#5#6}%
1069 }
1070 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1071   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1072   \HyPsd@@GreekNum#1{#5#6#7}%
1073 }
1074 \def\HyPsd@SpanishPatch{%
1075   \begingroup\expandafter\expandafter\expandafter\endgroup
1076   \expandafter\ifx\csname es@save@dot\endcsname\relax
1077   \else
1078     \let\.\es@save@dot
1079   \fi
1080 }

```

6.5.3 CJK patch

```

1081 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1082 \def\HyPsd@CJKhook{%
1083   \ltx@ifpackageloaded{CJK}{%
1084     \let\CJK@kern\relax
1085     \let\CJKkern\relax
1086     \let\CJK@CJK\relax
1087     \ifHy@CJKbookmarks
1088       \HyPsd@CJKhook@bookmarks
1089     \fi

```

```

1090 \HyPsd@CJKhook@unicode
1091 }{}%
1092 }

```

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 ($\geq 0x40$).

```

1093 \begingroup
1094 \catcode"7F=\active
1095 \toks@{%
1096 \let\CJK@ignorespaces\empty
1097 \def\CJK@char#1{\@gobbletwo}%
1098 \let\CJK@charx\@gobblefour
1099 \let\CJK@punctchar\@gobblefour
1100 \def\CJK@punctcharx#1{\@gobblefour}%
1101 \catcode"7F=\active
1102 \def^^7f#1^^7f#2^^7f{%
1103 \string #1\HyPsd@DecimalToOctal{#2}%
1104 }%
1105 % ... ?
1106 \ifHy@unicode
1107 \def\Hy@cjkpu{\80}%
1108 \else
1109 \let\Hy@cjkpu\@empty
1110 \fi
1111 \HyPsd@CJKActiveChars
1112 }%
1113 \count@=127 %
1114 \@whilenum\count@<255 \do{%
1115 \advance\count@ by 1 %
1116 \lccode'\~=\count@
1117 \lowercase{%
1118 \toks@\expandafter{\the\toks@ ~}%
1119 }%
1120 }%
1121 \toks@\expandafter{\the\toks@ !}%
1122 \xdef\HyPsd@CJKhook@bookmarks{%
1123 \the\toks@
1124 }%
1125 \endgroup

```

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

```

1126 \def\HyPsd@CJKActiveChars#1{%
1127 \ifx#1!%
1128 \let\HyPsd@CJKActiveChars\relax
1129 \else
1130 \edef#1{\noexpand\Hy@cjkpu\string#1}%

```

```

1131 \fi
1132 \HyPsd@CJKActiveChars
1133 }

```

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

```

1134 \def\HyPsd@DecimalToOctal#1{%
1135   \ifcase #1 %
1136     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1137     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1138     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1139     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1140     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1141     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1142     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1143     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1144     \or @\or A\or B\or C\or D\or E\or F\or G%
1145     \or H\or I\or J\or K\or L\or M\or N\or O%
1146     \or P\or Q\or R\or S\or T\or U\or V\or W%
1147     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1148     \or \140\or a\or b\or c\or d\or e\or f\or g%
1149     \or h\or i\or j\or k\or l\or m\or n\or o%
1150     \or p\or q\or r\or s\or t\or u\or v\or w%
1151     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1152     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1153     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1154     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1155     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1156     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1157     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1158     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1159     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1160     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1161     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1162     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1163     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1164     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1165     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1166     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1167     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1168   \fi
1169 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1170 \def\HyPsd@CJKhook@unicode{%
1171   \let\Unicode\HyPsd@CJK@Unicode
1172   \let\CJKnumber\HyPsd@CJKnumber
1173   \let\CJKdigits\HyPsd@CJKdigits
1174 }

```

\HyPsd@CJK@Unicode

```

1175 \def\HyPsd@CJK@Unicode#1#2{%
1176   \ifnum#1<256 %
1177     \HyPsd@DecimalToOctalFirst{#1}%
1178     \HyPsd@DecimalToOctalSecond{#2}%

```

```

1179 \else
1180 \933%
1181 \expandafter\expandafter\expandafter\HyPsd@HighA
1182 \intcalcDiv{#1}{4}!%
1183 \933%
1184 \ifcase\intcalcMod{#1}{4} %
1185 4\or 5\or 6\or 7%
1186 \fi
1187 \HyPsd@DecimalToOctalSecond{#2}%
1188 \fi
1189 }

1190 \def\HyPsd@HighA#1!{%
1191 \expandafter\expandafter\expandafter\HyPsd@HighB
1192 \IntCalcDiv#1!64!!%
1193 \expandafter\expandafter\expandafter\HyPsd@HighD
1194 \IntCalcMod#1!64!!%
1195 }

1196 \def\HyPsd@HighB#1!{%
1197 \expandafter\expandafter\expandafter\HyPsd@HighC
1198 \IntCalcDec#1!!%
1199 }

1200 \def\HyPsd@HighC#1!{%
1201 \IntCalcDiv#1!4!%
1202 \@backslashchar
1203 \IntCalcMod#1!4!%
1204 }

1205 \def\HyPsd@HighD#1!{%
1206 \ifcase\IntCalcDiv#1!8! %
1207 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1208 \fi
1209 \ifcase\IntCalcMod#1!8! %
1210 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1211 \fi
1212 }

1213 \def\HyPsd@DecimalToOctalFirst#1{%
1214 \9%
1215 \ifcase#1 %
1216 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1217 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1218 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1219 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1220 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1221 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1222 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1223 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1224 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1225 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1226 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1227 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1228 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1229 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1230 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1231 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1232 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1233 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1234 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1235 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%

```

```

1236 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1237 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1238 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1239 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1240 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1241 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1242 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1243 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1244 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1245 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1246 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1247 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1248 \fi
1249 }
1250 \def\HyPsd@DecimalToOctalSecond#1{%
1251 \ifcase #1 %
1252 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1253 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1254 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1255 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1256 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1257 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1258 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1259 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1260 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1261 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1262 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1263 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1264 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1265 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1266 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1267 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1268 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1269 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1270 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1271 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1272 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1273 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1274 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1275 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1276 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1277 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1278 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1279 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1280 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1281 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1282 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1283 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1284 \fi
1285 }
1286 \def\HyPsd@CJKNumber#1{%
1287 \ifnum#1<\z@
1288 \CJK@minus
1289 \expandafter\HyPsd@@CJKNumber\expandafter{\number-\number#1}%
1290 \else
1291 \expandafter\HyPsd@@CJKNumber\expandafter{\number#1}%
1292 \fi

```



```

1293 }
1294 \def\HyPsd@@CJKnumber#1{%
1295   \ifcase#1 %
1296     \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1297     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1298     \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1299     \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1300     \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1301     \CJK@ten\CJK@nine
1302   \else
1303     \ifnum#1<10000 %
1304       \HyPsd@CJKnumberFour#1!\@empty{20}%
1305       \@empty
1306     \else
1307       \ifnum#1<100000000 %
1308         \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1309         \IntCalcDiv#1!10000!%
1310         !{}{20}%
1311         \CJK@tenthousand
1312         \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1313         \IntCalcMod#1!10000!%
1314         !\CJK@zero{10}%
1315         \@empty
1316       \else
1317         \expandafter\HyPsd@CJKnumberLarge
1318         \number\IntCalcDiv#1!100000000!\expandafter!%
1319         \number\IntCalcMod#1!100000000!!%
1320       \fi
1321     \fi
1322   \fi
1323 }
1324 \def\HyPsd@CJKnumberLarge#1!#2!{%
1325   \HyPsd@CJKnumberFour#1!{}{20}%
1326   \CJK@hundredmillion
1327   \ifnum#2=\z@
1328   \else
1329     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1330     \IntCalcDiv#2!10000!%
1331     !\CJK@zero{10}%
1332     \CJK@tenthousand
1333     \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1334     \IntCalcMod#2!10000!%
1335     !\CJK@zero{10}%
1336     \@empty
1337   \fi
1338 }
1339 \def\HyPsd@CJKnumberFour#1!#2#3{%
1340   \ifnum#1=\z@
1341     \expandafter\@gobble
1342   \else
1343     \ifnum#1<1000 %
1344       #2%
1345       \HyPsd@CJKnumberThree#1!{}{#3}%
1346     \else
1347       \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1348       \CJK@thousand
1349       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree

```

```

1350     \IntCalcMod#1!1000!%
1351     !\CJK@zero{10}%
1352     \fi
1353 \fi
1354 }
1355 \def\HyPsd@CJKnumberThree#1!#2#3{%
1356     \ifnum#1=\z@
1357     \else
1358         \ifnum#1<100 %
1359             #2%
1360             \HyPsd@CJKnumberTwo#1!#{#3}%
1361         \else
1362             \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1363             \CJK@hundred
1364             \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1365             \IntCalcMod#1!100!%
1366             !\CJK@zero{10}%
1367         \fi
1368     \fi
1369 }
1370 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1371     \ifnum#1=\z@
1372     \else
1373         \ifnum#1<#3 %
1374             #2%
1375             \HyPsd@@CJKnumber{#1}%
1376         \else
1377             \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1378             \CJK@ten
1379             \ifnum\IntCalcMod#1!10!=\z@
1380             \else
1381                 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1382             \fi
1383         \fi
1384     \fi
1385 }
1386 \def\HyPsd@CJKdigits#1{%
1387     \ifx*#1\relax
1388         \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1389     \else
1390         \HyPsd@@CJKdigits\CJK@null{#1}%
1391     \fi
1392 }
1393 \def\HyPsd@@CJKdigits#1#2{%
1394     \ifx\#2\%
1395     \else
1396         \HyPsd@@@CJKdigits#1#2\@nil
1397     \fi
1398 }%
1399 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1400     \HyPsd@CJKdigit#1{#2}%
1401     \ifx\#3\%
1402         \expandafter\@gobble
1403     \else
1404         \expandafter\@firstofone
1405     \fi
1406     {%

```

```

1407 \HyPsd@@@CJKdigits#1#3\@nil
1408 }%
1409 }
1410 \def\HyPsd@CJKdigit#1#2{%
1411 \ifcase#2 %
1412 #1\or
1413 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1414 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1415 \fi
1416 }

```

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}

1417 \def\HyPsd@inmathwarn#1#2{%
1418 \ifx#2\expandafter
1419 \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1420 \HyPsd@GLYPHERR

```

```

1421 \expandafter\@gobble\string#1%
1422 >%
1423 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1424 \else
1425 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1426 \fi
1427 \else
1428 \expandafter#2%
1429 \fi
1430 }
1431 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1432 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1433 \def\HyPsd@add@accent#1#2{%
1434 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1435 #2%
1436 }%

```

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.

```

1437 \def\HyPsd@LetUnexpandableSpace#1{%
1438 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1439 }

```

\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.

```

1440 \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.

```

1441 \edef\HyPsd@XSPACE{\string#\string X}
1442 \edef\HyPsd@ITALCORR{\string#\string I}
1443 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1444 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}

```

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

```

1445 \def\HyPsd@@hspace#1*#2\END{%
1446 \ifx\#2\%

```

```

1447 \HyPsd@hspacetest{#1}%
1448 \else
1449 \expandafter\HyPsd@hspacetest
1450 \fi
1451 }

```

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

```

1452 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}

```

6.5.10 Fix for AMS classes

```

1453 \ltx@ifundefined{tocsection}{%
1454 \let\HyPsd@AMSclassfix\relax
1455 }{%
1456 \def\HyPsd@AMSclassfix{%
1457 \let\tocpart\HyPsd@tocsection
1458 \let\tocchapter\HyPsd@tocsection
1459 \let\tocappendix\HyPsd@tocsection
1460 \let\tocsection\HyPsd@tocsection
1461 \let\tocsubsection\HyPsd@tocsection
1462 \let\tocsubsubsection\HyPsd@tocsection
1463 \let\tocparagraph\HyPsd@tocsection
1464 }%
1465 \def\HyPsd@tocsection#1#2#3{%
1466 \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1467 #3%
1468 }%
1469 }

```

6.5.11 Reference commands

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

```

1470 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1471 \def\HyPsd@@ref#1*#2\END{%
1472 \ifx\\#2\\%
1473 \HyPsd@@@ref{#1}%
1474 \else
1475 \expandafter\HyPsd@@@ref
1476 \fi
1477 }%

```

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

```

1478 \def\HyPsd@@@ref#1{%
1479 \expandafter\ifx\csname r@#1\endcsname\relax
1480 ??%
1481 \else
1482 \expandafter\expandafter\expandafter
1483 \@car\csname r@#1\endcsname\@nil
1484 \fi
1485 }

```

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

```

1486 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```
1487 \def\HyPsd@@pageref#1*#2\END{%
1488   \ifx\#2\%
1489     \HyPsd@@pageref{#1}%
1490   \else
1491     \expandafter\HyPsd@@pageref
1492   \fi
1493 }
```

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

```
1494 \def\HyPsd@@@pageref#1{%
1495   \expandafter\ifx\csname r@#1\endcsname\relax
1496     ??%
1497   \else
1498     \expandafter\expandafter\expandafter\expandafter
1499     \expandafter\expandafter\expandafter\@car
1500     \expandafter\expandafter\expandafter\@gobble
1501     \csname r@#1\endcsname{}\@nil
1502   \fi
1503 }
```

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

```
1504 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1505 \def\HyPsd@@nameref#1*#2\END{%
1506   \ifx\#2\%
1507     \HyPsd@@nameref{#1}%
1508   \else
1509     \expandafter\HyPsd@@nameref
1510   \fi
1511 }
```

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

```
1512 \def\HyPsd@@@nameref#1{%
1513   \expandafter\ifx\csname r@#1\endcsname\relax
1514     ??%
1515   \else
1516     \expandafter\expandafter\expandafter\expandafter
1517     \expandafter\expandafter\expandafter\@car
1518     \expandafter\expandafter\expandafter\@gobbletwo
1519     \csname r@#1\endcsname{}\@nil
1520   \fi
1521 }
```

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

```
1522 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1523 \def\HyPsd@@autoref#1*#2\END{%
1524   \ifx\#2\%
1525     \HyPsd@@autoref{#1}%
1526   \else
1527     \expandafter\HyPsd@@autoref
```

```

1528  \fi
1529  }

```

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

```

1530 \def\HyPsd@@@autoref#1{%
1531   \expandafter\ifx\csname r@#1\endcsname\relax
1532     ??%
1533   \else
1534     \expandafter\expandafter\expandafter\HyPsd@autorefname
1535       \csname r@#1\endcsname{}{}{}{}\@nil
1536     \expandafter\expandafter\expandafter
1537       \@car\csname r@#1\endcsname\@nil
1538   \fi
1539 }

```

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

```

1540 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1541   \ifx\\#4\\%
1542     \else
1543       \HyPsd@@autorefname#4.\@nil
1544     \fi
1545 }

```

\HyPsd@@@autorefname

```

1546 \def\HyPsd@autorefname#1.#2\@nil{%
1547   \ltx@ifundefined{#1autorefname}{%
1548     \ltx@ifundefined{#1name}{%
1549       {%
1550         \csname#1name\endcsname\space
1551       }%
1552     }{%
1553       \csname#1autorefname\endcsname\space
1554     }%
1555 }

```

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 `\HyPsdLetCommand` 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 unmached `\if...` tokens, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```
\HyPsd@DefCommand
\HyPsd@LetCommand
1556 \begingroup
1557   \def\x#1#2{%
1558     \endgroup
1559     \let#1\def
1560     \def\HyPsd@DefCommand##1##2###{%
1561       #1%
1562       \expandafter\noexpand
1563       \csname\expandafter\@gobble\string##1\@empty\endcsname
1564       \@gobble
1565     }%
1566     \let#2\let
1567     \def\HyPsd@@LetCommand##1{%
1568       \expandafter\ifx\csname##1\expandafter\endcsname
1569         \csname iftrue\endcsname
1570       \pdfstringdefWarn\let
1571       \expandafter\@gobble
1572     \else
1573       \expandafter\ifx\csname##1\expandafter\endcsname
1574         \csname iffalse\endcsname
1575       \pdfstringdefWarn\let
1576       \expandafter\expandafter\expandafter\@gobble
1577     \else
1578       #2%
1579       \expandafter\noexpand
1580       \csname##1\expandafter\expandafter\expandafter\endcsname
1581     \fi
1582   \fi
1583 }%
1584 }%
1585 \expandafter\x\csname <def>-command\expandafter\endcsname
1586   \csname <let>-command\endcsname
1587 \def\HyPsd@LetCommand#1{%
1588   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1589   \expandafter\expandafter\expandafter{%
1590     \expandafter\@gobble\string#1\@empty
1591   }%
1592 }
```

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).

```

1593 \def\HyPsd@ifnextchar#1{%
1594   \pdfstringdefWarn#1%
1595   \expandafter\@gobbletwo\@gobble
1596 }

```

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`.

```

1597 \def\HyPsd@protected@testopt#1{%
1598   \pdfstringdefWarn#1%
1599   \@gobbletwo
1600 }

```

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:

```

1601 \def\HyPsd@Warning#1{%
1602   \begingroup
1603   \def\space{ }%
1604   \Hy@Warning{#1}%
1605   \endgroup
1606 }

```

6.6.2 Protecting spaces

```

1607 \RequirePackage{etexcmds}[2007/09/09]
1608 \ifetex@unexpanded
1609   \expandafter\@secondoftwo
1610 \else
1611   \expandafter\@firstoftwo
1612 \fi
1613 {%

```

`\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`.

```

1614 \def\HyPsd@ProtectSpaces#1{%
1615   \iftrue
1616     \expandafter\HyPsd@@ProtectSpacesFi
1617     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1618   \fi
1619 }%

```

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

```

1620 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1621 \fi
1622 \ifx\scrollmode#2\scrollmode
1623 \HyPsd@RemoveMask#1\HyPsd@End#3%
1624 \else
1625 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1626 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1627 \fi
1628 }%

```

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.

```

1629 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1630 \toks@{\expandafter{#1}}%
1631 \xdef#2{\the\toks@}%
1632 }%

1633 }{%
1634 \let\HyPsd@fi\fi
1635 \def\HyPsd@ProtectSpaces#1{%
1636 \xdef#1{%
1637 \iftrue
1638 \expandafter\HyPsd@@ProtectSpacesFi
1639 \expandafter|\expandafter\@empty#1| %
1640 \HyPsd@fi
1641 }%
1642 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1643 }%
1644 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1645 \fi
1646 \etex@unexpanded{#1}%
1647 \ifx\scrollmode#2\scrollmode
1648 \else
1649 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1650 \HyPsd@fi
1651 }%
1652 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1653 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1654 }%
1655 }

```

6.6.3 Remove grouping braces

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

```

1656 \def\HyPsd@RemoveBraces#1{%
1657 \ifx\scrollmode#1\scrollmode
1658 \else
1659 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1660 \fi
1661 }

```

`\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 compari-

son 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 \Hy@ReturnAfterFi.

```

1662 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1663   \fi
1664   \def\Hy@temp@A{#1#2}%
1665   \def\Hy@temp@B{#3}%
1666   \ifx\Hy@temp@A\Hy@temp@B
1667     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1668       \HyPsd@String#1%
1669     }%
1670     \ifx\scrollmode#2\scrollmode
1671     \else
1672       \Hy@ReturnAfterFiFiEnd{%
1673         \HyPsd@RemoveBraces{#2}%
1674       }%
1675     \fi
1676   \else
1677     \def\Hy@temp@A{#1}%
1678     \HyPsd@AppendItalcorr\HyPsd@String
1679     \ifx\Hy@temp@A\@empty
1680       \Hy@ReturnAfterElseFiFiEnd{%
1681         \HyPsd@RemoveBraces{#2}%
1682       }%
1683     \else
1684       \HyPsd@ProtectSpaces\Hy@temp@A
1685       \HyPsd@AppendItalcorr\Hy@temp@A
1686       \Hy@ReturnAfterFiFiEnd{%
1687         \expandafter\HyPsd@RemoveBraces\expandafter
1688           {\Hy@temp@A#2}%
1689       }%
1690     \fi
1691   \fi
1692   \Hy@ReturnEnd
1693 }
```

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

```

1694 \def\HyPsd@AppendItalcorr#1{%
1695   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1}%
1696 }
1697 \def\HyPsd@@AppendItalcorr#1#2{%
1698   \expandafter\def\expandafter#2\expandafter{#2#1}%
1699 }
```

6.6.4 Catcode check

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`).

```

1700 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1701   \global\let\HyPsd@Rest\relax
1702   \ifcat\relax\noexpand#1\relax
1703     \ifx#1\protect
1704       \else
1705         \ifx#1\penalty
1706           \setbox\z@=\hbox{%
1707             \afterassignment\HyPsd@AfterCountRemove
1708             \count@=#2\HyPsd@end
1709           }%
1710         \else
1711           \ifx#1\kern
1712             \setbox\z@=\hbox{%
1713               \afterassignment\HyPsd@AfterDimenRemove
1714               \dimen@=#2\HyPsd@end
1715             }%
1716           \else
1717             \ifx#1\hskip
1718               \setbox\z@=\hbox{%
1719                 \afterassignment\HyPsd@AfterSkipRemove
1720                 \skip@=#2\HyPsd@end
1721               }%
1722             \else
1723               \HyPsd@CatcodeWarning{#1}%
1724             \fi
1725           \fi
1726         \fi
1727       \fi
1728     \else
1729       \ifcat#1A% letter
1730         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1731           \HyPsd@String#1%
1732         }%
1733       \else
1734         \ifcat#1 % SPACE
1735           \expandafter\def\expandafter\HyPsd@String\expandafter{%
1736             \HyPsd@String\HyPsd@SPACEOPTI
1737           }%
1738         \else
1739           \ifcat$#1%
1740             \HyPsd@CatcodeWarning{math shift}%
1741           \else
1742             \ifcat&#1%
1743               \HyPsd@CatcodeWarning{alignment tab}%
1744             \else
1745               \ifcat^#1%
1746                 \HyPsd@CatcodeWarning{superscript}%
1747               \else
1748                 \ifcat_#1%
1749                   \HyPsd@CatcodeWarning{subscript}%
1750                 \else
1751                   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1752                     \HyPsd@String#1%

```

```

1753         }%
1754     \fi
1755 \fi
1756 \fi
1757 \fi
1758 \fi
1759 \fi
1760 \fi
1761 \ifx\HyPsd@Rest\relax
1762 \ifx\scrollmode#2\scrollmode
1763 \else
1764 \Hy@ReturnAfterFiFiEnd{%
1765 \HyPsd@CheckCatcodes#2\HyPsd@End
1766 }%
1767 \fi
1768 \else
1769 \ifx\HyPsd@Rest\@empty
1770 \else
1771 \Hy@ReturnAfterFiFiEnd{%
1772 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1773 }%
1774 \fi
1775 \fi
1776 \Hy@ReturnEnd
1777 }

```

Remove counts, dimens, skips.

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

```

1778 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1779 \gdef\HyPsd@Rest{#1}%
1780 }

```

\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.

```

1781 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1782 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1783 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1784 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1785 \else
1786 \ifdim\dimen@=\z@
1787 \else
1788 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1789 \fi
1790 \gdef\HyPsd@Rest{#1}%
1791 \fi
1792 }

```

\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).

```

1793 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1794 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1795 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1796 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%

```

```

1797 \else
1798 \ifdim\skip@=\z@
1799 \else
1800 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1801 \fi
1802 \gdef\HyPsd@Rest{#1}%
1803 \fi
1804 }

```

Catcode warnings.

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

```

1805 \def\HyPsd@CatcodeWarning#1{%
1806 \HyPsd@Warning{%
1807 Token not allowed in a PDF string (%)
1808 \ifHy@unicode
1809 Unicode%
1810 \else
1811 PDFDocEncoding%
1812 \fi
1813 }:%
1814 \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1815 }%
1816 }
1817 \begingroup
1818 \catcode'\|=0 %
1819 \catcode'\|=12 %
1820 \gdef\HyPsd@RemoveCmdPrefix#1{%
1821 |expandafter\HyPsd@@RemoveCmdPrefix
1822 |string#1|@empty\<>-|@empty|@empty
1823 }%
1824 \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1825 \endgroup

```

\HyPsd@RemoveSpaceWarning

```

1826 \def\HyPsd@RemoveSpaceWarning#1{%
1827 \HyPsd@Warning{%
1828 Token not allowed in a PDF string (%)
1829 \ifHy@unicode
1830 Unicode%
1831 \else
1832 PDFDocEncoding%
1833 \fi
1834 }:%
1835 \MessageBreak #1\MessageBreak
1836 removed%
1837 }%
1838 }

```

\HyPsd@ReplaceSpaceWarning

```

1839 \def\HyPsd@ReplaceSpaceWarning#1{%
1840 \HyPsd@Warning{%
1841 Token not allowed in a PDF string (%)
1842 \ifHy@unicode
1843 Unicode%
1844 \else
1845 PDFDocEncoding%

```

```

1846 \fi
1847 ): %
1848 \MessageBreak #1\MessageBreak
1849 replaced by space%
1850 }%
1851 }

```

6.6.5 Check for wrong glyphs

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

```

1852 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1853 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1854 \HyPsd@String#1%
1855 }%
1856 \ifx\#2\%
1857 \else
1858 \Hy@ReturnAfterFi{%
1859 \HyPsd@GlyphProcessWarning#2\@empty
1860 }%
1861 \fi
1862 }
1863 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1864 \HyPsd@@GlyphProcessWarning#1++>%
1865 \HyPsd@GlyphProcess#2\@empty
1866 }
1867 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1868 \ifx\#2\%
1869 \HyPsd@Warning{%
1870 Glyph not defined in %
1871 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1872 removing '@backslashchar#1'%
1873 }%
1874 \else
1875 \HyPsd@Warning{%
1876 Composite letter '@backslashchar#1+#2'\MessageBreak
1877 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1878 \MessageBreak
1879 removing '@backslashchar#1'%
1880 }%
1881 \fi
1882 }

```

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.

```

1883 \def\HyPsd@spaceopti#1{ % first space
1884 \ifx\HyPsd@spaceopti#1%
1885 \040%
1886 \else
1887 #1%
1888 \fi
1889 }%

```

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.

```
1890 \def\HyPsd@Subst#1#2#3{%
1891   \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1892     \fi
1893     ##1%
1894     \ifx\scrollmode##2\scrollmode
1895     \else
1896       #2%
1897       \HyPsd@@ReplaceFi##2\END
1898     \fi
1899   }%
1900 \xdef#3{%
1901   \iftrue
1902     \expandafter\HyPsd@@ReplaceFi#3#1\END
1903   \fi
1904 }%
1905 }
```

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

```
1906 \def\HyPsd@StringSubst#1{%
1907   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1908 }
```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'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.

```
1909 \def\HyPsd@doxspace#1{%
1910   \ifx#1\relax\else
1911     \ifx#1.\else
1912       \ifx#1:\else
1913         \ifx#1,\else
1914           \ifx#1;\else
1915             \ifx#1'\else
1916               \ifx#1?\else
1917                 \ifx#1/\else
1918                   \ifx#1-\else
1919                     \ifx#1'\else
1920                       \HyPsd@SPACEOPTI
1921                     \fi
1922                   \fi
1923                 \fi
1924               \fi
1925             \fi
1926           \fi
1927         \fi
1928       \fi
```



```

1929 \fi
1930 \fi
1931 #1%
1932 }%

```

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.

```

1933 \begingroup
1934 \catcode'\|=0 %
1935 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1936 |gdef|HyPsd@ConvertToUnicode#1{%
1937 |xdef#1{%
1938 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1939 }%
1940 |ifx#1|@empty
1941 |else
1942 |xdef#1{%
1943 \376\377%
1944 #1%
1945 }%
1946 |fi
1947 }%

```

\HyPsd@DoConvert

```

1948 |gdef|HyPsd@DoConvert#1{%
1949 |ifx#1|@empty
1950 |else
1951 |Hy@ReturnAfterFi{%
1952 |ifx#1\%%
1953 \%%
1954 |expandafter|HyPsd@DoEscape
1955 |else
1956 |HyPsd@Char{#1}%
1957 |expandafter|HyPsd@DoConvert
1958 |fi
1959 }%
1960 |fi
1961 }%

```

\HyPsd@DoEscape

```

1962 |gdef|HyPsd@DoEscape#1{%
1963 |ifx#19%
1964 |expandafter|HyPsd@GetTwoBytes
1965 |else
1966 |Hy@ReturnAfterFi{%
1967 |ifx#18%
1968 00%
1969 |expandafter|HyPsd@GetTwoBytes
1970 |else
1971 #1%
1972 |expandafter|HyPsd@GetOneByte

```

```

1973     |fi
1974     }%
1975     |fi
1976     }%

```

`\HyPsd@GetTwoBytes`

```

1977 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1978   #1\#2#3#4%
1979   |HyPsd@DoConvert
1980   }%

```

`\HyPsd@GetOneByte`

```

1981 |gdef|HyPsd@GetOneByte#1#2{%
1982   #1#2%
1983   |HyPsd@DoConvert
1984   }%
1985 |endgroup

```

`\HyPsd@@GetNextTwoTokens` \TeX does only allow nine parameters, so we need another macro to get more arguments.

```

1986 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1987   \xdef#4{#4#1#2}%
1988   \HyPsd@@ConvertToUnicode#3\END#4%
1989 }

```

`\HyPsd@Char`

```

1990 \begingroup
1991   \catcode0=9 %
1992   \catcode'\^=7 %
1993   \catcode'\^^=12 %
1994   \def\x{^^^0000}%
1995 \expandafter\endgroup
1996 \ifx\x\@empty
1997   \def\HyPsd@Char#1{%
1998     \ifnum'#1<128 %
1999       \@backslashchar 000#1%
2000     \else
2001       \ifnum'#1<65536 %
2002         \expandafter\HyPsd@CharTwoByte\number'#1!%
2003       \else
2004         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2005         \intcalcSub{'#1}{65536}!%
2006       \fi
2007     \fi
2008   }%
2009 \def\HyPsd@CharTwoByte#1!{%
2010   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2011   \IntCalcDiv#1!256!!%
2012   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2013   \IntCalcMod#1!256!!%
2014 }%
2015 \def\HyPsd@CharOctByte#1!{%
2016   \@backslashchar
2017   \IntCalcDiv#1!64!%
2018   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2019   \IntCalcMod#1!8!%
2020 }%
2021 \def\HyPsd@CharSurrogate#1!{%

```

```

2022 \@backslashchar 33%
2023 \IntCalcDiv#1!262144!%
2024 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2025 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2026 \@backslashchar 33%
2027 \expandafter\expandafter\expandafter\IntCalcAdd
2028 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2029 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2030 \IntCalcMod#1!256!!%
2031 }%
2032 \else
2033 \def\HyPsd@Char#1{%
2034 \@backslashchar 000#1%
2035 }%
2036 \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

2037 \begingroup\expandafter\expandafter\expandafter\endgroup
2038 \expandafter\ifx\csname numexpr\endcsname\relax
2039 \let\HyPsd@UTFviii\relax
2040 \else
2041 \begingroup
2042 \lccode'\~='^f4\relax
2043 \lowercase{\endgroup
2044 \def\HyPsd@UTFviii{%
2045 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2046 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2047 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2048 \ifx~\HyPsd@UTFviii@ccxliv@undef
2049 \let~\HyPsd@UTFviii@ccxliv@def
2050 \fi
2051 \let\unichar\HyPsd@unichar
2052 }%
2053 }%
2054 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2055 \edef\HyPsd@UTFviii@ccxliv@def{%
2056 \noexpand\UTFviii@four@octets\string ^f4%
2057 }%

```

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.

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

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

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

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

$$(5)$$

```

2058 \def\HyPsd@UTFviii@two#1#2{%
2059 \expandafter\HyPsd@UTFviii@@two
2060 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2061 \number'#1\expandafter| %
2062 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2063 \number'#2 \@nil
2064 }%
2065 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2066 \expandafter\8%
2067 \number\numexpr #1-48\expandafter\relax
2068 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2069 \number\numexpr #3-8*%
2070 \number\dimexpr.125\dimexpr'#3sp\relax\relax\expandafter\relax
2071 \number\numexpr #4-8*#3\relax
2072 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2073 \def\HyPsd@UTFviii@three#1#2#3{%
2074 \expandafter\HyPsd@UTFviii@@three
2075 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2076 \number'#1\expandafter| %
2077 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2078 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2079 \number'#2\expandafter| %
2080 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2081 \number'#3 \@nil
2082 }%
2083 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2084 \expandafter\9%
2085 \number\numexpr #1-56\expandafter\relax
2086 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2087 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2088 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2089 \number\numexpr #6-16\expandafter\relax
2090 \number\numexpr #7-8*#6\relax
2091 }%

```

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 wwzzzzyy 110111yy yyxxxxxx
 octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

2092 \def\HyPsd@UTFviii@four#1#2{%
2093   \expandafter\HyPsd@@UTFviii@four\number
2094   \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2095   \expandafter|\number
2096   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2097 }%
2098 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2099   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2100   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2101   \ifodd#2 %
2102     \number\dimexpr(#2-1)/2\relax
2103   \else
2104     \number\dimexpr#2/2\relax
2105   \fi
2106   \number\dimexpr\ifodd#2 4+\fi
2107   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2108   \933%
2109   \expandafter\HyPsd@@@UTFviii@four\number
2110   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2111 }%
2112 \def\HyPsd@@@UTFviii@four#1|#2{%
2113   \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2114   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2115   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2116   \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2117 }%

```

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

```

2118 \def\HyPsd@unichar#1{%
2119   \ifHy@unicode
2120     \ifnum#1>"10FFFF %
2121       \HyPsd@UnicodeReplacementCharacter % illegal
2122     \else
2123       \ifnum#1>"FFFF %

```

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

```

2124   \expandafter\HyPsd@unichar\expandafter{%
2125     \number\dimexpr 55296+%
2126     \dimexpr.0009765625\dimexpr\number#1sp-\p@
2127     \relax\relax\relax
2128   }%

```

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

```

2129   \expandafter\HyPsd@unichar\expandafter{%
2130     \number\dimexpr#1-9216%
2131     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2132     \relax\relax\relax
2133   }%
2134   \else
2135     \ifnum#1>"7FF %
2136     \9%
2137     \expandafter\HyPsd@unichar@first@byte\expandafter{%
2138       \number
2139       \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2140     }%

```

```

2141     \else
2142     \8%
2143     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2144     \fi
2145     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2146     \number
2147     \numexpr#1-256*\number
2148     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2149     }%
2150     \fi
2151     \fi
2152     \else
2153     .% unsupported (Unicode -> PDF Doc Encoding)
2154     \fi
2155     }%
2156     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2157     \def\HyPsd@unichar@first@byte#1{%
2158     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2159     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2160     \number
2161     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2162     \relax\relax\relax
2163     }%
2164     }%
2165     \def\HyPsd@unichar@second@byte#1{%
2166     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2167     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2168     \number
2169     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2170     \relax\relax\relax
2171     }%
2172     }%
2173     \def\HyPsd@unichar@octtwo#1{%
2174     \number\dimexpr.125\dimexpr#1sp\relax\relax
2175     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2176     \relax\relax\relax
2177     }%
2178     \fi

```

7 Support of other packages

7.1 Class memoir

```

2179 \@ifclassloaded{memoir}{%
2180 \AtEndOfPackage{\RequirePackage{memhfixc}}}%
2181 }{}

```

7.2 Package subfigure

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

```

2182 \@ifpackageloaded{subfigure}{%
2183 \ltx@ifundefined{sub@label}{%
2184 \Hy@hypertexnamesfalse
2185 }{%
2186 \renewcommand*{\sub@label}[1]{%
2187 \@bsphack
2188 \subfig@oldlabel{#1}%

```

```

2189 \if@filesw
2190 \begingroup
2191 \edef\@currentlabstr{%
2192 \expandafter\strip@prefix\meaning\@currentlabelname
2193 }%
2194 \protected@write\@auxout{}\@auxout{%
2195 \string\newlabel{sub@#1}{%
2196 {\@nameuse{\@thesub\@capttype}}%
2197 {\thepage}%
2198 }%
2199 \expandafter\strip@period\@currentlabstr
2200 \relax.\relax\@@@%
2201 }%
2202 {\@currentHref}%
2203 }%
2204 }%
2205 }%
2206 \endgroup
2207 \fi
2208 \@esphack
2209 }%
2210 \@ifpackagelater{subfigure}{2002/03/26}{\@esphack}%
2211 \providecommand*\@toclevelsubfigure{1}%
2212 \providecommand*\@toclevelsubtable{1}%
2213 }%
2214 }%
2215 }{}

```

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:

```

2216 \ltx@ifundefined{XR@addURL}{%
2217 }{}

```

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.

```

2218 \def\XR@addURL#1{\XR@dURL#1{}{}{}\\}%
2219 \def\XR@dURL#1#2#3#4#5\\{%
2220 {#1}{#2}%
2221 \if!#4!%
2222 \else
2223 {#3}{#4}{\XR@URL}%
2224 \fi
2225 }%
2226 }

2227 \def\Hy@true{true}
2228 \def\Hy@false{false}

```

Providing dummy definitions.

```

2229 \let\literalps@out\@gobble
2230 \newcommand\pdfbookmark[3]{}
2231 \def\Acrobatmenu#1#2{\leavevmode#2}
2232 \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

```
2233 \let\HyperRaiseLinkHook\@empty
2234 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2235 \def\Hy@raisedlink#1{%
2236   \ifvmode
2237     #1%
2238   \else
2239     \penalty\@M
2240     \smash{%
2241       \begingroup
2242         \let\HyperRaiseLinkLength\@tempdima
2243         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2244         \HyperRaiseLinkHook
2245       \expandafter\endgroup
2246       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2247     }%
2248   \fi
2249 }
```

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

```
2250 \def\Hy@SaveLastskip{%
2251   \let\Hy@RestoreLastskip\relax
2252   \ifvmode
2253     \ifdim\lastskip=\z@
2254       \let\Hy@RestoreLastskip\nobreak
2255     \else
2256       \begingroup
2257         \skip@=-\lastskip
2258         \edef\x{%
2259           \endgroup
2260           \def\noexpand\Hy@RestoreLastskip{%
2261             \noexpand\ifvmode
2262               \noexpand\nobreak
2263               \vskip\the\skip@
2264               \vskip\the\lastskip\relax
2265             \noexpand\fi
2266           }%
2267         }%
2268       \x
2269     \fi
2270   \else
2271     \ifhmode
2272       \ifdim\lastskip=\z@
```



```

2273     \let\Hy@RestoreLastskip\nobreak
2274   \else
2275     \begingroup
2276     \skip@=-\lastskip
2277     \edef\x{%
2278       \endgroup
2279       \def\noexpand\Hy@RestoreLastskip{%
2280         \noexpand\ifhmode
2281         \noexpand\nobreak
2282         \hskip\the\skip@
2283         \hskip\the\lastskip\relax
2284         \noexpand\fi
2285       }%
2286     }%
2287   \x
2288 \fi
2289 \fi
2290 \fi
2291 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2292 \def\Hy@boolkey{ \@dblarg\Hy@@boolkey}
2293 \def\Hy@@boolkey[#1]#2#3{%
2294   \edef\Hy@tempa{#3}%
2295   \lowercase\expandafter{%
2296     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2297   }%
2298   \ifx\Hy@tempa\@empty
2299     \let\Hy@tempa\Hy@true
2300   \fi
2301   \ifx\Hy@tempa\Hy@true
2302   \else
2303     \ifx\Hy@tempa\Hy@false
2304     \else
2305       \let\Hy@tempa\relax
2306     \fi
2307   \fi
2308   \ifx\Hy@tempa\relax
2309     \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2310   \else
2311     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2312     \csname Hy@#2\Hy@tempa\endcsname
2313   \fi
2314 }

```

\Hy@WarnOptionValue

```

2315 \def\Hy@WarnOptionValue#1#2#3{%
2316   \Hy@Warning{%
2317     Unexpected value ‘#1’\MessageBreak
2318     of option ‘#2’ instead of\MessageBreak
2319     #3%
2320   }%

```

2321 }

\Hy@DisableOption

```
2322 \def\Hy@DisableOption#1{%
2323   \ifundefined{KV@Hyp@#1@default}{%
2324     \define@key{Hyp}{#1}%
2325   }{%
2326     \define@key{Hyp}{#1}[]%
2327   }%
2328   {\Hy@WarnOptionDisabled{#1}}}%
2329 }
```

\Hy@WarnOptionDisabled

```
2330 \def\Hy@WarnOptionDisabled#1{%
2331   \Hy@Warning{%
2332     Option '#1' has already been used,\MessageBreak
2333     setting the option has no effect%
2334   }%
2335 }
```

\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.

```
2336 \def\Hy@CheckOptionValue#1#2#3{%
2337   \begingroup
2338   \edef\x{#1}%
2339   \@onelevel@sanitize\x
2340   \let\y=y%
2341   \def\do##1##2{%
2342     \def\z{##1}%
2343     \@onelevel@sanitize\z
2344     \ifx\x\z
2345       \let\y=n%
2346       \let\do\@gobbletwo
2347     \fi
2348   }%
2349   #3%
2350   \ifx\y y%
2351     \def\do##1##2{%
2352       * '#1'%
2353       \ifx\##2\\else\space(##2)\fi
2354       \MessageBreak
2355     }%
2356     \Hy@Warning{%
2357       Values of option '#2':\MessageBreak
2358       #3%
2359       * An empty value disables the option.\MessageBreak
2360       Unknown value '\x'%
2361     }%
2362   \fi
2363   \endgroup
2364 }
```

\Hy@DefNameKey #1: option name

#2: \do list with known values, first argument of \do is value, second argument is a comment.

```
2365 \def\Hy@DefNameKey#1{%
```

```

2366 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2367 }

```

\Hy@@DefNameKey #1: macro for value storage

#2: option name

#3: \do list with known values.

```

2368 \def\Hy@@DefNameKey#1#2#3{%
2369 \define@key{Hyp}{#2}{%
2370 \edef#1{##1}%
2371 \ifx#1\@empty
2372 \else
2373 \Hy@CheckOptionValue{##1}{#2}{#3}%
2374 \fi
2375 }%
2376 \let#1\@empty
2377 }

```

\Hy@UseNameKey

```

2378 \def\Hy@UseNameKey#1#2{%
2379 \ifx#2\@empty
2380 \else
2381 /#1/#2%
2382 \fi
2383 }

```

9.2 Defining the options

```

2384 \define@key{Hyp}{implicit}[true]{%
2385 \Hy@boolkey{implicit}{#1}%
2386 }
2387 \define@key{Hyp}{draft}[true]{%
2388 \Hy@boolkey{draft}{#1}%
2389 }
2390 \define@key{Hyp}{final}[true]{%
2391 \Hy@boolkey{final}{#1}%
2392 }
2393 \let\KV@Hyp@nolinks\KV@Hyp@draft
2394 \def\Hy@ObsoletePaperOption#1{%
2395 \Hy@WarningNoLine{%
2396 Option '#1' is no longer used%
2397 }%
2398 \define@key{Hyp}{#1}[true]{}%
2399 }
2400 \def\Hy@temp#1{%
2401 \define@key{Hyp}{#1}[true]{%
2402 \Hy@ObsoletePaperOption{#1}%
2403 }%
2404 }
2405 \Hy@temp{a4paper}
2406 \Hy@temp{a5paper}
2407 \Hy@temp{b5paper}
2408 \Hy@temp{letterpaper}
2409 \Hy@temp{legalpaper}
2410 \Hy@temp{executivepaper}
2411 \define@key{Hyp}{setpagesize}[true]{%
2412 \Hy@boolkey{setpagesize}{#1}%

```

```

2413 }
2414 \define@key{Hyp}{debug}[true]{%
2415   \Hy@boolkey[debug]{verbose}{#1}%
2416 }
2417 \define@key{Hyp}{linktocpage}[true]{%
2418   \Hy@boolkey[linktocpage]{#1}%
2419   \ifHy@linktocpage
2420     \let\Hy@linktoc\Hy@linktoc@page
2421   \else
2422     \let\Hy@linktoc\Hy@linktoc@section
2423   \fi
2424 }
2425 \chardef\Hy@linktoc@none=0 %
2426 \chardef\Hy@linktoc@section=1 %
2427 \chardef\Hy@linktoc@page=2 %
2428 \chardef\Hy@linktoc@all=3 %
2429 \ifHy@linktocpage
2430   \let\Hy@linktoc\Hy@linktoc@page
2431 \else
2432   \let\Hy@linktoc\Hy@linktoc@section
2433 \fi
2434 \define@key{Hyp}{linktoc}{%
2435   \@ifundefined{Hy@linktoc@#1}{%
2436     \Hy@Warning{%
2437       Unexpected value ‘#1’ of\MessageBreak
2438       option ‘linktoc’ instead of ‘none’,\MessageBreak
2439       ‘section’, ‘page’ or ‘all’%
2440     }%
2441   }{%
2442     \expandafter\let\expandafter\Hy@linktoc
2443     \csname Hy@linktoc@#1\endcsname
2444   }%
2445 }
2446 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2447 \let\XR@ext\relax
2448 \define@key{Hyp}{verbose}[true]{%
2449   \Hy@boolkey[verbose]{#1}%
2450 }
2451 \define@key{Hyp}{typexml}[true]{%
2452   \Hy@boolkey[typexml]{#1}%
2453 }

```

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.

```

2454 \define@key{Hyp}{raiselinks}[true]{%
2455   \Hy@boolkey[raiselinks]{#1}%
2456 }

```

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

```

2457 \def\Hy@setbreaklinks#1{%
2458   \csname breaklinks#1\endcsname
2459 }
2460 \def\Hy@breaklinks@unsupported{%
2461   \ifx\Hy@setbreaklinks\@gobble
2462     \ifHy@breaklinks
2463       \Hy@WarningNoLine{%

```

```

2464      You have enabled option 'breaklinks'.\MessageBreak
2465      But driver '\Hy@driver.def' does not support this.\MessageBreak
2466      Expect trouble with the link areas of broken links%
2467    }%
2468  \fi
2469 \fi
2470 }

```

```

2471 \define@key{Hyp}{breaklinks}[true]{%
2472   \Hy@boolkey{breaklinks}{#1}%
2473   \let\Hy@setbreaklinks\@gobble
2474 }

2475 \define@key{Hyp}{localanchorname}[true]{%
2476   \Hy@boolkey{localanchorname}{#1}%
2477 }

```

Determines whether an automatic anchor is put on each page

```

2478 \define@key{Hyp}{pageanchor}[true]{%
2479   \Hy@boolkey{pageanchor}{#1}%
2480 }

```

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.

```

2481 \define@key{Hyp}{plainpages}[true]{%
2482   \Hy@boolkey{plainpages}{#1}%
2483 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what \LaTeX provides?

```

2484 \define@key{Hyp}{naturalnames}[true]{%
2485   \Hy@boolkey{naturalnames}{#1}%
2486 }

```

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

```

2487 \define@key{Hyp}{hypertextnames}[true]{%
2488   \Hy@boolkey{hypertextnames}{#1}%
2489 }

```

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

```

2490 \define@key{Hyp}{nesting}[true]{%
2491   \Hy@boolkey{nesting}{#1}%
2492 }

```

```

2493 \define@key{Hyp}{unicode}[true]{%
2494   \Hy@boolkey{unicode}{#1}%
2495   \ifHy@unicode
2496     \def\HyPsd@pdfencoding{unicode}%
2497     \HyPsd@LoadUnicode
2498   \else
2499     \def\HyPsd@pdfencoding{pdfdoc}%
2500   \fi
2501 }

2502 \def\HyPsd@LoadUnicode{%
2503   \@ifundefined{T@PU}{%
2504     \input{puenc.def}%
2505     \HyLinguex@Restore
2506   }{}%
2507   \DeclareFontFamily{PU}{pdf}{}%
2508   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2509   \DeclareFontSubstitution{PU}{pdf}{m}{n}%

```

```

2510 \global\let\HyPsd@LoadUnicode\relax
2511 }
2512 \AtBeginDocument{%
2513   \ifx\HyPsd@LoadUnicode\relax
2514   \else
2515     \def\HyPsd@LoadUnicode{%
2516       \PackageError{hyperref}{%
2517         Unicode support for bookmarks is not available.\MessageBreak
2518         Activate unicode support by using one of the options\MessageBreak
2519         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2520         in the preamble%
2521       }\@ehc
2522     \global\let\HyPsd@LoadUnicode\relax
2523     \global\Hy@unicodedefalse
2524     \global\let\Hy@unicodetrue\Hy@unicodedefalse
2525   }%
2526 \fi
2527 }

2528 \define@key{Hyp}{pdfencoding}{%
2529   \edef\HyPsd@temp{#1}%
2530   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2531     \let\HyPsd@pdfencoding\HyPsd@temp
2532     \Hy@unicodedefalse
2533   \else
2534     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2535       \z@
2536     \else
2537       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2538         \z@
2539       \else
2540         \@ne
2541       \fi
2542     \fi
2543     \let\HyPsd@pdfencoding\HyPsd@temp
2544     \hypersetup{unicode}%
2545     \ifHy@unicode
2546       \def\HyPsd@pdfencoding{#1}%
2547       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2548         \HyPsd@LoadStringEncoding
2549       \fi
2550     \else
2551       \Hy@Warning{Cannot switch to unicode bookmarks}%
2552       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2553     \fi
2554   \else
2555     \@onelevel@sanitize\HyPsd@temp
2556     \Hy@Warning{%
2557       Values of option 'pdfencoding':\MessageBreak
2558       'pdfdoc', 'unicode', 'auto'.\MessageBreak
2559       Ignoring unknown value '\HyPsd@temp'%
2560     }%
2561   \fi
2562 \fi
2563 }

2564 \def\HyPsd@pdfencoding@auto{auto}
2565 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2566 \def\HyPsd@pdfencoding@unicode{unicode}

```

```

2567 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2568 \def\HyPsd@LoadStringEnc{%
2569   \RequirePackage{stringenc}[2009/12/15]%
2570   \let\HyPsd@LoadStringEnc\relax
2571 }
2572 \AtBeginDocument{%
2573   \ifpackageloaded{stringenc}{%
2574     \let\HyPsd@LoadStringEnc\relax
2575   }{%
2576     \def\HyPsd@LoadStringEnc{%
2577       \Hy@WarningNoLine{%
2578         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2579         in the preamble or load the package there%
2580       }%
2581     }%
2582   }%
2583 }

2584 \newif\ifHy@setpdfversion
2585 \define@key{Hyp}{pdfversion}{%
2586   \ifundefined{Hy@pdfversion@#1}{%
2587     \PackageWarning{hyperref}{%
2588       Unsupported PDF version '#1'.\MessageBreak
2589       Valid values: 1.2 until 1.9%
2590     }%
2591   }{%
2592     \Hy@setpdfversiontrue
2593     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2594   }%
2595 }

2596 \@namedef{Hy@pdfversion@1.2}{2}%
2597 \@namedef{Hy@pdfversion@1.3}{3}%
2598 \@namedef{Hy@pdfversion@1.4}{4}%
2599 \@namedef{Hy@pdfversion@1.5}{5}%
2600 \@namedef{Hy@pdfversion@1.6}{6}%
2601 \@namedef{Hy@pdfversion@1.7}{7}%
2602 \@namedef{Hy@pdfversion@1.8}{8}%
2603 \@namedef{Hy@pdfversion@1.9}{9}%
2604 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2605 \define@key{Hyp}{hyperref}[true]{}
2606 \define@key{Hyp}{tex4ht}[true]{}%
2607 \Hy@texhttrue
2608 \setkeys{Hyp}{colorlinks=true}%
2609 \def\BeforeTeXIVht{\usepackage{color}}%
2610 \def\Hy@driver{htex4ht}%
2611 \def\MaybeStopEarly{%
2612   \typeout{Hyperref stopped early}%
2613   \AfterBeginDocument{%
2614     \PDF@FinishDoc
2615     \gdef\PDF@FinishDoc{}%
2616   }%
2617   \endinput
2618 }%
2619 }
2620 \define@key{Hyp}{pdftex}[true]{}%

```

```

2621 \def\Hy@driver{hpdtex}%
2622 }
2623 \define@key{Hyp}{nativepdf}[true]{%
2624 \def\Hy@driver{hdvips}%
2625 }
2626 \define@key{Hyp}{dvipdfm}[true]{%
2627 \def\Hy@driver{hdvipdfm}%
2628 }
2629 \define@key{Hyp}{dvipdfmx}[true]{%
2630 \def\Hy@driver{hdvipdfm}%
2631 }
2632 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2633 \expandafter\ifx\csname if#1\expandafter\endcsname
2634 \csname iftrue\endcsname
2635 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2636 \else
2637 \chardef\SpecialDvipdfmxOutlineOpen\z@
2638 \fi
2639 }
2640 \define@key{Hyp}{xetex}[true]{%
2641 \def\Hy@driver{hxetex}%
2642 }
2643 \define@key{Hyp}{pdfmark}[true]{%
2644 \def\Hy@driver{hdvips}%
2645 }
2646 \define@key{Hyp}{dvips}[true]{%
2647 \def\Hy@driver{hdvips}%
2648 }
2649 \define@key{Hyp}{hypertex}[true]{%
2650 \def\Hy@driver{hypertex}%
2651 }
2652 \let\Hy@MaybeStopNow\relax
2653 \define@key{Hyp}{vtex}[true]{%
2654 \begingroup\expandafter\expandafter\expandafter\endgroup
2655 \expandafter\ifx\csname OpMode\endcsname\relax
2656 \@latex@error{Non-VTeX processor}{}%
2657 \global\let\Hy@MaybeStopNow\endinput
2658 \endinput
2659 \else
2660 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2661 \def\Hy@driver{hvtex}%
2662 \else
2663 \ifnum\OpMode=10\relax
2664 \def\Hy@driver{hvtexhtm}%
2665 \def\MaybeStopEarly{%
2666 \typeout{Hyperref stopped early}%
2667 \AfterBeginDocument{%
2668 \PDF@FinishDoc
2669 \gdef\PDF@FinishDoc{}}%
2670 }%
2671 \endinput
2672 }%
2673 \else
2674 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2675 \global\let\Hy@MaybeStopNow\endinput
2676 \endinput
2677 \fi

```



```

2678 \fi
2679 \fi
2680 }
2681 \define@key{Hyp}{vtexpdfmark}[true]{%
2682 \begingroup\expandafter\expandafter\expandafter\endgroup
2683 \expandafter\ifx\csname OpMode\endcsname\relax
2684 \latexerror{Non-VTeX processor}{}%
2685 \let\Hy@MaybeStopNow\endinput
2686 \endinput
2687 \else
2688 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2689 \def\Hy@driver{hvtexmrk}%
2690 \else
2691 \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2692 \let\Hy@MaybeStopNow\endinput
2693 \endinput
2694 \fi
2695 \fi
2696 }
2697 \define@key{Hyp}{dviwindo}[true]{%
2698 \def\Hy@driver{hdviwind}%
2699 \setkeys{Hyp}{colorlinks}%
2700 \ifpdf
2701 \else
2702 \ifxetex
2703 \else
2704 \PassOptionsToPackage{dviwindo}{color}%
2705 \fi
2706 \fi
2707 }
2708 \define@key{Hyp}{dvipsone}[true]{%
2709 \def\Hy@driver{hdvipson}%
2710 }
2711 \define@key{Hyp}{textures}[true]{%
2712 \def\Hy@driver{htexture}%
2713 }
2714 \define@key{Hyp}{latex2html}[true]{%
2715 \AtBeginDocument{\@@latextohtmlX}%
2716 }

```

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

```

2717 \define@key{Hyp}{ps2pdf}[true]{%
2718 \def\Hy@driver{hdvips}%
2719 \providecommand*\pdfborder{0 0 1}%
2720 }

```

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.

```

2721 \define@key{Hyp}{hyperfigures}[true]{%
2722 \Hy@boolkey{hyperfigures}{figures}{#1}%
2723 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2724 \define@key{Hyp}{hyperfootnotes}[true]{%
2725 \Hy@boolkey{hyperfootnotes}{#1}%
2726 }

```

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

```

2727 \def\back@none{none}
2728 \def\back@section{section}
2729 \def\back@page{page}
2730 \def\back@slide{slide}
2731 \define@key{Hyp}{backref}[section]{%
2732   \lowercase{\def\Hy@tempa{#1}}}%
2733   \ifx\Hy@tempa\@empty
2734     \let\Hy@tempa\back@section
2735   \fi
2736   \ifx\Hy@tempa\Hy@false
2737     \let\Hy@tempa\back@none
2738   \fi
2739   \ifx\Hy@tempa\back@slide
2740     \let\Hy@tempa\back@section
2741   \fi
2742   \ifx\Hy@tempa\back@page
2743     \PassOptionsToPackage{hyperpageref}{backref}%
2744     \Hy@backreftrue
2745   \else
2746     \ifx\Hy@tempa\back@section
2747       \PassOptionsToPackage{hyperref}{backref}%
2748       \Hy@backreftrue
2749     \else
2750       \ifx\Hy@tempa\back@none
2751         \Hy@backreffalse
2752       \else
2753         \Hy@WarnOptionValue{#1}{backref}{%
2754           'section', 'slide', 'page', 'none',\MessageBreak
2755           or 'false'}%
2756       \fi
2757     \fi
2758   \fi
2759 }
2760 \define@key{Hyp}{pagebackref}[true]{%
2761   \edef\Hy@tempa{#1}%
2762   \lowercase\expandafter{%
2763     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2764   }%
2765   \ifx\Hy@tempa\@empty
2766     \let\Hy@tempa\Hy@true
2767   \fi
2768   \ifx\Hy@tempa\Hy@true
2769     \PassOptionsToPackage{hyperpageref}{backref}%
2770     \Hy@backreftrue
2771   \else
2772     \ifx\Hy@tempa\Hy@false
2773       \Hy@backreffalse
2774     \else
2775       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2776     \fi
2777   \fi
2778 }

```

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

```

2779 \define@key{Hyp}{hyperindex}[true]{%
2780   \Hy@boolkey{hyperindex}{#1}%

```

2781 }

Configuration of encap char.

2782 \define@key{Hyp}{encap}{\|}{%}

2783 \def\HyInd@EncapChar{#1}%

2784 }

12 Language options

The \autoref feature depends on the language.

2785 \def\HyLang@afrikaans{%

2786 \def\equationautorefname{Vergelyking}%

2787 \def\footnoteautorefname{Voetnota}%

2788 \def\itemautorefname{Item}%

2789 \def\figureautorefname{Figuur}%

2790 \def\tableautorefname{Tabel}%

2791 \def\partautorefname{Deel}%

2792 \def\appendixautorefname{Bylae}%

2793 \def\chapterautorefname{Hoofstuk}%

2794 \def\sectionautorefname{Afdeling}%

2795 \def\subsectionautorefname{Subafdeling}%

2796 \def\subsubsectionautorefname{Subsubafdeling}%

2797 \def\paragraphautorefname{Paragraaf}%

2798 \def\subparagraphautorefname{Subparagraaf}%

2799 \def\FancyVerbLineautorefname{Lyn}%

2800 \def\theoremautorefname{Teorema}%

2801 \def\pageautorefname{Bladsy}%

2802 }

2803 \def\HyLang@english{%

2804 \def\equationautorefname{Equation}%

2805 \def\footnoteautorefname{footnote}%

2806 \def\itemautorefname{item}%

2807 \def\figureautorefname{Figure}%

2808 \def\tableautorefname{Table}%

2809 \def\partautorefname{Part}%

2810 \def\appendixautorefname{Appendix}%

2811 \def\chapterautorefname{chapter}%

2812 \def\sectionautorefname{section}%

2813 \def\subsectionautorefname{subsection}%

2814 \def\subsubsectionautorefname{subsubsection}%

2815 \def\paragraphautorefname{paragraph}%

2816 \def\subparagraphautorefname{subparagraph}%

2817 \def\FancyVerbLineautorefname{line}%

2818 \def\theoremautorefname{Theorem}%

2819 \def\pageautorefname{page}%

2820 }

2821 \def\HyLang@french{%

2822 \def\equationautorefname{'Equation}%

2823 \def\footnoteautorefname{note}%

2824 \def\itemautorefname{item}%

2825 \def\figureautorefname{Figure}%

2826 \def\tableautorefname{Tableau}%

2827 \def\partautorefname{Partie}%

2828 \def\appendixautorefname{Appendice}%

2829 \def\chapterautorefname{chapitre}%

2830 \def\sectionautorefname{section}%

2831 \def\subsectionautorefname{sous-section}%

```

2832 \def\subsubsectionautorefname{sous-sous-section}%
2833 \def\paragraphautorefname{paragraphe}%
2834 \def\subparagraphautorefname{sous-paragraphe}%
2835 \def\FancyVerbLineautorefname{ligne}%
2836 \def\theoremautorefname{Th\'eor\'eme}%
2837 \def\pageautorefname{page}%
2838 }
2839 \def\HyLang@german{%
2840 \def\equationautorefname{Gleichung}%
2841 \def\footnoteautorefname{Fu\ss note}%
2842 \def\itemautorefname{Punkt}%
2843 \def\figureautorefname{Abbildung}%
2844 \def\tableautorefname{Tabelle}%
2845 \def\partautorefname{Teil}%
2846 \def\appendixautorefname{Anhang}%
2847 \def\chapterautorefname{Kapitel}%
2848 \def\sectionautorefname{Abschnitt}%
2849 \def\subsectionautorefname{Unterabschnitt}%
2850 \def\subsubsectionautorefname{Unterunterabschnitt}%
2851 \def\paragraphautorefname{Absatz}%
2852 \def\subparagraphautorefname{Unterabsatz}%
2853 \def\FancyVerbLineautorefname{Zeile}%
2854 \def\theoremautorefname{Theorem}%
2855 \def\pageautorefname{Seite}%
2856 }
2857 \def\HyLang@italian{%
2858 \def\equationautorefname{Equazione}%
2859 \def\footnoteautorefname{nota}%
2860 \def\itemautorefname{punto}%
2861 \def\figureautorefname{Figura}%
2862 \def\tableautorefname{Tabella}%
2863 \def\partautorefname{Parte}%
2864 \def\appendixautorefname{Appendice}%
2865 \def\chapterautorefname{Capitolo}%
2866 \def\sectionautorefname{sezione}%
2867 \def\subsectionautorefname{sottosezione}%
2868 \def\subsubsectionautorefname{sottosottosezione}%
2869 \def\paragraphautorefname{paragrafo}%
2870 \def\subparagraphautorefname{sottoparagrafo}%
2871 \def\FancyVerbLineautorefname{linea}%
2872 \def\theoremautorefname{Teorema}%
2873 \def\pageautorefname{Pag.\@}%
2874 }
2875 \def\HyLang@magyar{%
2876 \def\equationautorefname{Egyenlet}%
2877 \def\footnoteautorefname{l\'abjegyzet}%
2878 \def\itemautorefname{Elem}%
2879 \def\figureautorefname{'Abra}%
2880 \def\tableautorefname{T\'abl\'azat}%
2881 \def\partautorefname{R\'esz}%
2882 \def\appendixautorefname{F\'uggel\'ek}%
2883 \def\chapterautorefname{fejezet}%
2884 \def\sectionautorefname{szakasz}%
2885 \def\subsectionautorefname{alszakasz}%
2886 \def\subsubsectionautorefname{alalszakasz}%
2887 \def\paragraphautorefname{bekezd\'es}%
2888 \def\subparagraphautorefname{albekezd\'es}%

```


2923 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
 2924 % \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.

2925 \def\itemautorefname{\cyr\cyrp.}%
 2926 % \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.

2927 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
 2928 \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.

2929 \def\partautorefname{\cyr\cyrch.}%
 2930 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
 2931 \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.

2932 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
 2933 % \def\appendixautorefname{%
 2934 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
 2935 % }%

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.

2936 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
 2937 \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.

2938 \def\paragraphautorefname{\cyr\cyrp.}%
 2939 \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.

2940 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
 2941 % \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.

2942 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

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

2943 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
 2944 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%

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

2945 % \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 ...

```
2946 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2947 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyr\cyra}%
```

```
2948 % \def\Accttheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyr\cyru}%
```

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

```
2949 \def\pageautorefname{\cyr\cyrs.}%
```

```
2950 }
```

```
2951 \def\HyLang@spanish{%
```

```
2952 \def\equationautorefname{Ecuaci\`on}%
```

```
2953 \def\footnoteautorefname{Nota a pie de p\`agina}%
```

```
2954 \def\itemautorefname{Elemento}%
```

```
2955 \def\figureautorefname{Figura}%
```

```
2956 \def\tableautorefname{Tabla}%
```

```
2957 \def\partautorefname{Parte}%
```

```
2958 \def\appendixautorefname{Ap\`endice}%
```

```
2959 \def\chapterautorefname{Cap\`itulo}%
```

```
2960 \def\sectionautorefname{Secci\`on}%
```

```
2961 \def\subsectionautorefname{Subsecci\`on}%
```

```
2962 \def\subsubsectionautorefname{Subsubsecci\`on}%
```

```
2963 \def\paragraphautorefname{P\`arrafo}%
```

```
2964 \def\subparagraphautorefname{Subp\`arrafo}%
```

```
2965 \def\FancyVerbLineautorefname{L\`inea}%
```

```
2966 \def\theoremautorefname{Teorema}%
```

```
2967 \def\pageautorefname{P\`agina}%
```

```
2968 }
```

```
2969 \def\HyLang@vietnamese{%
```

```
2970 \def\equationautorefname{Ph\`uhorn\`ohorn\`ng tr\`inh}%
```

```
2971 \def\footnoteautorefname{Ch\`u th\`ich}%
```

```
2972 \def\itemautorefname{m\`d\`u\`c}%
```

```
2973 \def\figureautorefname{H\`inh}%
```

```
2974 \def\tableautorefname{B\`h\`a\`ng}%
```

```
2975 \def\partautorefname{Ph\`acircumflex\`n}%
```

```
2976 \def\appendixautorefname{Ph\`d\`u\`l\`d\`u\`c}%
```

```
2977 \def\chapterautorefname{ch\`uhorn\`ohorn\`ng}%
```

```
2978 \def\sectionautorefname{m\`d\`u\`c}%
```

```
2979 \def\subsectionautorefname{m\`d\`u\`c}%
```

```
2980 \def\subsubsectionautorefname{m\`d\`u\`c}%
```

```
2981 \def\paragraphautorefname{\dj\`o\`d\`a\`n}%
```

```
2982 \def\subparagraphautorefname{\dj\`o\`d\`a\`n}%
```

```
2983 \def\FancyVerbLineautorefname{d\`ong}%
```

```
2984 \def\theoremautorefname{DJ\`d\`i\`nh l\`y}%
```

```
2985 \def\pageautorefname{Trang}%
```

```
2986 }
```

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

```
2987 \def\HyLang@addto#1#2{%
```

```
2988 #2%
```

```
2989 \@temptokena{#2}%
```

```
2990 \ifx#1\relax
```

```
2991 \let#1\@empty
```

```
2992 \fi
```

```
2993 \ifx#1\@undefined
```

```

2994 \edef#1{\the\@temptokena}%
2995 \else
2996 \toks@\expandafter{#1}%
2997 \edef#1{\the\toks@\the\@temptokena}%
2998 \fi
2999 \@temptokena{}\toks@\@temptokena
3000 }

3001 \def\HyLang@DeclareLang#1#2#3{%
3002 \begingroup
3003 \edef\x##1##2{%
3004 \noexpand\ifx##2\relax
3005 \errmessage{No definitions for language #2' found!}%
3006 \noexpand\fi
3007 \endgroup
3008 \noexpand\define@key{Hyp}{#1}[]{%
3009 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3010 #3%
3011 }%
3012 }%
3013 \expandafter\x\csname extras#1\expandafter\endcsname
3014 \csname HyLang@#2\endcsname
3015 }

3016 \HyLang@DeclareLang{english}{english}{}
3017 \HyLang@DeclareLang{UKenglish}{english}{}
3018 \HyLang@DeclareLang{british}{english}{}
3019 \HyLang@DeclareLang{USenglish}{english}{}
3020 \HyLang@DeclareLang{american}{english}{}
3021 \HyLang@DeclareLang{german}{german}{}
3022 \HyLang@DeclareLang{austrian}{german}{}
3023 \HyLang@DeclareLang{ngerman}{german}{}
3024 \HyLang@DeclareLang{naustrian}{german}{}
3025 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3026 \HyLang@DeclareLang{brazil}{portuges}{}
3027 \HyLang@DeclareLang{brazilian}{portuges}{}
3028 \HyLang@DeclareLang{portuguese}{portuges}{}
3029 \HyLang@DeclareLang{spanish}{spanish}{}
3030 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3031 \HyLang@DeclareLang{french}{french}{}
3032 \HyLang@DeclareLang{frenchb}{french}{}
3033 \HyLang@DeclareLang{francais}{french}{}
3034 \HyLang@DeclareLang{acadian}{french}{}
3035 \HyLang@DeclareLang{canadien}{french}{}
3036 \HyLang@DeclareLang{italian}{italian}{}
3037 \HyLang@DeclareLang{magyar}{magyar}{}
3038 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3039 \define@key{Hyp}{vietnamese}[]{}%
3040 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3041 \AtEndOfPackage{%
3042 \@ifundefined{T@PU}{}{}%
3043 \input{pvnenc.def}%
3044 }%
3045 }%
3046 }
3047 \define@key{Hyp}{vietnam}[]{}%
3048 \HyLang@addto\extravietnam\HyLang@vietnamese

```



```

3049 \AtEndOfPackage{%
3050   \ifundefined{T@PU}{-}{%
3051     \input{puvnenc.def}%
3052   }%
3053 }%
3054 }

```

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

```

3055 \define@key{Hyp}{arabic}[]{%
3056   \AtEndOfPackage{%
3057     \ifundefined{T@PU}{-}{%
3058       \input{puarenc.def}%
3059     }%
3060   }%
3061 }

```

13 Options to change appearance of links

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

```

3062 \define@key{Hyp}{colorlinks}[true]{%
3063   \Hy@boolkey{colorlinks}{#1}%
3064 }
3065 \define@key{Hyp}{ocgcolorlinks}[true]{%
3066   \Hy@boolkey{ocgcolorlinks}{#1}%
3067 }
3068 \AtBeginDocument{%
3069   \begingroup
3070   \ifundefined{OBJ@OCG@view}{%
3071     \ifHy@ocgcolorlinks
3072       \Hy@Warning{%
3073         Driver does not support ‘ocgcolorlinks’,\MessageBreak
3074         using ‘colorlinks’ instead%
3075       }%
3076     \fi
3077   }{}%
3078   \endgroup
3079 }
3080 \define@key{Hyp}{frenchlinks}[true]{%
3081   \Hy@boolkey{frenchlinks}{#1}%
3082 }

```

14 Bookmarking

```

3083 \begingroup\expandafter\expandafter\expandafter\endgroup
3084 \expandafter\ifx\csname chapter\endcsname\relax
3085   \def\toclevel@part{0}%
3086 \else
3087   \def\toclevel@part{-1}%
3088 \fi
3089 \def\toclevel@chapter{0}
3090 \def\toclevel@section{1}
3091 \def\toclevel@subsection{2}
3092 \def\toclevel@subsubsection{3}
3093 \def\toclevel@paragraph{4}
3094 \def\toclevel@subparagraph{5}

```

```

3095 \def\toclevel@figure{0}
3096 \def\toclevel@table{0}
3097 \@ifpackageloaded{listings}{%
3098   \providecommand*\theHlstlisting{\thelstlisting}%
3099   \providecommand*\toclevel@lstlisting{0}%
3100 }{}
3101 \@ifpackageloaded{listing}{%
3102   \providecommand*\theHlisting{\thelisting}%
3103   \providecommand*\toclevel@listing{0}%
3104 }{}

3105 \define@key{Hyp}{bookmarks}[true]{%
3106   \Hy@boolkey{bookmarks}{#1}%
3107 }

3108 \define@key{Hyp}{bookmarksopen}[true]{%
3109   \Hy@boolkey{bookmarksopen}{#1}%
3110 }

```

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.

```

3111 \let\Hy@bookmarksdepth\c@tocdepth
3112 \define@key{Hyp}{bookmarksdepth}[]{%
3113   \begingroup
3114     \edef\x{#1}%
3115     \ifx\x\empty
3116       \global\let\Hy@bookmarksdepth\c@tocdepth
3117     \else
3118       \@ifundefined{toclevel@\x}{%
3119         \@onelevel@sanitize\x
3120         \edef\y{\expandafter\@car\x\@nil}%
3121         \ifcase 0\expandafter\ifx\y-1\fi
3122           \expandafter\ifnum\expandafter'\y>47 %
3123             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3124           \Hy@Warning{Unknown document division name (\x)}%
3125         \else
3126           \setbox\z@=\hbox{%
3127             \count@=\x
3128             \xdef\Hy@bookmarksdepth{\the\count@}%
3129           }%
3130         \fi
3131       }{%
3132         \setbox\z@=\hbox{%
3133           \count@=\csname toclevel@\x\endcsname
3134           \xdef\Hy@bookmarksdepth{\the\count@}%
3135         }%
3136       }%
3137     \fi
3138   \endgroup
3139 }

```

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

```

3140 \define@key{Hyp}{bookmarksopenlevel}{%
3141   \def\@bookmarksopenlevel{#1}%
3142 }
3143 \def\@bookmarksopenlevel{\maxdimen}
3144 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3145 \define@key{Hyp}{bookmarkstype}{%
3146   \def\Hy@bookmarkstype{#1}%
3147 }
3148 \def\Hy@bookmarkstype{toc}

```

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

```

3149 \define@key{Hyp}{bookmarksnumbered}[true]{%
3150   \Hy@boolkey{bookmarksnumbered}{#1}%
3151 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3152 \define@key{Hyp}{CJKbookmarks}[true]{%
3153   \Hy@boolkey{CJKbookmarks}{#1}%
3154 }
3155 \def\Hy@temp#1{%
3156   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3157 }
3158 \def\Hy@@temp#1#2#3{%
3159   \define@key{Hyp}{#2color}{%
3160     \HyColor@HyperrefColor{##1}#1%
3161   }%
3162   \def#1{#3}%
3163 }
3164 \Hy@temp{link}{red}
3165 \Hy@temp{anchor}{black}
3166 \Hy@temp{cite}{green}
3167 \Hy@temp{file}{cyan}
3168 \Hy@temp{url}{magenta}
3169 \Hy@temp{menu}{red}
3170 \Hy@temp{run}{\@filecolor}
3171 \define@key{Hyp}{pagecolor}{%
3172   \Hy@WarningPageColor
3173 }
3174 \def\Hy@WarningPageColor{%
3175   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3176   \global\let\Hy@WarningPageColor\relax
3177 }
3178 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3179 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3180 \let\@baseurl\@empty
3181 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3182 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3183 \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.

```

3184 \let\@pdfpagetransition\relax
3185 \define@key{Hyp}{pdfpagetransition}{\def\@pdfpagetransition{#1}}

```

\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.

```

3186 \let\@pdfpageduration\relax
3187 \define@key{Hyp}{pdfpageduration}{\def\@pdfpageduration{#1}}

```

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.

```

3188 \newif\ifHy@useHidKey
3189 \Hy@useHidKeyfalse
3190 \define@key{Hyp}{pdfpagehidden}[true]{%
3191   \Hy@boolkey{pdfpagehidden}{#1}%
3192   \ifHy@pdfpagehidden
3193     \global\Hy@useHidKeytrue
3194   \fi
3195 }

```

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).

```

3196 \def\Hy@ColorList{cite,file,link,menu,run,url}
3197 \@for\Hy@temp:=\Hy@ColorList\do{%
3198   \edef\Hy@temp{%
3199     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3200       \noexpand\Hy@Color@HyperrefBorderColor
3201         {##1}%
3202       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3203         {hyperref}%
3204       {\Hy@temp bordercolor}%
3205     }%
3206   }%
3207   \Hy@temp
3208 }
3209 \define@key{Hyp}{pagebordercolor}{%
3210   \Hy@WarningPageBorderColor
3211 }
3212 \def\Hy@WarningPageBorderColor{%
3213   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3214   \global\let\Hy@WarningPageBorderColor\relax
3215 }
3216 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3217 \Hy@DefNameKey{pdfhighlight}{%
3218   \do{/I}{Invert}%
3219   \do{/N}{None}%
3220   \do{/O}{Outline}%
3221   \do{/P}{Push}%
3222 }
3223 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}

```

```

3224 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3225 \def\Hy@setpdfborder{%
3226   \ifx\@pdfborder\@empty
3227     \else
3228       /Border[\@pdfborder]%
3229     \fi
3230   \ifx\@pdfborderstyle\@empty
3231     \else
3232       /BS<<\@pdfborderstyle>>%
3233     \fi
3234 }
3235 \Hy@DefNameKey{pdfpagemode}{%
3236   \do{UseNone}{}%
3237   \do{UseOutlines}{}%
3238   \do{UseThumbs}{}%
3239   \do{FullScreen}{}%
3240   \do{UseOC}{PDF 1.5}%
3241   \do{UseAttachments}{PDF 1.6}%
3242 }
3243 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3244   \do{UseNone}{}%
3245   \do{UseOutlines}{}%
3246   \do{UseThumbs}{}%
3247   \do{FullScreen}{}%
3248   \do{UseOC}{PDF 1.5}%
3249   \do{UseAttachments}{PDF 1.6}%
3250 }
3251 \Hy@DefNameKey{pdfdirection}{%
3252   \do{L2R}{Left to right}%
3253   \do{R2L}{Right to left}%
3254 }
3255 \Hy@DefNameKey{pdfviewarea}{%
3256   \do{MediaBox}{}%
3257   \do{CropBox}{}%
3258   \do{BleedBox}{}%
3259   \do{TrimBox}{}%
3260   \do{ArtBox}{}%
3261 }
3262 \Hy@DefNameKey{pdfviewclip}{%
3263   \do{MediaBox}{}%
3264   \do{CropBox}{}%
3265   \do{BleedBox}{}%
3266   \do{TrimBox}{}%
3267   \do{ArtBox}{}%
3268 }
3269 \Hy@DefNameKey{pdfprintarea}{%
3270   \do{MediaBox}{}%
3271   \do{CropBox}{}%
3272   \do{BleedBox}{}%
3273   \do{TrimBox}{}%
3274   \do{ArtBox}{}%
3275 }
3276 \Hy@DefNameKey{pdfprintclip}{%
3277   \do{MediaBox}{}%
3278   \do{CropBox}{}%
3279   \do{BleedBox}{}%
3280   \do{TrimBox}{}%

```

```

3281 \do{ArtBox}{}%
3282 }
3283 \Hy@DefNameKey{pdfprintscaling}{%
3284 \do{AppDefault}{}%
3285 \do{None}{}%
3286 }
3287 \Hy@DefNameKey{pdfduplex}{%
3288 \do{Simplex}{}%
3289 \do{DuplexFlipShortEdge}{}%
3290 \do{DuplexFlipLongEdge}{}%
3291 }
3292 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3293 \do{true}{}%
3294 \do{false}{}%
3295 }
3296 \define@key{Hyp}{pdfprintpagerange}{%
3297 \def\@pdfprintpagerange{#1}%
3298 }
3299 \Hy@DefNameKey{pdfnumcopies}{%
3300 \do{2}{two copies}%
3301 \do{3}{three copies}%
3302 \do{4}{four copies}%
3303 \do{5}{five copies}%
3304 }
3305 \define@key{Hyp}{pdfusetitle}[true]{%
3306 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3307 }
3308 \def\HyXeTeX@CheckUnicode{%
3309 \ifxetex
3310 \ifHy@unicode
3311 \else
3312 \Hy@WarningNoLine{%
3313 XeTeX driver only supports unicode.\MessageBreak
3314 Enabling option 'unicode'%
3315 }%
3316 \setkeys{Hyp}{unicode}%
3317 \fi
3318 \else
3319 \let\HyXeTeX@CheckUnicode\relax
3320 \fi
3321 }
3322 \def\HyPsd@PrerenderUnicode#1{%
3323 \begingroup
3324 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3325 \else
3326 \sbox0{%
3327 \let\GenericInfo\@gobbletwo
3328 \let\GenericWarning\@gobbletwo
3329 \let\GenericError\@gobblefour
3330 \PrerenderUnicode{#1}%
3331 }%
3332 \fi
3333 \endgroup
3334 }
3335 \define@key{Hyp}{pdftitle}{%
3336 \HyXeTeX@CheckUnicode
3337 \HyPsd@XeTeXBigChartrue

```

```

3338 \HyPsd@PrerenderUnicode{#1}%
3339 \pdfstringdef\@pdftitle{#1}%
3340 }
3341 \define@key{Hyp}{pdfauthor}{%
3342 \HyXeTeX@CheckUnicode
3343 \HyPsd@XeTeXBigCharstrue
3344 \HyPsd@PrerenderUnicode{#1}%
3345 \pdfstringdef\@pdfauthor{#1}%
3346 }
3347 \define@key{Hyp}{pdfproducer}{%
3348 \HyXeTeX@CheckUnicode
3349 \HyPsd@XeTeXBigCharstrue
3350 \HyPsd@PrerenderUnicode{#1}%
3351 \pdfstringdef\@pdfproducer{#1}%
3352 }
3353 \define@key{Hyp}{pdfcreator}{%
3354 \HyXeTeX@CheckUnicode
3355 \HyPsd@XeTeXBigCharstrue
3356 \HyPsd@PrerenderUnicode{#1}%
3357 \pdfstringdef\@pdfcreator{#1}%
3358 }
3359 \define@key{Hyp}{pdfcreationdate}{%
3360 \begingroup
3361 \Hy@unicodedefalse
3362 \pdfstringdef\@pdfcreationdate{#1}%
3363 \endgroup
3364 }
3365 \define@key{Hyp}{pdfmoddate}{%
3366 \begingroup
3367 \Hy@unicodedefalse
3368 \pdfstringdef\@pdfmoddate{#1}%
3369 \endgroup
3370 }
3371 \define@key{Hyp}{pdfsubject}{%
3372 \HyXeTeX@CheckUnicode
3373 \HyPsd@XeTeXBigCharstrue
3374 \HyPsd@PrerenderUnicode{#1}%
3375 \pdfstringdef\@pdfsubject{#1}%
3376 }
3377 \define@key{Hyp}{pdfkeywords}{%
3378 \HyXeTeX@CheckUnicode
3379 \HyPsd@XeTeXBigCharstrue
3380 \HyPsd@PrerenderUnicode{#1}%
3381 \pdfstringdef\@pdfkeywords{#1}%
3382 }
3383 \define@key{Hyp}{pdftrapped}{%
3384 \lowercase{\edef\Hy@temp{#1}}%
3385 \ifx\Hy@temp\HyInfo@trapped@true
3386 \def\@pdftrapped{True}%
3387 \else
3388 \ifx\Hy@temp\HyInfo@trapped@false
3389 \def\@pdftrapped{False}%
3390 \else
3391 \ifx\Hy@temp\HyInfo@trapped@unknown
3392 \def\@pdftrapped{Unknown}%
3393 \else
3394 \ifx\Hy@temp\@empty

```

```

3395     \else
3396         \Hy@Warning{%
3397             Unsupported value '#1'\MessageBreak
3398             for option 'pdftrapped'%
3399         }%
3400     \fi
3401     \def\@pdftrapped{}%
3402 \fi
3403 \fi
3404 \fi
3405 }
3406 \def\HyInfo@trapped@true{true}
3407 \def\HyInfo@trapped@false{false}
3408 \def\HyInfo@trapped@unknown{unknown}
3409 \def\HyInfo@TrappedUnsupported{%
3410     \ifx\@pdftrapped\@empty
3411     \else
3412         \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3413         \gdef\HyInfo@TrappedUnsupported{}%
3414     \fi
3415 }
3416 \define@key{Hyp}{pdfinfo}{%
3417     \kvsetkeys{pdfinfo}{#1}%
3418 }
3419 \def\Hy@temp#1{%
3420     \lowercase{\Hy@temp@A{#1}}{#1}%
3421 }
3422 \def\Hy@temp@A#1#2{%
3423     \define@key{pdfinfo}{#2}{%
3424         \hypersetup{pdf#1={##1}}%
3425     }%
3426 }
3427 \Hy@temp{Title}
3428 \Hy@temp{Author}
3429 \Hy@temp{Keywords}
3430 \Hy@temp{Subject}
3431 \Hy@temp{Creator}
3432 \Hy@temp{Producer}
3433 \Hy@temp{CreationDate}
3434 \Hy@temp{ModDate}
3435 \Hy@temp{Trapped}
3436 \newif\ifHyInfo@AddonUnsupported
3437 \kv@set@family@handler{pdfinfo}{%
3438     \HyInfo@AddonHandler{#1}{#2}%
3439 }
3440 \let\HyInfo@do\relax
3441 \def\HyInfo@AddonHandler#1#2{%
3442     \ifx\kv@value\relax
3443         \Hy@Warning{%
3444             Option 'pdfinfo': ignoring key '\kv@key' without value%
3445         }%
3446     \else
3447         \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3448         \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3449         \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3450             \ifHyInfo@AddonUnsupported
3451                 \Hy@Warning{%

```



```

3452     This driver does not support additional\MessageBreak
3453     information entries, therefore\MessageBreak
3454     ‘\kv@key’ is ignored%
3455 }%
3456 \else
3457 \define@key{pdfinfo}{\HyInfo@Key}{%
3458   \HyXeTeX@CheckUnicode
3459   \HyPsd@XeTeXBigCharstrue
3460   \HyPsd@PrerenderUnicode{##1}%
3461   \pdfstringdef\HyInfo@Value{##1}%
3462   \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3463   \HyInfo@Value
3464 }%
3465 \edef\HyInfo@AddonList{%
3466   \HyInfo@AddonList
3467   \HyInfo@do{\HyInfo@Key}%
3468 }%
3469 \kv@parse@normalized{%
3470   \HyInfo@Key={#2}%
3471 }{%
3472   \kv@processor@default{pdfinfo}%
3473 }%
3474 \fi
3475 \else
3476 \kv@parse@normalized{%
3477   \HyInfo@Key={#2}%
3478 }{%
3479   \kv@processor@default{pdfinfo}%
3480 }%
3481 \fi
3482 \fi
3483 }
3484 \def\HyInfo@GenerateAddons{%
3485   \ifHyInfo@AddonUnsupported
3486     \def\HyInfo@Addons{}%
3487   \else
3488     \begingroup
3489     \toks@{}%
3490     \def\HyInfo@do##1{%
3491       \EdefEscapeName\HyInfo@Key{##1}%
3492       \edef\x{%
3493         \toks@{%
3494           \the\toks@
3495           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3496         }%
3497       }%
3498       \x
3499     }%
3500     \HyInfo@AddonList
3501     \edef\x{\endgroup
3502       \def\noexpand\HyInfo@Addons{\the\toks@}%
3503     }%
3504     \x
3505   \fi
3506 }
3507 \def\HyInfo@AddonList{}
3508 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}

```

```

3509 \define@key{Hyp}{pdflinkmargin}{\setpdfinkmargin{#1}}
3510 \let\setpdfinkmargin\@gobble
3511 \def\calculate@pdfview#1 #2\{\%
3512 \def\@pdfview{#1}%
3513 \ifx\#2\%
3514 \def\@pdfviewparams{ -32768}%
3515 \else
3516 \def\@pdfviewparams{ #2}%
3517 \fi
3518 }
3519 \begingroup\expandafter\expandafter\expandafter\endgroup
3520 \expandafter\ifx\csname numexpr\endcsname\relax
3521 \def\Hy@number#1{%
3522 \expandafter\@firstofone\expandafter{\number#1}%
3523 }%
3524 \else
3525 \def\Hy@number#1{%
3526 \the\numexpr#1\relax
3527 }%
3528 \fi
3529 \define@key{Hyp}{pdfstartpage}{%
3530 \ifx\#1\%
3531 \def\@pdfstartpage{%
3532 \else
3533 \edef\@pdfstartpage{\Hy@number{#1}}%
3534 \fi
3535 }%
3536 \define@key{Hyp}{pdfstartview}{%
3537 \ifx\#1\%
3538 \def\@pdfstartview{%
3539 \else
3540 \hypercalcbpdef\@pdfstartview{ /#1 }%
3541 \fi
3542 }
3543 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3544 \define@key{Hyp}{pdftoolbar}[true]{%
3545 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3546 }
3547 \define@key{Hyp}{pdfmenubar}[true]{%
3548 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3549 }
3550 \define@key{Hyp}{pdfwindowui}[true]{%
3551 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3552 }
3553 \define@key{Hyp}{pdffitwindow}[true]{%
3554 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3555 }
3556 \define@key{Hyp}{pdfcenterwindow}[true]{%
3557 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3558 }
3559 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3560 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3561 }
3562 \define@key{Hyp}{pdfa}[true]{%
3563 \Hy@boolkey{pdfa}{#1}%
3564 }
3565 \define@key{Hyp}{pdfnewwindow}[true]{%

```

```

3566 \def\Hy@temp{#1}%
3567 \ifx\Hy@temp\@empty
3568 \Hy@newwindowsetfalse
3569 \else
3570 \Hy@newwindowsettrue
3571 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3572 \fi
3573 }
3574 \def\Hy@SetNewWindow{%
3575 \ifHy@newwindowset
3576 /NewWindow %
3577 \ifHy@newwindow true\else false\fi
3578 \fi
3579 }
3580 \Hy@DefNameKey{pdfpagelayout}{%
3581 \do{SinglePage}{}%
3582 \do{OneColumn}{}%
3583 \do{TwoColumnLeft}{}%
3584 \do{TwoColumnRight}{}%
3585 \do{TwoPageLeft}{PDF 1.5}%
3586 \do{TwoPageRight}{PDF 1.5}%
3587 }
3588 \define@key{Hyp}{pdflang}{%
3589 \def\@pdflang{#1}%
3590 }
3591 \define@key{Hyp}{pdfpagelabels}[true]{%
3592 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3593 }
3594 \define@key{Hyp}{pdfescapeform}[true]{%
3595 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3596 }

```

Default values:

```

3597 \def\@linkbordercolor{1 0 0}
3598 \def\@urlbordercolor{0 1 1}
3599 \def\@menubordercolor{1 0 0}
3600 \def\@filebordercolor{0 .5 .5}
3601 \def\@runbordercolor{0 .7 .7}
3602 \def\@citebordercolor{0 1 0}
3603 \def\@pdfhighlight{/I}
3604 \def\@pdftitle{}
3605 \def\@pdfauthor{}
3606 \let\@pdfproducer\relax
3607 \def\@pdfcreator{LaTeX with hyperref package}
3608 \def\@pdfcreationdate{}
3609 \def\@pdfmoddate{}
3610 \def\@pdfsubject{}
3611 \def\@pdfkeywords{}
3612 \def\@pdftrapped{}
3613 \def\@pdfpagescrop{}
3614 \def\@pdfstartview{/Fit }
3615 \def\@pdfstartpage{1}
3616 \def\@pdfprintpagerange{}
3617 \def\@pdflang{}
3618 \let\PDF@SetupDoc\@empty
3619 \let\PDF@FinishDoc\@empty
3620 \let\phantomsection\@empty
3621 \let\special@paper\@empty

```

```

3622 \def\HyperDestNameFilter#1{#1}
3623 \AtBeginDocument{%
3624   \begingroup
3625   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3626   \dimen@=\x\relax
3627   \ifdim\dimen@>\z@
3628   \else
3629     \dimen@=11in\relax
3630     \Hy@WarningNoLine{%
3631       Height of page (\expandafter\string\x) %
3632       is invalid (\the\x),\MessageBreak
3633       using 11in%
3634     }%
3635   \fi
3636   \dimen@=0.99626401\dimen@
3637   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3638 \endgroup
3639 }
3640 \def\HyInd@EncapChar{\|}
3641 \def\hypersetup{\setkeys{Hyp}}

```

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.

```

3642 \let\hyper@normalise\ExecuteOptions
3643 \let\ExecuteOptions\hypersetup
3644 \Hy@RestoreCatcodes
3645 \InputIfFileExists{hyperref.cfg}{-}{}
3646 \Hy@SetCatcodes
3647 \let\ExecuteOptions\hyper@normalise
3648 \Hy@MaybeStopNow

```

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.

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

```

3649 \RequirePackage{kvoptions}[2009/07/21]
3650 \SetupKeyvalOptions{family=Hyp}
3651 \DeclareLocalOptions{%
3652   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3653 }

```

Add option `tex4ht` if package `tex4ht` is loaded.

```

3654 \@ifpackageloaded{tex4ht}{%
3655   \@ifpackagewith{hyperref}{tex4ht}{-}{}%
3656   \PassOptionsToPackage{tex4ht}{hyperref}%
3657 }%
3658 {}

3659 \let\ReadBookmarks\relax
3660 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3661 \AtBeginDocument{%
3662   \ifHy@draft
3663     \let\hyper@@anchor\@gobble
3664     \gdef\hyper@link#1#2#3{#3}%
3665     \let\hyper@anchorstart\@gobble

```

```

3666 \let\hyper@anchorend\@empty
3667 \let\hyper@linkstart\@gobbletwo
3668 \let\hyper@linkend\@empty
3669 \def\hyper@linkurl#1#2{#1}%
3670 \def\hyper@linkfile#1#2#3{#1}%
3671 \def\hyper@link@{#1}#2#3{}%
3672 \def\Acrobatmenu#1#2{\leavevmode#2}%
3673 \let\PDF@SetupDoc\@empty
3674 \let\PDF@FinishDoc\@empty
3675 \let\@fifthoffive\@secondoftwo
3676 \let\@secondoffive\@secondoftwo
3677 \let\ReadBookmarks\relax
3678 \let\WriteBookmarks\relax
3679 \Hy@WarningNoLine{ draft mode on}%
3680 \fi
3681 \Hy@DisableOption{draft}%
3682 \Hy@DisableOption{nolinks}%
3683 \Hy@DisableOption{final}%
3684 }

```

15.1 PDF/A

```

3685 \Hy@DisableOption{pdfa}

3686 \ifHy@pdfa
3687 \setkeys{Hyp}{pdfversion=1.4}%
3688 \def\Hy@Acrobatmenu#1#2{%
3689 \leavevmode
3690 \begingroup
3691 \edef\x{#1}%
3692 \@onelevel@sanitize\x
3693 \ifx\x\Hy@NextPage
3694 \let\y=Y%
3695 \else
3696 \ifx\x\Hy@PrevPage
3697 \let\y=Y%
3698 \else
3699 \ifx\x\Hy@FirstPage
3700 \let\y=Y%
3701 \else
3702 \ifx\x\Hy@LastPage
3703 \let\y=Y%
3704 \else
3705 \let\y=N%
3706 \fi
3707 \fi
3708 \fi
3709 \fi
3710 \expandafter\endgroup
3711 \ifx\y Y%
3712 \else
3713 \PackageError{hyperref}{%
3714 PDF/A: Named action ‘#1’ is not permitted%
3715 }\@ehc
3716 {#2}%
3717 \expandafter\@gobble
3718 \fi
3719 }%

```

```

3720 \def\Hy@temp#1{%
3721   \expandafter\def\csname Hy@#1\endcsname{#1}%
3722   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3723 }%
3724 \Hy@temp{NextPage}%
3725 \Hy@temp{PrevPage}%
3726 \Hy@temp{FirstPage}%
3727 \Hy@temp{LastPage}%
3728 \else
3729 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3730 \fi

```

15.2 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.

```

3731 \Hy@nextfalse
3732 \ltx@ifundefined{spanish@sh@"@sel}{-}{\Hy@nexttrue}
3733 \ltx@ifundefined{galician@sh@"@sel}{-}{\Hy@nexttrue}
3734 \ltx@ifundefined{estonian@sh@"@sel}{-}{\Hy@nexttrue}
3735 \ifHy@next
3736 \let\texttilde\~%
3737 \fi

3738 \ifHy@figures
3739 \Hy@Info{Hyper figures ON}%
3740 \else
3741 \Hy@Info{Hyper figures OFF}%
3742 \fi

3743 \ifHy@nesting
3744 \Hy@Info{Link nesting ON}%
3745 \else
3746 \Hy@Info{Link nesting OFF}%
3747 \fi

3748 \ifHy@hyperindex
3749 \Hy@Info{Hyper index ON}%
3750 \else
3751 \Hy@Info{Hyper index OFF}%
3752 \fi

3753 \ifHy@plainpages
3754 \Hy@Info{Plain pages ON}%
3755 \else
3756 \Hy@Info{Plain pages OFF}%
3757 \fi

3758 \ifHy@backref
3759 \Hy@Info{Backreferencing ON}%
3760 \else
3761 \Hy@Info{Backreferencing OFF}%
3762 \fi

3763 \ifHy@typexml
3764 \AtEndOfPackage{%
3765   \RequirePackage{color}%
3766   \RequirePackage{nameref}%
3767 }%
3768 \fi

3769 \Hy@DisableOption{typexml}
3770 \ifHy@implicit
3771 \typeout{Implicit mode ON; LaTeX internals redefined}%

```

```

3772 \else
3773   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3774   \def\MaybeStopEarly{%
3775     \typeout{Hyperref stopped early}%
3776     \AfterBeginDocument{%
3777       \PDF@FinishDoc
3778       \gdef\PDF@FinishDoc{}}%
3779   }%
3780   \endinput
3781 }%
3782 \AtBeginDocument{%
3783   \let\autoref\ref
3784   \let\autopageref\pageref
3785   \ifx\@pdfpagemode\@empty
3786     \gdef\@pdfpagemode{UseNone}%
3787   \fi
3788   \global\Hy@backreffalse
3789 }%
3790 \AtEndOfPackage{%
3791   \global\let\ReadBookmarks\relax
3792   \global\let\WriteBookmarks\relax
3793 }%
3794 \fi
3795 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3796 \AtEndOfPackage{%
3797   \@ifpackageloaded{tex4ht}{%
3798     \def\Hy@driver{htex4ht}%
3799     \Hy@texhttrue
3800   }{}%

```

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.

```

3801   \ifx\Hy@driver\@empty
3802   \else
3803     \def\Hy@temp{hpdfTeX}%
3804     \ifpdf
3805       \ifx\Hy@driver\Hy@temp
3806       \else
3807         \Hy@WarningNoLine{%
3808           Wrong driver ‘\Hy@driver.def’;\MessageBreak
3809           pdfTeX is running in PDF mode.\MessageBreak
3810           Forcing driver ‘\Hy@temp.def’%
3811         }%
3812         \let\Hy@driver\Hy@temp
3813       \fi
3814     \else
3815       \ifx\Hy@driver\Hy@temp
3816       \Hy@WarningNoLine{%
3817         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3818         pdfTeX is not running in PDF mode.\MessageBreak
3819         Using default driver%
3820       }%
3821       \let\Hy@driver\@empty
3822     \fi
3823   \fi

```

```

3824 \fi
3825 \ifx\Hy@driver\@empty
3826 \else
3827 \def\Hy@temp{hxtex}%
3828 \ifxetex
3829 \ifx\Hy@driver\Hy@temp
3830 \else
3831 \Hy@WarningNoLine{%
3832   Wrong driver '\Hy@driver.def';\MessageBreak
3833   XeTeX is running.\MessageBreak
3834   Forcing driver '\Hy@temp.def' for XeTeX%
3835 }%
3836 \let\Hy@driver\Hy@temp
3837 \fi
3838 \fi
3839 \fi
3840 \ifx\Hy@driver\@empty
3841 \else
3842 \def\Hy@temp{hvtexhtm}%
3843 \ifvtexhtml
3844 \ifx\Hy@driver\Hy@temp
3845 \else
3846 \Hy@WarningNoLine{%
3847   Wrong driver '\Hy@driver.def';\MessageBreak
3848   VTeX is running in HTML mode.\MessageBreak
3849   Forcing driver '\Hy@temp.def'%
3850 }%
3851 \let\Hy@driver\Hy@temp
3852 \fi
3853 \else
3854 \ifx\Hy@driver\Hy@temp
3855 \Hy@WarningNoLine{%
3856   Wrong driver '\Hy@driver.def';\MessageBreak
3857   VTeX is not running in HTML mode.\MessageBreak
3858   Using default driver%
3859 }%
3860 \let\Hy@driver\@empty
3861 \fi
3862 \fi
3863 \fi

```

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

```

3864 \ifx\Hy@driver\@empty
3865 \providecommand*{\Hy@defaultdriver}{hypertex}%
3866 \ifpdf
3867 \def\Hy@driver{hpdftex}%
3868 \else
3869 \ifxetex
3870 \def\Hy@driver{hxtex}%
3871 \else
3872 \ifvtexhtml
3873 \def\Hy@driver{hvtexhtm}%
3874 \def\MaybeStopEarly{%
3875   \typeout{Hyperref stopped early}%
3876   \AfterBeginDocument{%
3877     \PDF@FinishDoc
3878     \gdef\PDF@FinishDoc{}%
3879   }%

```



```

3880     \endinput
3881   }%
3882 \else
3883   \ifvtexpdf
3884     \def\Hy@driver{hvtex}%
3885   \else
3886     \ifvtexps
3887       \def\Hy@driver{hvtex}%
3888     \else
3889       \let\Hy@driver\Hy@defaultdriver
3890     \fi
3891   \fi
3892 \fi
3893 \fi
3894 \fi
3895 \ifx\Hy@driver\Hy@defaultdriver
3896   \def\Hy@temp{hdviwind}%
3897   \ifx\Hy@temp\Hy@driver
3898     \setkeys{Hyp}{colorlinks}%
3899     \PassOptionsToPackage{dviwindo}{color}%
3900   \fi
3901 \fi
3902 \typeout{*hyperref using default driver \Hy@driver*}%
3903 \else
3904   \typeout{*hyperref using driver \Hy@driver*}%
3905 \fi
3906 \input{\Hy@driver.def}%
3907 \let\@unprocessedoptions\relax
3908 \Hy@RestoreCatcodes
3909 }

```

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.

```

3910 \newif\ifHy@DvipdfmxOutlineOpen
3911 \ifxetex
3912   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3913   \else
3914     \Hy@DvipdfmxOutlineOpentrue
3915   \fi
3916 \fi
3917 \begingroup\expandafter\expandafter\expandafter\endgroup
3918 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3919 \else
3920   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3921     \Hy@DvipdfmxOutlineOpentrue
3922   \fi
3923 \fi
3924 \Hy@DisableOption{tex4ht}
3925 \Hy@DisableOption{pdftex}
3926 \Hy@DisableOption{nativepdf}
3927 \Hy@DisableOption{dvipdfm}
3928 \Hy@DisableOption{dvipdfmx}
3929 \Hy@DisableOption{dvipdfmx-outline-open}
3930 \Hy@DisableOption{pdfmark}
3931 \Hy@DisableOption{dvips}
3932 \Hy@DisableOption{hypertex}
3933 \Hy@DisableOption{vtex}

```

```

3934 \Hy@DisableOption{vtxpdfmark}
3935 \Hy@DisableOption{dviwindo}
3936 \Hy@DisableOption{dvipsone}
3937 \Hy@DisableOption{textures}
3938 \Hy@DisableOption{latex2html}
3939 \Hy@DisableOption{ps2pdf}
3940 \Hy@DisableOption{xetex}
3941 \AtEndOfPackage{%
3942   \Hy@DisableOption{pdfversion}%
3943 }

```

15.2.2 Bookmarks

```

3944 \def\WriteBookmarks{0}
3945 \def\@bookmarkopenstatus#1{%
3946   \ifHy@bookmarksopen

```

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

```

3947   \ifnum#1<\expandafter\@firstofone\expandafter
3948     {\number\@bookmarkopenlevel} % explicit space
3949   \else
3950     -%
3951   \fi
3952 \else
3953   -%
3954 \fi
3955 }
3956 \ifHy@bookmarks
3957   \Hy@Info{Bookmarks ON}%
3958   \ifx\@pdfpagemode\@empty
3959     \def\@pdfpagemode{UseOutlines}%
3960   \fi
3961 \else
3962   \def\@bookmarkopenstatus#1{%
3963     \Hy@Info{Bookmarks OFF}%
3964     \AtEndOfPackage{%
3965       \global\let\ReadBookmarks\relax
3966       \global\let\WriteBookmarks\relax
3967     }%
3968     \ifx\@pdfpagemode\@empty
3969       \def\@pdfpagemode{UseNone}%
3970     \fi
3971 \fi
3972 \Hy@DisableOption{bookmarks}

```

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

```

3973 \def\Hy@CatcodeWrapper#1{%
3974   \def\Hy@endWrap{%
3975     \def\TMP@EnsureCode##1##2{%
3976       \edef\Hy@endWrap{%
3977         \Hy@endWrap
3978         \catcode##1 \the\catcode##1\relax
3979       }%
3980       \catcode##1 ##2\relax
3981     }%
3982     \TMP@EnsureCode{10}{12}% ^^J
3983     \TMP@EnsureCode{33}{12}% !
3984     \TMP@EnsureCode{34}{12}% "
3985     \TMP@EnsureCode{36}{3}% $ (math)

```

```

3986 \TMP@EnsureCode{38}{4}% & (alignment)
3987 \TMP@EnsureCode{39}{12}% '
3988 \TMP@EnsureCode{40}{12}% (
3989 \TMP@EnsureCode{41}{12}% )
3990 \TMP@EnsureCode{42}{12}% *
3991 \TMP@EnsureCode{43}{12}% +
3992 \TMP@EnsureCode{44}{12}% ,
3993 \TMP@EnsureCode{45}{12}% -
3994 \TMP@EnsureCode{46}{12}% .
3995 \TMP@EnsureCode{47}{12}% /
3996 \TMP@EnsureCode{58}{12}% :
3997 \TMP@EnsureCode{59}{12}% ;
3998 \TMP@EnsureCode{60}{12}% <
3999 \TMP@EnsureCode{61}{12}% =
4000 \TMP@EnsureCode{62}{12}% >
4001 \TMP@EnsureCode{63}{12}% ?
4002 \TMP@EnsureCode{91}{12}% [
4003 \TMP@EnsureCode{93}{12}% ]
4004 \TMP@EnsureCode{94}{7}% ^ (superscript)
4005 \TMP@EnsureCode{95}{8}% _ (subscript)
4006 \TMP@EnsureCode{96}{12}% '
4007 \TMP@EnsureCode{124}{12}% |
4008 \TMP@EnsureCode{126}{13}% ~ (active)
4009 #1\relax
4010 \Hy@EndWrap
4011 }

```

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

```

4012 \AtBeginDocument{%
4013   \ifHy@ocgcolorlinks
4014     \setkeys{Hyp}{colorlinks}%
4015     \ifHy@pdfa
4016       \Hy@Warning{%
4017         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4018         using 'colorlinks' instead of 'ocgcolorlinks'%
4019       }%
4020       \Hy@ocgcolorlinksfalse
4021     \fi
4022   \fi
4023   \ifHy@ocgcolorlinks
4024   \else
4025     \Hy@DisableOption{ocgcolorlinks}%
4026   \fi
4027   \ifHy@colorlinks
4028     \def\@pdfborder{0 0 0}%
4029     \let\@pdfborderstyle\@empty
4030     \ifHy@typexml
4031     \else
4032       \Hy@CatcodeWrapper{%
4033         \RequirePackage{color}%
4034       }%
4035     \fi
4036     \def\Hy@colorlink#1{%
4037       \begingroup
4038       \HyColor@UseColor#1%
4039     }%
4040     \def\Hy@endcolorlink{\endgroup}%

```

```

4041 \Hy@Info{Link coloring ON}%
4042 \else
4043 \ifHy@frenchlinks
4044 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4045 \def\Hy@endcolorlink{\endgroup}%
4046 \Hy@Info{French linking ON}%
4047 \else
for grouping consistency:
4048 \def\Hy@colorlink#1{\begingroup}%
4049 \def\Hy@endcolorlink{\endgroup}%
4050 \Hy@Info{Link coloring OFF}%
4051 \fi
4052 \fi
4053 \Hy@DisableOption{colorlinks}%
4054 \Hy@DisableOption{frenchlinks}%
4055 \ifHy@texht
4056 \long\def\@firstoffive#1#2#3#4#5{#1}%
4057 \long\def\@secondoffive#1#2#3#4#5{#2}%
4058 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4059 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4060 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4061 \providecommand*\@safe@activestruet{}%
4062 \providecommand*\@safe@activesfalse{}%
4063 \def\T@ref#1{%
4064 \Hy@safe@activestruet
4065 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4066 \Hy@safe@activesfalse
4067 }%
4068 \def\T@pageref#1{%
4069 \Hy@safe@activestruet
4070 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4071 \Hy@safe@activesfalse
4072 }%
4073 \else
4074 \ifHy@typexml
4075 \else
4076 \Hy@CatcodeWrapper{%
4077 \RequirePackage{nameref}%
4078 }%
4079 \fi
4080 \fi
4081 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
4082 \DeclareRobustCommand\pageref{%
4083 \@ifstar\@pagerefstar\T@pageref
4084 }%
4085 }
4086 \AfterBeginDocument{%
4087 \ifHy@texht
4088 \else
4089 \Hy@CatcodeWrapper{%
4090 \ReadBookmarks
4091 }%
4092 \fi
4093 }
4094 \ifHy@backref
4095 \RequirePackage{backref}%
4096 \else

```

```

4097 \let\Hy@backout\@gobble
4098 \fi
4099 \Hy@DisableOption{backref}
4100 \Hy@DisableOption{pagebackref}
4101 \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.

```

4102 \begingroup
4103 \endlinechar=-1 %
4104 \catcode'\^^A=14 %
4105 \catcode'\^^M\active
4106 \catcode'\%\active
4107 \catcode'\#\active
4108 \catcode'\_\active
4109 \catcode'\$\active
4110 \catcode'\&\active
4111 \gdef\hyper@normalise{^^A
4112 \begingroup
4113 \catcode'\^^M\active
4114 \def^^M{ }^^A
4115 \catcode'\%\active
4116 \let%\@percentchar
4117 \let%\@percentchar
4118 \catcode'\#\active
4119 \def#{\hyper@hash}^^A
4120 \def\#{\hyper@hash}^^A
4121 \@makeother\&^^A
4122 \edef&{\string&}^^A
4123 \edef&{\string&}^^A
4124 \edef\textunderscore{\string_}^^A
4125 \let\_ \textunderscore
4126 \catcode'\_\active
4127 \let\_ \textunderscore
4128 \let~\hyper@tilde
4129 \let~\hyper@tilde
4130 \let\textasciitilde\hyper@tilde
4131 \let\\ \@backslashchar
4132 \edef$\{ \string$ \}^^A
4133 \Hy@safe@activetrue
4134 \hyper@n@rmalise
4135 }^^A
4136 \catcode'\#=6 ^^A
4137 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4138 \gdef\hyper@n@rmalise#1#2{^^A
4139 \def\Hy@tempa{#2}^^A
4140 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4141 \Hy@ReturnAfterElseFi{^^A
4142 \hyper@@normalise{#1}^^A
4143 }^^A

```

```

4144 \else
4145   \Hy@ReturnAfterFi{^^A
4146   \hyper@@normalise{#1}{#2}^^A
4147 }^^A
4148 \fi
4149 }^^A
4150 \gdef\hyper@@normalise#1#2{^^A
4151   \edef\Hy@tempa{^^A
4152     \endgroup
4153     \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4154   }^^A
4155   \Hy@tempa
4156 }^^A
4157 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4158   #1^^A
4159   \ifx\limits#2\limits
4160   \else
4161     \Hy@ReturnAfterFi{^^A
4162     \Hy@RemovePercentCr #2\@nil
4163   }^^A
4164   \fi
4165 }^^A
4166 \endgroup
4167 \providecommand*\hyper@chars{%
4168   \let\#\hyper@hash
4169   \let\%\@percentchar
4170   \Hy@safe@activetrue
4171 }

4172 \def\hyperlink#1#2{%
4173   \hyper@@link{#1}{#2}%
4174 }

4175 \def\Hy@VerboseLinkStart#1#2{%
4176   \ifHy@verbose
4177     \begingroup
4178     \Hy@safe@activetrue
4179     \xdef\Hy@VerboseGlobalTemp{(#1 '#2')%
4180     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4181     \xdef\Hy@VerboseGlobalTemp{%
4182       \Hy@VerboseGlobalTemp, %
4183       line \the\inputlineno
4184     }%
4185     \endgroup
4186     \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4187     \@onelevel@sanitize\Hy@VerboseLinkInfo
4188   \fi
4189 }

4190 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4191 \def\Hy@VerboseLinkStop{%
4192   \ifHy@verbose
4193     \begingroup
4194     \edef\x{\endgroup
4195       \write\m@ne{%
4196         Package 'hyperref' Info: %
4197         End of reference \Hy@VerboseLinkInfo.%
4198       }%
4199     }%

```

```

4200 \x
4201 \fi
4202 }

4203 \def\Hy@VerboseAnchor#1{%
4204 \ifHy@verbose
4205 \begingroup
4206 \Hy@safe@activetrue
4207 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4208 \endgroup
4209 \fi
4210 }

4211 \def\Hy@AllowHyphens{%
4212 \relax
4213 \ifhmode
4214 \penalty\@M
4215 \hskip\z@skip
4216 \fi
4217 }

4218 \DeclareRobustCommand*\href{%
4219 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4220 }
4221 \def\Hy@href#1{%
4222 \hyper@normalise\href@
4223 }
4224 \begingroup
4225 \catcode'\$=6 %
4226 \catcode'\#=12 %
4227 \gdef\href@#1{\expandafter\href@split$1##\}%
4228 \gdef\href@split$1#$2#$3\{\%
4229 \hyper@@link{$1}{$2}%
4230 }%
4231 \endgroup

```

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

```

4232 \RequirePackage{url}
4233 \let\HyOrg@url\url
4234 \def\Hurl{\begingroup \Url}
4235 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4236 \def\nolinkurl@#1{\Hurl{#1}}
4237 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4238 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4239 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4240 \providecommand\hyper@image[2]{#2}

4241 \def\hypertarget#1#2{%
4242 \ifHy@nesting
4243 \hyper@@anchor{#1}{#2}%
4244 \else
4245 \hyper@@anchor{#1}{\relax}#2%
4246 \fi
4247 }

```

\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.

```

4248 \DeclareRobustCommand*\hyperref{%
4249   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4250 }
4251 \def\Hy@babelnormalise#1[#2]{%
4252   \begingroup
4253   \Hy@safe@activetrue
4254   \edef\Hy@tempa{%
4255     \endgroup
4256     \noexpand#1[#2]}%
4257   }%
4258   \Hy@tempa
4259 }
4260 \def\@hyperref{\hyper@normalise\@hyperref}
4261 \def\@hyperref#1#2#3{%
4262   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4263   \expandafter\tryhyper@link\ref@one\{#1}%
4264 }
4265 \def\tryhyper@link#1\#2{%
4266   \hyper@@link{#2}{#1}%
4267 }
4268 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
4269 \def\@hyperdef#1#2#3{%, category, name, text
4270   \ifx\#1\%
4271     \def\Hy@AnchorName{#2}%
4272   \else
4273     \def\Hy@AnchorName{#1.#2}%
4274   \fi
4275   \ifHy@nesting
4276     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4277   \else
4278     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4279   \fi
4280 }

```

We also have a need to give a \LaTeX label to a hyper reference, to ease the pain of referring to it later.

```

4281 \def\label@hyperref[#1]{%
4282   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4283 }%
4284 \def\label@@hyperref#1#2#3{%
4285   \ifx#1\relax
4286     \protect\G@refundefinedtrue
4287     \@latex@warning{%
4288       Hyper reference ‘#2’ on page \thepage \space undefined%
4289     }%
4290     \hyper@@link{}{??}{#3}%
4291   \else
4292     \hyper@@link{\expandafter\@fifthoffive#1}%
4293     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4294   \fi
4295 }
4296 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4297                               % anchor text
4298   \@bsphack
4299   \ifx\#2\%

```



```

4300 \def\Hy@AnchorName{#3}%
4301 \else
4302 \def\Hy@AnchorName{#2.#3}%
4303 \fi
4304 \if@filesw
4305 \protected@write\@auxout{}\{%
4306 \string\newlabel{#1}{\Hy@AnchorName}\}%
4307 }%
4308 \fi
4309 \@esphack
4310 \ifHy@nesting
4311 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4312 \else
4313 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4314 \fi
4315 }

```

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, it's an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

4316 \def\hyper@@link{\let\Hy@reserved@a\relax
4317 \ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4318 }
4319 \def\hyper@link@[#1]#2#3#4{%
4320 \begingroup
4321 \protected@edef\Hy@tempa{#2}%
4322 \Hy@safe@activetrue
4323 \edef\x{#3}%
4324 \ifx\Hy@tempa\@empty
4325 \toks0{\hyper@link{#1}}%
4326 \else
4327 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4328 \fi
4329 \toks2{%
4330 \Hy@safe@activesfalse
4331 #4%
4332 }%
4333 \edef\Hy@tempa{\the\toks2}%
4334 \edef\x{\endgroup
4335 \ifx\Hy@tempa\@empty
4336 \noexpand\Hy@Warning{Suppressing empty link}%
4337 \else
4338 \the\toks0 {\x}{\the\toks2}}%
4339 \fi
4340 }%
4341 \x
4342 }

```

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.

```

4343 \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.

```
4344 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%  
4345 }
```

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

```
4346 \def\@pdftempwordfile{file}%  
4347 \def\@pdftempwordrun{run}%  
4348 \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:

```
4349 \ifx\{#6\}%  
4350 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%  
4351 \else  
4352 \ifx\{#4\}%  
4353 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%  
4354 \else
```

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

```
4355 \def\@pdftempa{#4}%  
4356 \ifx\@pdftempa\@pdftempwordfile  
4357 \expandafter\@hyper@linkfile#7\{#3}{#2}%  
4358 \else
```

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

```
4359 \ifx\@pdftempa\@pdftempwordrun  
4360 \ifHy@pdfa  
4361 \PackageError{hyperref}{%  
4362 PDF/A: Launch action is prohibited%  
4363 }\@ehc  
4364 \begingroup  
4365 \leavevmode  
4366 #2%  
4367 \endgroup  
4368 \else  
4369 \expandafter\@hyper@launch#7\{#3}{#2}%  
4370 \fi  
4371 \else
```

otherwise its a URL

```
4372 \hyper@linkurl{#3}{#7\ifx\{#2\}\else\hyper@hash#2\fi}%  
4373 \fi  
4374 \fi  
4375 \fi  
4376 \fi  
4377 }
```

By default, turn run: into file:

```

4378 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text, linkname
4379 \hyper@linkurl{#2}{%
4380 \Hy@linkfileprefix
4381 #1%
4382 \ifx\|#3\|%
4383 \else
4384 \hyper@hash
4385 #3%
4386 \fi
4387 }%
4388 }

```

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

```

4389 \def\@hyper@linkfile file:#1\|#2#3{%
4390 %file url,link string, name
4391 \filename@parse{#1}%
4392 \ifx\filename@ext\relax
4393 \edef\filename@ext{\XR@ext}%
4394 \fi
4395 \def\use@file{\filename@area\filename@base.\filename@ext}%
4396 \ifx\filename@ext\XR@ext
4397 \hyper@linkfile{#2}{\use@file}{#3}%
4398 \else
4399 \ifx\@baseurl\@empty
4400 \hyper@linkurl{#2}{%
4401 \Hy@linkfileprefix\use@file\ifx\|#3\|\\else\hyper@hash#3\fi
4402 }%
4403 \else
4404 \hyper@linkurl{#2}{\use@file\ifx\|#3\|\\else\hyper@hash#3\fi}%
4405 \fi
4406 \fi
4407 }

```

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.

```

4408 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4409 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4410 \ifx\|#1\|%
4411 #2\Hy@Warning{Ignoring empty anchor}%
4412 \else
4413 \def\anchor@spot{#2#3}%
4414 \let\put@me@back\@empty
4415 \ifx\relax#2\relax
4416 \else
4417 \ifHy@nesting
4418 \else
4419 \ifcat a\noexpand#2\relax
4420 \else
4421 \ifcat 0\noexpand#2 \relax
4422 \else

```

```

4423 %      \typeout{Anchor start is not alphanumeric %
4424 %      on input line\the\inputlineno%
4425 %      }%
4426      \let\anchor@spot\@empty
4427      \def\put@me@back{##2##3}%
4428      \fi
4429      \fi
4430      \fi
4431      \fi
4432      \ifHy@activeanchor
4433      \anchor@spot
4434      \else
4435      \hyper@anchor{##1}%
4436      \fi
4437      \expandafter\put@me@back
4438      \fi
4439      \let\anchor@spot\@empty
4440 }

```

18 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.

```

4441 \let\htmladding\hyperimage
4442 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4443 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4444 \def\htmlref#1#2{% anchor text, label
4445   \label@hyperref[{#2}]{#1}%
4446 }

```

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.

```

4447 \def\@@latex2htmlX{%
4448   \let\hyperref\hyperref
4449   \def\hyperref##1##2##3##4{% anchor text for HTML
4450     % text to print before label in print
4451     % label
4452     % post-label text in print
4453     ##2\ref{##4}##3%
4454   }%
4455 }

```

19 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.

19.1 Field flags

The field flags are organized in a bit set.

```
4456 \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

```
4457 \def\HyField@NewFlag#1#2{%  
4458   \lowercase{\HyField@NewOption{#2}}%  
4459   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%  
4460 }
```

\HyField@NewFlagOnly

```
4461 \def\HyField@NewFlagOnly#1#2{%  
4462   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%  
4463 }
```

\HyField@NewOption #1: option name

```
4464 \def\HyField@NewOption#1{%  
4465   \expandafter\newif\csname ifFld@#1\endcsname  
4466   \define@key{Field}{#1}[true]{%  
4467     \lowercase{\Field@boolkey{##1}}{#1}%  
4468   }%  
4469 }
```

\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

```
4470 \def\HyField@NewBitsetFlag#1#2#3#4{%  
4471   \begingroup  
4472     \count@=#4\relax  
4473     \advance\count@\m@ne  
4474     \def\x##1{%  
4475       \endgroup  
4476       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%  
4477       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax  
4478         \expandafter\edef\csname HyField@#3@##1\endcsname{%  
4479           (\number#4) #2%  
4480         }%  
4481       \else  
4482         \expandafter\edef\csname HyField@#3@##1\endcsname{%  
4483           \csname HyField@#3@##1\endcsname  
4484             /#2%  
4485         }%  
4486       \fi  
4487     }%  
4488   \expandafter\x\expandafter{\the\count@}%  
4489 }
```

```

\HyField@UseFlag The bit set is HyField@#1
4490 \def\HyField@UseFlag#1#2{%
4491 \lowercase{\HyField@@UseFlag{#2}}{#1}%
4492 }

\HyField@@UseFlag
4493 \def\HyField@@UseFlag#1#2{%
4494 \bitsetSetValue{HyField@#2}{%
4495 \csname HyField@#2@#1\endcsname
4496 }{%
4497 \csname ifFld@#1\endcsname 1\else 0\fi
4498 }%
4499 }

\HyField@SetFlag The bit set is HyField@#1
4500 \def\HyField@SetFlag#1#2{%
4501 \lowercase{\HyField@@SetFlag{#2}}{#1}%
4502 }

\HyField@@SetFlag
4503 \def\HyField@@SetFlag#1#2{%
4504 \bitsetSetValue{HyField@#2}{%
4505 \csname HyField@#2@#1\endcsname
4506 }{1}%
4507 }

\HyField@PrintFlags
4508 \def\HyField@PrintFlags#1#2{%
4509 \ifHy@verbose
4510 \begingroup
4511 \let\Hy@temp\@empty
4512 \let\MessageBreak\relax
4513 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4514 \bitsetGetSetBitList{HyField@#1}\do{%
4515 \edef\Hy@temp{%
4516 \Hy@temp
4517 \csname HyField@#1@\x\endcsname\MessageBreak
4518 }%
4519 }%
4520 \edef\x{\endgroup
4521 \noexpand\Hy@Info{%
4522 Field flags: %
4523 \expandafter\ifx\@car#1\@nil S\else/\fi
4524 #1 %
4525 \bitsetGetDec{HyField@#1} %
4526 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4527 \Hy@temp
4528 for #2%
4529 }%
4530 }\x
4531 \fi
4532 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4533 \HyField@NewFlag{Ff}{ReadOnly}{1}
4534 \HyField@NewFlag{Ff}{Required}{2}
4535 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4536 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4537 \HyField@NewFlag{Ff}{Radio}{16}
4538 \HyField@NewFlag{Ff}{Pushbutton}{17}
4539 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4540 \HyField@NewFlag{Ff}{Multiline}{13}
4541 \HyField@NewFlag{Ff}{Password}{14}
4542 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4543 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4544 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4545 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4546 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4547 \HyField@NewFlag{Ff}{Combo}{18}
4548 \HyField@NewFlag{Ff}{Edit}{19}
4549 \HyField@NewFlag{Ff}{Sort}{20}
4550 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4551 \% \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4552 \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.

```

4553 \newif\ifFld@popdown
4554 \define@key{Field}{popdown}[true]{%
4555   \lowercase{\Field@boolkey{#1}}{popdown}%
4556 }

```

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.

```

4557 \HyField@NewFlag{F}{Invisible}{1}
4558 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4559 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4560 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4561 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4562 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4563 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4564 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4565 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4566 \ifHy@pdfa
4567   \def\HyField@PDFAFlagWarning#1#2{%
4568     \Hy@Warning{%
4569       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4570       be set to ‘#2’%
4571     }%
4572   }%
4573   \Fld@invisiblefalse
4574   \def\Fld@invisibletrue{%

```

```

4575 \HyField@PDFAFIagWarning{invisible}{false}%
4576 }%
4577 \Fld@hiddenfalse
4578 \def\Fld@hiddentrue{%
4579 \HyField@PDFAFIagWarning{hidden}{false}%
4580 }%
4581 \Fld@printrtrue
4582 \def\Fld@printfalse{%
4583 \HyField@PDFAFIagWarning{print}{true}%
4584 }%
4585 \Fld@nozoomtrue
4586 \def\Fld@nozoomfalse{%
4587 \HyField@PDFAFIagWarning{nozoom}{true}%
4588 }%
4589 \Fld@norotatetrue
4590 \def\Fld@norotatefalse{%
4591 \HyField@PDFAFIagWarning{norotate}{true}%
4592 }%
4593 \Fld@noviewfalse
4594 \def\Fld@noviewtrue{%
4595 \HyField@PDFAFIagWarning{noview}{false}%
4596 }%
4597 \fi

```

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

```

4598 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4599 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4600 \HyField@NewFlag{Submit}{GetMethod}{4}
4601 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4602 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4603 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4604 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4605 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4606 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4607 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4608 \HyField@NewFlag{Submit}{ExclFKey}{12}
4609 \HyField@NewFlag{Submit}{EmbedForm}{14}

4610 \define@key{Field}{export}{%
4611 \lowercase{\def\Hy@temp{#1}}%
4612 \@ifundefined{Fld@export@\Hy@temp}{%
4613 \@onelevel@sanitize\Hy@temp
4614 \PackageError{hyperref}{%
4615 Unknown export format '\Hy@temp'.\MessageBreak
4616 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4617 }\@ehc
4618 }{%
4619 \let\Fld@export\Hy@temp
4620 }%
4621 }
4622 \def\Fld@export{fdf}
4623 \@namedef{Fld@export@fdf}{0}%
4624 \@namedef{Fld@export@html}{1}%
4625 \@namedef{Fld@export@xdf}{2}%
4626 \@namedef{Fld@export@pdf}{3}%

```


19.1.2 Set submit flags

\HyField@FlagsSubmit

```
4627 \def\HyField@FlagsSubmit{%
4628   \bitsetReset{HyField@Submit}%
4629   \ifcase\@nameuse{Fld@export@\Fld@export} %
4630     % FDF
4631     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4632     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4633     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4634     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4635     \HyField@UseFlag{Submit}{CanonicalFormat}%
4636     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4637     \HyField@UseFlag{Submit}{ExclFKey}%
4638     \HyField@UseFlag{Submit}{EmbedForm}%
4639   \or % HTML
4640     \HyField@SetFlag{Submit}{ExportFormat}%
4641     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4642     \HyField@UseFlag{Submit}{GetMethod}%
4643     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4644     \HyField@UseFlag{Submit}{CanonicalFormat}%
4645   \or % XFDF
4646     \HyField@SetFlag{Submit}{XFDF}%
4647     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4648     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4649     \HyField@UseFlag{Submit}{CanonicalFormat}%
4650   \or % PDF
4651     \HyField@SetFlag{Submit}{SubmitPDF}%
4652     \HyField@UseFlag{Submit}{GetMethod}%
4653   \fi
4654   \HyField@PrintFlags{Submit}{submit button field}%
4655   \bitsetIsEmpty{HyField@Submit}{%
4656     \def\Fld@submitflags{%
4657     }{%
4658       \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4659     }%
4660 }
```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
4661 \def\HyField@FlagsAnnot#1{%
4662   \bitsetReset{HyField@F}%
4663   \HyField@UseFlag{F}{Invisible}%
4664   \HyField@UseFlag{F}{Hidden}%
4665   \HyField@UseFlag{F}{Print}%
4666   \HyField@UseFlag{F}{NoZoom}%
4667   \HyField@UseFlag{F}{NoRotate}%
4668   \HyField@UseFlag{F}{NoView}%
4669   \HyField@UseFlag{F}{Locked}%
4670   \HyField@UseFlag{F}{ToggleNoView}%
4671   \HyField@UseFlag{F}{LockedContents}%
4672   \HyField@PrintFlags{F}{#1}%
4673   \bitsetIsEmpty{HyField@F}{%
4674     \def\Fld@annotflags{%
4675     }{%
4676       \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4677     }%
4678   }
```

```

4677 }%
4678 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4679 \def\HyField@FlagsPushButton{%
4680 \HyField@FlagsAnnot{push button field}%
4681 \bitsetReset{HyField@Ff}%
4682 \HyField@UseFlag{Ff}{ReadOnly}%
4683 \HyField@UseFlag{Ff}{Required}%
4684 \HyField@UseFlag{Ff}{NoExport}%
4685 \HyField@SetFlag{Ff}{Pushbutton}%
4686 \HyField@PrintFlags{Ff}{push button field}%
4687 \bitsetIsEmpty{HyField@Ff}{%
4688 \def\Fld@flags{%
4689 }{%
4690 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4691 }%
4692 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4693 \def\HyField@FlagsCheckBox{%
4694 \HyField@FlagsAnnot{check box field}%
4695 \bitsetReset{HyField@Ff}%
4696 \HyField@UseFlag{Ff}{ReadOnly}%
4697 \HyField@UseFlag{Ff}{Required}%
4698 \HyField@UseFlag{Ff}{NoExport}%
4699 \HyField@PrintFlags{Ff}{check box field}%
4700 \bitsetIsEmpty{HyField@Ff}{%
4701 \def\Fld@flags{%
4702 }{%
4703 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4704 }%
4705 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4706 \def\HyField@FlagsRadioButton{%
4707 \HyField@FlagsAnnot{radio button field}%
4708 \bitsetReset{HyField@Ff}%
4709 \HyField@UseFlag{Ff}{ReadOnly}%
4710 \HyField@UseFlag{Ff}{Required}%
4711 \HyField@UseFlag{Ff}{NoExport}%
4712 \HyField@UseFlag{Ff}{NoToggleToOff}%
4713 \HyField@SetFlag{Ff}{Radio}%
4714 \HyField@UseFlag{Ff}{RadiosInUnison}%
4715 \HyField@PrintFlags{Ff}{radio button field}%
4716 \bitsetIsEmpty{HyField@Ff}{%
4717 \def\Fld@flags{%
4718 }{%
4719 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4720 }%

```

4721 }

19.1.7 Text fields

\HyField@FlagsText

```
4722 \def\HyField@FlagsText{%
4723   \HyField@FlagsAnnot{text field}%
4724   \bitsetReset{HyField@Ff}%
4725   \HyField@UseFlag{Ff}{ReadOnly}%
4726   \HyField@UseFlag{Ff}{Required}%
4727   \HyField@UseFlag{Ff}{NoExport}%
4728   \HyField@UseFlag{Ff}{Multiline}%
4729   \HyField@UseFlag{Ff}{Password}%
4730   \HyField@UseFlag{Ff}{FileSelect}%
4731   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4732   \HyField@UseFlag{Ff}{DoNotScroll}%
4733   \ifFld@comb
4734     \ifcase0\ifFld@multiline
4735       \else\ifFld@password
4736       \else\ifFld@fileselect
4737       \else 1\fi\fi\fi\relax
4738     \PackageError{hyperref}{%
4739       Field option ‘comb’ cannot used together with\MessageBreak
4740       ‘multiline’, ‘password’, or ‘fileselect’%
4741     }\@ehc
4742   \else
4743     \HyField@UseFlag{Ff}{Comb}%
4744   \fi
4745 \fi
4746 \HyField@UseFlag{Ff}{RichText}%
4747 \HyField@PrintFlags{Ff}{text field}%
4748 \bitsetIsEmpty{HyField@Ff}{%
4749   \def\Fld@flags{%
4750   }{%
4751     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4752 }%
4753 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
4754 \def\HyField@FlagsChoice{%
4755   \HyField@FlagsAnnot{choice field}%
4756   \bitsetReset{HyField@Ff}%
4757   \HyField@UseFlag{Ff}{ReadOnly}%
4758   \HyField@UseFlag{Ff}{Required}%
4759   \HyField@UseFlag{Ff}{NoExport}%
4760   \HyField@UseFlag{Ff}{Combo}%
4761   \ifFld@combo
4762     \HyField@UseFlag{Ff}{Edit}%
4763   \fi
4764   \HyField@UseFlag{Ff}{Sort}%
4765   \HyField@UseFlag{Ff}{MultiSelect}%
4766   \ifFld@combo
4767     \ifFld@edit
4768       \HyField@UseFlag{Ff}{DoNotSpellCheck}%

```

```

4769 \fi
4770 \fi
4771 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4772 \HyField@PrintFlags{Ff}{choice field}%
4773 \bitsetIsEmpty{HyField@Ff}{%
4774 \def\Fld@flags{%
4775 }{%
4776 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4777 }%
4778 }

```

19.2 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`.

```

4779 \def\HyField@PDFChoices#1{%
4780 \begingroup
4781 \gdef\Fld@choices{%
4782 \def\HyTmp@optlist{%
4783 \let\HyTmp@optitem\relax
4784 \count@=0 %
4785 \kv@parse{#1}{%
4786 \Hy@pdfstringdef\kv@key\kv@key
4787 \ifx\kv@value\relax
4788 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4789 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4790 \else
4791 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4792 \fi
4793 \else
4794 \Hy@pdfstringdef\kv@value\kv@value
4795 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4796 \fi
4797 \edef\HyTmp@optlist{%
4798 \HyTmp@optlist
4799 \HyTmp@optitem{\the\count@}{\kv@key}0%
4800 }%
4801 \advance\count@ by 1 %
4802 \@gobbletwo
4803 }%
4804 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4805 \ifFld@multiselect
4806 \HyField@@PDFChoices{DV}\Fld@default
4807 \HyField@@PDFChoices{V}\Fld@value
4808 \else
4809 \ifx\Fld@default\relax
4810 \else
4811 \pdfstringdef\Hy@gtemp\Fld@default
4812 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4813 \fi
4814 \ifx\Fld@value\relax
4815 \else
4816 \pdfstringdef\Hy@gtemp\Fld@value
4817 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4818 \fi
4819 \fi

```

```

4820 \endgroup
4821 }

```

\HyField@@PDFChoices

```

4822 \def\HyField@@PDFChoices#1#2{%
4823   \ifx#2\relax
4824   \else
4825     \count@=0 %
4826     \def\HyTmp@optitem##1##2##3{%
4827       \def\HyTmp@key{##2}%
4828       \ifx\HyTmp@key\Hy@gtemp
4829         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4830           \HyTmp@optlist
4831           \HyTmp@optitem{##1}{##2}1%
4832         }%
4833         \let\HyTmp@found=Y%
4834       \else
4835         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4836           \HyTmp@optlist
4837           \HyTmp@optitem{##1}{##2}##3%
4838         }%
4839       \fi
4840     }%
4841     \expandafter\comma@parse\expandafter{#2}{%
4842       \pdfstringdef\Hy@gtemp\comma@entry
4843       \let\HyTmp@found=N %
4844       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4845       \HyTmp@optlist
4846       \ifx\HyTmp@found Y%
4847         \advance\count@ by 1 %
4848       \else
4849         \@onelevel@sanitize\comma@entry
4850         \PackageWarning{hyperref}{%
4851           \string\ChoiceBox: Ignoring value '\comma@entry',%
4852           \MessageBreak
4853           it cannot be found in the choices%
4854         }%
4855       \fi
4856       \@gobble
4857     }%
4858     \def\HyTmp@optitem##1##2##3{%
4859       \ifnum##3=1 %
4860         (##2)%
4861       \fi
4862     }%
4863     \ifcase\count@
4864     \or
4865       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4866     \else
4867       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4868       \ifx#1V%
4869         \def\HyTmp@optitem##1##2##3{%
4870           \ifnum##3=1 %
4871             \@firstofone{ ##1}%
4872           \fi
4873         }%
4874       \edef\HyTmp@optlist{\HyTmp@optlist}%

```

```

4875     \xdef\Fld@choices{%
4876         \Fld@choices
4877         /I[\expandafter\@firstofone\HyTmp@optlist]%
4878     }%
4879     \fi
4880     \fi
4881     \fi
4882 }

```

19.3 Forms

\HyField@SetKeys

```

4883 \def\HyField@SetKeys{%
4884     \setkeys{Field}%
4885 }

4886 \newif\ifFld@checked
4887 \newif\ifFld@disabled
4888 \Fld@checkedfalse
4889 \Fld@disabledfalse
4890 \newcount\Fld@menulength
4891 \newdimen\Fld@Width
4892 \newdimen\Fld@charsize
4893 \Fld@charsize=10\p@
4894 \def\Fld@maxlen{0}
4895 \def\Fld@align{0}
4896 \def\Fld@color{0 0 0 rg}
4897 \def\Fld@bcolor{1 1 1}
4898 \def\Fld@bordercolor{1 0 0}
4899 \def\Fld@bordersep{1\p@}
4900 \def\Fld@borderwidth{1}
4901 \def\Fld@borderstyle{S}
4902 \def\Fld@cbsymbol{4}
4903 \def\Fld@radiosymbol{H}
4904 \def\Fld@rotation{0}
4905 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4906 \def\endForm{\@endForm}
4907 \newif\ifForm@html
4908 \Form@htmlfalse
4909 \def\Form@boolkey#1#2{%
4910     \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4911 }
4912 \define@key{Form}{action}{%
4913     \hyper@normalise\Hy@DefFormAction{#1}%
4914 }
4915 \def\Hy@DefFormAction{\def\Form@action}
4916 \def\enc@html{html}
4917 \define@key{Form}{encoding}{%
4918     \def\Hy@tempa{#1}%
4919     \ifx\Hy@tempa\enc@html
4920         \Form@htmltrue
4921         \def\Fld@export{html}%
4922     \else
4923         \typeout{hyperref: form 'encoding' key set to #1 %
4924             -- unknown type%
4925         }%
4926     \Form@htmlfalse

```

```

4927 \fi
4928 }
4929 \define@key{Form}{method}{%
4930 \lowercase{\def\Hy@temp{#1}}%
4931 \@ifundefined{Form@method@\Hy@temp}{%
4932 \@onelevel@sanitize\Hy@temp
4933 \PackageError{hyperref}{%
4934 Unknown method '\Hy@temp'.\MessageBreak
4935 Known values are 'post' and 'get'%
4936 }\@ehc
4937 }{%
4938 \let\Form@method\Hy@temp
4939 \ifcase\@nameuse{Form@method@\Hy@temp} %
4940 \Fld@getmethodfalse
4941 \else
4942 \Fld@getmethodtrue
4943 \fi
4944 }%
4945 }
4946 \def\Form@method{}
4947 \@namedef{Form@method@post}{0}
4948 \@namedef{Form@method@get}{1}
4949 \def\Fld@boolkey#1#2{%
4950 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4951 }
4952 \newtoks\Fld@toks
4953 \Fld@toks={ }%
4954 \def\Fld@addtoks#1#2{%
4955 \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
4956 \@processme
4957 }
4958 \def\Fld@checkequals#1=#2=#3\\{%
4959 \def\@currDisplay{#1}%
4960 \ifx\\#2\\%
4961 \def\@currValue{#1}%
4962 \else
4963 \def\@currValue{#2}%
4964 \fi
4965 }
4966 \define@key{Field}{loc}{%
4967 \def\Fld@loc{#1}%
4968 }
4969 \define@key{Field}{checked}[true]{%
4970 \lowercase{\Field@boolkey{#1}}{checked}%
4971 }
4972 \define@key{Field}{disabled}[true]{%
4973 \lowercase{\Field@boolkey{#1}}{disabled}%
4974 }
4975 \define@key{Field}{accesskey}{%
4976 \Field@addtoks{accesskey}{#1}%
4977 }
4978 \define@key{Field}{tabkey}{%
4979 \Field@addtoks{tabkey}{#1}%
4980 }
4981 \define@key{Field}{name}{%
4982 \def\Fld@name{#1}%
4983 }

```

```

4984 \define@key{Field}{width}{%
4985   \def\Fld@width{#1}%
4986   \Field@Width#1\setbox0=\hbox{m}%
4987 }
4988 \define@key{Field}{maxlen}{%
4989   \def\Fld@maxlen{#1}%
4990 }
4991 \define@key{Field}{menulength}{%
4992   \Fld@menulength=#1\relax
4993 }
4994 \define@key{Field}{height}{%
4995   \def\Fld@height{#1}%
4996 }
4997 \define@key{Field}{charsize}{%
4998   \Fld@charsize#1%
4999 }
5000 \define@key{Field}{borderwidth}{%
5001   \def\Fld@borderwidth{#1}%
5002 }
5003 \define@key{Field}{borderstyle}{%
5004   \def\Fld@borderstyle{#1}%
5005 }
5006 \define@key{Field}{bordersep}{%
5007   \def\Fld@bordersep{#1}%
5008 }
5009 \define@key{Field}{default}{%
5010   \def\Fld@default{#1}%
5011 }
5012 \define@key{Field}{align}{%
5013   \def\Fld@align{#1}%
5014 }
5015 \define@key{Field}{value}{%
5016   \def\Fld@value{#1}%
5017 }
5018 \define@key{Field}{checkboxsymbol}{%
5019   \Fld@DingDef\Fld@cbsymbol{#1}%
5020 }
5021 \define@key{Field}{radiosymbol}{%
5022   \Fld@DingDef\Fld@radiosymbol{#1}%
5023 }
5024 \def\Fld@DingDef#1#2{%
5025   \def\Fld@temp{}%
5026   \Fld@@DingDef#2\ding{}\@nil
5027   \let#1\Fld@temp
5028 }
5029 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5030   \expandafter\def\expandafter\Fld@temp\expandafter{%
5031     \Fld@temp
5032     #1%
5033   }%
5034   \ifx\#3\%
5035     \expandafter\@gobble
5036   \else
5037     \begingroup
5038       \lccode'0=#2\relax
5039       \lowercase{\endgroup
5040       \expandafter\def\expandafter\Fld@temp\expandafter{%

```



```

5041     \Fld@temp
5042     0%
5043   }%
5044 }%
5045 \expandafter\@firstofone
5046 \fi
5047 {%
5048   \Fld@@DingDef#3\@nil
5049 }%
5050 }

5051 \define@key{Field}{rotation}{%
5052   \def\Fld@rotation{#1}%
5053 }

5054 \define@key{Field}{backgroundcolor}{%
5055   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5056 }
5057 \define@key{Field}{bordercolor}{%
5058   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5059 }
5060 \define@key{Field}{color}{%
5061   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5062 }

5063 \def\Fld@onclick@code{}
5064 \def\Fld@format@code{}
5065 \def\Fld@validate@code{}
5066 \def\Fld@calculate@code{}
5067 \def\Fld@keystroke@code{}
5068 \def\Fld@onfocus@code{}
5069 \def\Fld@onblur@code{}
5070 \def\Fld@onmousedown@code{}
5071 \def\Fld@onmouseup@code{}
5072 \def\Fld@onenter@code{}
5073 \def\Fld@onexit@code{}
5074 \def\Hy@temp#1{%
5075   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5076 }
5077 \def\Hy@@temp#1#2{%
5078   \ifHy@pdfa
5079     \define@key{Field}{#2}{%
5080       \PackageError{hyperref}{%
5081         PDF/A: Additional action ‘#2’ is prohibited%
5082       }\@ehc
5083     }%
5084   \else
5085     \define@key{Field}{#2}{%
5086       \def#1{##1}%
5087     }%
5088   \fi
5089 }
5090 \Hy@temp{keystroke}
5091 \Hy@temp{format}
5092 \Hy@temp{validate}
5093 \Hy@temp{calculate}
5094 \Hy@temp{onfocus}
5095 \Hy@temp{onblur}
5096 \Hy@temp{onenter}

```

```

5097 \Hy@temp{onexit}
5098 \def\Hy@temp#1{%
5099   \define@key{Field}{#1}{%
5100     \Field@addtoks{#1}{##1}%
5101   }%
5102 }
5103 \Hy@temp{onselect}
5104 \Hy@temp{onchange}
5105 \Hy@temp{ondblclick}
5106 \Hy@temp{onmousedown}
5107 \Hy@temp{onmouseup}
5108 \Hy@temp{onmouseover}
5109 \Hy@temp{onmousemove}
5110 \Hy@temp{onmouseout}
5111 \Hy@temp{onkeypress}
5112 \Hy@temp{onkeydown}
5113 \Hy@temp{onkeyup}
5114 \ifHy@pdfa
5115   \define@key{Field}{onclick}{%
5116     \PackageError{hyperref}{%
5117       PDF/A: Action 'onclick' is prohibited%
5118     }\@ehc
5119   }%
5120 \else
5121   \define@key{Field}{onclick}{%
5122     \def\Fld@onclick@code{#1}%
5123     \Field@addtoks{onclick}{#1}%
5124   }%
5125 \fi

5126 \DeclareRobustCommand\TextField{%
5127   \@ifnextchar[{\@TextField}{\@TextField[]}%
5128 }
5129 \DeclareRobustCommand\ChoiceMenu{%
5130   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5131 }
5132 \DeclareRobustCommand\CheckBox{%
5133   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5134 }
5135 \DeclareRobustCommand\PushButton{%
5136   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5137 }
5138 \DeclareRobustCommand\Gauge{%
5139   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5140 }
5141 \DeclareRobustCommand\Submit{%
5142   \@ifnextchar[{\@Submit}{\@Submit[]}%
5143 }
5144 \DeclareRobustCommand\Reset{%
5145   \@ifnextchar[{\@Reset}{\@Reset[]}%
5146 }
5147 \def\LayoutTextField#1#2{% label, field
5148   #1 #2%
5149 }
5150 \def\LayoutChoiceField#1#2{% label, field
5151   #1 #2%
5152 }
5153 \def\LayoutCheckField#1#2{% label, field

```

```

5154 #1 #2%
5155 }
5156 \def\LayoutPushButtonField#1{% button
5157 #1%
5158 }
5159 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5160 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5161 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5162 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5163 \def\MakeButtonField#1{%
5164 \sbox0{%
5165 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5166 }%
5167 \@tempdima\ht0 %
5168 \advance\@tempdima by \Fld@borderwidth bp %
5169 \advance\@tempdima by \Fld@borderwidth bp %
5170 \ht0\@tempdima
5171 \@tempdima\dp0 %
5172 \advance\@tempdima by \Fld@borderwidth bp %
5173 \advance\@tempdima by \Fld@borderwidth bp %
5174 \dp0\@tempdima
5175 \box0\relax
5176 }
5177 \def\DefaultHeightofSubmit{14pt}
5178 \def\DefaultWidthofSubmit{2cm}
5179 \def\DefaultHeightofReset{14pt}
5180 \def\DefaultWidthofReset{2cm}
5181 \def\DefaultHeightofCheckBox{\baselineskip}
5182 \def\DefaultWidthofCheckBox{\baselineskip}
5183 \def\DefaultHeightofChoiceMenu{\baselineskip}
5184 \def\DefaultWidthofChoiceMenu{\baselineskip}
5185 \def\DefaultHeightofText{\baselineskip}
5186 \def\DefaultHeightofTextMultiline{4\baselineskip}
5187 \def\DefaultWidthofText{3cm}
5188 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5189 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5190 \def\DefaultOptionsofPushButton{print}
5191 \def\DefaultOptionsofCheckBox{print}
5192 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5193 \def\DefaultOptionsofListBox{print}
5194 \def\DefaultOptionsofComboBox{print,edit,sort}
5195 \def\DefaultOptionsofPopdownBox{print}
5196 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5197 \ifHy@figures
5198 \Hy@Info{Hyper figures ON}%
5199 \else
5200 \Hy@Info{Hyper figures OFF}%
5201 \fi
5202 \ifHy@nesting
5203 \Hy@Info{Link nesting ON}%
5204 \else
5205 \Hy@Info{Link nesting OFF}%

```

```

5206 \fi
5207 \ifHy@hyperindex
5208   \Hy@Info{Hyper index ON}%
5209 \else
5210   \Hy@Info{Hyper index OFF}%
5211 \fi
5212 \ifHy@backref
5213   \Hy@Info{backreferencing ON}%
5214 \else
5215   \Hy@Info{backreferencing OFF}%
5216 \fi
5217 \ifHy@colorlinks
5218   \Hy@Info{Link coloring ON}%
5219 \else
5220   \Hy@Info{Link coloring OFF}%
5221 \fi
5222 \ifHy@ocgcolorlinks
5223   \Hy@Info{Link coloring with OCG ON}%
5224 \else
5225   \Hy@Info{Link coloring with OCG OFF}%
5226 \fi
5227 \ifHy@pdfa
5228   \Hy@Info{PDF/A mode ON}%
5229 \else
5230   \Hy@Info{PDF/A mode OFF}%
5231 \fi

```

21 Low-level utility macros

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

```

5232 \edef\hyper@hash{\string#}
5233 \edef\hyper@tilde{\string~}
5234 \edef\hyper@quote{\string"}
5235 \let\@currentHref\@empty
5236 \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.

```

5237 \AfterBeginDocument{%
5238   \Hy@pdfstringtrue
5239   \PDF@SetupDoc
5240   \let\PDF@SetupDoc\@empty
5241   \Hy@DisableOption{pdfpagescrop}%
5242   \Hy@DisableOption{pdfpagemode}%
5243   \Hy@DisableOption{pdfnonfullscreenpagemode}%
5244   \Hy@DisableOption{pdfdirection}%
5245   \Hy@DisableOption{pdfviewarea}%
5246   \Hy@DisableOption{pdfviewclip}%
5247   \Hy@DisableOption{pdfprintarea}%
5248   \Hy@DisableOption{pdfprintclip}%
5249   \Hy@DisableOption{pdfprintscaling}%
5250   \Hy@DisableOption{pdfduplex}%
5251   \Hy@DisableOption{pdfpicktraybypdfsize}%
5252   \Hy@DisableOption{pdfprintpagerange}%
5253   \Hy@DisableOption{pdfnumcopies}%
5254   \Hy@DisableOption{pdfstartview}%
5255   \Hy@DisableOption{pdfstartpage}%

```

```

5256 \Hy@DisableOption{pdftoolbar}%
5257 \Hy@DisableOption{pdfmenubar}%
5258 \Hy@DisableOption{pdfwindowui}%
5259 \Hy@DisableOption{pdffitwindow}%
5260 \Hy@DisableOption{pdfcenterwindow}%
5261 \Hy@DisableOption{pdfdisplaydoctitle}%
5262 \Hy@DisableOption{pdfpagelayout}%
5263 \Hy@DisableOption{pdflang}%
5264 \Hy@DisableOption{baseurl}%
5265 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5266 \Hy@pdfstringfalse
5267 }

```

Ignore star from referencing macros:

```

5268 \LetLtxMacro\NoHy@OrgRef\ref
5269 \DeclareRobustCommand*\ref{%
5270 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5271 }
5272 \LetLtxMacro\NoHy@OrgPageRef\pageref
5273 \DeclareRobustCommand*\pageref{%
5274 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5275 }

```

22 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.

```

5276 \def\NoHyper{%
5277 \def\hyper@link@{##1}##2##3##4{##4}%
5278 \def\hyper@@anchor##1{%
5279 \global\let\hyper@livelink\hyper@link
5280 \gdef\hyper@link##1##2##3{##3}%
5281 \def\hyper@anchor##1{%
5282 \def\hyper@anchorstart##1{%
5283 \let\hyper@anchorend\@empty
5284 \def\hyper@linkstart##1##2{%
5285 \let\hyper@linkend\@empty
5286 \def\hyper@linkurl##1##2{##1}%
5287 \def\hyper@linkfile##1##2##3{##1}%
5288 \def\hyper@link@{##1}##2##3}%
5289 \let\Hy@backout\@gobble
5290 }
5291 \def\stop@hyper{%
5292 \def\hyper@link@{##1}##2##3##4{##4}%
5293 \let\Hy@backout\@gobble
5294 \def\hyper@@anchor##1{%
5295 \def\hyper@link##1##2##3{##3}%
5296 \def\hyper@anchor##1{%
5297 \def\hyper@anchorstart##1{%
5298 \let\hyper@anchorend\@empty
5299 \def\hyper@linkstart##1##2{%
5300 \let\hyper@linkend\@empty
5301 \def\hyper@linkurl##1##2{##1}%
5302 \def\hyper@linkfile##1##2##3{##1}%

```

```

5303 \def\hyper@link@{##1}##2##3}%
5304 }
5305 \def\endNoHyper{%
5306 \global\let\hyper@link\hyper@livelink
5307 }
5308 \</package>

```

23 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:

```

5309 \*nohyperref
5310 \RequirePackage{letltxmacro}[2008/06/13]
5311 \let\hyper@@anchor\@gobble
5312 \def\hyper@link#1##2##3{##3}%
5313 \let\hyper@anchorstart\@gobble
5314 \let\hyper@anchorend\@empty
5315 \let\hyper@linkstart\@gobbletwo
5316 \let\hyper@linkend\@empty
5317 \def\hyper@linkurl#1##2{##1}%
5318 \def\hyper@linkfile#1##2##3{##1}%
5319 \def\hyper@link@{##1}##2##3}%
5320 \let\PDF@SetupDoc\@empty
5321 \let\PDF@FinishDoc\@empty
5322 \def\nohyperpage#1{##1}

```

Some top-level commands:

```

5323 \def\Acrobatmenu#1##2{\leavevmode#2}
5324 \let\pdfstringdefDisableCommands\@gobbletwo
5325 \let\texorpdfstring\@firstoftwo
5326 \let\pdfbookmark\@undefined
5327 \newcommand\pdfbookmark[3]{}{}
5328 \let\phantomsection\@empty
5329 \let\hypersetup\@gobble
5330 \let\hyperbaseurl\@gobble
5331 \let\href\@gobble
5332 \let\hyperdef\@gobbletwo
5333 \let\hyperlink\@gobble
5334 \let\hypertarget\@gobble
5335 \def\hyperref{%
5336 \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5337 }
5338 \long\def\@gobbleopt[#1]{}
5339 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5340 \LetLtxMacro\NoHy@OrgRef\ref
5341 \DeclareRobustCommand*\ref{%
5342 \ifstar\NoHy@OrgRef\NoHy@OrgRef
5343 }
5344 \LetLtxMacro\NoHy@OrgPageRef\pageref
5345 \DeclareRobustCommand*\pageref{%

```

```

5346 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5347 }
5348 \nohyperref

```

24 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}`

```

5349 \*package
5350 \AfterBeginDocument{%

```

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.

```

5351 \if@files
5352 \ifHy@typexml
5353 \immediate\closeout\@mainaux
5354 \immediate\openout\@mainaux\jobname.aux\relax
5355 \immediate\write\@auxout{<relaxxml>\relax}%
5356 \fi
5357 \immediate\write\@auxout{%
5358 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5359 \global\let\string\oldcontentsline\string\contentsline^^J%
5360 \gdef\string\contentsline%
5361 \string#1\string#2\string#3\string#4{%
5362 \string\oldcontentsline%
5363 {\string#1}{\string#2}{\string#3}}^^J%
5364 \global\let\string\oldnewlabel\string\newlabel^^J%
5365 \gdef\string\newlabel\string#1\string#2{%
5366 \string\newlabelxx{\string#1}\string#2}^^J%
5367 \gdef\string\newlabelxx%
5368 \string#1\string#2\string#3\string#4\string#5\string#6{%
5369 \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.

```

5370 \string\AtEndDocument{%
5371 \let\string\contentsline\string\oldcontentsline^^J%
5372 \let\string\newlabel\string\oldnewlabel^^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.

```

5373 \string\else^^J%
5374 \global\let\string\hyper@last\relax^^J%
5375 \string\fi^^J%
5376 }%
5377 \fi

```

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.

```

5378 \ifx\hyper@last\@undefined
5379 \def\@starttoc#1{%

```

```

5380 \begingroup
5381 \makeatletter
5382 \IfFileExists{\jobname.#1}{%
5383   \Hy@WarningNoLine{%
5384     old #1 file detected, not used; run LaTeX again%
5385   }%
5386 }{}%
5387 \if@files
5388   \expandafter\newwrite\csname tf@#1\endcsname
5389   \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5390 \fi
5391 \@nobreakfalse
5392 \endgroup
5393 }%
5394 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5395 \fi
5396 }

```

25 Title strings

If options `pdftitle` and `pdfauthor` are not used, these informations for the pdf information dictionary can be extracted by the nd

```

5397 \ifHy@usetitle
5398 \let\HyOrg@title\title
5399 \let\HyOrg@author\author
5400 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5401 \def\Hy@scanopttitle[#1]{%
5402   \gdef\Hy@title{#1}%
5403   \HyOrg@title{#1}%
5404 }%
5405 \def\Hy@scantitle#1{%
5406   \gdef\Hy@title{#1}%
5407   \HyOrg@title{#1}%
5408 }%
5409 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5410 \def\Hy@scanoptauthor[#1]{%
5411   \gdef\Hy@author{#1}%
5412   \HyOrg@author{#1}%
5413 }%
5414 \def\Hy@scanauthor#1{%
5415   \gdef\Hy@author{#1}%
5416   \HyOrg@author{#1}%
5417 }%

```

The case, that `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.

```

5418 \begingroup
5419 \def\process@me#1\@nil#2{%
5420   \expandafter\let\expandafter\x\csname @#2\endcsname
5421   \edef\y{\expandafter\strip@prefix\meaning\x}%
5422   \def\c##1#1##2\@nil{%
5423     \ifx\\##1\\%
5424     \else
5425       \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5426         \expandafter{x}%
5427     \fi

```



```

5428 }%
5429 \expandafter\c\y\relax#1\@nil
5430 }%
5431 \expandafter\process@me\string\@latex@\@nil{title}%
5432 \expandafter\process@me\string\@latex@\@nil{author}%
5433 \endgroup
5434 \fi
5435 \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.

```

5436 \def\Hy@UseMaketitleString#1{%
5437 \ltx@ifundefined{Hy@#1}{-}{%
5438 \begingroup
5439 \let\Hy@saved@hook\pdfstringdefPreHook
5440 \pdfstringdefDisableCommands{%
5441 \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5442 \let\newline\\%
5443 }%
5444 \expandafter\ifx\csname @pdf#1\endcsname\@empty
5445 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5446 \csname Hy@#1\endcsname\@empty
5447 }%
5448 \fi
5449 \global\let\pdfstringdefPreHook\Hy@saved@hook
5450 \endgroup
5451 }%
5452 }
5453 \def\Hy@newline@title#1{ #1}
5454 \def\Hy@newline@author#1{, #1}
5455 \def\Hy@UseMaketitleInfos{%
5456 \Hy@UseMaketitleString{title}%
5457 \Hy@UseMaketitleString{author}%
5458 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5459 \RequirePackage{atbegshi}[2007/09/09]
5460 \def\Hy@EveryPageHook{}
5461 \def\Hy@EveryPageBoxHook{}
5462 \def\Hy@FirstPageHook{}
5463 \AtBeginShipout{%
5464 \Hy@EveryPageHook
5465 \ifx\Hy@EveryPageBoxHook\@empty

```

```

5466 \else
5467 \setbox\AtBeginShipoutBox=\vbox{%
5468 \offinterlineskip
5469 \Hy@EveryPageBoxHook
5470 \box\AtBeginShipoutBox
5471 }%
5472 \fi
5473 }
5474 \AtBeginShipoutFirst{%
5475 \Hy@FirstPageHook
5476 }
5477 \g@addto@macro\Hy@FirstPageHook{%
5478 \PDF@FinishDoc
5479 \gdef\PDF@FinishDoc{}}%
5480 }

```

27.1 PDF /PageLabels

Internal macros of this module are marked with \HyPL@.

```

5481 \ifHy@pagelabels
5482 \begingroup\expandafter\expandafter\expandafter\endgroup
5483 \expandafter\ifx\csname thepage\endcsname\relax
5484 \Hy@pagelabelsfalse
5485 \Hy@WarningNoLine{%
5486 Option 'pdfpagelabels' is turned off\MessageBreak
5487 because \string\thepage\space is undefined%
5488 }%
5489 \csname fi\endcsname
5490 \csname iffalse\expandafter\endcsname
5491 \fi

```

\thispdfpagelabel The command \thispdfpagelabel allows to label a special page without the redefinition of \thepage for the page.

```

5492 \def\thispdfpagelabel#1{%
5493 \gdef\HyPL@thisLabel{#1}%
5494 }%
5495 \global\let\HyPL@thisLabel\relax

```

\HyPL@Labels The page labels are collected in \HyPL@Labels and set at the end of the document.

```

5496 \def\HyPL@Labels{}%

```

\Hy@abspage We have to know the the absolute page number and introduce a new counter for that.

```

5497 \newcount\Hy@abspage
5498 \Hy@abspage=0 %

```

For comparisons with the values of the previous page, some variables are needed:

```

5499 \def\HyPL@LastType{init}%
5500 \def\HyPL@LastNumber{0}%
5501 \def\HyPL@LastPrefix{}%

```

Definitions for the PDF names of the L^AT_EX pendants.

```

5502 \def\HyPL@arabic{D}%
5503 \def\HyPL@Roman{R}%
5504 \def\HyPL@roman{r}%
5505 \def\HyPL@Alph{A}%
5506 \def\HyPL@alph{a}%

```

`\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.

```

5507 \def\HyPL@EveryPage{%
5508   \begingroup
5509   \ifx\HyPL@thisLabel\relax
5510     \let\HyPL@page\thepage
5511   \else
5512     \let\HyPL@page\HyPL@thisLabel
5513     \global\let\HyPL@thisLabel\relax
5514   \fi
5515   \let\HyPL@Type\relax
5516   \ifnum\the\c@page>0 %
5517     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5518   \fi
5519   \let\Hy@temp Y%
5520   \ifx\HyPL@Type\HyPL@LastType
5521   \else
5522     \let\Hy@temp N%
5523   \fi
5524   \ifx\HyPL@Type\relax
5525     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5526   \else
5527     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5528   \fi
5529   \ifx\HyPL@Prefix\HyPL@LastPrefix
5530   \else
5531     \let\Hy@temp N%
5532   \fi
5533   \if Y\Hy@temp
5534     \advance\c@page by -1 %
5535     \ifnum\HyPL@LastNumber=\the\c@page\relax
5536     \else
5537       \let\Hy@temp N%
5538     \fi
5539     \Hy@StepCount\c@page
5540   \fi
5541   \if N\Hy@temp
5542     \ifx\HyPL@Type\relax
5543       \HyPL@storePageLabel{/P(\HyPL@Prefix)}%
5544     \else
5545       \HyPL@storePageLabel{%
5546         \ifx\HyPL@Prefix\@empty
5547         \else
5548           /P(\HyPL@Prefix)%
5549         \fi
5550         /S/\csname HyPL\HyPL@Type\endcsname
5551         \ifnum\the\c@page=1 %
5552         \else
5553           \space/St \the\c@page
5554         \fi
5555       }%
5556     \fi
5557   \fi
5558   \xdef\HyPL@LastNumber{\the\c@page}%
5559   \global\let\HyPL@LastType\HyPL@Type
5560   \global\let\HyPL@LastPrefix\HyPL@Prefix
5561 \endgroup

```

```

5562 \Hy@GlobalStepCount\Hy@abspage
5563 }%

```

`\HyPL@CheckThePage` Macro `\HyPL@CheckThePage` calls `\HyPL@@CheckThePage` that does the job.

```

5564 \def\HyPL@CheckThePage#1\@nil{%
5565   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5566 }%

```

`\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`.

```

5567 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5568   \def\Hy@tempa{#4}%
5569   \def\Hy@tempb{\csname\endcsname\c@page}%
5570   \ifx\Hy@tempa\Hy@tempb
5571     \expandafter\ifx\csname HyPL#3\endcsname\relax
5572     \else
5573       \def\HyPL@Type{#3}%
5574       \def\HyPL@Prefix{#2}%
5575       \fi
5576     \else
5577       \begingroup
5578         \let\Hy@next\endgroup
5579         \let\HyPL@found\@undefined
5580         \def\arabic{\HyPL@Format{arabic}}%
5581         \def\Roman{\HyPL@Format{Roman}}%
5582         \def\roman{\HyPL@Format{roman}}%
5583         \def\Alph{\HyPL@Format{Alph}}%
5584         \def\alph{\HyPL@Format{alph}}%
5585         \protected@edef\Hy@temp{#1}%
5586         \ifx\HyPL@found\relax
5587           \toks@{\expandafter{\Hy@temp}}%
5588           \edef\Hy@next{\endgroup
5589             \noexpand\HyPL@@CheckThePage\the\toks@
5590             \noexpand\HyPL@found\relax\noexpand\@nil
5591           }%
5592         \fi
5593         \Hy@next
5594       \fi
5595     }%

```

`\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`.

```

5596 \def\HyPL@Format#1#2{%
5597   \ifx\HyPL@found\@undefined
5598     \expandafter\ifx\csname c@#2\endcsname\c@page
5599     \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5600   \else
5601     \expandafter\noexpand\csname#1\endcsname{#2}%
5602   \fi
5603   \else
5604     \expandafter\noexpand\csname#1\endcsname{#2}%
5605   \fi
5606 }%

```

`\HyPL@@@CheckThePage` If the second check method is successful, `\HyPL@@@CheckThePage` scans the result of `\HyPL@Format` and stores the found values.

```
5607 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5608   \def\Hy@tempa{#3}%
5609   \def\Hy@tempb{\HyPL@found\relax}%
5610   \ifx\Hy@tempa\Hy@tempb
5611     \def\HyPL@Type{@#2}%
5612     \def\HyPL@Prefix{#1}%
5613   \fi
5614 }%
```

`\HyPL@StorePageLabel` Dummy for drivers that does not support `/PageLabel`.

```
5615 \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`.

```
5616 \def\HyPL@Useless{0<</S/D>>}%
5617 \@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.

```
5618 \def\HyPL@SetPageLabels{%
5619   \@onelevel@sanitize\HyPL@Labels
5620   \ifx\HyPL@Labels\@empty
5621     \else
5622       \ifx\HyPL@Labels\HyPL@Useless
5623         \else
5624           \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5625         \fi
5626       \fi
5627 }%
```

```
5628 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5629 \fi
```

Option ‘pdfpagelabels’ has been used and is now disabled.

```
5630 \Hy@DisableOption{pdfpagelabels}
5631 </package>
```

27.1.1 pdfTeX and VTeX

Because of pdfTeX’s `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
5632 <pdfTeX>\let\Hy@PutCatalog\pdfcatalog
```

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.

```
5633 <*vTeX>
5634 \providecommand*{\XR@ext}{pdf}
5635 \edef\Hy@VTeXversion{%
5636   \ifx\VTeXversion\@undefined
5637     \z@
```

```

5638 \else
5639 \ifx\VTexversion\relax
5640 \z@
5641 \else
5642 \VTexversion
5643 \fi
5644 \fi
5645 }
5646 \begingroup
5647 \ifnum\Hy@VTexversion<660 %
5648 \gdef\Hy@PutCatalog#1{%
5649 \Hy@WarningNoLine{%
5650 VTeX 6.59g or above required for pdfpagelabels%
5651 }%
5652 }%
5653 \else
5654 \gdef\Hy@PutCatalog#1{%
5655 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5656 }%
5657 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5658 \ifx\#2\%
5659 \else
5660 \immediate\special{!pdfpagelabels #2}%
5661 \fi
5662 }%
5663 \fi
5664 \endgroup
5665 </vtex>

5666 <*pdfTeX | vTeX>

```

`\HyPL@StorePageLabel` This macro adds the entry #1 to `\HyPL@Labels`.

```

5667 \ifHy@pagelabels
5668 \def\HyPL@StorePageLabel#1{%
5669 \toks@{\expandafter{\HyPL@Labels}}%
5670 \xdef\HyPL@Labels{%
5671 \the\toks@
5672 \the\Hy@abspage<<#1>>%
5673 }%
5674 }%

```

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.

```

5675 \RequirePackage{atveryend}[2009/12/07]%
5676 \AtVeryEndDocument{%
5677 \HyPL@SetPageLabels
5678 }%

5679 \fi
5680 </pdfTeX | vTeX>

```

27.1.2 xetex

```

5681 <*xetex>
5682 \HyPsd@LoadUnicode
5683 \Hy@unicodetrue
5684 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode

```

```

5685 \else
5686   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5687 \fi
5688 \HyPsd@LoadStringEncoding
5689 \define@key{Hyp}{unicode}[true]{%
5690   \Hy@boolkey{unicode}{#1}%
5691   \ifHy@unicode
5692   \else
5693     \Hy@Warning{%
5694       XeTeX driver only supports 'unicode=true'.\MessageBreak
5695       Ignoring option setting 'unicode=false'%
5696     }%
5697     \Hy@unicodetrue
5698   \fi
5699 }
5700 \define@key{Hyp}{pdfencoding}{%
5701   \edef\HyPsd@temp{#1}%
5702   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5703     \let\HyPsd@pdfencoding\HyPsd@temp
5704   \else
5705     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5706       \let\HyPsd@pdfencoding\HyPsd@temp
5707     \else
5708       \Hy@Warning{%
5709         XeTeX driver only supports 'pdfencoding=unicode|auto.%
5710         \MessageBreak
5711         Ignoring option setting 'pdfencoding=\HyPsd@temp'%
5712       }%
5713     \fi
5714   \fi
5715 }
5716 \let\HyXeTeX@CheckUnicode\relax
5717 \</xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5718 <*pdfmarkbase>
5719 \begingroup
5720   \@ifundefined{headerps@out}{-}{%
5721     \toks@{\expandafter{\Hy@FirstPageHook}}%
5722     \xdef\Hy@FirstPageHook{%
5723       \noexpand\headerps@out{%
5724         systemdict /pdfmark known%
5725         {%
5726           userdict /?pdfmark systemdict /exec get put%
5727         }{%
5728           userdict /?pdfmark systemdict /pop get put %
5729           userdict /pdfmark systemdict /cleartomark get put%
5730         }%
5731         ifelse%
5732       }%
5733       \the\toks@
5734     }%
5735   }%
5736 \endgroup
5737 \</pdfmarkbase>

```

\Hy@PutCatalog

```

5738 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
5739 <*pdfmarkbase>
5740 \def\Hy@PutCatalog#1{%
5741   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}}%
5742 }
5743 </pdfmarkbase>

5744 <*pdfmarkbase | dvipdfm | xetex>
5745 \ifHy@pagelabels

```

`\HyPL@StorePageLabel` This macro writes a string to the .aux file.

```

5746 \def\HyPL@StorePageLabel#1{%
5747   \if@filesw
5748     \begingroup
5749     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5750     \immediate\write\@mainaux{%
5751       \string\HyPL@Entry{\Hy@tempa}%
5752     }%
5753     \endgroup
5754   \fi
5755 }%

```

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.

```

5756 \AfterBeginDocument{%
5757   \if@filesw
5758     \immediate\write\@mainaux{%
5759       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5760     }%
5761   \fi
5762   \ifx\HyPL@Labels\@empty
5763     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5764   \else
5765     \HyPL@SetPageLabels
5766   \fi
5767   \let\HyPL@Entry\@gobble
5768 }%

```

`\HyPL@Entry`

```

5769 \def\HyPL@Entry#1{%
5770   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5771     \HyPL@Labels
5772     #1%
5773   }%
5774 }%

5775 \fi
5776 </pdfmarkbase | dvipdfm | xetex>

5777 <*package>
5778 \MaybeStopEarly

```

28 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

```

5779 \def\Hy@CounterExists#1{%
5780   \begingroup\expandafter\expandafter\expandafter\endgroup
5781   \expandafter\ifx\csname c@#1\endcsname\relax
5782     \expandafter\@gobble
5783   \else
5784     \begingroup\expandafter\expandafter\expandafter\endgroup
5785     \expandafter\ifx\csname the#1\endcsname\relax
5786       \expandafter\expandafter\expandafter\@gobble
5787     \else
5788       \expandafter\expandafter\expandafter\@firstofone
5789     \fi
5790   \fi
5791 }
5792 \Hy@CounterExists{section}{%
5793   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5794 }
5795 \Hy@CounterExists{part}{%
5796   \newcommand\theHpart{\arabic{part}}}%
5797 }
5798 \ltx@ifundefined{thechapter}{%
5799   \newcommand\theHsection   {\arabic{section}}}%
5800   \newcommand\theHfigure    {\arabic{figure}}}%
5801   \newcommand\theHtable     {\arabic{table}}}%
5802 }{%
5803   \newcommand\theHchapter   {\arabic{chapter}}}%
5804   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
5805   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
5806   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
5807 }
5808 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5809 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5810 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5811 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5812 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
5813 \newcommand\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.

```

5814 \let\H@item\item
5815 \newcounter{Item}
5816 \def\theHItem{\arabic{Item}}

```

```

5817 \def\item{%
5818   \@hyper@itemfalse
5819   \if@nmbrlist\@hyper@itemtrue\fi
5820   \H@item
5821 }

5822 \newcommand\theHenumi   {\theHItem}
5823 \newcommand\theHenumii  {\theHItem}
5824 \newcommand\theHenumiii {\theHItem}
5825 \newcommand\theHenumiv  {\theHItem}
5826 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5827 \newcommand\theHmpfootnote {\arabic{mpfootnote}}
5828 \let\theHHmpfootnote\theHHfootnote

```

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.

```

5829 \let\H@refstepcounter\refstepcounter
5830 \edef\name@of@eq{equation}%
5831 \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.

```

5832 \newif\if@hyper@item
5833 \newif\if@skiphyperref
5834 \@hyper@itemfalse
5835 \@skiphyperreffalse
5836 \def\refstepcounter#1{%
5837   \ifHy@pdfstring
5838   \else
5839     \H@refstepcounter{#1}%
5840     \edef\This@name{#1}%
5841     \ifx\This@name\name@of@slide
5842     \else
5843       \if@skiphyperref
5844       \else
5845         \if@hyper@item
5846           \stepcounter{Item}%
5847           \hyper@refstepcounter{Item}%
5848           \@hyper@itemfalse
5849         \else
5850           \hyper@refstepcounter{#1}%
5851         \fi
5852       \fi
5853     \fi
5854   \fi
5855 }

```

AMSL^AT_EX 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.

```

5856 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5857 \def\hyper@refstepcounter#1{%
5858   \edef\This@name{#1}%
5859   \ifx\This@name\name@of@eq
5860     \@ifundefined{theHequation}{%

```

```

5861 \make@stripped@name{\theequation}%
5862 \let\theHequation\newname
5863 }{}%
5864 \fi
5865 \@ifundefined{theH#1}{%
5866 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5867 }{}%
5868 \hyper@makecurrent{#1}%
5869 \ifmeasuring@
5870 \else
5871 \Hy@raisedlink{%
5872 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5873 }%
5874 \fi
5875 }

```

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`.

```

5876 \begingroup\expandafter\expandafter\expandafter\endgroup
5877 \expandafter\ifx\csname chapter\endcsname\relax
5878 \def\Hy@chapterstring{section}%
5879 \else
5880 \def\Hy@chapterstring{chapter}%
5881 \fi
5882 \def\Hy@appendixstring{appendix}
5883 \def\Hy@chapapp{\Hy@chapterstring}
5884 \let\HyOrg@appendix\appendix
5885 \def\appendix{%
5886 \ltx@ifundefined{chapter}%
5887 {\gdef\theHsection{\Alph{section}}}%
5888 {\gdef\theHchapter{\Alph{chapter}}}%
5889 \xdef\Hy@chapapp{\Hy@appendixstring}%
5890 \HyOrg@appendix
5891 }

```

`\hyper@makecurrent` Because of Babel mucking around, nullify `\textlatin` when making names. And `\@number` because of babel’s `lrbabel.def`.

```

5892 \def\hyper@makecurrent#1{%
5893 \begingroup
5894 \edef\Hy@param{#1}%
5895 \ifx\Hy@param\Hy@chapterstring
5896 \let\Hy@param\Hy@chapapp
5897 \fi
5898 \ifHy@hypertexnames
5899 \let\@number\@firstofone
5900 \@ifundefined{latin@Alph}{}{%
5901 \ifx\@Alph\greek@Alph
5902 \def\@Alph{Alph\@arabic}%
5903 \fi
5904 }%
5905 \ifx\@Alph\@Alph@bul
5906 \def\@Alph{Alph\@arabic}%
5907 \fi

```

```

5908 \ifx\@alph\@alph@bul
5909 \def\@alph{alph\@arabic}%
5910 \fi
5911 \ifHy@naturalnames
5912 \let\textlatin\@firstofone
5913 \xdef\Hy@GlobalTempHlabel{\csname the#1\endcsname}%
5914 \else
5915 \xdef\Hy@GlobalTempHlabel{%
5916 \csname
5917 the%
5918 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5919 #1%
5920 \endcsname
5921 }%
5922 \fi
5923 \xdef\Hy@GlobalTempHref{%
5924 \Hy@param.\expandafter\strip@prefix\meaning\Hy@GlobalTempHlabel
5925 }%
5926 \else
5927 \Hy@GlobalStepCount\Hy@linkcounter
5928 \xdef\Hy@GlobalTempHref{\Hy@param.\the\Hy@linkcounter}%
5929 \fi
5930 \endgroup
5931 \ifHy@localanchorname
5932 \let\@currentHlabel\Hy@GlobalTempHlabel
5933 \let\@currentHref\Hy@GlobalTempHref
5934 \else
5935 \global\let\@currentHlabel\Hy@GlobalTempHlabel
5936 \global\let\@currentHref\Hy@GlobalTempHref
5937 \fi
5938 }

5939 \@ifpackageloaded{fancyvrb}{%
5940 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
5941 \def\FV@StepLineNo{%
5942 \FV@SetLineNo
5943 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5944 \FV@SetLineNo
5945 }%
5946 }%
5947 }{}

```

29 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options `hypertextnames` and `plainpages`) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 38). The link will not work if option `pageanchor` is set to false.

`\lastpage@putlabel`

```

5948 \AtBeginDocument{%
5949 \@ifclassloaded{revtex4}{%
5950 \@namedef{ver@lastpage.sty}{1994/06/25}%

```

```

5951 }{}%
5952 \@ifpackageloaded{lastpage}{%
5953   \ifHy@pageanchor
5954   \else
5955     \Hy@WarningNoLine{%
5956       The \string\pageref{LastPage} link doesn't work\MessageBreak
5957       with disabled option 'pageanchor'%
5958     }%
5959   \fi
5960   \def\lastpage@putlabel{%
5961     \addtocounter{page}{-1}%
5962     \if@filesw
5963       \begingroup
5964         \let\@number\@firstofone
5965         \ifHy@pageanchor
5966           \ifHy@hypertextnames
5967             \ifHy@plainpages
5968               \def\Hy@temp{\arabic{page}}%
5969             \else
5970               \Hy@unicodefalse
5971               \pdfstringdef\Hy@temp{\thepage}%
5972             \fi
5973           \else
5974             \def\Hy@temp{\the\Hy@pagecounter}%
5975           \fi
5976         \fi
5977         \immediate\write\@auxout{%
5978           \string\newlabel
5979           {LastPage}{}{\thepage}{}{%
5980             \ifHy@pageanchor page.\Hy@temp\fi}{}%
5981         }%
5982       \endgroup
5983     \fi
5984     \addtocounter{page}{1}%
5985   }%
5986   \@ifclassloaded{revtex4}{%
5987     \begingroup
5988     \toks@{\expandafter\lastpage@putlabel}%
5989     \edef\x{\endgroup
5990       \def\noexpand\lastpage@putlabel{%
5991         \noexpand\stepcounter{page}%
5992         \the\toks@
5993         \noexpand\addtocounter{page}\noexpand\m@ne
5994       }%
5995     }%
5996     \x
5997   }{}%
5998 }{}%
5999 }
6000 \</package>
6001 \<*check>
6002 \checkpackage{lastpage}[1994/06/25]
6003 \checkcommand\def\lastpage@putlabel{%
6004   \addtocounter{page}{-1}%
6005   \immediate\write\@auxout{%
6006     \string\newlabel{LastPage}{}{\thepage}{}%
6007   }%

```

```

6008 \addtocounter{page}{1}%
6009 }
6010 </check>
6011 <*package>

```

30 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.

```

6012 \def\hypergetref#1{\getrefbykeydefault{#1}{\{??\}}
6013 \def\hypergetpageref#1{\getrefbykeydefault{#1}{page}{0}}

```

31 Package titlesec and titletoc support

This code is contributed by Javier Bezos (Email: jbezos@arrakis.es).

Package titlesec support:

```

6014 \@ifpackageloaded{titlesec}{%
6015 \def\ttl@Hy@steplink#1{%
6016 \Hy@GlobalStepCount\Hy@linkcounter
6017 \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
6018 \edef\ttl@Hy@saveanchor{%
6019 \noexpand\Hy@raisedlink{%
6020 \noexpand\hyper@anchorstart{\@currentHref}%
6021 \noexpand\hyper@anchorend
6022 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6023 \noexpand\ttl@Hy@PatchSaveWrite
6024 }%
6025 }%
6026 }%
6027 \def\ttl@Hy@PatchSaveWrite{%
6028 \begingroup
6029 \toks@{\expandafter{\ttl@savewrite}%
6030 \edef\x{\endgroup
6031 \def\noexpand\ttl@savewrite{%
6032 \let\noexpand\@currentHref
6033 \noexpand\ttl@Hy@SavedCurrentHref
6034 \the\toks@
6035 }%
6036 }%
6037 \x
6038 }%
6039 \def\ttl@Hy@refstepcounter#1{%
6040 \let\ttl@b\Hy@raisedlink
6041 \def\Hy@raisedlink##1{%
6042 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6043 }%
6044 \refstepcounter{#1}%
6045 \let\Hy@raisedlink\ttl@b
6046 }%
6047 }{}

```

Package titletoc support:

```

6048 \@ifpackageloaded{titletoc}{%
6049 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%

```

```
6050 }{}
```

32 Package varioref support

Package nameref uses five arguments for the ref system. Fix provided by Felix Neubauer (felix.neubauer@gmx.net).

```
6051 \def\Hy@varioref@undefined{{{??}{??}}{}}{}}
6052 \@ifpackageloaded{varioref}{%
6053   \def\vref@pagenum#1#2{%
6054     \@ifundefined{r@#2}{%
6055       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6056     }{}%
6057     \edef#1{\getpagerefnumber{#2}}%
6058   }%
6059 }
```

33 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

```
6060 \@ifpackageloaded{longtable}{%
6061   \begingroup
6062   \def\y{\LT@array}%
6063   \@ifundefined{scr@LT@array}{}{\def\y{\scr@LT@array}}%
6064   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6065     \expandafter\endgroup
6066     \expandafter\def\y[#1]##2{%
6067       \H@refstepcounter{#1}%
6068       \hyper@makecurrent{table}%
6069       \let\Hy@LT@currentHlabel\@currentHlabel
6070       \let\Hy@LT@currentHref\@currentHref
6071       #2\@sharp####4%
6072     }%
6073   }%
6074   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

Patch of \LT@start: add anchor before first line after \vskip\LTpre

```
6075   \begingroup
6076   \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
6077     \endgroup
6078     \def\LT@start{%
6079       #1%
6080       \let\@currentHlabel\Hy@LT@currentHlabel
6081       \let\@currentHref\Hy@LT@currentHref
6082       \Hy@raisedlink{%
6083         \hyper@anchorstart{\@currentHref}\hyper@anchorend
6084       }%
6085       \ifvoid\LT@firsthead\copy
6086         #2%
6087     }%
6088   }%
6089   \expandafter\x\LT@start\@nil
```

6090 }{}

34 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 41). 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.

```

6091 \let\new@refstepcounter\refstepcounter
6092 \let\H@equation\equation
6093 \let\H@endequation\endequation

6094 \ifpackageloaded{amsmath}{%
6095   \long\def\Hy@temp{%
6096     \incr@eqnum
6097     \mathdisplay@push
6098     \st@rredfalse \global\@eqnswtrue
6099     \mathdisplay{equation}%
6100   }%
6101   \ifx\Hy@temp\equation
6102     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6103       \csname iftrue\endcsname
6104   \else
6105     \long\def\equation{%
6106       \mathdisplay@push
6107       \st@rredfalse \global\@eqnswtrue
6108       \mathdisplay{equation}%
6109       \incr@eqnum
6110     }%
6111   \fi
6112 \fi
6113 }{%
6114 \def\equation{%
6115   \let\refstepcounter\H@refstepcounter
6116   \H@equation
6117   \ifundefined{theHequation}{%
6118     \make@stripped@name{\theequation}%
6119     \let\theHequation\newname
6120   }{}%
6121   \hyper@makecurrent{equation}%
6122   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6123   \let\refstepcounter\new@refstepcounter
6124 }%
6125 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6126 }
```

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.

```

6127 \newif\if@eqnstar
6128 \@eqnstarfalse
6129 \let\H@eqnarray\eqnarray
6130 \let\H@endeqnarray\endeqnarray
```



```

6131 \def\eqnarray{%
6132   \let\Hy@reserved@a\relax
6133   \def\@currentHref{}%
6134   \H@eqnarray
6135   \if@eqnstar
6136   \else
6137     \ifx\\ \@currentHref\\%
6138     \else
6139       \ifundefined{theHequation}{%
6140         \make@stripped@name{theequation}%
6141         \let\theHequation\newname
6142       }{}%
6143       \hyper@makecurrent{equation}%
6144       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6145     \fi
6146   \fi
6147 }
6148 \def\endeqnarray{%
6149   \H@endeqnarray
6150 }

```

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.

```

6151 \@namedef{eqnarray*}{%
6152   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6153 }
6154 \@namedef{endeqnarray*}{%
6155   \nonumber\endeqnarray\@eqnstarfalse
6156 }

```

Then again, we have the *subeqnarray* package. Tanmoy provided some code for this:

```

6157 \ltx@ifundefined{subeqnarray}{}{}%
6158 \let\H@subeqnarray\subeqnarray
6159 \let\H@endsubeqnarray\endsubeqnarray
6160 \def\subeqnarray{%
6161   \let\Hy@reserved@a\relax
6162   \H@subeqnarray
6163   \ifundefined{theHequation}{%
6164     \make@stripped@name{theequation}%
6165     \let\theHequation\newname
6166   }{}%
6167   \hyper@makecurrent{equation}%
6168   \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6169 }%
6170 \def\endsubeqnarray{%
6171   \H@endsubeqnarray
6172 }%
6173 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6174 }

```

The aim of this macro is to produce a sanitized version of its argument, to make it a safe label.

```

6175 \def\make@stripped@name#1{%
6176   \begingroup
6177   \escapechar\m@ne
6178   \global\let\newname\@empty
6179   \protected@edef\Hy@tempa{#1}%
6180   \edef\@tempb{%
6181     \noexpand\@tfor\noexpand\Hy@tempa:=%

```

```

6182     \expandafter\strip@prefix\meaning\Hy@tempa
6183   }%
6184   \@tempb\do{%
6185     \if\Hy@tempa\else
6186     \if\Hy@tempa\else
6187     \xdef\newname{\newname\Hy@tempa}%
6188     \fi
6189     \fi
6190   }%
6191 \endgroup
6192 }

```

Support for amsmath's subequations:

```

6193 \begingroup\expandafter\expandafter\expandafter\endgroup
6194 \expandafter\ifx\csname subequations\endcsname\relax
6195 \else
6196   \let\HyOrg@subequations\subequations
6197   \def\subequations{%
6198     \stepcounter{equation}%
6199     \protected@edef\theHparentequation{%
6200       \@ifundefined{theHequation}\theequation\theHequation
6201     }%
6202     \addtocounter{equation}{-1}%
6203     \HyOrg@subequations
6204     \def\theHequation{\theHparentequation\alph{equation}}}%
6205     \ignorespaces
6206   }%
6207 \fi

```

Support for package amsthm (Daniel Müllner):

```

6208 \@ifpackageloaded{amsthm}{%
6209   \def\@thm#1#2#3{%
6210     \ifhmode
6211       \unskip\unskip\par
6212     \fi
6213     \normalfont
6214     \trivlist
6215     \let\thmheadnl\relax
6216     \let\thm@swap\@gobble
6217     \thm@notefont{\fontseries\mddefault\upshape}%
6218     \thm@headpunct{.}% add period after heading
6219     \thm@headsep 5\p@ plus\p@ minus\p@\relax
6220     \thm@space@setup
6221     #1% style overrides
6222     \@topsep \thm@preskip           % used by thm head
6223     \@topsepadd \thm@postskip      % used by \endparentv
6224     \def\dth@counter{#2}%
6225     \ifx\@empty\dth@counter
6226       \def\@tempa{%
6227         \@oparg{\@begintheorem{#3}{}}{}%
6228       }%
6229     \else
6230       \H@refstepcounter{#2}%
6231       \hyper@makecurrent{#2}%
6232       \def\@tempa{%
6233         \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6234       }%
6235     \fi

```

```

6236 \@tempa
6237 }%
6238 \dth@everypar={%
6239 \@minipagefalse
6240 \global\@newlistfalse
6241 \@noparitemfalse
6242 \if@inlabel
6243 \global\@inlabelfalse
6244 \begingroup
6245 \setbox\z@\lastbox
6246 \ifvoid\z@
6247 \kern-\itemindent
6248 \fi
6249 \endgroup
6250 \ifx\@empty\dth@counter
6251 \else
6252 \Hy@raisedlink{%
6253 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6254 }%
6255 \fi
6256 \unhbox\@labels
6257 \fi
6258 \if@nobreak
6259 \@nobreakfalse \clubpenalty\@M
6260 \else
6261 \clubpenalty\@clubpenalty \everypar{}%
6262 \fi
6263 }%
6264 }{}

```

35 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.

Tabularx causes footnote problems, disable the linking if that is loaded.

```

6265 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6266 \ifHy@hyperfootnotes
6267 \newcounter{Hfootnote}%
6268 \let\H@@footnotetext\@footnotetext
6269 \let\H@@footnotemark\@footnotemark
6270 \def\@xfootnotenext[#1]{%
6271 \begingroup
6272 \csname c@\@mpfn\endcsname #1\relax
6273 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6274 \endgroup
6275 \ifx\@footnotetext\@mpfootnotetext
6276 \expandafter\H@@mpfootnotetext
6277 \else
6278 \expandafter\H@@footnotetext
6279 \fi
6280 }%
6281 \def\@xfootnotemark[#1]{%
6282 \begingroup
6283 \c@footnote #1\relax

```

```

6284 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6285 \endgroup
6286 \H@@footnotemark
6287 }%
6288 \let\H@@mpfootnotetext\@mpfootnotetext
6289 \long\def\@mpfootnotetext#1{%
6290 \H@@mpfootnotetext{%
6291 \ifHy@nesting
6292 \expandafter\hyper@@anchor\expandafter{%
6293 \Hy@footnote@currentHref
6294 }{#1}%
6295 \else
6296 \Hy@raisedlink{%
6297 \expandafter\hyper@@anchor\expandafter{%
6298 \Hy@footnote@currentHref
6299 }{\relax}%
6300 }#1%
6301 \fi
6302 }%
6303 }%
6304 \long\def\@footnotetext#1{%
6305 \H@@footnotetext{%
6306 \ifHy@nesting
6307 \expandafter\hyper@@anchor\expandafter{%
6308 \Hy@footnote@currentHref
6309 }{#1}%
6310 \else
6311 \Hy@raisedlink{%
6312 \expandafter\hyper@@anchor\expandafter{%
6313 \Hy@footnote@currentHref
6314 }{\relax}%
6315 }%
6316 \let\@currentHlabel\Hy@footnote@currentHlabel
6317 \let\@currentHref\Hy@footnote@currentHref
6318 \let\@currentlabelname\@empty
6319 #1%
6320 \fi
6321 }%
6322 }%

```

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.

```

6323 \def\@footnotemark{%
6324 \leavevmode
6325 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6326 \stepcounter{Hfootnote}%
6327 \global\let\Hy@saved@currentHlabel\@currentHlabel
6328 \global\let\Hy@saved@currentHref\@currentHref
6329 \hyper@makecurrent{Hfootnote}%
6330 \global\let\Hy@footnote@currentHlabel\@currentHlabel
6331 \global\let\Hy@footnote@currentHref\@currentHref
6332 \global\let\@currentHlabel\Hy@saved@currentHlabel
6333 \global\let\@currentHref\Hy@saved@currentHref
6334 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6335 \@makefnmark
6336 \hyper@linkend

```

```

6337 \ifhmode\spacefactor\@x@sf\fi
6338 \relax
6339 }%

```

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

```

6340 \ifpackageloaded{longtable}{%
6341 \CheckCommand*\LT@p@ftntext}[1]{%
6342 \edef\@tempa{%
6343 \the\LT@p@ftn
6344 \noexpand\footnotetext[\the\c@footnote]%
6345 }%
6346 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6347 }%
6348 \long\def\LT@p@ftntext#1{%
6349 \edef\@tempa{%
6350 \the\LT@p@ftn
6351 \begingroup
6352 \noexpand\c@footnote=\the\c@footnote\relax
6353 \noexpand\protected@xdef
6354 \noexpand\@thefnmark{\noexpand\thempfn}%
6355 \noexpand\protected@xdef\noexpand\@thefnmark{%
6356 \noexpand\thempfn
6357 }%
6358 \expandafter\expandafter\expandafter\noexpand
6359 \expandafter\expandafter\expandafter\Hy@LT@footnotetext
6360 \expandafter\expandafter\expandafter{%
6361 \expandafter\Hy@footnote@currentHref\expandafter
6362 }\expandafter{\Hy@footnote@currentHlabel}%
6363 }%
6364 \global\LT@p@ftn\expandafter{%
6365 \@tempa{#1}%
6366 \endgroup
6367 }%
6368 }%
6369 \long\def\Hy@LT@footnotetext#1#2#3{%
6370 \H@@@footnotetext{%
6371 \ifHy@nesting
6372 \hyper@@@anchor{#1}{#3}%
6373 \else
6374 \Hy@raisedlink{%
6375 \hyper@@@anchor{#1}{\relax}%
6376 }%
6377 \def\@currentHlabel{#2}%
6378 \def\@currentHref{#1}%
6379 \let\@currentlabelname\@empty
6380 #3%
6381 \fi
6382 }%
6383 }%
6384 }{}%

```

Footnotes for fancyvrb (Fix by Manuel Pégourié-Gonnard).

```

6385 \ifpackageloaded{fancyvrb}{%
6386 \def\V@@@footnotetext{%
6387 \insert\footins\bgroup

```

```

6388 \csname reset@font\endcsname
6389 \footnotesize
6390 \interlinepenalty\interfootnotelinepenalty
6391 \splittopskip\footnotesep
6392 \splitmaxdepth\dp\strutbox
6393 \floatingpenalty \@MM
6394 \hsize\columnwidth
6395 \@parboxrestore
6396 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6397 \@makefnmark{}%
6398 \rule{\z@}{\footnotesep}%
6399 \bgroup
6400 \aftergroup\V@@@footnotetext
6401 \Hy@raisedlink{%
6402   \expandafter\hyper@@anchor\expandafter{%
6403     \Hy@footnote@currentHref
6404   }\relax}%
6405 }%
6406 \let\@currentHlabel\Hy@footnote@currentHlabel
6407 \let\@currentHref\Hy@footnote@currentHref
6408 \let\@currentlabelname\@empty
6409 \ignorespaces
6410 }%
6411 }{}%

```

KOMA-Script defines `\footref` that uses both `\ref` and `\@footnotemark` resulting in two links, one of them wrong.

```

6412 \def\Hy@temp#1{%
6413   \begingroup
6414     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6415   \endgroup
6416   \@footnotemark
6417 }%
6418 \ifx\Hy@temp\footref
6419   \def\footref#1{%
6420     \begingroup
6421       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6422     \endgroup
6423     \H@@@footnotemark
6424   }%
6425 \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.

```

6426 \let\HyOrg@maketitle\maketitle
6427 \def\maketitle{%
6428   \let\Hy@saved@footnotemark\@footnotemark
6429   \let\Hy@saved@footnotetext\@footnotetext
6430   \let\@footnotemark\H@@@footnotemark
6431   \let\@footnotetext\H@@@footnotetext
6432   \@ifnextchar[\Hy@maketitle@optarg{% ]
6433     \HyOrg@maketitle
6434     \Hy@maketitle@end
6435   }%
6436 }%
6437 \def\Hy@maketitle@optarg[#1]{%
6438   \HyOrg@maketitle[{#1}]%
6439   \Hy@maketitle@end

```

```

6440 }%
6441 \def\Hy@maketitle@end{%
6442 \ifx\@footnotemark\H@@footnotemark
6443 \let\@footnotemark\Hy@saved@footnotemark
6444 \fi
6445 \ifx\@footnotetext\H@@footnotetext
6446 \let\@footnotetext\Hy@saved@footnotetext
6447 \fi
6448 }%

\realfootnote Does anyone remember the function and purpose of \realfootnote?

6449 \def\realfootnote{%
6450 \ifnextchar[\@xfootnote{%
6451 \stepcounter{\@mpfn}%
6452 \protected@xdef\@thefnmark{\thempfn}%
6453 \H@@@footnotemark\H@@@footnotetext
6454 }%
6455 }%

6456 \fi
6457 \Hy@DisableOption{hyperfootnotes}

6458 \</package>
6459 \<*check>
6460 \checklatex
6461 \checkcommand\def\@xfootnotenext[#1]{%
6462 \begingroup
6463 \csname c@\@mpfn\endcsname #1\relax
6464 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6465 \endgroup
6466 \@footnotetext
6467 }
6468 \checkcommand\def\@xfootnotemark[#1]{%
6469 \begingroup
6470 \c@footnote #1\relax
6471 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6472 \endgroup
6473 \@footnotemark
6474 }
6475 \checkcommand\def\@footnotemark{%
6476 \leavevmode
6477 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6478 \@makefnmark
6479 \ifhmode\spacefactor\@x@sf\fi
6480 \relax
6481 }
6482 \</check>
6483 \<*package>

```

36 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.

```

6484 \def\caption{%
6485 \ifx\@capttype\@undefined
6486 \latex@error{\noexpand\caption outside float}\@ehd
6487 \expandafter\@gobble

```

```

6488 \else
6489 \H@refstepcounter\@capttype
6490 \let\Hy@tempa\@caption
6491 \@ifundefined{float@caption}{%
6492 }{%
6493 \expandafter\ifx\csname @float@c@\@capttype\endcsname
6494 \float@caption
6495 \let\Hy@tempa\Hy@float@caption
6496 \fi
6497 }%
6498 \expandafter\@firstofone
6499 \fi
6500 {\@dblarg{\Hy@tempa\@capttype}}%
6501 }
6502 \long\def\@caption#1[#2]#3{%
6503 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6504 \csname iftrue\endcsname
6505 \global\let\@currentHref\hc@currentHref
6506 \else
6507 \hyper@makecurrent{\@capttype}%
6508 \fi
6509 \@ifundefined{NR@gettitle}{%
6510 \def\@currentlabelname{#2}%
6511 }{%
6512 \NR@gettitle{#2}%
6513 }%
6514 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6515 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6516 }%
6517 \begingroup
6518 \@parboxrestore
6519 \if@minipage
6520 \@setminipage
6521 \fi
6522 \normalsize
6523 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6524 \csname iftrue\endcsname
6525 \global\@capstartfalse
6526 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6527 \else
6528 \@makecaption{\csname fnum@#1\endcsname}{%
6529 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6530 \ifHy@nesting
6531 \expandafter\hyper@@@anchor\expandafter{\@currentHref}{#3}%
6532 \else
6533 \Hy@raisedlink{%
6534 \expandafter\hyper@@@anchor\expandafter{%
6535 \@currentHref
6536 }\relax}%
6537 }%
6538 #3%
6539 \fi
6540 }%
6541 \fi
6542 \par
6543 \endgroup

```


6544 }

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.

```
6545 \let\Hy@float@caption\@caption
6546 \ifpackageloaded{float}{%
6547   \def\Hy@float@caption{%
6548     \ifx\Hy@float@currentHref\@undefined
6549       \hyper@makecurrent{\@cuptype}%
6550       \global\let\Hy@float@currentHref\@currentHref
6551     \else
6552       \let\@currentHref\Hy@float@currentHref
6553     \fi
6554     \float@caption
6555   }%
6556   \let\HyOrg@float@makebox\float@makebox
6557   \renewcommand{\float@makebox}[1]{%
6558     \HyOrg@float@makebox{%
6559       #1\relax
6560       \ifx\Hy@float@currentHref\@undefined
6561         \else
6562           \expandafter\hyper@@anchor\expandafter{%
6563             \Hy@float@currentHref
6564           }\relax}%
6565       \global\let\Hy@float@currentHref\@undefined
6566     \fi
6567   }%
6568 }%
6569 }{}

6570 \</package>
6571 \< *check>
6572 \checklatex[1999/06/01 - 2000/06/01]
6573 \checkcommand\def\caption{%
6574   \ifx\@cuptype\@undefined
6575     \@latex@error{\noexpand\caption outside float}\@ehd
6576     \expandafter\@gobble
6577   \else
6578     \refstepcounter\@cuptype
6579     \expandafter\@firstofone
6580   \fi
6581   {\@dblarg{\@caption\@cuptype}}}%
6582 }

6583 \checkcommand\long\def\@caption#1[#2]#3{%
6584   \par
6585   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6586     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
6587 }%
6588 \begingroup
6589   \@parboxrestore
6590   \if@minipage
6591     \@setminipage
6592   \fi
6593   \normalsize
6594   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6595 \endgroup
6596 }
6597 \</check>
6598 \< *package>
```

37 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.

```

6599 \def\hyper@natlinkstart#1{%
6600   \Hy@backout{#1}%
6601   \hyper@linkstart{cite}{cite.#1}%
6602   \def\hyper@nat@current{#1}%
6603 }
6604 \def\hyper@natlinkend{%
6605   \hyper@linkend
6606 }
6607 \def\hyper@natlinkbreak#1#2{%
6608   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6609 }
6610 \def\hyper@natanchorstart#1{%
6611   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6612 }
6613 \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.

```

6614 \ltx@ifundefined{NAT@parse}{%
6615   \providecommand*\@extra@binfo{}%
6616   \providecommand*\@extra@b@citeb{}%
6617   \def\bibcite#1#2{%
6618     \@newl@bel{b}{#1\@extra@binfo}{%
6619       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6620     }%
6621   }%
6622   \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.”.

```

6623 \let\Hy@bibcite\bibcite
6624 \begingroup
6625   \ifundefined{bbl@cite@choice}{}{%
6626     \g@addto@macro\bbl@cite@choice{%
6627       \let\bibcite\Hy@bibcite
6628     }%
6629   }%
6630 \endgroup

```

`\@BIBLABEL` is working around a ‘feature’ of *RevTeX*.

```

6631 \providecommand*\@BIBLABEL{\@biblabel}%
6632 \def\@bibitem[#1]#2{%
6633   \@skiphyperreftrue
6634   \H@item[%
6635     \ifx\Hy@raisedlink\@empty

```

```

6636     \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6637     \@BIBLABEL{#1}%
6638     \hyper@anchorend
6639   \else
6640     \Hy@raisedlink{%
6641       \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6642     }%
6643     \@BIBLABEL{#1}%
6644   \fi
6645   \hfill
6646 }%
6647 \@skiphyperreffalse
6648 \if@filesw
6649   \begingroup
6650     \let\protect\noexpand
6651     \immediate\write\@auxout{%
6652       \string\bibcite{#2}{#1}%
6653     }%
6654   \endgroup
6655 \fi
6656 \ignorespaces
6657 }%

```

Since `\bibitem` is doing its own labelling, call the raw version of `\item`, to avoid extra spurious labels

```

6658 \def\@bibitem#1{%
6659   \@skiphyperrefftrue\H@item\@skiphyperreffalse
6660   \Hy@raisedlink{%
6661     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6662   }%
6663   \if@filesw
6664     \begingroup
6665       \let\protect\noexpand
6666       \immediate\write\@auxout{%
6667         \string\bibcite{#1}{\the\value{\@listctr}}%
6668       }%
6669     \endgroup
6670   \fi
6671   \ignorespaces
6672 }%
6673 }{}

6674 </package>
6675 <*check>
6676 \checklatex
6677 \checkcommand\def\@lbibitem[#1]#2{%
6678   \item[\@biblabel{#1}\hfill]%
6679   \if@filesw
6680     {%
6681       \let\protect\noexpand
6682       \immediate\write\@auxout{%
6683         \string\bibcite{#2}{#1}%
6684       }%
6685     }%
6686   \fi
6687   \ignorespaces
6688 }
6689 \checkcommand\def\@bibitem#1{%

```

```

6690 \item
6691 \if@filesw
6692 \immediate\write\@auxout{%
6693 \string\bibcite{#1}{\the\value{\@listctr}}}%
6694 }%
6695 \fi
6696 \ignorespaces
6697 }
6698 \end{check}
6699 \end{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.

```

6700 \ifclassloaded{revtex}{%
6701 \Hy@Info{*** compatibility with revtex **** }%
6702 \def\revtex@checking#1#2{%
6703 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6704 \expandafter\def\csname b@#1\endcsname{#2}%
6705 \@SetMaxRnhefLabel{#1}%
6706 \expandafter\let\csname b@#1\endcsname\T@temp
6707 }%

```

Tanmoy provided this replacement for CITEX. Lord knows what it does. For chapterbib added: extra@b@citeb

```

6708 \@ifundefined{@CITE}{\def\CITE{\@cite}}{}%
6709 \providecommand*\@extra@b@citeb{}%
6710 \def\CITEX[#1]#2{%
6711 \let\@citea\@empty
6712 \leavevmode
6713 \unskip
6714 $\sim$%
6715 \scriptstyle
6716 \@CITE{%
6717 \@for\@citeb:=#2\do{%
6718 \@citea
6719 \def\@citea{,\penalty\@m\ }%
6720 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6721 \if@filesw
6722 \immediate\write\@auxout{\string\citation{\@citeb}}%
6723 \fi
6724 \@ifundefined{b@\@citeb\extra@b@citeb}{%
6725 \mbox{\reset@font\bfseries ?}%
6726 \G@refundefinedtrue
6727 \@latex@warning{%
6728 Citation '\@citeb' on page \thepage \space undefined%
6729 }%
6730 }{%
6731 {\csname b@\@citeb\extra@b@citeb\endcsname}%
6732 }%
6733 }%
6734 }{#1}%
6735 }$%
6736 }%

```

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.

```

6737 \def\citex[#1]#2{%

```

```

6738 \let\@citea\@empty
6739 \@cite{%
6740   \@for\@citeb:=#2\do{%
6741     \@citea
6742     \def\@citea{,\penalty\@m\ }%
6743     \edef\@citeb{\expandafter\@firstofone\@citeb}%
6744     \if@filesw
6745       \immediate\write\@auxout{\string\citation{\@citeb}}%
6746     \fi
6747     \ifundefined{b@\@citeb\@extra@b@citeb}{%
6748       \mbox{\reset@font\bfseries ?}%
6749       \G@refundefinedtrue
6750       \@latex@warning{%
6751         Citation '\@citeb' on page \thepage \space undefined%
6752       }%
6753     }{%
6754       \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6755     }%
6756   }%
6757 }{\#1}%
6758 }%
6759 }{}

```

37.1 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 pdf \TeX , then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

6760 \ifpackageloaded{harvard}{%
6761   \AtBeginDocument{%
6762     \Hy@Info{*** compatibility with harvard **** }%
6763     \Hy@raiselinksfalse
6764     \def\harvardcite#1#2#3#4{%
6765       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
6766       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
6767       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
6768       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6769     }%
6770     \def\HAR@citetoaux#1{%
6771       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6772       \ifHy@backref
6773         \ifx\@empty\@currentlabel
6774           \else
6775             \@bsphack
6776             \if@filesw
6777               \protected@write\@auxout{}{%
6778                 \string\@writefile{brf}{%
6779                   \string\backcite{#1}{%
6780                     {\thepage}{\@currentlabel}{\@currentHref}%
6781                   }%
6782                 }%
6783               }%
6784             \fi

```

```

6785     \@esphack
6786     \fi
6787   \fi
6788 }%
6789 \def\harvarditem{%
6790   \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6791 }%
6792 \def\@harvarditem[#1]#2#3#4#5\par{%
6793   \item[]%
6794   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6795   \if@filesw
6796     \begingroup
6797     \def\protect##1{\string ##1\space}%
6798     \ifthenelse{\equal{#1}{\null}}{%
6799       {\def\next{{#4}{#2}{#2}{#3}}}%
6800       {\def\next{{#4}{#2}{#1}{#3}}}%
6801     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6802   \endgroup
6803   \fi
6804   \protect\hspace*{-\labelwidth}%
6805   \protect\hspace*{-\labelsep}%
6806   \ignorespaces
6807   #5%
6808   \ifHy@backref
6809     \newblock
6810     \backref{\csname br@#4\endcsname}%
6811   \fi
6812   \par
6813 }%

```

\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:

```

6814 \long\def\HAR@checkcitations#1#2#3#4{%
6815   \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6816   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6817     \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6818     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6819       \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6820       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6821         \else
6822           \@tempwattrue
6823         \fi
6824       \else
6825         \@tempwattrue
6826       \fi
6827     \else
6828       \@tempwattrue
6829     \fi
6830   }%
6831 }%
6832 }{}

```

37.2 Package chicago

The links by \citeN and \shortciteN should include the closing parentheses.

```

6833 \@ifpackageloaded{chicago}{%
\citeN
6834 \def\citeN{%
6835 \def\@citesep{-1000}%
6836 \def\@cite##1##2{##1}%
6837 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}}%
6838 \@citedata@opt
6839 }%

\shortciteN
6840 \def\shortciteN{%
6841 \def\@citesep{-1000}%
6842 \def\@cite##1##2{##1}%
6843 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}}%
6844 \@citedata@opt
6845 }%

\@citedata@opt
6846 \def\@citedata@opt{%
6847 \let\@cite@opt\@empty
6848 \@ifnextchar [{%
6849 \@tempswatrue
6850 \@citedatax@opt
6851 }{%
6852 \@tempswafalse
6853 \@citedatax[]%
6854 }%
6855 }%

\@citedatax@opt
6856 \def\@citedatax@opt[#1]{%
6857 \def\@cite@opt{, #1}%
6858 \@citedatax[{#1}]%
6859 }%

6860 }{}

```

38 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.

```

6861 \def\Hy@EveryPageAnchor{%
6862 \Hy@DistillerDestFix
6863 \ifHy@pageanchor
6864 \ifHy@hypertextnames
6865 \ifHy@plainpages
6866 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6867 \else
6868 \begingroup
6869 \let\@number\@firstofone

```

```

6870      \Hy@unicodedefalse
6871      \pdfstringdef\@the@H@page{\thepage}%
6872      \endgroup
6873      \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6874      \fi
6875      \else
6876      \Hy@GlobalStepCount\Hy@pagecounter
6877      \def\Hy@TempPageAnchor{%
6878      \hyper@@anchor{page.\the\Hy@pagecounter}%
6879      }%
6880      \fi
6881      \vbox to 0pt{%
6882      \kern\voffset
6883      \kern\topmargin
6884      \kern-1bp\relax
6885      \hbox to 0pt{%
6886      \kern\hoffset
6887      \kern\ifodd\value{page}%
6888      \oddsidemargin
6889      \else
6890      \evensidemargin
6891      \fi
6892      \kern-1bp\relax
6893      \Hy@TempPageAnchor
6894      \hss
6895      }%
6896      \vss
6897      }%
6898      \fi
6899      }
6900      \g@addto@macro\Hy@EveryPageBoxHook{%
6901      \Hy@EveryPageAnchor
6902      }

```

39 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.

```

6903 \def\addcontentsline#1#2#3{% toc extension, type, tag
6904   \begingroup
6905   \let\label\@gobble
6906   \ifx\@currentHref\@empty
6907     \Hy@Warning{%
6908       No destination for bookmark of \string\addcontentsline,%
6909       \MessageBreak destination is added%
6910     }%
6911     \phantomsection
6912   \fi
6913   \expandafter\ifx\csname toplevel@#2\endcsname\relax
6914     \begingroup
6915     \def\Hy@tempa{#1}%
6916     \ifx\Hy@tempa\Hy@bookmarkstype
6917       \Hy@WarningNoLine{%
6918         bookmark level for unknown #2 defaults to 0%
6919       }%

```



```

6920     \else
6921       \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6922     \fi
6923   \endgroup
6924   \expandafter\gdef\csname toclevel@#2\endcsname{0}%
6925 \fi
6926 \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
6927 \Hy@writebookmark{\csname the#2\endcsname}%
6928   {#3}%
6929   {\@currentHref}%
6930   {\Hy@toclevel}%
6931   {#1}%
6932 \ifHy@verbose
6933   \begingroup
6934     \def\Hy@tempa{#3}%
6935     \@onelevel@sanitize\Hy@tempa
6936     \let\temp@online\on@line
6937     \let\on@line\@empty
6938     \Hy@Info{%
6939       bookmark\temp@online:\MessageBreak
6940       thecounter {\csname the#2\endcsname}\MessageBreak
6941       text {\Hy@tempa}\MessageBreak
6942       reference {\@currentHref}\MessageBreak
6943       toclevel {\Hy@toclevel}\MessageBreak
6944       type {#1}%
6945     }%
6946   \endgroup
6947 \fi
6948 \addtocontents{#1}{%
6949   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6950 }%
6951 \endgroup
6952 }
6953 \def\contentsline#1#2#3#4{%
6954   \ifx\\#4\\%
6955     \csname l@#1\endcsname{#2}{#3}%
6956   \else
6957     \ifcase\Hy@linktoc % none
6958       \csname l@#1\endcsname{#2}{#3}%
6959     \or % section
6960       \csname l@#1\endcsname{%
6961         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6962       }{#3}%
6963     \or % page
6964       \csname l@#1\endcsname{{#2}}{%
6965         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6966       }%
6967     \else % all
6968       \csname l@#1\endcsname{%
6969         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6970       }{%
6971         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6972       }%
6973     \fi
6974   \fi
6975 }
6976 \end{package}

```

```

6977 <*check>
6978 \checklatex
6979 \checkcommand\def\addcontentsline#1#2#3{%
6980   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}}%
6981 }
6982 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6983 </check>
6984 <*package>

```

40 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.

```

6985 \let\H@definecounter\@definecounter
6986 \def\@definecounter#1{%
6987   \H@definecounter{#1}%
6988   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6989 }

```

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.

```

6990 \let\H@newctr\@newctr
6991 \def\@newctr#1[#2]{%
6992   \H@newctr#1[{#2}]%
6993   \expandafter\def\csname theH#1\endcsname{%
6994     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6995   }%
6996 }

```

41 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.

```

6997 \ifpackageloaded{amsmath}{%
6998   \def\Hy@make@anchor{%
6999     \Hy@GlobalStepCount\Hy@linkcounter
7000     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7001     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7002   }%
7003   \def\Hy@make@df@tag@@#1{%
7004     \gdef\df@tag{%
7005       \maketag@@@{\Hy@make@anchor#1}%
7006       \def\@currentlabel{#1}%
7007     }%
7008   }%
7009   \def\Hy@make@df@tag@@@#1{%
7010     \gdef\df@tag{%
7011       \tagform@{\Hy@make@anchor#1}%
7012       \toks@{\xp{p@equation{#1}}}%
7013       \edef\@currentlabel{\the\toks@}%
7014     }%

```

```

7015 }%
7016 \let\HyOrg@make@df@tag@@\make@df@tag@@
7017 \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
7018 \let\make@df@tag@@\Hy@make@df@tag@@
7019 \let\make@df@tag@@@ \Hy@make@df@tag@@@
7020 }{}

```

Only play with `\seteqlebal` if we are using pdf_{tex}. Other drivers cause problems; requested by Michael Downes (AMS).

```

7021 \ifpackagewith{hyperref}{pdftex}{%
7022   \let\H@seteqlabel\@seteqlabel
7023   \def\@seteqlabel#1{%
7024     \H@seteqlabel{#1}%
7025     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7026     \Hy@raisedlink{%
7027       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7028     }%
7029   }%
7030 }{}

```

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}}}}

```

41.1 `\@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.

```

7031 \let\HyOrg@addtoreset \@addtoreset
7032 \def\@addtoreset#1#2{%
7033   \HyOrg@addtoreset{#1}{#2}%
7034   \expandafter\xdef\csname theH#1\endcsname{%
7035     \expandafter\noexpand
7036     \csname the\@ifundefined{theH#2}{H#2\endcsname
7037     .\noexpand\the\noexpand\value{#1}%
7038   }%
7039 }

```

`\numberwithin` A appropriate definition of hyperref’s companion counter (`\theH...`) is added for correct link names.

```

7040 \</package>
7041 \<*check>
7042 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7043 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7044   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7045     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7046       \@addtoreset{#2}{#3}%
7047       \@xp\xdef\csname the#2\endcsname{%
7048         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7049       }%
7050     }%

```

```

7051 }%
7052 }%
7053 \check)
7054 \*package)
7055 \ifpackageloaded{amsmath}{%
7056 \ifpackagelater{amsmath}{1999/12/14}{%
7057 \renewcommand*{\numberwithin}{3}[\arabic]{%
7058 \ifundefined{c@#2}{\@nocounterr{#2}}{%
7059 \ifundefined{c@#3}{\@nocnterr{#3}}{%
7060 \HyOrg@addtoreset{#2}{#3}%
7061 \xp\xdef\csname the#2\endcsname{%
7062 \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7063 }%
7064 \xp\xdef\csname theH#2\endcsname{%
7065 \@xp\@nx
7066 \csname the\ifundefined{theH#3}{#3}\endcsname
7067 .\@nx#1{#2}%
7068 }%
7069 }%
7070 }%
7071 }%
7072 }{%
7073 \Hy@WarningNoLine{%
7074 \string\numberwithin\space of package 'amsmath' %
7075 only fixed\MessageBreak
7076 for version 2000/06/06 v2.12 or newer%
7077 }%
7078 }%
7079 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7080 \ifHy@figures
7081 \let\Hy@Gin@setfile\Gin@setfile
7082 \def\Gin@setfile#1#2#3{%
7083 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7084 }%
7085 \fi
7086 \Hy@DisableOption{hyperfigures}

```

43 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.

```

7087 \ifHy@hyperindex
7088 \def\HyInd@ParenLeft{({}%

```

```

7089 \def\HyInd@ParenRight{)}%
7090 \def\hyperindexformat#1#2{%
7091 \let\HyOrg@hyperpage\hyperpage
7092 \let\hyperpage\@firstofone
7093 #1{\HyOrg@hyperpage{#2}}%
7094 \let\hyperpage\HyOrg@hyperpage
7095 }%
7096 \Hy@nextfalse
7097 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7098 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7099 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7100 \begingroup
7101 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7102 \lccode'\|/'=\|\\relax
7103 \lowercase{\endgroup
7104 \ifHy@next
7105 \let\HyInd@org@wrindex\@wrindex
7106 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\\}%
7107 \def\HyInd@@wrindex#1#2|#3|#4\\{%
7108 \ifx\\#3\\%
7109 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7110 \else
7111 \HyInd@@@wrindex{#1}{#2}#3\\%
7112 \fi
7113 }%
7114 \def\HyInd@@@wrindex#1#2#3#4\\{%
7115 \def\Hy@temp@A{#3}%
7116 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7117 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7118 \relax
7119 \HyInd@org@wrindex{#1}{%
7120 #2|hyperindexformat{/#3#4}%
7121 }%
7122 \else
7123 \ifx\\#4\\%
7124 \ifx\Hy@temp@A\HyInd@ParenRight
7125 \HyInd@org@wrindex{#1}{#2|#3}%
7126 \else
7127 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7128 \fi
7129 \else
7130 \HyInd@org@wrindex{#1}{%
7131 #2|#3hyperindexformat{/#4}%
7132 }%
7133 \fi
7134 \fi
7135 }%
7136 \else
7137 \def\@wrindex#1{\@@wrindex#1||\\}%
7138 \def\@@wrindex#1|#2|#3\\{%
7139 \if@filesw
7140 \ifx\\#2\\%
7141 \protected@write\@indexfile{}{%
7142 \string\indexentry{#1|hyperpage}{\thepage}%
7143 }%
7144 \else
7145 \HyInd@@@wrindex{#1}#2\\%

```

```

7146     \fi
7147     \fi
7148     \endgroup
7149     \@esphack
7150 }%
7151 \def\HyInd@@@wrindex#1#2#3\\{%
7152     \def\Hy@temp@A{#2}%
7153     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7154         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7155         \relax
7156     \protected@write\@indexfile{}{%
7157         \string\indexentry{%
7158             #1|hyperindexformat{/#2#3}%
7159         }\thepage}%
7160 }%
7161 \else
7162     \ifx\\#3\\%
7163         \ifx\Hy@temp@A\HyInd@ParenRight
7164             \protected@write\@indexfile{}{%
7165                 \string\indexentry{#1|#2}\thepage}%
7166             }%
7167         \else
7168             \protected@write\@indexfile{}{%
7169                 \string\indexentry{#1|#2hyperpage}\thepage}%
7170             }%
7171         \fi
7172     \else
7173         \protected@write\@indexfile{}{%
7174             \string\indexentry{%
7175                 #1|#2hyperindexformat{/#3}%
7176             }\thepage}%
7177         }%
7178     \fi
7179     \fi
7180 }%
7181 \fi
7182 }%
7183 \fi
7184 \Hy@DisableOption{hyperindex}
7185 \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.

```

7186 \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.

```

7187 \def\hyperpage#1{%
7188     \HyInd@hyperpage#1\nohyperpage{}\@nil
7189 }
7190 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7191     \HyInd@@@hyperpage{#1}%
7192     #2%
7193     \def\Hy@temp{#3}%
7194     \ifx\Hy@temp\@empty
7195     \else
7196         \Hy@ReturnAfterFi{%

```

```

7197 \HyInd@hyperpage#3\@nil
7198 }%
7199 \fi
7200 }
7201 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7202 \def\@hyperpage#1--#2--#3\{\%
7203 \ifx\#2\%
7204 \@commahyperpage{#1}%
7205 \else
7206 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7207 \fi
7208 }
7209 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7210 \def\@commahyperpage#1, #2,#3\{\%
7211 \ifx\#2\%
7212 \HyInd@pagelink{#1}%
7213 \else
7214 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7215 \fi
7216 }

```

The argument of `\hyperpage` can be empty. And the line breaking algorithm of `Makeindex` can introduce spaces. So we have to remove them.

```

7217 \def\HyInd@pagelink#1{\%
7218 \begingroup
7219 \toks@={}%
7220 \HyInd@removespaces#1 \@nil
7221 \endgroup
7222 }
7223 \def\HyInd@removespaces#1 #2\@nil{\%
7224 \toks@=\expandafter{\the\toks@#1}%
7225 \ifx\#2\%
7226 \edef\x{\the\toks@}%
7227 \ifx\x\@empty
7228 \else
7229 \hyperlink{page.\the\toks@}{\the\toks@}%
7230 \fi
7231 \else
7232 \Hy@ReturnAfterFi{\%
7233 \HyInd@removespaces#2\@nil
7234 }%
7235 \fi
7236 }

```

44 Compatibility with foiltex

```

7237 \@ifclassloaded{foils}{\%
7238 \providecommand*\ext@table{lot}%
7239 \providecommand*\ext@figure{lof}%
7240 }{}

```

45 Compatibility with seminar slide package

This requires `seminar.bg2`, version 1.6 or later. Contributions by Denis Girou (`denis.girou@idris.fr`).

```

7241 \@ifclassloaded{seminar}{\%

```

```

7242 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7243 }{%
7244 \Hy@seminarslidesfalse
7245 }
7246 \ifpackageloaded{slidesec}{%
7247 \newcommand\theHslidesection {\arabic{slidesection}}}%
7248 \newcommand\theHslidesubsection{%
7249 \theHslidesection.\arabic{slidesubsection}}%
7250 }%
7251 \def\slide@heading[#1]#2{%
7252 \H@refstepcounter{slidesection}%
7253 \@addtoreset{slidesubsection}{slidesection}%
7254 \addtocontents{los}{%
7255 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}}%
7256 {\@SCTR}{slideheading.\theslide\theslide\theslide}%
7257 }%
7258 \def\Hy@tempa{#2}%
7259 \ifx\Hy@tempa\@empty
7260 \else
7261 {%
7262 \edef\@currentlabel{%
7263 \csname p@slidesection\endcsname\theslide\theslide\theslide
7264 }%
7265 \makeslideheading{#2}%
7266 }%
7267 \fi
7268 \gdef\theslideheading{#1}%
7269 \gdef\theslidesubheading{}%
7270 \ifHy@bookmarksnumbered
7271 \def\Hy@slidetitle{\theslide\theslide\theslide #1}%
7272 \else
7273 \def\Hy@slidetitle{#1}%
7274 \fi
7275 \ifHy@hypertextnames
7276 \ifHy@naturalnames
7277 \hyper@@anchor{slideheading.\theslide\theslide\theslide}{\relax}%
7278 \Hy@writebookmark
7279 {\theslide\theslide\theslide}%
7280 {\Hy@slidetitle}%
7281 {slideheading.\theslide\theslide\theslide}%
7282 {1}%
7283 {toc}%
7284 \else
7285 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7286 \Hy@writebookmark
7287 {\theslide\theslide\theslide}%
7288 {\Hy@slidetitle}%
7289 {slideheading.\theHslidesection}%
7290 {1}%
7291 {toc}%
7292 \fi
7293 \else
7294 \Hy@GlobalStepCount\Hy@linkcounter
7295 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7296 \Hy@writebookmark
7297 {\theslide\theslide\theslide}%
7298 {\Hy@slidetitle}%

```



```

7299     {slideheading.\the\Hy@linkcounter}%
7300     {1}%
7301     {toc}%
7302   \fi
7303 }%
7304 \def\slide@subheading[#1]#2{%
7305   \H@refstepcounter{slidesubsection}%
7306   \addtocontents{los}{%
7307     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7308     {\@SCTR}{\slideheading.\theslidesubsection}%
7309   }%
7310   \def\Hy@tempa{#2}%
7311   \ifx\Hy@tempa\@empty
7312   \else
7313     {%
7314       \edef\@currentlabel{%
7315         \csname p@slidesubsection\endcsname\theslidesubsection
7316       }%
7317       \makeslidesubheading{#2}%
7318     }%
7319   \fi
7320   \gdef\theslidesubheading{#1}%
7321   \ifHy@bookmarksnumbered
7322     \def\Hy@slidetitle{\theslidesubsection\space #1}%
7323   \else
7324     \def\Hy@slidetitle{#1}%
7325   \fi
7326   \ifHy@hypertexnames
7327     \ifHy@naturalnames
7328       \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7329       \Hy@writebookmark
7330         {\theslidesubsection}%
7331         {\Hy@slidetitle}%
7332         {slideheading.\theslidesubsection}%
7333         {2}%
7334         {toc}%
7335     \else
7336       \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7337       \Hy@writebookmark
7338         {\theslidesubsection}%
7339         {\Hy@slidetitle}%
7340         {slideheading.\theHslidesubsection}%
7341         {2}%
7342         {toc}%
7343     \fi
7344   \else
7345     \Hy@GlobalStepCount\Hy@linkcounter
7346     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7347     \Hy@writebookmark
7348       {\theslidesubsection}%
7349       {\Hy@slidetitle}%
7350       {slideheading.\the\Hy@linkcounter}%
7351       {1}%
7352       {toc}%
7353   \fi
7354 }%
7355 \providecommand*{\listslidenam}{List of Slides}%

```

```

7356 \def\listofslides{%
7357   \section*{%
7358     \listslidename
7359     \@mkboth{%
7360       \expandafter\MakeUppercase\listslidename
7361     }{%
7362       \expandafter\MakeUppercase\listslidename
7363     }%
7364   }%
7365 \def\l@slide##1##2##3##4{%
7366   \slide@undottedcline{%
7367     \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
7368   }{%
7369   }%
7370 \let\l@subslide\l@slide
7371 \@startlos
7372 }%
7373 \def\slide@contents{%
7374   \def\l@slide##1##2##3##4{%
7375     \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7376   }%
7377   \let\l@subslide\@gobblefour
7378   \@startlos
7379 }%
7380 \def\Slide@contents{%
7381   \def\l@slide##1##2##3##4{%
7382     \ifcase\lslide@flag
7383       \message{##1 ** \the\c@slidesection}%
7384       \ifnum##1>\c@slidesection
7385         \def\lslide@flag{1}%
7386         {%
7387           \large
7388           \slide@ccline{%
7389             \slidenumberline{$\Rightarrow\bullet$}%
7390             {\hyperlink{##4}{##2}}}%
7391           }{##3}%
7392         }%
7393       \else
7394         {%
7395           \large
7396           \slide@ccline{%
7397             \slidenumberline{$\surd\;\bullet$}%
7398             {\hyperlink{##4}{##2}}}%
7399           }{##3}%
7400         }%
7401       \fi
7402     \or
7403     \def\lslide@flag{2}%
7404     {%
7405       \large
7406       \slide@ccline{%
7407         \slidenumberline{$\bullet$}%
7408         {\hyperlink{##4}{##2}}}%
7409       }{##3}%
7410     }%
7411     \or
7412     {%

```

```

7413     \large
7414     \slide@cline{%
7415         \slidenumberline{$\bullet$}%
7416         {\hyperlink{##4}{##2}}}%
7417     }{##3}%
7418 }%
7419 \fi
7420 }%
7421 \def\l@subslide##1##2##3##4{%
7422     \ifnum\lslide@flag=1 %
7423         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}}%
7424     \fi
7425 }%
7426 \def\lslide@flag{0}%
7427 \@startlos
7428 }%
7429 }{}

```

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.)

```

7430 \ifHy@texht
7431   \expandafter\endinput
7432 \fi
7433 \let\real@setref\@setref
7434 \def\@setref#1#2#3{% csname, extract group, refname
7435   \ifx#1\relax
7436     \protect\G@refundefinedtrue
7437     \nfss@text{\reset@font\bfseries ??}%
7438     \@latex@warning{%
7439       Reference ‘#3’ on page \thepage \space undefined%
7440     }%
7441   \else
7442     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7443   \fi
7444 }

```

\Hy@setref@link extracts the reference information entries, because \hyper@@link does not expand arguments for the automatic link type detection.

```

7445 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7446   \begingroup
7447   \toks0={\hyper@@link{#5}{#4}}%
7448   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7449   \edef\x{\endgroup
7450     \the\toks0 \the\toks1 }%
7451   }%
7452 \x
7453 }
7454 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7455   \ifx#1\relax
7456     \protect\G@refundefinedtrue
7457     \nfss@text{\reset@font\bfseries ??}%
7458     \@latex@warning{%
7459       Reference ‘#3’ on page \thepage \space undefined%
7460     }%
7461   \else
7462     \protect\hyper@@link
7463     {\expandafter\@fifthoffive#1}%

```

```

7464     {page.\expandafter\@secondoffive#1}%
7465     {\expandafter\@secondoffive#1}%
7466   \fi
7467 }

7468 \</package>
7469 \< *check>
7470 \checklatex
7471 \checkcommand\def\@setref#1#2#3{%
7472   \ifx#1\relax
7473     \protect\G@refundefinedtrue
7474     \nfss@text{\reset@font\bfseries ??}%
7475     \@latex@warning{%
7476       Reference '#3' on page \thepage\space undefined%
7477     }%
7478   \else
7479     \expandafter#2#1\null
7480   \fi
7481 }
7482 \</check>
7483 \< *package>

```

Now some extended referencing. `\ref*` and `\pageref*` are not linked, and `\autoref` prefixes with a tag based on the type.

```

7484 \def\HyRef@StarSetRef#1{%
7485   \begingroup
7486   \Hy@safe@activetrue
7487   \edef\x{#1}%
7488   \@onelevel@sanitize\x
7489   \edef\x{\endgroup
7490     \noexpand\HyRef@@StarSetRef
7491     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7492   }%
7493   \x
7494 }

7495 \def\HyRef@@StarSetRef#1#2#3{%
7496   \ifx#1\@undefined
7497     \let#1\relax
7498   \fi
7499   \real@setref#1#3{#2}%
7500 }

7501 \def\@refstar#1{%
7502   \HyRef@StarSetRef{#1}\@firstoffive
7503 }

7504 \def\@pagerefstar#1{%
7505   \HyRef@StarSetRef{#1}\@secondoffive
7506 }

7507 \AtBeginDocument{%
7508   \@ifpackageloaded{varioref}{%
7509     \def\@Refstar#1{%
7510       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7511     }%
7512     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7513       \MakeUppercase#1%
7514     }%
7515     \DeclareRobustCommand*\ref{\Ref}%
7516     \@ifstar\@Refstar\HyRef@Ref
7517   }%

```

```

7518 \def\HyRef@Ref#1{%
7519   \hyperref[{#1}]{\Ref*{#1}}%
7520 }%
7521 \def\Vr@f#1{%
7522   \leavevmode\unskip\vref@space
7523   \hyperref[{#1}]{%
7524     \Ref*{#1}%
7525     \let\vref@space\nobreakspace
7526     \@vpageref{\unskip}{#1}%
7527   }%
7528 }%
7529 \def\vr@f#1{%
7530   \leavevmode\unskip\vref@space
7531   \begingroup
7532     \let\T@pageref\@pagerefstar
7533     \hyperref[{#1}]{%
7534       \ref*{#1}%
7535       \vpageref{\unskip}{#1}%
7536     }%
7537   \endgroup
7538 }%
7539 }{}%
7540 }
7541 \DeclareRobustCommand*\autopageref{%
7542   \@ifstar{%
7543     \HyRef@autopagerefname\pageref*%
7544   }\HyRef@autopageref
7545 }
7546 \def\HyRef@autopageref#1{%
7547   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7548 }
7549 \def\HyRef@autopagerefname{%
7550   \ltx@ifundefined{pageautorefname}{%
7551     \ltx@ifundefined{pagename}{%
7552       \Hy@Warning{No autoref name for 'page'}%
7553     }{%
7554       \pagename\nobreakspace
7555     }%
7556   }{%
7557     \pageautorefname\nobreakspace
7558   }%
7559 }
7560 \DeclareRobustCommand*\autoref{%
7561   \@ifstar{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@@link}%
7562 }
7563 \def\HyRef@autoref#1#2{%
7564   \begingroup
7565     \Hy@safe@activetrue
7566     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7567   \endgroup
7568 }
7569 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7570   \HyRef@ShowKeysRef{#2}%
7571   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7572   \edef\HyRef@thisref{%
7573     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7574   }%

```

```

7575 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7576 \Hy@safe@activesfalse
7577 #3{%
7578   \expandafter\@fifthoffive#1\@empty\@empty\@empty
7579 }{%
7580   \expandafter\@fourthoffive#1\@empty\@empty\@empty
7581 }{%
7582   \HyRef@currentHtag
7583   \expandafter\@firstoffive#1\@empty\@empty\@empty
7584   \null
7585 }%
7586 \else
7587   \protect\G@refundefinedtrue
7588   \nfss@text{\reset@font\bfseries ??}%
7589   \@latex@warning{%
7590     Reference '#2' on page \thepage\space undefined%
7591   }%
7592 \fi
7593 }
7594 \def\HyRef@testreftype#1.#2\{%
7595   \ltx@ifundefined{#1autorefname}{%
7596     \ltx@ifundefined{#1name}{%
7597       \HyRef@StripStar#1\*\@nil{#1}%
7598     }%
7599     \ltx@ifundefined{\HyRef@name autorefname}{%
7600       \ltx@ifundefined{\HyRef@name name}{%
7601         \def\HyRef@currentHtag{%
7602           \Hy@Warning{No autoref name for '#1'}%
7603         }%
7604         \edef\HyRef@currentHtag{%
7605           \expandafter\noexpand\csname\HyRef@name name\endcsname
7606           \noexpand~%
7607         }%
7608       }%
7609       \edef\HyRef@currentHtag{%
7610         \expandafter\noexpand
7611         \csname\HyRef@name autorefname\endcsname
7612         \noexpand~%
7613       }%
7614     }%
7615   }%
7616   \edef\HyRef@currentHtag{%
7617     \expandafter\noexpand\csname#1name\endcsname
7618     \noexpand~%
7619   }%
7620 }%
7621 }{%
7622   \edef\HyRef@currentHtag{%
7623     \expandafter\noexpand\csname#1autorefname\endcsname
7624     \noexpand~%
7625   }%
7626 }%
7627 }
7628 \def\HyRef@StripStar#1*\@nil#3{%
7629   \def\HyRef@name{#2}%
7630   \ifx\HyRef@name\HyRef@CaseStar
7631     \def\HyRef@name{#1}%

```

```

7632 \else
7633   \def\HyRef@name{#3}%
7634 \fi
7635 }
7636 \def\HyRef@CaseStar{*\\}
7637 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7638 \let\HyRef@ShowKeysRef@gobble
7639 \def\HyRef@ShowKeysInit{%
7640   \begingroup\expandafter\expandafter\expandafter\endgroup
7641   \expandafter\ifx\csname SK@@label\endcsname\relax
7642   \else
7643     \ifx\SK@ref\@empty
7644     \else
7645       \def\HyRef@ShowKeysRef{%
7646         \SK@\SK@@ref
7647       }%
7648     \fi
7649   \fi
7650 }
7651 \ifpackageloaded{showkeys}{%
7652   \HyRef@ShowKeysInit
7653 }{%
7654   \AtBeginDocument{%
7655     \ifpackageloaded{showkeys}{%
7656       \HyRef@ShowKeysInit
7657     }{%
7658     }%
7659 }

```

Defaults for the names that \autoref uses.

```

7660 \providecommand*\AMSautorefname{\equationautorefname}
7661 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7662 \providecommand*\Itemautorefname{\itemautorefname}
7663 \providecommand*\itemautorefname{item}
7664 \providecommand*\equationautorefname{Equation}
7665 \providecommand*\footnoteautorefname{footnote}
7666 \providecommand*\itemautorefname{item}
7667 \providecommand*\figureautorefname{Figure}
7668 \providecommand*\tableautorefname{Table}
7669 \providecommand*\partautorefname{Part}
7670 \providecommand*\appendixautorefname{Appendix}
7671 \providecommand*\chapterautorefname{chapter}
7672 \providecommand*\sectionautorefname{section}
7673 \providecommand*\subsectionautorefname{subsection}
7674 \providecommand*\subsubsectionautorefname{subsubsection}
7675 \providecommand*\paragraphautorefname{paragraph}
7676 \providecommand*\subparagraphautorefname{subparagraph}
7677 \providecommand*\FancyVerbLineautorefname{line}
7678 \providecommand*\theoremautorefname{Theorem}
7679 \providecommand*\pageautorefname{page}
7680 \</package>

```

46 Configuration files

46.1 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 pdf_T_EX offers `\pdfescapestring`.

```
7681 <*pdfTex | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7682 \RequirePackage{pdfTexcmds}[2009/04/10]
7683 \begingroup\expandafter\expandafter\expandafter\endgroup
7684 \expandafter\ifx\csname pdfTescapestring\endcsname\relax
7685 \begingroup
7686 \catcode'\|=0 %
7687 \@makeother\|%
7688 |@firstofone{|endgroup
7689 |def|Hy@pstringdef#1#2{%
7690 |begingroup
7691 |edef~{|string~}%
7692 |xdef|Hy@gtemp{#2}%
7693 |endgroup
7694 |let#1|Hy@gtemp
7695 |@onelevel@sanitize#1%
7696 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7697 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7698 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7699 }%
7700 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7701 #1%
7702 |ifx|\#2\|%%
7703 |else
7704 \\\%
7705 |Hy@ReturnAfterFi{%
7706 |Hy@ExchangeBackslash#2|@nil
7707 }%
7708 |fi
7709 }%
7710 }%
7711 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7712 #1%
7713 \ifx\#2\|%%
7714 \else
7715 \@backslashchar(%
7716 \Hy@ReturnAfterFi{%
7717 \Hy@ExchangeLeftParenthesis#2\@nil
7718 }%
7719 \fi
7720 }%
7721 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7722 #1%
7723 \ifx\#2\|%%
7724 \else
7725 \@backslashchar)%
7726 \Hy@ReturnAfterFi{%
```



```

7727 \Hy@ExchangeRightParenthesis#2\@nil
7728 }%
7729 \fi
7730 }%
7731 \else
7732 \def\Hy@pstringdef#1#2{%
7733 \begingroup
7734 \edef~{\string~}%
7735 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7736 \endgroup
7737 \let#1\Hy@gtemp
7738 }%
7739 \fi
7740 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7741 <*pdfTeX>
7742 \providecommand*{\XR@ext}{pdf}
7743 \Hy@setbreaklinks{true}

```

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, 2005-08-08: \pdfminorversion

```

7744 \let\Hy@pdfminorversion\relax
7745 \begingroup\expandafter\expandafter\expandafter\endgroup
7746 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7747 \begingroup\expandafter\expandafter\expandafter\endgroup
7748 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7749 \else
7750 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7751 \fi
7752 \else
7753 \def\Hy@pdfminorversion{\pdfminorversion}%
7754 \fi
7755 \ifundefined{Hy@pdfminorversion}{%
7756 \PackageInfo{hyperref}{%
7757 PDF version is not set, because pdfTeX is too old (<1.10a)%
7758 }%
7759 }{%
7760 \ifHy@ocgcolorlinks
7761 \ifnum\Hy@pdfminorversion<5 %
7762 \setkeys{Hyp}{pdfversion=1.5}%
7763 \fi
7764 \fi
7765 \ifHy@setpdfversion
7766 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7767 \else
7768 \Hy@pdfminorversion=\Hy@pdfversion\relax
7769 \fi
7770 \PackageInfo{hyperref}{%
7771 \expandafter\string\Hy@pdfminorversion
7772 :=\number\Hy@pdfversion\space

```

```

7773 }%
7774 \fi
7775 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7776 }
7777 \Hy@DisableOption{pdfversion}%

7778 \ifHy@ocgcolorlinks
7779 \immediate\pdfobj{%
7780 <<%
7781 /Type/OCG%
7782 /Name(View)%
7783 /Usage<<%
7784 /Print<<%
7785 /PrintState/OFF%
7786 >>%
7787 /View<<%
7788 /ViewState/ON%
7789 >>%
7790 >>%
7791 >>%
7792 }%
7793 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7794 \immediate\pdfobj{%
7795 <<%
7796 /Type/OCG%
7797 /Name(Print)%
7798 /Usage<<%
7799 /Print<<%
7800 /PrintState/ON%
7801 >>%
7802 /View<<%
7803 /ViewState/OFF%
7804 >>%
7805 >>%
7806 >>%
7807 }%
7808 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7809 \immediate\pdfobj{%
7810 [%
7811 \OBJ@OCG@view\space\OBJ@OCG@print
7812 ]%
7813 }%
7814 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7815 \pdfcatalog{%
7816 /OCProperties<<%
7817 /OCGs \OBJ@OCGs
7818 /D<<%
7819 /OFF[\OBJ@OCG@print]%
7820 /AS[%
7821 <<%
7822 /Event/View%
7823 /OCGs \OBJ@OCGs
7824 /Category[/View]%
7825 >>%
7826 <<%
7827 /Event/Print%
7828 /OCGs \OBJ@OCGs
7829 /Category[/Print]%

```

```

7830      >>%
7831      <<%
7832      /Event/Export%
7833      /OCGs \OBJ@OCGs
7834      /Category[/Print]%
7835      >>%
7836      ]%
7837      >>%
7838      >>%
7839      }%
7840      \beginpgroup
7841      \edef\x{\endpgroup
7842      \pdfpageresources{%
7843      /Properties<<%
7844      /OCView \OBJ@OCG@view
7845      /OCPrint \OBJ@OCG@print
7846      >>%
7847      }%
7848      }%
7849      \x
7850      \AtBeginDocument{%
7851      \def\Hy@colorlink#1{%
7852      \beginpgroup
7853      \ifHy@ocgcolorlinks
7854      \def\Hy@ocgcolor{#1}%
7855      \setbox0=\color@hbox
7856      \else
7857      \HyColor@UseColor#1%
7858      \fi
7859      }%
7860      \def\Hy@endcolorlink{%
7861      \ifHy@ocgcolorlinks
7862      \color@endbox
7863      \mbox{%
7864      \pdfliteral page{/OC/OCPrint BDC}%
7865      \rlap{\copy0}%
7866      \pdfliteral page{EMC/OC/OCView BDC}%
7867      \beginpgroup
7868      \expandafter\HyColor@UseColor\Hy@ocgcolor
7869      \box0 %
7870      \endpgroup
7871      \pdfliteral page{EMC}%
7872      }%
7873      \fi
7874      \endpgroup
7875      }%
7876      }%
7877      \else
7878      \Hy@DisableOption{ocgcolorlinks}%
7879      \fi

```

First, allow for some changes and additions to pdftex syntax:

```

7880 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7881 \ifx\pdfstartlink\@undefined% less than version 14
7882 \let\pdfstartlink\pdfannotlink
7883 \let\pdfinkmargin\@tempdima
7884 \let\pdfxform\pdfform
7885 \let\pdflastxform\pdflastform

```

```

7886 \let\pdfrefxform\pdfrefform
7887 \else
7888 \pdflinkmargin1pt %
7889 \fi

```

First set up the default linking

```
7890 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7891 \def\new@pdfink#1{%
7892 \Hy@SaveLastskip
7893 \Hy@VerboseAnchor{#1}%
7894 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7895 \Hy@DestName\Hy@pstringDest\@pdfview
7896 \Hy@RestoreLastskip
7897 }
7898 \let\pdf@endanchor\@empty

```

`\Hy@DestName` Wrap the call of `\pdfdest` name in `\Hy@DestName`. Then it can easier be caught by package `hypdestopt`.

```

7899 \def\Hy@DestName#1#2{%
7900 \pdfdest name{#1}#2\relax
7901 }

```

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.

```

7902 \providecommand*\@pdfborder{0 0 1}
7903 \providecommand*\@pdfborderstyle{}
7904 \def\Hy@undefinedname{UNDEFINED}
7905 \def\find@pdfink#1#2{%
7906 \leavevmode
7907 \protected@edef\Hy@testname{#2}%
7908 \ifx\Hy@testname\@empty
7909 \Hy@Warning{%
7910 Empty destination name,\MessageBreak
7911 using '\Hy@undefinedname'%
7912 }%
7913 \let\Hy@testname\Hy@undefinedname
7914 \else
7915 \Hy@pstringdef\Hy@testname{%
7916 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7917 }%
7918 \fi
7919 \Hy@StartlinkName{%
7920 \ifHy@pdfa /F 4\fi
7921 \Hy@setpdfborder
7922 \ifx\@pdfhighlight\@empty
7923 \else
7924 /H\@pdfhighlight
7925 \fi
7926 \ifx\CurrentBorderColor\relax
7927 \else
7928 /C[\CurrentBorderColor]%
7929 \fi
7930 }\Hy@testname
7931 \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

7932 }
7933 \def\Hy@StartlinkName#1#2{%
7934   \pdfstartlink attr{#1}goto name{#2}\relax
7935 }
7936 \def\close@pdfink{%
7937   \Hy@endcolorlink
7938   \Hy@VerboseLinkStop
7939   \pdfendlink
7940 }
7941 \def\hyper@anchor#1{%
7942   \new@pdfink{#1}\anchor@spot\pdf@endanchor
7943 }
7944 \def\hyper@anchorstart#1{%
7945   \new@pdfink{#1}%
7946   \Hy@activeanchortrue
7947 }
7948 \def\hyper@anchorend{%
7949   \pdf@endanchor
7950   \Hy@activeanchorfalse
7951 }
7952 \def\hyper@linkstart#1#2{%
7953   \Hy@VerboseLinkStart{#1}{#2}%
7954   \ltx@ifundefined{@#1bordercolor}{%
7955     \let\CurrentBorderColor\relax
7956   }{%
7957     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7958   }%
7959   \find@pdfink{#1}{#2}%
7960 }
7961 \def\hyper@linkend{\close@pdfink}
7962 \def\hyper@link#1#2#3{%
7963   \Hy@VerboseLinkStart{#1}{#2}%
7964   \ltx@ifundefined{@#1bordercolor}{%
7965     \let\CurrentBorderColor\relax
7966   }{%
7967     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7968   }%
7969   \find@pdfink{#1}{#2}#3%
7970   \close@pdfink
7971 }
7972 \let\CurrentBorderColor\@linkbordercolor
7973 \def\hyper@linkurl#1#2{%
7974   \begingroup
7975     \Hy@pstringdef\Hy@pstringURI{#2}%
7976     \hyper@chars
7977     \leavevmode
7978     \pdfstartlink
7979       attr{%
7980         \Hy@setpdfborder
7981         \ifx\@pdfhighlight\@empty
7982           \else
7983             /H\@pdfhighlight
7984           \fi
7985         \ifx\@urlbordercolor\relax
7986           \else
7987             /C[\@urlbordercolor]%
7988           \fi

```

```

7989     }%
7990     user{%
7991         /Subtype/Link%
7992         \ifHy@pdfa /F 4\fi
7993         /A<<%
7994         /Type/Action%
7995         /S/URI%
7996         /URI(\Hy@pstringURI)%
7997     >>%
7998     }%
7999     \relax
8000     \Hy@colorlink\@urlcolor#1%
8001     \close@pdflink
8002 \endgroup
8003 }
8004 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8005     \begingroup
8006     \Hy@pstringdef\Hy@pstringF{#2}%
8007     \Hy@pstringdef\Hy@pstringD{#3}%
8008     \leavevmode
8009     \pdfstartlink
8010     attr{%
8011         \Hy@setpdfborder
8012         \ifx\@pdfhighlight\@empty
8013         \else
8014             /H\@pdfhighlight
8015         \fi
8016         \ifx\@filebordercolor\relax
8017         \else
8018             /C[\@filebordercolor]%
8019         \fi
8020     }%
8021     user {%
8022         /Subtype/Link%
8023         \ifHy@pdfa /F 4\fi
8024         /A<<%
8025         /F(\Hy@pstringF)%
8026         /S/GoToR%
8027         \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}

```

```

8028     \ifx\#3\%
8029         /D[0 \@pdfstartview]%
8030     \else
8031         /D(\Hy@pstringD)%
8032     \fi
8033     >>%
8034     }%

```

```

8035 \relax
8036 \Hy@colorlink\@filecolor#1%
8037 \close@pdflink
8038 \endgroup
8039 }
8040 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
8041 \begingroup
8042 \Hy@pstringdef\Hy@pstringF{#1}%
8043 \Hy@pstringdef\Hy@pstringP{#3}%
8044 \leavevmode
8045 \pdfstartlink
8046 attr{%
8047 \Hy@setpdfborder
8048 \ifx\@pdfhighlight\@empty
8049 \else
8050 /H\@pdfhighlight
8051 \fi
8052 \ifx\@runbordercolor\relax
8053 \else
8054 /C[\@runbordercolor]%
8055 \fi
8056 }%
8057 user {%
8058 /Subtype/Link%
8059 \ifHy@pdfa /F 4\fi
8060 /A<<%
8061 /F(\Hy@pstringF)%
8062 /S/Launch%
8063 \Hy@SetNewWindow
8064 \ifx\|#3\|
8065 \else
8066 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8067 \fi
8068 >>%
8069 }%
8070 \relax
8071 \Hy@colorlink\@runcolor#2%
8072 \close@pdflink
8073 \endgroup
8074 }

```

\@pdfproducer

```

8075 \ifx\@pdfproducer\relax
8076 \begingroup\expandafter\expandafter\expandafter\endgroup
8077 \expandafter\ifx\csname luatexversion\endcsname\relax
8078 \def\@pdfproducer{pdfTeX}%
8079 \ifx\eTeXversion\@undefined
8080 \else
8081 \ifx\eTeXversion\relax
8082 \else
8083 \ifnum\eTeXversion>0 %
8084 \def\@pdfproducer{pdfTeX}%
8085 \fi
8086 \fi
8087 \fi
8088 \ifx\pdfTeXversion\@undefined
8089 \else

```

```

8090 \ifnum\pdfTeXversion<100 %
8091 \edef\@pdfproducer{%
8092 \@pdfproducer
8093 \the\pdfTeXversion.\pdfTeXrevision
8094 }%
8095 \else
8096 \ifnum\pdfTeXversion<130 %
8097 \edef\@pdfproducer{%
8098 \@pdfproducer-%
8099 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8100 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8101 \pdfTeXrevision
8102 }%
8103 \else
8104 \ifnum\pdfTeXversion<140 %
8105 \else
8106 \def\@pdfproducer{pdfTeX}%
8107 \fi
8108 \edef\@pdfproducer{%
8109 \@pdfproducer-%
8110 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8111 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8112 \pdfTeXrevision
8113 }%
8114 \fi
8115 \fi
8116 \fi
8117 \else
8118 \begingroup
8119 \count@=\luaTeXversion
8120 \divide\count@ by 100 %
8121 \edef\x{\the\count@}%
8122 \count@=-\x\relax
8123 \multiply\count@ by 100 %
8124 \advance\count@ by \luaTeXversion
8125 \edef\x{\endgroup
8126 \def\noexpand\@pdfproducer{%
8127 LuaTeX-\x.\the\count@.\luaTeXrevision
8128 }%
8129 }%
8130 \x
8131 \fi
8132 \fi

```

\PDF@SetupDox

```

8133 \def\PDF@SetupDoc{%
8134 \ifx\@pdfpagescrop\@empty
8135 \else
8136 \edef\process@me{%
8137 \pdfpagesattr={%
8138 /CropBox[\@pdfpagescrop]%
8139 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8140 \else
8141 ^^J\the\pdfpagesattr
8142 \fi
8143 }%
8144 }%

```



```

8145 \process@me
8146 \fi
8147 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8148 \pdfcatalog{%
8149 /PageMode/\@pdfpagemode
8150 \ifx\@baseurl\@empty
8151 \else
8152 /URI<</Base(\Hy@pstringB)>>%
8153 \fi
8154 }%
8155 \ifx\@pdfstartpage\@empty
8156 \else
8157 \ifx\@pdfstartview\@empty
8158 \else
8159 openaction goto page\@pdfstartpage{\@pdfstartview}%
8160 \fi
8161 \fi
8162 \edef\Hy@temp{%
8163 \ifHy@toolbar\else /HideToolbar true\fi
8164 \ifHy@menubar\else /HideMenubar true\fi
8165 \ifHy>windowui\else /HideWindowUI true\fi
8166 \ifHy@fitwindow /FitWindow true\fi
8167 \ifHy@centerwindow /CenterWindow true\fi
8168 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8169 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8170 \Hy@UseNameKey{Direction}\@pdfdirection
8171 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8172 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8173 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8174 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8175 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8176 \Hy@UseNameKey{Duplex}\@pdfduplex
8177 \ifx\@pdfpicktraybypdfsize\@empty
8178 \else
8179 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8180 \fi
8181 \ifx\@pdfprintpagerange\@empty
8182 \else
8183 /PrintPageRange[\@pdfprintpagerange]%
8184 \fi
8185 \ifx\@pdfnumcopies\@empty
8186 \else
8187 /NumCopies \@pdfnumcopies
8188 \fi
8189 }%
8190 \pdfcatalog{%
8191 \ifx\Hy@temp\@empty
8192 \else
8193 /ViewerPreferences<<\Hy@temp>>%
8194 \fi
8195 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8196 \ifx\@pdflang\@empty
8197 \else
8198 /Lang(\@pdflang)%
8199 \fi
8200 }%
8201 }

```

\PDF@FinishDoc

```
8202 \def\PDF@FinishDoc{%
8203   \Hy@UseMaketitleInfos
8204   \HyInfo@GenerateAddons
8205   \pdfinfo{%
8206     /Author(\@pdfauthor)%
8207     /Title(\@pdftitle)%
8208     /Subject(\@pdfsubject)%
8209     /Creator(\@pdfcreator)%
8210     \ifx\@pdfcreationdate\@empty
8211     \else
8212       /CreationDate(\@pdfcreationdate)%
8213     \fi
8214     \ifx\@pdfmoddate\@empty
8215     \else
8216       /ModDate(\@pdfmoddate)%
8217     \fi
8218     \ifx\@pdfproducer\relax
8219     \else
8220       /Producer(\@pdfproducer)%
8221     \fi
8222     /Keywords(\@pdfkeywords)%
8223     \ifx\@pdftrapped\@empty
8224     \else
8225       /Trapped/\@pdftrapped
8226     \fi
8227     \HyInfo@Addons
8228   }%
8229   \Hy@DisableOption{pdfauthor}%
8230   \Hy@DisableOption{pdftitle}%
8231   \Hy@DisableOption{pdfsubject}%
8232   \Hy@DisableOption{pdfcreator}%
8233   \Hy@DisableOption{pdfcreationdate}%
8234   \Hy@DisableOption{pdfmoddate}%
8235   \Hy@DisableOption{pdfproducer}%
8236   \Hy@DisableOption{pdfkeywords}%
8237   \Hy@DisableOption{pdftrapped}%
8238   \Hy@DisableOption{pdfinfo}%
8239 }
```

\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.

```
8240 \def\hyper@pagetransition{%
8241   \ifx\@pdfpagetransition\relax
8242   \else
8243     \expandafter\Hy@RemoveTransPageAttr
8244     \the\pdfpageattr^^J/Trans{}}>>\END
8245   \ifx\@pdfpagetransition\@empty
8246   \else
8247     \edef\@processme{%
8248       \global\pdfpageattr{%
8249         \the\pdfpageattr
8250         ^^J/Trans << /S /\@pdfpagetransition\space >>%
8251       }%
8252     }%
8253     \@processme
```

```

8254 \fi
8255 \fi
8256 }

```

`\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.

```

8257 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8258 \ifx\#2\%
8259 \global\pdfpageattr{#1}%
8260 \else
8261 \Hy@RemoveTransPageAttr#1#4\END
8262 \fi
8263 }

```

`\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`.

```

8264 \def\hyper@pageduration{%
8265 \ifx\@pdfpageduration\relax
8266 \else
8267 \expandafter
8268 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8269 \ifx\@pdfpageduration\@empty
8270 \else
8271 \edef\@processme{%
8272 \global\pdfpageattr{%
8273 \the\pdfpageattr
8274 ^^J/Dur \@pdfpageduration\space
8275 }%
8276 }%
8277 \@processme
8278 \fi
8279 \fi
8280 }

```

`\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.

```

8281 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8282 \ifx\#2\%
8283 \global\pdfpageattr{#1}%
8284 \else
8285 \Hy@RemoveDurPageAttr#1#4\END
8286 \fi
8287 }

```

`\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).

```

8288 \def\hyper@pagehidden{%
8289 \ifHy@useHidKey
8290 \expandafter
8291 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{ } \END

```

```

8292 \ifHy@pdfpagehidden
8293 \edef\@processme{%
8294 \global\pdfpageattr{%
8295 \the\pdfpageattr
8296 ^^J/Hid true % SPACE
8297 }%
8298 }%
8299 \@processme
8300 \fi
8301 \fi
8302 }

```

`\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.

```

8303 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8304 \ifx\#2\%
8305 \global\pdfpageattr{#1}%
8306 \else
8307 \Hy@RemoveHidPageAttr#1#4\END
8308 \fi
8309 }

8310 \g@addto@macro\Hy@EveryPageHook{%
8311 \hyper@pagetransition
8312 \hyper@pageduration
8313 \hyper@pagehidden
8314 }

```

Also XeTeX support `\pdfpagewidth` and `\pdfpageheight`, but it does not provide `\pdfhorigin` and `\pdfvorigin`.

```

8315 </pdfTeX>
8316 <*pdfTeX | xetex>
8317 \AtBeginDocument{%
8318 \ifHy@setpagesize
8319 \expandafter\@firstofone
8320 \else
8321 \expandafter\@gobble
8322 \fi
8323 {%
8324 \@ifclassloaded{seminar}{%
8325 <*pdfTeX>
8326 \setlength{\pdfhorigin}{1truein}%
8327 \setlength{\pdfvorigin}{1truein}%
8328 </pdfTeX>
8329 \ifportrait
8330 \ifdim\paperwidth=\z@
8331 \else
8332 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8333 \fi
8334 \ifdim\paperheight=\z@
8335 \else
8336 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8337 \fi
8338 \else
8339 \ifdim\paperheight=\z@
8340 \else

```

```

8341     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8342     \fi
8343     \ifdim\paperwidth=\z@
8344     \else
8345     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8346     \fi
8347     \fi
8348   }{%
8349     \ltx@ifundefined{stockwidth}{%
8350     \ifdim\paperwidth>\z@
8351     \setlength{\pdfpagewidth}{\paperwidth}%
8352     \fi
8353     \ifdim\paperheight>\z@
8354     \setlength{\pdfpageheight}{\paperheight}%
8355     \fi
8356   }{%
8357     \ifdim\stockwidth>\z@
8358     \setlength{\pdfpagewidth}{\stockwidth}%
8359     \fi
8360     \ifdim\stockheight>\z@
8361     \setlength{\pdfpageheight}{\stockheight}%
8362     \fi
8363   }%
8364 }%
8365 }%
8366 \Hy@DisableOption{setpagesize}%
8367 }
8368 </pdfTeX | xetex>
8369 <*pdfTeX>
8370 \def\Acrobatmenu#1#2{%
8371   \Hy@Acrobatmenu{#1}{#2}{%
8372     \pdfstartlink
8373     attr{%
8374       \Hy@setpdfborder
8375       \ifx\@pdfhighlight\@empty
8376       \else
8377       /H\@pdfhighlight
8378       \fi
8379       \ifx\@menubordercolor\relax
8380       \else
8381       /C[\@menubordercolor]%
8382       \fi
8383     }%
8384     user{%
8385       /Subtype/Link%
8386       \ifHy@pdfa /F 4\fi
8387       /A<<%
8388       /S/Named/N/#1%
8389       >>%
8390     }%
8391     \relax
8392     \Hy@colorlink\@menucolor#2%
8393     \close@pdflink
8394   }%
8395 }

```

46.2.1 Fix for problem with different nesting levels

`\AtBeginShipoutFirst` adds an additional box layer around the first output page. This disturbs pdf_TE_X'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 pdf_TE_X—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`.

```
8396 \def\Hy@FixNotFirstPage{%
8397   \gdef\Hy@FixNotFirstPage{%
8398     \setbox\AtBeginShipoutBox=\hbox{%
8399       \copy\AtBeginShipoutBox
8400     }%
8401   }%
8402 }
8403 \AtBeginShipout{\Hy@FixNotFirstPage}
8404 \</pdfTeX>
```

46.3 hypertex

The Hyper_TE_X 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:`

name: `html:`

end: `html:`

image: `html:`

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 _TE_X file — the _TE_X 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.

```
8405 \<*hypertex>
8406 \providecommand*{\XR@ext}{dvi}
8407 \def\PDF@FinishDoc{}
8408 \def\PDF@SetupDoc{%
```

```

8409 \ifx\@baseurl\@empty
8410 \else
8411 \special{html:<base href="\@baseurl">}%
8412 \fi
8413 }
8414 \def\hyper@anchor#1{%
8415 \Hy@SaveLastskip
8416 \Hy@VerboseAnchor{#1}%
8417 \begingroup
8418 \let\protect=\string
8419 \hyper@chars
8420 \special{html:<a name=%
8421 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8422 \endgroup
8423 \Hy@activeanchortrue
8424 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8425 \special{html:</a>}%
8426 \Hy@activeanchorfalse
8427 \Hy@RestoreLastskip
8428 }
8429 \def\hyper@anchorstart#1{%
8430 \Hy@SaveLastskip
8431 \Hy@VerboseAnchor{#1}%
8432 \begingroup
8433 \hyper@chars
8434 \special{html:<a name=%
8435 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8436 \endgroup
8437 \Hy@activeanchortrue
8438 }
8439 \def\hyper@anchorend{%
8440 \special{html:</a>}%
8441 \Hy@activeanchorfalse
8442 \Hy@RestoreLastskip
8443 }
8444 \def\@urltype{url}
8445 \def\hyper@linkstart#1#2{%
8446 \Hy@VerboseLinkStart{#1}{#2}%
8447 \expandafter\Hy@colorlink\csname @#1color\endcsname
8448 \def\Hy@tempa{#1}%
8449 \ifx\Hy@tempa\@urltype
8450 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8451 \else
8452 \begingroup
8453 \hyper@chars
8454 \special{html:<a href=%
8455 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
8456 \endgroup
8457 \fi
8458 }
8459 \def\hyper@linkend{%
8460 \special{html:</a>}%
8461 \Hy@endcolorlink
8462 }
8463 \def\hyper@linkfile#1#2#3{%
8464 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8465 }

```

```
8466 \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.

```
8467 \leavevmode
8468 \ifHy@raiselinks
8469 \setbox\@tempboxa=\color@hbox #1\color@endbox
8470 \@linkdim\dp\@tempboxa
8471 \lower\@linkdim\hbox{%
8472   \hyper@chars
8473   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8474 }%
8475 \Hy@colorlink\@urlcolor#1%
8476 \@linkdim\ht\@tempboxa
```

Because of the interaction with the `dvi` 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 `dvi`s (Jan 1997).

```
8477 \advance\@linkdim by -6.5\p@
8478 \raise\@linkdim\hbox{\special{html:</a>}}%
8479 \Hy@endcolorlink
8480 \else
8481 \begingroup
8482   \hyper@chars
8483   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8484   \Hy@colorlink\@urlcolor#1%
8485   \special{html:</a>}%
8486   \Hy@endcolorlink
8487 \endgroup
8488 \fi
8489 }
```

Very poor implementation of `\hyper@link` without considering `#1`.

```
8490 \def\hyper@link#1#2#3{%
8491   \Hy@VerboseLinkStart{#1}{#2}%
8492   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
8493 }

8494 \def\hyper@image#1#2{%
8495   \begingroup
8496   \hyper@chars
8497   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8498   \endgroup
8499 }
8500 </hypertex>
8501 <*dviwindo>
```

46.4 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.

```

8502 \providecommand*{\XR@ext}{dvi}
8503 \providecommand*{\wwwbrowser{c:\string\netscape\string\netscape}
8504 \def\hyper@anchor#1{%
8505   \Hy@SaveLastskip
8506   \Hy@VerboseAnchor{#1}%
8507   \begingroup
8508     \let\protect=\string
8509     \special{mark: #1}%
8510   \endgroup
8511   \Hy@activeanchortrue
8512   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8513   \Hy@activeanchorfalse
8514   \Hy@RestoreLastskip
8515 }
8516 \def\hyper@anchorstart#1{%
8517   \Hy@SaveLastskip
8518   \Hy@VerboseAnchor{#1}%
8519   \special{mark: #1}%
8520   \Hy@activeanchortrue
8521 }
8522 \def\hyper@anchorend{%
8523   \Hy@activeanchorfalse
8524   \Hy@RestoreLastskip
8525 }
8526 \def\hyper@linkstart#1#2{%
8527   \Hy@VerboseLinkStart{#1}{#2}%
8528   \expandafter\Hy@colorlink\csname @#1color\endcsname
8529   \special{button: %
8530     10000000 %
8531     \number\baselineskip\space
8532     #2%
8533   }%
8534 }
8535 \def\hyper@linkend{%
8536   \Hy@endcolorlink
8537 }
8538 \def\hyper@link#1#2#3{%
8539   \Hy@VerboseLinkStart{#1}{#2}%
8540   \setbox\@tempboxa=\color@hbox #3\color@endbox
8541   \leavevmode
8542   \ifHy@raiselinks
8543     \@linkdim\dp\@tempboxa
8544     \lower\@linkdim\hbox{%
8545       \special{button: %
8546         \number\wd\@tempboxa\space
8547         \number\ht\@tempboxa\space
8548         #2%
8549       }%
8550       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8551       \Hy@endcolorlink
8552     }%
8553     \@linkdim\ht\@tempboxa
8554     \advance\@linkdim by -6.5\p@
8555     \raise\@linkdim\hbox{}%
8556   \else

```

```

8557 \special{button: %
8558 \number\wd\@tempboxa\space
8559 \number\ht\@tempboxa\space
8560 #2%
8561 }%
8562 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8563 \Hy@endcolorlink
8564 \fi
8565 }
8566 \def\hyper@linkurl#1#2{%
8567 \begingroup
8568 \hyper@chars
8569 \leavevmode
8570 \setbox\@tempboxa=\color@hbox #1\color@endbox
8571 \ifHy@raiselinks
8572 \@linkdim\dp\@tempboxa
8573 \lower\@linkdim\hbox{%
8574 \special{button: %
8575 \number\wd\@tempboxa\space
8576 \number\ht\@tempboxa\space
8577 launch: \wwwbrowser\space
8578 #2%
8579 }%
8580 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8581 }%
8582 \@linkdim\ht\@tempboxa
8583 \advance\@linkdim by -6.5\p@
8584 \raise\@linkdim\hbox{}}%
8585 \else
8586 \special{button: %
8587 \number\wd\@tempboxa\space
8588 \number\ht\@tempboxa\space
8589 launch: \wwwbrowser\space
8590 #2%
8591 }%
8592 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8593 \fi
8594 \endgroup
8595 }
8596 \def\hyper@linkfile#1#2#3{%
8597 \begingroup
8598 \hyper@chars
8599 \leavevmode
8600 \setbox\@tempboxa=\color@hbox #1\color@endbox
8601 \ifHy@raiselinks
8602 \@linkdim\dp\@tempboxa
8603 \lower\@linkdim\hbox{%
8604 \special{button: %
8605 \number\wd\@tempboxa\space
8606 \number\ht\@tempboxa\space
8607 #3,%
8608 file: #2%
8609 }%
8610 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8611 }%
8612 \@linkdim\ht\@tempboxa
8613 \advance\@linkdim by -6.5\p@

```

```

8614 \raise\@linkdim\hbox{}%
8615 \else
8616 \special{button: %
8617 \number\wd\@tempboxa\space
8618 \number\ht\@tempboxa\space
8619 #3,%
8620 file: #2%
8621 }%
8622 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8623 \fi
8624 \endgroup
8625 }
8626 \ifx\@pdfproducer\relax
8627 \def\@pdfproducer{dviwindo + Distiller}%
8628 \fi
8629 \HyInfo@AddonUnsupportedtrue
8630 \def\PDF@FinishDoc{%
8631 \Hy@UseMaketitleInfos
8632 \HyInfo@TrappedUnsupported
8633 \special{PDF: Keywords \@pdfkeywords}%
8634 \special{PDF: Title \@pdftitle}%
8635 \special{PDF: Creator \@pdfcreator}%
8636 \ifx\@pdfcreationdate\@empty
8637 \else
8638 \special{PDF: CreationDate \@pdfcreationdate}%
8639 \fi
8640 \ifx\@pdfmoddate\@empty
8641 \else
8642 \special{PDF: ModDate \@pdfmoddate}%
8643 \fi
8644 \special{PDF: Author \@pdfauthor}%
8645 \ifx\@pdfproducer\relax
8646 \else
8647 \special{PDF: Producer \@pdfproducer}%
8648 \fi
8649 \special{PDF: Subject \@pdfsubject}%
8650 \Hy@DisableOption{pdfauthor}%
8651 \Hy@DisableOption{pdftitle}%
8652 \Hy@DisableOption{pdfsubject}%
8653 \Hy@DisableOption{pdfcreator}%
8654 \Hy@DisableOption{pdfcreationdate}%
8655 \Hy@DisableOption{pdfmoddate}%
8656 \Hy@DisableOption{pdfproducer}%
8657 \Hy@DisableOption{pdfkeywords}%
8658 \Hy@DisableOption{pdftrapped}%
8659 \Hy@DisableOption{pdfinfo}%
8660 }
8661 \def\PDF@SetupDoc{%
8662 \ifx\@baseurl\@empty
8663 \else
8664 \special{PDF: Base \@baseurl}%
8665 \fi
8666 \ifx\@pdfpagescrop\@empty\else
8667 \special{PDF: BBox \@pdfpagescrop}%
8668 \fi
8669 \def\Hy@temp{}%
8670 \ifx\@pdfstartpage\@empty

```

```

8671 \else
8672 \ifx\@pdfstartview\@empty
8673 \else
8674 \edef\Hy@temp{%
8675 ,Page=\@pdfstartpage
8676 ,View=\@pdfstartview
8677 }%
8678 \fi
8679 \fi
8680 \edef\Hy@temp{%
8681 \noexpand\pdfmark{%
8682 pdfmark=/DOCVIEW,%
8683 PageMode=/\@pdfpagemode
8684 \Hy@temp
8685 }%
8686 }%
8687 \Hy@temp
8688 \ifx\@pdfpagescrop\@empty
8689 \else
8690 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8691 \fi
8692 \edef\Hy@temp{%
8693 \ifHy@toolbar\else /HideToolbar true\fi
8694 \ifHy@menubar\else /HideMenubar true\fi
8695 \ifHy>windowui\else /HideWindowUI true\fi
8696 \ifHy@fitwindow /FitWindow true\fi
8697 \ifHy@centerwindow /CenterWindow true\fi
8698 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8699 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
8700 \Hy@UseNameKey{Direction}\@pdfdirection
8701 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8702 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8703 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8704 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8705 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8706 \Hy@UseNameKey{Duplex}\@pdfduplex
8707 \ifx\@pdfpicktraybypdfsize\@empty
8708 \else
8709 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8710 \fi
8711 \ifx\@pdfprintpagerange\@empty
8712 \else
8713 /PrintPageRange[\@pdfprintpagerange]%
8714 \fi
8715 \ifx\@pdfnumcopies\@empty
8716 \else
8717 /NumCopies \@pdfnumcopies
8718 \fi
8719 }%
8720 \pdfmark{pdfmark=/PUT,%
8721 Raw={%
8722 \string{Catalog\string}<<%
8723 \ifx\Hy@temp\@empty
8724 \else
8725 /ViewerPreferences<<\Hy@temp>>%
8726 \fi
8727 \Hy@UseNameKey{PageLayout}\@pdfpagelayout

```

```

8728     \ifx\@pdflang\@empty
8729     \else
8730     /Lang(\@pdflang)%
8731     \fi
8732     >>%
8733     }%
8734   }%
8735 }
8736 \</dviwindo>
8737 \<*dvi pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8738 \providecommand*{\XR@ext}{pdf}
8739 \Hy@setbreaklinks{true}
8740 \newsavebox{\pdfm@box}
8741 \def\@pdfm@mark#1{\special{pdf:#1}}
8742 \def\@pdfm@dest#1{%
8743   \Hy@SaveLastskip
8744   \Hy@VerboseAnchor{#1}%
8745   \begingroup
8746     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8747     \def\x{XYZ}%
8748     \ifx\x\@pdfview
8749       \def\x{XYZ @xpos @ypos null}%
8750     \else
8751       \def\x{FitH}%
8752       \ifx\x\@pdfview
8753         \def\x{FitH @ypos}%
8754       \else
8755         \def\x{FitBH}%
8756         \ifx\x\@pdfview
8757           \def\x{FitBH @ypos}%
8758         \else
8759           \def\x{FitV}%
8760           \ifx\x\@pdfview
8761             \def\x{FitV @xpos}%
8762           \else
8763             \def\x{FitBV}%
8764             \ifx\x\@pdfview
8765               \def\x{FitBV @xpos}%
8766             \else
8767               \def\x{Fit}%
8768               \ifx\x\@pdfview
8769                 \let\x\@pdfview
8770             \else
8771               \def\x{FitB}%
8772               \ifx\x\@pdfview
8773                 \let\x\@pdfview
8774             \else
8775               \def\x{FitR}%
8776               \ifx\x\@pdfview
8777                 \Hy@Warning{'pdfview=FitR' is not supported}%
8778                 \def\x{XYZ @xpos @ypos null}%
8779             \else
8780               \@onelevel@sanitize\@pdfview

```

```

8781             \Hy@Warning{%
8782                 Unknown value '\@pdfview' for pdfview%
8783             }%
8784             \def\x{XYZ @xpos @ypos null}%
8785         \fi
8786     \fi
8787 \fi
8788 \fi
8789 \fi
8790 \fi
8791 \fi
8792 \fi
8793 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8794 \endgroup
8795 \Hy@RestoreLastskip
8796 }
8797 \providecommand*\@pdfview{XYZ}
8798 \providecommand*\@pdfborder{0 0 1}
8799 \providecommand*\@pdfborderstyle{}
8800 \def\hyper@anchor#1{%
8801     \@pdfm@dest{#1}%
8802 }
8803 \def\hyper@anchorstart#1{%
8804     \Hy@activeanchortrue
8805     \@pdfm@dest{#1}%
8806 }
8807 \def\hyper@anchorend{%
8808     \Hy@activeanchorfalse
8809 }
8810 \newcounter{Hy@AnnotLevel}
8811 \ifHy@ocgcolorlinks
8812 \def\OBJ@OCG@view{@OCG@view}%
8813 \@pdfm@mark{%
8814     obj \OBJ@OCG@view <<%
8815         /Type/OCG%
8816         /Name(View)%
8817         /Usage<<%
8818         /Print<<%
8819         /PrintState/OFF%
8820         >>%
8821         /View<<%
8822         /ViewState/ON%
8823         >>%
8824         >>%
8825         >>%
8826     }%
8827 \@pdfm@mark{close \OBJ@OCG@view}%
8828 \def\OBJ@OCG@print{@OCG@print}%
8829 \@pdfm@mark{%
8830     obj \OBJ@OCG@print <<%
8831         /Type/OCG%
8832         /Name(Print)%
8833         /Usage<<%
8834         /Print<<%
8835         /PrintState/ON%
8836         >>%
8837         /View<<%

```

```

8838      /ViewState/OFF%
8839      >>%
8840      >>%
8841      >>%
8842  }%
8843  \@pdfm@mark{close \OBJ@OCG@print}%
8844  \def\OBJ@OCGs{@OCGs}%
8845  \@pdfm@mark{%
8846    obj \OBJ@OCGs [%
8847      \OBJ@OCG@view\space\OBJ@OCG@print
8848    ]%
8849  }%
8850  \@pdfm@mark{close \OBJ@OCGs}%
8851  \@pdfm@mark{%
8852    put @catalog <<%
8853      /OCProperties<<%
8854      /OCGs \OBJ@OCGs
8855      /D<<%
8856      /OFF[\OBJ@OCG@print]%
8857      /AS[%
8858        <<%
8859          /Event/View%
8860          /OCGs \OBJ@OCGs
8861          /Category[/View]%
8862        >>%
8863        <<%
8864          /Event/Print%
8865          /OCGs \OBJ@OCGs
8866          /Category[/Print]%
8867        >>%
8868        <<%
8869          /Event/Export%
8870          /OCGs \OBJ@OCGs
8871          /Category[/Print]%
8872        >>%
8873        ]%
8874      >>%
8875    >>%
8876    >>%
8877  }%
8878  \AtBeginShipout{%
8879    \setbox\AtBeginShipoutBox=\hbox{%
8880      \copy\AtBeginShipoutBox
8881      \@pdfm@mark{%
8882        put @resources <<%
8883          /Properties<<%
8884          /OCView \OBJ@OCG@view
8885          /OCPrint \OBJ@OCG@print
8886        >>%
8887      >>%
8888    }%
8889  }%
8890  }%
8891  \AtBeginDocument{%
8892    \def\Hy@colorlink#1{%
8893      \begingroup
8894      \ifHy@ocgcolorlinks

```

```

8895     \def\Hy@ocgcolor{#1}%
8896     \setbox0=\color@hbox
8897     \else
8898     \HyColor@UseColor#1%
8899     \fi
8900 }%
8901 \def\Hy@endcolorlink{%
8902   \ifHy@ocgcolorlinks
8903     \color@endbox
8904     \mbox{%
8905       \@pdfm@mark{content /OC/OCPrint BDC}%
8906       \rlap{\copy0}%
8907       \@pdfm@mark{content EMC/OC/OCView BDC}%
8908       \begingroup
8909         \expandafter\HyColor@UseColor\Hy@ocgcolor
8910         \box0 %
8911       \endgroup
8912       \@pdfm@mark{content EMC}%
8913     }%
8914   \fi
8915   \endgroup
8916 }%
8917 }%
8918 \else
8919   \Hy@DisableOption{ocgcolorlinks}%
8920 \fi

8921 \def\Hy@BeginAnnot#1{%
8922   \stepcounter{Hy@AnnotLevel}%
8923   \ifnum\value{Hy@AnnotLevel}=\@ne
8924     #1%
8925   \fi
8926 }
8927 \def\Hy@endAnnot{%
8928   \ifnum\value{Hy@AnnotLevel}=\@ne
8929     \Hy@endcolorlink
8930     \@pdfm@mark{eann}%
8931   \fi
8932   \addtocounter{Hy@AnnotLevel}\m@ne
8933 }

8934 \def\Hy@undefinedname{UNDEFINED}
8935 \def\hyper@linkstart#1#2{%
8936   \Hy@VerboseLinkStart{#1}{#2}%
8937   \Hy@BeginAnnot{%
8938     \protected@edef\Hy@testname{#2}%
8939     \ifx\Hy@testname\@empty
8940       \Hy@Warning{%
8941         Empty destination name,\MessageBreak
8942         using '\Hy@undefinedname'%
8943       }%
8944       \let\Hy@testname\Hy@undefinedname
8945     \else
8946       \Hy@pstringdef\Hy@testname{%
8947         \expandafter\HyperDestNameFilter\expandafter{%
8948           \Hy@testname
8949         }%
8950       }%
8951     \fi

```



```

8952 \pdfmark{
8953   bann<<
8954   /Type/Annot
8955   /Subtype/Link
8956   \ifHy@pdfa /F 4\fi
8957   \Hy@setpdfborder
8958   \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8959   \else
8960     /C[\csname @#1bordercolor\endcsname]
8961   \fi
8962   /A<<
8963   /S/GoTo
8964   /D(\Hy@testname)
8965   >>
8966   >>
8967 }
8968 \expandafter\Hy@colorlink\csname @#1color\endcsname
8969 }
8970 }
8971 \def\hyper@linkend{\Hy@EndAnnot}%
8972 \def\hyper@link#1#2#3{
8973   \hyper@linkstart{#1}{#2}#3\hyper@linkend
8974 }
8975 \def\hyper@linkfile#1#2#3{
8976   \leavevmode
8977   \Hy@BeginAnnot{
8978     \Hy@pstringdef\Hy@pstringF{#2}%
8979     \Hy@pstringdef\Hy@pstringD{#3}%
8980     \pdfmark{
8981       bann<<
8982       /Type/Annot
8983       /Subtype/Link
8984       \ifHy@pdfa /F 4\fi
8985       \Hy@setpdfborder
8986       \ifx\@filebordercolor\relax
8987       \else
8988         /C[\@filebordercolor]
8989       \fi
8990       /A<<
8991       /S/GoToR
8992       /F(\Hy@pstringF)%
8993       /D\ifx\#3\@pdfstartview\else(\Hy@pstringD)\fi
8994       \Hy@SetNewWindow
8995       >>
8996       >>
8997     }
8998     \Hy@colorlink\@filecolor
8999   }
9000   #1%
9001   \Hy@EndAnnot
9002 }
9003 \def\hyper@linkurl#1#2{
9004   \leavevmode
9005   \Hy@BeginAnnot{
9006     \Hy@pstringdef\Hy@pstringURI{#2}%
9007     \pdfmark{
9008       bann<<

```

```

9009      /Type/Annot%
9010      /Subtype/Link%
9011      \ifHy@pdfa /F 4\fi
9012      \Hy@setpdfborder
9013      \ifx\@urlbordercolor\relax
9014      \else
9015      /C[\@urlbordercolor]%
9016      \fi
9017      /A<<%
9018      /S/URI%
9019      /URI(\Hy@pstringURI)%
9020      >>%
9021      >>%
9022      }%
9023      \Hy@colorlink\@urlcolor
9024      }%
9025      #1%
9026      \Hy@endAnnot
9027      }
9028      \def\Acrobatmenu#1#2{%
9029      \Hy@Acrobatmenu{#1}{#2}{%
9030      \Hy@BeginAnnot{%
9031      \@pdfm@mark{%
9032      bann<<%
9033      /Type/Annot%
9034      /Subtype/Link%
9035      \ifHy@pdfa /F 4\fi
9036      /A<<%
9037      /S/Named%
9038      /N/#1%
9039      >>%
9040      \Hy@setpdfborder
9041      \ifx\@menubordercolor\relax
9042      \relax
9043      /C[\@menubordercolor]%
9044      \fi
9045      >>%
9046      }%
9047      \Hy@colorlink\@menucolor
9048      }%
9049      #2%
9050      \Hy@endAnnot
9051      }%
9052      }
9053      \ifx\@pdfproducer\relax
9054      \def\@pdfproducer{dvipdfm}%

```

Detect Xe_TTeX. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9055      \begingroup\expandafter\expandafter\expandafter\endgroup
9056      \expandafter\ifx\csname XeTeXversion\endcsname\relax
9057      \else
9058      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9059      \fi
9060      \fi
9061      \def\PDF@FinishDoc{%
9062      \Hy@UseMaketitleInfos
9063      \HyInfo@GenerateAddons
9064      \@pdfm@mark{%

```

```

9065 docinfo<<%
9066   /Title(\@pdftitle)%
9067   /Subject(\@pdfsubject)%
9068   /Creator(\@pdfcreator)%
9069   \ifx\@pdfcreationdate\@empty
9070   \else
9071     /CreationDate(\@pdfcreationdate)%
9072   \fi
9073   \ifx\@pdfmoddate\@empty
9074   \else
9075     /ModDate(\@pdfmoddate)%
9076   \fi
9077   /Author(\@pdfauthor)%
9078   \ifx\@pdfproducer\relax
9079   \else
9080     /Producer(\@pdfproducer)%
9081   \fi
9082   /Keywords(\@pdfkeywords)%
9083   \ifx\@pdftrapped\@empty
9084   \else
9085     /Trapped/\@pdftrapped
9086   \fi
9087   \HyInfo@Addons
9088   >>%
9089 }%
9090 \Hy@DisableOption{pdfauthor}%
9091 \Hy@DisableOption{pdftitle}%
9092 \Hy@DisableOption{pdfsubject}%
9093 \Hy@DisableOption{pdfcreator}%
9094 \Hy@DisableOption{pdfcreationdate}%
9095 \Hy@DisableOption{pdfmoddate}%
9096 \Hy@DisableOption{pdfproducer}%
9097 \Hy@DisableOption{pdfkeywords}%
9098 \Hy@DisableOption{pdftrapped}%
9099 \Hy@DisableOption{pdfinfo}%
9100 }

9101 \def\PDF@SetupDoc{%
9102   \edef\Hy@temp{%
9103     \ifHy@toolbar\else /HideToolbar true\fi
9104     \ifHy@menubar\else /HideMenubar true\fi
9105     \ifHy>windowui\else /HideWindowUI true\fi
9106     \ifHy@fitwindow /FitWindow true\fi
9107     \ifHy@centerwindow /CenterWindow true\fi
9108     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9109     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9110     \Hy@UseNameKey{Direction}\@pdfdirection
9111     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9112     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9113     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9114     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9115     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9116     \Hy@UseNameKey{Duplex}\@pdfduplex
9117     \ifx\@pdfpicktraybypdfsize\@empty
9118     \else
9119       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9120     \fi
9121     \ifx\@pdfprintpagerange\@empty

```

```

9122 \else
9123   /PrintPageRange[\@pdfprintpagerange]%
9124 \fi
9125 \ifx\@pdfnumcopies\@empty
9126 \else
9127   /NumCopies \@pdfnumcopies
9128 \fi
9129 }%
9130 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9131 \@pdfm@mark{%
9132   docview<<%
9133     \ifx\@pdfstartpage\@empty
9134     \else
9135       \ifx\@pdfstartview\@empty
9136       \else
9137         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9138       \fi
9139     \fi
9140     \ifx\@baseurl\@empty
9141     \else
9142       /URI<</Base(\Hy@pstringB)>>%
9143     \fi
9144     /PageMode/\@pdfpagemode
9145     \ifx\Hy@temp\@empty
9146     \else
9147       /ViewerPreferences<<\Hy@temp>>%
9148     \fi
9149     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9150     \ifx\@pdflang\@empty
9151     \else
9152       /Lang(\@pdflang)%
9153     \fi
9154   >>%
9155 }%
9156 \ifx\@pdfpagescrop\@empty
9157 \else
9158   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9159 \fi
9160 }
9161 </dvipdfm | xetex>

```

XeTeX uses pdfTeX's method `\pdfpagewidth` and `\pdfpageheight` for setting the paper size.

```

9162 <*dvipdfm>
9163 \AtBeginShipoutFirst{%
9164   \ifHy@setpagesize
9165     \begingroup
9166     \@ifundefined{stockwidth}{%
9167       \ifdim\paperwidth>\z@
9168       \ifdim\paperheight>\z@
9169         \special{papersize=\the\paperwidth,\the\paperheight}%
9170       \fi
9171     \fi
9172   }{%
9173     \ifdim\stockwidth>\z@
9174     \ifdim\stockheight>\z@
9175       \special{papersize=\the\stockwidth,\the\stockheight}%
9176     \fi

```

```

9177     \fi
9178   }%
9179   \endgroup
9180 \fi
9181 \Hy@DisableOption{setpagesize}%
9182 }
9183 </dvipdfm>

```

46.6 VTeX typesetting system

Provided by MicroPress, May 1998. They require VTeX version 6.02 or newer; see <http://www.micropress-inc.com/> for details.

```

9184 <*vtexhtml>
9185 \providecommand*{\XR@ext}{htm}
9186 \RequirePackage{vtexhtml}
9187 \newif\if@Localurl
9188 \def\PDF@FinishDoc{}
9189 \def\PDF@SetupDoc{%
9190   \ifx\@baseurl\@empty
9191     \else
9192       \special{!direct <base href="\@baseurl">}%
9193     \fi
9194 }
9195 \def\@urltype{url}
9196 \def\hyper@link#1#2#3{%
9197   \Hy@VerboseLinkStart{#1}{#2}%
9198   \leavevmode
9199   \special{!direct <a href=%
9200     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9201   #3%
9202   \special{!direct </a>}%
9203 }
9204 \def\hyper@linkurl#1#2{%
9205   \begingroup
9206     \hyper@chars
9207     \leavevmode
9208     \MathBSuppress=1\relax
9209     \special{!direct <a href=%
9210       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9211     #1%
9212     \MathBSuppress=0\relax
9213     \special{!direct </a>}%
9214   \endgroup
9215 }
9216 \def\hyper@linkfile#1#2#3{%
9217   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\#3\fi}%
9218 }
9219 \def\hyper@linkstart#1#2{%
9220   \Hy@VerboseLinkStart{#1}{#2}%
9221   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
9222     \@Localurltrue
9223     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9224   \else
9225     \@Localurlfalse
9226   \begingroup
9227     \hyper@chars
9228     \special{!aref \HyperDestNameFilter{#2}}%

```

```

9229 \endgroup
9230 \fi
9231 }
9232 \def\hyper@linkend{%
9233 \if@Localurl
9234 \special{!endaref}%
9235 \else
9236 \special{!direct </a>}%
9237 \fi
9238 }
9239 \def\hyper@anchorstart#1{%
9240 \Hy@SaveLastskip
9241 \Hy@VerboseAnchor{#1}%
9242 \begingroup
9243 \hyper@chars
9244 \special{!aname #1}%
9245 \special{!direct <a name=%
9246 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9247 \endgroup
9248 \Hy@Activeanchortrue
9249 }
9250 \def\hyper@anchorend{%
9251 \special{!direct </a>}%
9252 \Hy@Activeanchorfalse
9253 \Hy@RestoreLastskip
9254 }
9255 \def\hyper@anchor#1{%
9256 \Hy@SaveLastskip
9257 \Hy@VerboseAnchor{#1}%
9258 \begingroup
9259 \let\protect=\string
9260 \hyper@chars
9261 \leavevmode
9262 \special{!aname #1}%
9263 \special{!direct <a name=%
9264 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9265 \endgroup
9266 \Hy@Activeanchortrue
9267 \bgroup\anchor@spot\egroup
9268 \special{!direct </a>}%
9269 \Hy@Activeanchorfalse
9270 \Hy@RestoreLastskip
9271 }
9272 \def\@Form[#1]{%
9273 \typeout{Sorry, TeXpider does not yet support FORMs}%
9274 }
9275 \def\@endForm{}
9276 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9277 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9278 }
9279 \def\@TextField[#1]#2{% parameters, label
9280 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9281 }
9282 \def\@CheckBox[#1]#2{% parameters, label
9283 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9284 }
9285 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices

```

```

9286 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9287 }
9288 \def\@PushButton[#1]#2{% parameters, label
9289 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9290 }
9291 \def\@Reset[#1]#2{%
9292 \typeout{Sorry, TeXpider does not yet support FORMs}%
9293 }
9294 \def\@Submit[#1]#2{%
9295 \typeout{Sorry, TeXpider does not yet support FORMs}%
9296 }
9297 \</vtexhtml>
9298 \< *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.

```

9299 \ifx\mediaheight\@undefined
9300 \else
9301 \ifx\mediaheight\relax
9302 \else
9303 \ifHy@setpagesize
9304 \providecommand*\VTeXInitMediaSize{%
9305 \ltx@ifundefined{stockwidth}{%
9306 \ifdim\paperheight>0pt %
9307 \setlength\mediaheight\paperheight
9308 \fi
9309 \ifdim\paperheight>0pt %
9310 \setlength\mediawidth\paperwidth
9311 \fi
9312 }{%
9313 \ifdim\stockheight>0pt %
9314 \setlength\mediaheight\stockheight
9315 \fi
9316 \ifdim\stockwidth>0pt %
9317 \setlength\mediawidth\stockwidth
9318 \fi
9319 }%
9320 }%
9321 \AtBeginDocument{\VTeXInitMediaSize}%
9322 \fi
9323 \Hy@DisableOption{setpagesize}%
9324 \fi
9325 \fi

```

Older versions of VTeX require xyz in lower case.

```

9326 \providecommand*\@pdfview{xyz}
9327 \providecommand*\@pdfborder{0 0 1}
9328 \providecommand*\@pdfborderstyle{}
9329 \let\CurrentBorderColor\@linkbordercolor
9330 \def\hyper@anchor#1{%
9331 \Hy@SaveLastskip
9332 \Hy@VerboseAnchor{#1}%
9333 \begingroup
9334 \let\protect=\string
9335 \hyper@chars
9336 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9337 \endgroup

```

```

9338 \Hy@activeanchortrue
9339 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9340 \Hy@activeanchorfalse
9341 \Hy@RestoreLastskip
9342 }
9343 \def\hyper@anchorstart#1{%
9344 \Hy@SaveLastskip
9345 \Hy@VerboseAnchor{#1}%
9346 \begingroup
9347 \hyper@chars
9348 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9349 \endgroup
9350 \Hy@activeanchortrue
9351 }
9352 \def\hyper@anchorend{%
9353 \Hy@activeanchorfalse
9354 \Hy@RestoreLastskip
9355 }
9356 \def\@urltype{url}
9357 \def\Hy@undefinedname{UNDEFINED}
9358 \def\hyper@linkstart#1#2{%
9359 \Hy@VerboseLinkStart{#1}{#2}%
9360 \Hy@pstringdef\Hy@pstringURI{#2}%
9361 \expandafter\Hy@colorlink\csname @#1color\endcsname
9362 \ltx@ifundefined{@#1bordercolor}{%
9363 \let\CurrentBorderColor\relax
9364 }{%
9365 \edef\CurrentBorderColor{%
9366 \csname @#1bordercolor\endcsname
9367 }%
9368 }%
9369 \def\Hy@tempa{#1}%
9370 \ifx\Hy@tempa\@urltype
9371 \special{!%
9372 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9373 a=<%
9374 \ifHy@pdfa /F 4\fi
9375 \Hy@setpdfborder
9376 \ifx\CurrentBorderColor\relax
9377 \else
9378 /C [\CurrentBorderColor]%
9379 \fi
9380 >%
9381 }%
9382 \else
9383 \protected@edef\Hy@testname{#2}%
9384 \ifx\Hy@testname\@empty
9385 \Hy@Warning{%
9386 Empty destination name,\MessageBreak
9387 using '\Hy@undefinedname'%
9388 }%
9389 \let\Hy@testname\Hy@undefinedname
9390 \fi
9391 \special{!%
9392 aref \expandafter\HyperDestNameFilter
9393 \expandafter{\Hy@testname};%
9394 a=<%

```



```

9395     \ifHy@pdfa /F 4\fi
9396     \Hy@setpdfborder
9397     \ifx\CurrentBorderColor\relax
9398     \else
9399         /C [\CurrentBorderColor]%
9400     \fi
9401     >%
9402     }%
9403 \fi
9404 }
9405 \def\hyper@linkend{%
9406     \special{!endaref}%
9407     \Hy@endcolorlink
9408 }
9409 \def\hyper@linkfile#1#2#3{%
9410     \leavevmode
9411     \special{!%
9412         aref <%
9413         \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9414         f=#2>#3;%
9415         a=<%
9416         \ifHy@pdfa /F 4\fi
9417         \Hy@setpdfborder
9418         \ifx\@filebordercolor\relax
9419         \else
9420             /C [\@filebordercolor]%
9421         \fi
9422         >%
9423     }%
9424     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9425     \special{!endaref}%
9426 }
9427 \def\hyper@linkurl#1#2{%
9428     \begingroup
9429     \Hy@pstringdef\Hy@pstringURI{#2}%
9430     \hyper@chars
9431     \leavevmode
9432     \special{!%
9433         aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9434         a=<%
9435         \ifHy@pdfa /F 4\fi
9436         \Hy@setpdfborder
9437         \ifx\@urlbordercolor\relax
9438         \else
9439             /C [\@urlbordercolor]%
9440         \fi
9441         >%
9442     }%
9443     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9444     \special{!endaref}%
9445     \endgroup
9446 }
9447 \def\hyper@link#1#2#3{%
9448     \Hy@VerboseLinkStart{#1}{#2}%
9449     \ltx@ifundefined{@#1bordercolor}{%
9450         \let\CurrentBorderColor\relax
9451     }{%

```

```

9452 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9453 }%
9454 \leavevmode
9455 \protected@edef\Hy@testname{#2}%
9456 \ifx\Hy@testname\@empty
9457 \Hy@Warning{%
9458   Empty destination name,\MessageBreak
9459   using '\Hy@undefinedname'%
9460 }%
9461 \let\Hy@testname\Hy@undefinedname
9462 \fi
9463 \special{!%
9464   aref \expandafter\HyperDestNameFilter
9465   \expandafter{\Hy@testname};%
9466   a=<%
9467   \ifHy@pdfa /F 4\fi
9468   \Hy@setpdfborder
9469   \ifx\CurrentBorderColor\relax
9470   \else
9471     /C [\CurrentBorderColor]%
9472   \fi
9473   >%
9474 }%
9475 \expandafter
9476 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9477 \special{!endaref}%
9478 }
9479 \def\hyper@image#1#2{%
9480 \hyper@linkurl{#2}{#1}%
9481 }
9482 \def\@hyper@launch run:#1\#2#3{%
9483 \Hy@pstringdef\Hy@pstringF{#1}%
9484 \Hy@pstringdef\Hy@pstringP{#3}%
9485 \leavevmode
9486 \special{!aref %
9487   <u=%
9488     /Type/Action%
9489     /S/Launch%
9490     /F(\Hy@pstringF)%
9491     \Hy@SetNewWindow
9492     \ifx\#3\%
9493     \else
9494       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9495     \fi%
9496   >%
9497   a=<%
9498     \ifHy@pdfa /F 4\fi
9499     \Hy@setpdfborder
9500     \ifx\@runbordercolor\relax
9501     \else
9502       /C[\@runbordercolor]%
9503     \fi
9504   >%
9505 }%
9506 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9507 \special{!endaref}%
9508 }

```

```

9509 \def\Acrobatmenu#1#2{%
9510   \Hy@Acrobatmenu{#1}{#2}{%
9511     \special{!%
9512       aref <u=/S /Named /N /#1>;%
9513       a=<%
9514         \ifHy@pdfa /F 4\fi
9515         \Hy@setpdfborder
9516         \ifx\@menubordercolor\relax
9517         \else
9518           /C[\@menubordercolor]%
9519         \fi
9520       >%
9521     }%
9522     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9523     \special{!endaref}%
9524   }%
9525 }

```

The following code (transition effects) is made by Alex Kostin.

The code below makes sense for \TeX 7.02 or later.

Please never use $\text{\@ifundefined\TeXversion}\{..\}\{..\}$ globally.

```

9526 \ifnum\Hy@VTeXversion<702 %
9527 \else
9528   \def\hyper@pagetransition{%
9529     \ifx\@pdfpagetransition\relax
9530     \else
9531       \ifx\@pdfpagetransition\@empty

```

Standard incantation.

1. Does an old entry have to be deleted? 2. If 1=yes, how to delete?

```

9532   \else
9533     \hvtex@parse@trans\@pdfpagetransition
9534   \fi
9535 \fi
9536 }%

```

I have to write an “honest” parser to convert raw PDF code into \TeX \special .
(AVK)

Syntax of \TeX $\text{\special}\{!trans <transition_effect>\}$:

```

<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:

```

9537 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9538 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%

```

```

9539 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}}%
9540 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}}%
9541 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}}%
9542 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}}%
9543 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}}%

```

Optional parameters:

```

9544 \def\hvtex@par@dimension{/Dm}%
9545 \def\hvtex@par@direction{/Di}%
9546 \def\hvtex@par@duration{/D}%
9547 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9548 \def\hvtex@gettoken{%
9549 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9550 }%

```

Notice that tokens in the input buffer must be space delimited.

```

9551 \def\hvtex@gettoken@#1 #2\@nil{%
9552 \edef\hvtex@token{#1}%
9553 \edef\hvtex@buffer{#2}%
9554 }%
9555 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9556 \let\hvtex@trans@code\@empty
9557 \let\hvtex@param@dimension\@empty
9558 \let\hvtex@param@direction\@empty
9559 \let\hvtex@param@duration\@empty
9560 \let\hvtex@param@motion\@empty
9561 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9562 \hvtex@gettoken
9563 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9564 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9565 \else
9566 \hvtex@gettoken
9567 \fi
9568 \fi
9569 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9570 \hvtex@trans@params
9571 }%

```

Reentrant macro to parse optional parameters.

```

9572 \def\hvtex@trans@params{%
9573 \ifx\hvtex@buffer\@empty
9574 \else
9575 \hvtex@gettoken
9576 \let\hvtex@trans@par\hvtex@token
9577 \ifx\hvtex@buffer\@empty
9578 \else
9579 \hvtex@gettoken
9580 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. VTeX special takes it in milliseconds.

```
9581      \let\hvtex@param@duration\hvtex@token
9582      \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9583      \expandafter\edef\expandafter\hvtex@param@motion
9584      \expandafter{\expandafter\@gobble\hvtex@token}%
9585      \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9586      \expandafter\edef\expandafter\hvtex@param@dimension
9587      \expandafter{\expandafter\@gobble\hvtex@token}%
9588      \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).

```
9589      \let\hvtex@param@direction\hvtex@token
9590      \fi\fi\fi
9591      \fi
9592      \fi
9593      \ifx\hvtex@buffer\@empty
9594      \let\next\hvtex@produce@trans
9595      \else
9596      \let\next\hvtex@trans@params
9597      \fi
9598      \next
9599      }%
```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```
9600 \def\hvtex@produce@trans{%
9601   \let\vtex@trans@special\@empty
9602   \if S\hvtex@trans@code
9603     \edef\vtex@trans@special{\hvtex@trans@code
9604       \hvtex@param@dimension\hvtex@param@motion}%
9605   \else\if B\hvtex@trans@code
9606     \edef\vtex@trans@special{%
9607       \hvtex@trans@code\hvtex@param@dimension
9608     }%
9609   \else\if X\hvtex@trans@code
9610     \edef\vtex@trans@special{%
9611       \hvtex@trans@code\hvtex@param@motion
9612     }%
9613   \else\if W\hvtex@trans@code
9614     \edef\vtex@trans@special{%
9615       \hvtex@trans@code\hvtex@param@direction
9616     }%
9617   \else\if D\hvtex@trans@code
9618     \let\vtex@trans@special\hvtex@trans@code
9619   \else\if R\hvtex@trans@code
9620     \let\vtex@trans@special\hvtex@trans@code
9621   \else\if G\hvtex@trans@code
9622     \edef\vtex@trans@special{%
9623       \hvtex@trans@code\hvtex@param@direction
9624     }%
9625   \fi\fi\fi\fi\fi
9626   \ifx\vtex@trans@special\@empty
9627   \else
9628     \ifx\hvtex@param@duration\@empty
```

```

9629 \else
9630 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9631 \multiply\dimen@\@m
9632 \edef\vtex@trans@special{%
9633 \vtex@trans@special,\strip@pt\dimen@
9634 }%
9635 \fi

```

And all the mess is just for this.

```

9636 \special{!trans \vtex@trans@special}%
9637 \fi
9638 }%

9639 \def\hyper@pageduration{%
9640 \ifx\@pdfpageduration\relax
9641 \else
9642 \ifx\@pdfpageduration\@empty
9643 \special{!duration-}%
9644 \else
9645 \special{!duration \@pdfpageduration}%
9646 \fi
9647 \fi
9648 }%

9649 \def\hyper@pagehidden{%
9650 \ifHy@useHidKey
9651 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9652 \fi
9653 }%

9654 \g@addto@macro\Hy@EveryPageBoxHook{%
9655 \hyper@pagetransition
9656 \hyper@pageduration
9657 \hyper@pagehidden
9658 }%
9659 \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

```

9660 \ifx\@pdfproducer\relax
9661 \def\@pdfproducer{VTeX}%
9662 \ifnum\Hy@VTeXversion>\z@
9663 \count@\VTeXversion
9664 \divide\count@ 100 %
9665 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9666 \multiply\count@ -100 %
9667 \advance\count@\VTeXversion
9668 \edef\@pdfproducer{%
9669 \@pdfproducer
9670 .\ifnum\count@<10 0\fi\the\count@
9671 \ifx\VTeXOS\@undefined\else

```

```

9672 \ifnum\VTeXOS>0 %
9673 \ifnum\VTeXOS<6 %
9674 \space(
9675 \ifcase\VTeXOS
9676 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9677 \fi
9678 )%
9679 \fi
9680 \fi
9681 \fi
9682 ,\space
9683 \ifnum\OpMode=\@ne PDF\else PS\fi
9684 \space backend%
9685 \ifx\gexmode\@undefined\else
9686 \ifnum\gexmode>\z@\space with GeX\fi
9687 \fi
9688 }%
9689 \fi
9690 \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).

```

9691 \def\PDF@SetupDoc{%
9692 \ifx\@pdfpagescrop\@empty
9693 \else
9694 \special{!pdfinfo b=<\@pdfpagescrop>}%
9695 \fi
9696 \ifx\@pdfstartpage\@empty
9697 \else
9698 \ifx\@pdfstartview\@empty
9699 \else
9700 \special{!onopen Page\@pdfstartpage}%
9701 \fi
9702 \fi
9703 \special{!pdfinfo p=</\@pdfpagemode>}%
9704 \ifx\@baseurl\@empty
9705 \else
9706 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9707 \fi
9708 \special{!pdfinfo v=<<<%
9709 \ifHy@toolbar\else /HideToolbar true\fi
9710 \ifHy@menubar\else /HideMenubar true\fi
9711 \ifHy>windowui\else /HideWindowUI true\fi
9712 \ifHy@fitwindow /FitWindow true\fi
9713 \ifHy@centerwindow /CenterWindow true\fi

```

```

9714 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9715 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9716 \Hy@UseNameKey{Direction}\@pdfdirection
9717 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9718 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9719 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9720 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9721 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9722 \Hy@UseNameKey{Duplex}\@pdfduplex
9723 \ifx\@pdfpicktraybypdfsize\@empty
9724 \else
9725 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9726 \fi
9727 \ifx\@pdfprintpagerange\@empty
9728 \else
9729 /PrintPageRange\@pdfprintpagerange\%
9730 \fi
9731 \ifx\@pdfnumcopies\@empty
9732 \else
9733 /NumCopies \@pdfnumcopies
9734 \fi
9735 >>>}%
9736 \ifx\@pdfpagelayout\@empty
9737 \else
9738 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9739 \fi
9740 }%
9741 \HyInfo@AddonUnsupportedtrue
9742 \def\PDF@FinishDoc{%
9743 \Hy@UseMaketitleInfos
9744 \HyInfo@TrappedUnsupported
9745 \special{!pdfinfo a=<\@pdfauthor>}%
9746 \special{!pdfinfo t=<\@pdftitle>}%
9747 \special{!pdfinfo s=<\@pdfsubject>}%
9748 \special{!pdfinfo c=<\@pdfcreator>}%
9749 \ifx\@pdfproducer\relax
9750 \else
9751 \special{!pdfinfo r=<\@pdfproducer>}%
9752 \fi
9753 \special{!pdfinfo k=<\@pdfkeywords>}%
9754 \Hy@DisableOption{pdfauthor}%
9755 \Hy@DisableOption{pdftitle}%
9756 \Hy@DisableOption{pdfsubject}%
9757 \Hy@DisableOption{pdfcreator}%
9758 \Hy@DisableOption{pdfcreationdate}%
9759 \Hy@DisableOption{pdfmoddate}%
9760 \Hy@DisableOption{pdfproducer}%
9761 \Hy@DisableOption{pdfkeywords}%
9762 \Hy@DisableOption{pdftrapped}%
9763 \Hy@DisableOption{pdfinfo}%
9764 }
9765 </vtex>

```


46.7 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.

```
9766 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
9767 <package>\providecommand*\Hy@DistillerDestFix{-}  
9768 <*pdfmark | dviwindo>  
9769 \def\Hy@DistillerDestFix{%  
9770   \begingroup  
9771   \let\x\literalps@out
```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```
9772   \ifnum \@ifundefined{OpMode}{0}{%  
9773     \@ifundefined{gexmode}{0}{%  
9774       \ifnum\gexmode>0 \OpMode\else 0\fi  
9775     }>1 %  
9776   \def\x##1{%  
9777     \immediate\special{!=##1}%  
9778   }%  
9779   \fi  
9780   \x{%  
9781     /product where{%  
9782       pop %  
9783       product(Distiller)search{%  
9784         pop pop pop %  
9785         version(.)search{%  
9786           exch pop exch pop%  
9787           (3011)eq{%  
9788             gsave %  
9789             newpath 0 0 moveto closepath clip%  
9790             /Courier findfont 10 scalefont setfont %  
9791             72 72 moveto(.)show %  
9792             grestore%  
9793           }if%  
9794           }{pop}ifelse%  
9795           }{pop}ifelse%  
9796         }if%  
9797       }%  
9798     \endgroup  
9799   }  
9800 </pdfmark | dviwindo>
```

46.8 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

```

9801 (*pdfmark)
9802 \Hy@breaklinks@unsupported
9803 \def\hyper@anchor#1{%
9804   \Hy@SaveLastskip
9805   \Hy@VerboseAnchor{#1}%
9806   \begingroup
9807   \pdfmark[\anchor@spot]{%
9808     pdfmark=/DEST,%
9809     linktype=anchor,%
9810     View=/\@pdfview \@pdfviewparams,%
9811     DestAnchor={#1}%
9812   }%
9813   \endgroup
9814   \Hy@RestoreLastskip
9815 }
9816 \ltx@ifundefined{hyper@anchorstart}{\endinput}{}
9817 \def\hyper@anchorstart#1{%
9818   \Hy@SaveLastskip
9819   \Hy@VerboseAnchor{#1}%
9820   \literalps@out{H.S}%
9821   \Hy@AllowHyphens
9822   \xdef\hyper@currentanchor{#1}%
9823   \Hy@activeanchortrue
9824 }
9825 \def\hyper@anchorend{%
9826   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9827   \pdfmark{%
9828     pdfmark=/DEST,%
9829     linktype=anchor,%
9830     View=/\@pdfview \@pdfviewparams,%
9831     DestAnchor=\hyper@currentanchor,%
9832   }%
9833   \Hy@activeanchorfalse
9834   \Hy@RestoreLastskip
9835 }
9836 \def\hyper@linkstart#1#2{%
9837   \Hy@VerboseLinkStart{#1}{#2}%
9838   \ifHy@breaklinks
9839   \else
9840     \leavevmode\hbox\bgroup
9841     \fi
9842     \expandafter\Hy@colorlink\csname @#1color\endcsname
9843     \literalps@out{H.S}%
9844     \Hy@AllowHyphens
9845     \xdef\hyper@currentanchor{#2}%
9846     \gdef\hyper@currentlinktype{#1}%
9847 }
9848 \def\hyper@linkend{%
9849   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9850   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%

```

```

9851 \let\Hy@tempcolor\relax
9852 }{%
9853 \edef\Hy@tempcolor{%
9854 \csname @\hyper@currentlinktype bordercolor\endcsname
9855 }%
9856 }%
9857 \pdfmark{%
9858 pdfmark=/ANN,%
9859 linktype=link,%
9860 Subtype=/Link,%
9861 PDFAFlags=4,%
9862 Dest=\hyper@currentanchor,%
9863 AcroHighlight=\@pdfhighlight,%
9864 Border=\@pdfborder,%
9865 BorderStyle=\@pdfborderstyle,%
9866 Color=\Hy@tempcolor,%
9867 Raw=H.B%
9868 }%
9869 \Hy@endcolorlink
9870 \ifHy@breaklinks
9871 \else
9872 \egroup
9873 \fi
9874 }

```

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.

```

9875 \begingroup
9876 \catcode'P=12 %
9877 \catcode'T=12 %
9878 \lowercase{\endgroup
9879 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
9880 }
9881 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

9882 \def\hyper@pagetransition{%
9883 \ifx\@pdfpagetransition\relax
9884 \else
9885 \ifx\@pdfpagetransition\empty
9886 % 1. Does an old entry have to be deleted?
9887 % 2. If 1=yes, how to delete?
9888 \else
9889 \pdfmark{%
9890 pdfmark=/PUT,%
9891 Raw={%
9892 \string{ThisPage\string}%
9893 <</Trans << /S /\@pdfpagetransition\space >> >>%
9894 }%
9895 }%
9896 \fi
9897 \fi
9898 }

```

`\hyper@pageduration`

```

9899 \def\hyper@pageduration{%

```

```

9900 \ifx\@pdfpageduration\relax
9901 \else
9902 \ifx\@pdfpageduration\@empty
9903 % 1. Does an old entry have to be deleted?
9904 % 2. If 1=yes, how to delete?
9905 \else
9906 \pdfmark{%
9907 pdfmark=/PUT,%
9908 Raw={%
9909 \string{ThisPage\string}%
9910 <</Dur \@pdfpageduration>>%
9911 }%
9912 }%
9913 \fi
9914 \fi
9915 }

```

\hyper@pagehidden

```

9916 \def\hyper@pagehidden{%
9917 \ifHy@useHidKey
9918 \pdfmark{%
9919 pdfmark=/PUT,%
9920 Raw={%
9921 \string{ThisPage\string}%
9922 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9923 }%
9924 }%
9925 \fi
9926 }

9927 \g@addto@macro\Hy@EveryPageBoxHook{%
9928 \hyper@pagetransition
9929 \hyper@pageduration
9930 \hyper@pagehidden
9931 }

9932 \def\hyper@image#1#2{%
9933 \hyper@linkurl{#2}{#1}%
9934 }

9935 \def\Hy@undefinedname{UNDEFINED}
9936 \def\hyper@link#1#2#3{%
9937 \Hy@VerboseLinkStart{#1}{#2}%
9938 \ltx@ifundefined{@#1bordercolor}{%
9939 \let\Hy@tempcolor\relax
9940 }{%
9941 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
9942 }%
9943 \begingroup
9944 \protected@edef\Hy@testname{#2}%
9945 \ifx\Hy@testname\@empty
9946 \Hy@Warning{%
9947 Empty destination name,\MessageBreak
9948 using '\Hy@undefinedname'%
9949 }%
9950 \let\Hy@testname\Hy@undefinedname
9951 \fi
9952 \pdfmark[{#3}]{%
9953 Color=\Hy@tempcolor,%

```

```

9954     linktype={#1},%
9955     AcroHighlight=\@pdfhighlight,%
9956     Border=\@pdfborder,%
9957     BorderStyle=\@pdfborderstyle,%
9958     pdfmark=/ANN,%
9959     Subtype=/Link,%
9960     PDFAFlags=4,%
9961     Dest=\Hy@testname
9962   }%
9963 \endgroup
9964 }
9965 \newtoks\pdf@docset
9966 \def\PDF@FinishDoc{%
9967   \Hy@UseMaketitleInfos
9968   \HyInfo@GenerateAddons
9969   \let\Hy@temp\@empty
9970   \ifx\@pdfcreationdate\@empty
9971   \else
9972     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9973   \fi
9974   \ifx\@pdfmoddate\@empty
9975   \else
9976     \expandafter\def\expandafter\Hy@temp\expandafter{%
9977       \Hy@temp
9978       ModDate=\@pdfmoddate,%
9979     }%
9980   \fi
9981   \ifx\@pdfproducer\relax
9982   \else
9983     \expandafter\def\expandafter\Hy@temp\expandafter{%
9984       \Hy@temp
9985       Producer=\@pdfproducer,%
9986     }%
9987   \fi
9988   \expandafter
9989   \pdfmark\expandafter{%
9990     \Hy@temp
9991     pdfmark=/DOCINFO,%
9992     Title=\@pdftitle,%
9993     Subject=\@pdfsubject,%
9994     Creator=\@pdfcreator,%
9995     Author=\@pdfauthor,%
9996     Keywords=\@pdfkeywords,%
9997     Trapped=\@pdftrapped
9998   }%
9999   \ifx\HyInfo@Addons\@empty
10000 \else
10001   \pdfmark{%
10002     pdfmark=/DOCINFO,%
10003     Raw={\HyInfo@Addons}%
10004   }%
10005 \fi
10006 \Hy@DisableOption{pdfauthor}%
10007 \Hy@DisableOption{pdftitle}%
10008 \Hy@DisableOption{pdfsubject}%
10009 \Hy@DisableOption{pdfcreator}%
10010 \Hy@DisableOption{pdfcreationdate}%

```

```

10011 \Hy@DisableOption{pdfmoddate}%
10012 \Hy@DisableOption{pdfproducer}%
10013 \Hy@DisableOption{pdfkeywords}%
10014 \Hy@DisableOption{pdftrapped}%
10015 \Hy@DisableOption{pdfinfo}%
10016 }
10017 \def\PDF@SetupDoc{%
10018 \def\Hy@temp{%
10019 \ifx\@pdfstartpage\@empty
10020 \else
10021 \ifx\@pdfstartview\@empty
10022 \else
10023 \edef\Hy@temp{%
10024 ,Page=\@pdfstartpage
10025 ,View=\@pdfstartview
10026 }%
10027 \fi
10028 \fi
10029 \edef\Hy@temp{%
10030 \noexpand\pdfmark{%
10031 pdfmark=/DOCVIEW,%
10032 PageMode=/\@pdfpagemode
10033 \Hy@temp
10034 }%
10035 }%
10036 \Hy@temp
10037 \ifx\@pdfpagescrop\@empty
10038 \else
10039 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10040 \fi
10041 \edef\Hy@temp{%
10042 \ifHy@toolbar\else /HideToolbar true\fi
10043 \ifHy@menubar\else /HideMenubar true\fi
10044 \ifHy>windowui\else /HideWindowUI true\fi
10045 \ifHy@fitwindow /FitWindow true\fi
10046 \ifHy@centerwindow /CenterWindow true\fi
10047 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10048 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10049 \Hy@UseNameKey{Direction}\@pdfdirection
10050 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10051 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10052 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10053 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10054 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10055 \Hy@UseNameKey{Duplex}\@pdfduplex
10056 \ifx\@pdfpicktraybypdfsize\@empty
10057 \else
10058 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10059 \fi
10060 \ifx\@pdfprintpagerange\@empty
10061 \else
10062 /PrintPageRange\@pdfprintpagerange}%
10063 \fi
10064 \ifx\@pdfnumcopies\@empty
10065 \else
10066 /NumCopies \@pdfnumcopies
10067 \fi

```

```

10068 }%
10069 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10070 \pdfmark{%
10071   pdfmark=/PUT,%
10072   Raw={%
10073     \string{Catalog\string}<<%
10074     \ifx\Hy@temp\@empty
10075       \else
10076         /ViewerPreferences<<\Hy@temp>>%
10077       \fi
10078       \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10079       \ifx\@pdflang\@empty
10080       \else
10081         /Lang(\@pdflang)%
10082       \fi
10083       \ifx\@baseurl\@empty
10084       \else
10085         /URI<</Base(\Hy@pstringB)>>%
10086       \fi
10087     >>%
10088   }%
10089 }%
10090 }
10091 </pdfmark>
10092 <*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.

```

10093 \newif\ifHy@pdfmarkerror
10094 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
10095 \def\pdfmark@[#1]#2{%
10096   \Hy@pdfmarkerrorfalse
10097   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10098   \@processme
10099   \let\pdf@type\relax
10100   \setkeys{PDF}{#2}%
10101   \ifHy@pdfmarkerror
10102   \else
10103     \ifx\pdf@type\relax
10104       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10105       \ifx\#1\%
10106       \else
10107         \pdf@rect{#1}%
10108       \fi
10109     \else
10110       \ifx\#1\%
10111       \literalps@out{%
10112         [\the\pdf@toks\space\pdf@type\space pdfmark%
10113       ]}%
10114     \else
10115       \ltx@ifundefined{@\pdf@linktype color}{%
10116         \Hy@colorlink\@linkcolor
10117       }{%
10118         \expandafter\Hy@colorlink

```

```

10119             \csname @\pdf@linktype color\endcsname
10120         }%
10121         \pdf@rect{#1}%
10122         \literalps@out{%
10123             [\the\pdf@toks\space\pdf@type\space pdfmark%
10124         }%
10125         \Hy@endcolorlink
10126     \fi
10127 \fi
10128 \fi
10129 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (tobyth@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}

```

```

10130 \newsavebox{\pdf@box}
10131 \providecommand*{\Hy@setouterhbox}{\sbox}
10132 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10133 \def\Hy@DEST{/DEST}
10134 \def\pdf@rect#1{%
10135     \leavevmode
10136     \ifHy@breaklinks
10137         \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10138     \else
10139         \sbox\pdf@box{#1}%
10140     \fi
10141     \dimen@ \ht\pdf@box
10142     \ifdim\dp\pdf@box=\z@
10143         \literalps@out{H.S}%
10144     \else
10145         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10146     \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...).

```

10147 \ifHy@breaklinks
10148     \expandafter\Hy@breaklinksunhbox
10149 \else
10150     \expandafter\box
10151 \fi
10152 \pdf@box

```

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

```

```

10153 \ifdim\dimen@=\z@
10154     \literalps@out{H.R}%
10155 \else

```



```

10156 \raise\dimen@\hbox{\literalps@out{H.R}}}%
10157 \fi
10158 \ifx\pdf@type\Hy@DEST
10159 \else
10160 \pdf@addtoksx{H.B}%
10161 \fi
10162 }

```

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.

```

10163 \newtoks\pdf@toks
10164 \newtoks\pdf@defaulttoks
10165 \pdf@defaulttoks={}%
10166 \def\pdf@addtoks#1#2{%
10167 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10168 \@processme
10169 }
10170 \def\pdf@addtoksx#1{%
10171 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10172 \@processme
10173 }
10174 \def\PDFdefaults#1{%
10175 \pdf@defaulttoks={#1}%
10176 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

10177 % what is the type of pdfmark?
10178 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10179 % what is the link type?
10180 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10181 \def\pdf@linktype{link}
10182 % parameter is a stream of PDF
10183 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10184 % parameter is a name
10185 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10186 % parameter is a array
10187 \define@key{PDF}{Border}{%
10188 \edef\Hy@temp{#1}%
10189 \ifx\Hy@temp\@empty
10190 \else
10191 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10192 \fi
10193 }
10194 \let\Hy@BorderArrayPatch\@empty
10195 % parameter is a dictionary
10196 \define@key{PDF}{BorderStyle}{%
10197 \edef\Hy@temp{#1}%
10198 \ifx\Hy@temp\@empty
10199 \else
10200 \pdf@addtoks{<<#1>>}{BS}%
10201 \fi
10202 }
10203 % parameter is a array
10204 \define@key{PDF}{Color}{%
10205 \ifx\relax#1\relax
10206 \else
10207 \pdf@addtoks{[#1]}{Color}% hash-ok
10208 \fi

```

```

10209 }
10210 % parameter is a string
10211 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10212 % parameter is a integer
10213 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10214 % parameter is a array
10215 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10216 % parameter is a string
10217 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10218 % parameter is a string or file
10219 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10220 % parameter is a destination
10221 \define@key{PDF}{Dest}{%
10222   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10223   \ifx\Hy@pstringDest\@empty
10224     \Hy@pdfmarkerrortrue
10225     \Hy@Warning{Destination with empty name ignored}%
10226   \else
10227     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10228   \fi
10229 }
10230 \define@key{PDF}{DestAnchor}{%
10231   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10232   \ifx\Hy@pstringDest\@empty
10233     \Hy@pdfmarkerrortrue
10234     \Hy@Warning{Destination with empty name ignored}%
10235   \else
10236     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10237   \fi
10238 }
10239 % parameter is a string
10240 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10241 % parameter is a string
10242 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10243 % parameter is a int
10244 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10245 \define@key{PDF}{PDFAFlags}{%
10246   \ifHy@pdfa
10247     \pdf@addtoks{#1}{F}%
10248   \fi
10249 }
10250 % parameter is a name
10251 \define@key{PDF}{AcroHighlight}{%
10252   \begingroup
10253     \edef\x{#1}%
10254     \expandafter\endgroup\ifx\x\@empty
10255     \else
10256       \pdf@addtoks{#1}{H}%
10257     \fi
10258 }
10259 % parameter is a string
10260 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10261 % parameter is a string
10262 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10263 % parameter is a string
10264 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10265 % parameter is a string

```

```

10266 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10267 % parameter is a Boolean
10268 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10269 % parameter is a integer or name
10270 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10271 % parameter is a name
10272 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10273 % parameter is a string
10274 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10275 % parameter is a array
10276 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10277 % parameter is a integer
10278 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10279 % parameter is a name
10280 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10281 % parameter is a string
10282 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10283 % parameter is a string
10284 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10285 % parameter is a string
10286 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10287 % parameter is an array
10288 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10289 % parameter is a string
10290 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10291 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10292 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10293 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10294 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10295 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10296 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10297 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10298 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10299 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10300 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10301 \define@key{PDF}{Trapped}{%
10302   \edef\Hy@temp{#1}%
10303   \ifx\Hy@temp\@empty
10304     \else
10305       \pdf@addtoks{/#1}{Trapped}%
10306     \fi
10307 }
10308
10309 </pdfmarkbase>
10310 <*pdfmark>
10311 \def\Acrobatmenu#1#2{%
10312   \Hy@Acrobatmenu{#1}{#2}{%
10313     \pdfmark{[#2]}{%
10314       linktype=menu,%
10315       pdfmark=/ANN,%
10316       AcroHighlight=\@pdfhighlight,%
10317       Border=\@pdfborder,%
10318       BorderStyle=\@pdfborderstyle,%
10319       Action={<< /Subtype /Named /N /#1 >>},%
10320       Subtype=/Link,%
10321       PDFANFlags=4%

```

```

10322 }%
10323 }%
10324 }

```

And now for some useful examples:

```

10325 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10326 \def\PDFNextPage@[#1]#2{%
10327   \pdfmark[{#2}]{%
10328     #1,%
10329     Border=\@pdfborder,%
10330     BorderStyle=\@pdfborderstyle,%
10331     Color=.2 .1 .5,%
10332     pdfmark=/ANN,%
10333     Subtype=/Link,%
10334     PDFAFlags=4,%
10335     Page=/Next%
10336   }%
10337 }
10338 \def\PDFPreviousPage{%
10339   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10340 }
10341 \def\PDFPreviousPage@[#1]#2{%
10342   \pdfmark[{#2}]{%
10343     #1,%
10344     Border=\@pdfborder,%
10345     BorderStyle=\@pdfborderstyle,%
10346     Color=.4 .4 .1,%
10347     pdfmark=/ANN,%
10348     Subtype=/Link,%
10349     PDFAFlags=4,%
10350     Page=/Prev%
10351   }%
10352 }
10353 \def\PDFOpen#1{%
10354   \pdfmark{#1,pdfmark=/DOCVIEW}%
10355 }

```

This will only work if you use Distiller 2.1 or higher.

```

10356 \def\hyper@linkurl#1#2{%
10357   \begingroup
10358   \Hy@pstringdef\Hy@pstringURI{#2}%
10359   \hyper@chars
10360   \leavevmode
10361   \pdfmark[{#1}]{%
10362     pdfmark=/ANN,%
10363     linktype=url,%
10364     AcroHighlight=\@pdfhighlight,%
10365     Border=\@pdfborder,%
10366     BorderStyle=\@pdfborderstyle,%
10367     Color=\@urlbordercolor,%
10368     Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10369     Subtype=/Link,%
10370     PDFAFlags=4%
10371   }%
10372   \endgroup
10373 }
10374 \def\hyper@linkfile#1#2#3{%
10375   \begingroup

```

```

10376 \Hy@pstringdef\Hy@pstringF{#2}%
10377 \Hy@pstringdef\Hy@pstringD{#3}%
10378 \leavevmode
10379 \pdfmark[{#1}]{%
10380   pdfmark=/ANN,%
10381   Subtype=/Link,%
10382   PDFAFlags=4,%
10383   AcroHighlight=\@pdfhighlight,%
10384   Border=\@pdfborder,%
10385   BorderStyle=\@pdfborderstyle,%
10386   linktype=file,%
10387   Color=\@filebordercolor,%
10388   Action={%
10389     <<%
10390       /S/GoToR%
10391       \Hy@SetNewWindow
10392       /F(\Hy@pstringF)%
10393       /D\ifx\#3\@0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
10394     >>%
10395   }%
10396 }%
10397 \endgroup
10398 }
10399 \def\@hyper@launch run:#1\#2#3{%
10400   \begingroup
10401   \Hy@pstringdef\Hy@pstringF{#1}%
10402   \Hy@pstringdef\Hy@pstringP{#3}%
10403   \leavevmode
10404   \pdfmark[{#2}]{%
10405     pdfmark=/ANN,%
10406     Subtype=/Link,%
10407     PDFAFlags=4,%
10408     AcroHighlight=\@pdfhighlight,%
10409     Border=\@pdfborder,%
10410     BorderStyle=\@pdfborderstyle,%
10411     linktype=run,%
10412     Color=\@runbordercolor,%
10413     Action={%
10414       <<%
10415         /S/Launch%
10416         \Hy@SetNewWindow
10417         /F(\Hy@pstringF)%
10418         \ifx\#3\@%
10419         \else
10420           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10421         \fi
10422       >>%
10423     }%
10424   }%
10425   \endgroup
10426 }
10427 </pdfmark>

```

Unfortunately, some parts of the pdfmark PostScript code depend on vagaries of the dvi driver. We isolate here all the problems.

46.9 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.

```
10428 <*dvips>
10429 \providecommand*\XR@ext}{pdf}
10430 \def\Hy@raisedlink{}
10431 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10432 \def\headerps@out#1{\special{! #1}}%
10433 \input{pdfmark.def}%
10434 \ifx\@pdfproducer\relax
10435 \def\@pdfproducer{dvips + Distiller}%
10436 \fi
10437 \providecommand*\@pdfborder{0 0 1}
10438 \providecommand*\@pdfborderstyle{}
10439 \providecommand*\@pdfview{XYZ}
10440 \providecommand*\@pdfviewparams{ H.V}
10441 \def\Hy@BorderArrayPatch{BorderArrayPatch}

10442 \g@addto@macro\Hy@FirstPageHook{%
10443 \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.

```
10444 /DvipsToPDF{72.27 mul Resolution div} def%
10445 /PDFToDvips{72.27 div Resolution mul} def%
10446 /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.

```
10447 /BorderArrayPatch{%
10448 [exch{%
10449 dup dup type/integertype eq exch type/realtype eq or%
10450 {BPToDvips}if%
10451 }forall]%
10452 }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.

```
10453 /HyperBorder {1 PDFToDvips} def%
10454 /H.V {pdf@hoff pdf@voff null} def%
10455 /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

```
10456 /H.S {%
```

```

10457     currentpoint %
10458     HyperBorder add /pdf@lly exch def %
10459     dup DvipsToPDF 72 add /pdf@hoff exch def %
10460     HyperBorder sub /pdf@llx exch def%
10461 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ 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

```

10462 /H.L {%
10463     2 sub dup%
10464     /HyperBasePt exch def %
10465     PDFToDvips /HyperBaseDvips exch def %
10466     currentpoint %
10467     HyperBaseDvips sub /pdf@ury exch def%
10468     /pdf@urx exch def%
10469 } def%
10470 /H.A {%
10471     H.L %
10472 % | /pdf@voff| = the distance from the top of the page to a point
10473 % | \baselineskip| above the current point in PDF coordinates
10474     currentpoint exch pop %
10475     vsize 72 sub exch DvipsToPDF %
10476     HyperBasePt sub % baseline skip
10477     sub /pdf@voff exch def%
10478 } def%
10479 /H.R {%
10480     currentpoint %
10481     HyperBorder sub /pdf@ury exch def %
10482     HyperBorder add /pdf@urx exch def %
10483 % | /pdf@voff| = the distance from the top of the page to the current point, in
10484 % PDF coordinates
10485     currentpoint exch pop vsize 72 sub %
10486     exch DvipsToPDF sub /pdf@voff exch def%
10487 } def%
10488 }%
10489 }
10490 \AtBeginShipoutFirst{%
10491     \ifHy@setpagesize
10492     \begingroup
10493     \@ifundefined{stockwidth}{%
10494         \ifdim\paperwidth>\z@
10495         \ifdim\paperheight>\z@
10496             \special{papersize=\the\paperwidth,\the\paperheight}%
10497         \fi
10498     \fi
10499 }{%
10500     \ifdim\stockwidth>\z@
10501     \ifdim\stockheight>\z@
10502         \special{papersize=\the\stockwidth,\the\stockheight}%
10503     \fi
10504     \fi
10505 }%

```

```

10506 \endgroup
10507 \fi
10508 \Hy@DisableOption{setpagesize}%
10509 }
10510 </dvips>

```

46.10 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.

```

10511 <*vtexpdfmark>
10512 \providecommand*\XR@ext{-pdf}
10513 \def\Hy@raisedlink{}
10514 \def\literalps@out#1{\special{pS:#1}}%
10515 \def\headerps@out#1{\immediate\special{pS:#1}}%
10516 \input{pdfmark.def}%
10517 \ifx\@pdfproducer\relax
10518 \ifnum\OpMode=\@ne
10519 \def\@pdfproducer{VTeX}%
10520 \else
10521 \def\@pdfproducer{VTeX + Distiller}%
10522 \fi
10523 \fi
10524 \providecommand*\@pdfborder{0 0 1}
10525 \providecommand*\@pdfborderstyle{}
10526 \providecommand*\@pdfview{XYZ}
10527 \providecommand*\@pdfviewparams{ H.V}

10528 \g@addto@macro\Hy@FirstPageHook{%
10529 \headerps@out{%
10530 /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.

```

10531 /HyperBorder {1} def%
10532 /H.V {pdf@hoff pdf@voff null} def%
10533 /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10534 /H.S {%
10535 currentpoint %
10536 HyperBorder sub%
10537 /pdf@lly exch def %
10538 dup 72 add /pdf@hoff exch def %
10539 HyperBorder sub%
10540 /pdf@llx exch def%
10541 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10542 /H.L {%
10543 2 sub%
10544 /HyperBasePt exch def %
10545 currentpoint %

```



```

10546   HyperBasePt add HyperBorder add%
10547   /pdf@ury exch def %
10548   HyperBorder add%
10549   /pdf@urx exch def%
10550   } def%
10551   /H.A {%
10552     H.L %
10553     currentpoint exch pop %
10554     vsize 72 sub exch %
10555     HyperBasePt add add%
10556     /pdf@voff exch def%
10557   } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
10558   /H.R {%
10559     currentpoint %
10560     HyperBorder add%
10561     /pdf@ury exch def %
10562     HyperBorder add%
10563     /pdf@urx exch def %
10564     currentpoint exch pop vsize 72 sub add%
10565     /pdf@voff exch def%
10566   } def%
10567   }%
10568 }
10569 </vtxpdfmark>

```

46.11 Textures

```

10570 <*textures>
10571 \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.

```

10572 \begingroup
10573   \obeylines %
10574   \gdef\Hy@ps@CR{\noexpand
10575   }%
10576 \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`.

```

10577 \def\literalps@out#1{%

```

```

10578 \special{postscript 0 0 transform}%
10579 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10580 }%
10581 %

```

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.

```

10582 \def\headerps@out#1{%
10583   \special{%
10584     prepostscript TeXdict begin\Hy@ps@CR
10585       #1\Hy@ps@CR
10586     end%
10587   }%
10588 }%
10589 %

```

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.

```

10590 \g@addto@macro\Hy@FirstPageHook{%
10591   \headerps@out{%
10592     /betterpdfmark {%
10593       systemdict begin %
10594         dup /BP eq%
10595         {cleartomark gsave nulldevice []%
10596         {dup /EP eq%
10597           {cleartomark cleartomark grestore}%
10598           {cleartomark}%
10599           ifelse%
10600         }ifelse %
10601       end%
10602     }def\Hy@ps@CR
10603     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10604   }% end of \headerps@out
10605 }% end of \AtBeginShipoutFirst
10606 %
10607 \input{pdfmark.def}%
10608 %
10609 \ifx\@pdfproducer\relax
10610   \def\@pdfproducer{Textures + Distiller}%
10611 \fi
10612 \providecommand*\@pdfborder{0 0 1}
10613 \providecommand*\@pdfborderstyle{}
10614 \providecommand*\@pdfview{XYZ}
10615 \providecommand*\@pdfviewparams{ H.V}
10616 %

```

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 T_EX.

```

10617 \AfterBeginDocument{%
10618   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

10619     /vsize {\Hy@pageheight} def%

```

```

10620 /DvipsToPDF {} def%
10621 /PDFToDvips {} def%
10622 /BPToDvips {} def%
10623 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10624 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10625 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10626 /H.S {%
10627     currentpoint %
10628     HyperBorder add /pdf@lly exch def %
10629     dup DvipsToPDF 72 add /pdf@hoff exch def %
10630     HyperBorder sub /pdf@llx exch def%
10631 } def\Hy@ps@CR
10632 /H.L {%
10633     2 sub %
10634     PDFToDvips /HyperBase exch def %
10635     currentpoint %
10636     HyperBase sub /pdf@ury exch def%
10637     /pdf@urx exch def%
10638 } def\Hy@ps@CR
10639 /H.A {%
10640     H.L %
10641     currentpoint exch pop %
10642     vsize 72 sub exch DvipsToPDF %
10643     HyperBase sub % baseline skip
10644     sub /pdf@voff exch def%
10645 } def\Hy@ps@CR
10646 /H.R {%
10647     currentpoint %
10648     HyperBorder sub /pdf@ury exch def %
10649     HyperBorder add /pdf@urx exch def %
10650     currentpoint exch pop vsize 72 sub %
10651     exch DvipsToPDF sub /pdf@voff exch def%
10652 } def\Hy@ps@CR
10653 }%
10654 }

10655 \AfterBeginDocument{%
10656     \ifHy@colorlinks
10657         \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10658     \fi
10659 }

```

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.

```

10660 \expandafter\let\expandafter\keepPDF@SetupDoc
10661 \csname PDF@SetupDoc\endcsname
10662 \def\PDF@SetupDoc{%
10663     \ifx\@baseurl\@empty
10664     \else
10665         \special{html:<base href="\@baseurl">}%
10666     \fi
10667     \keepPDF@SetupDoc
10668 }
10669 \def\hyper@anchor#1{%
10670     \Hy@SaveLastskip
10671     \Hy@VerboseAnchor{#1}%
10672     \begingroup
10673     \let\protect=\string

```

```

10674 \special{html:<a name=%
10675 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10676 \endgroup
10677 \Hy@activeanchortrue
10678 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10679 \special{html:</a>}%
10680 \Hy@activeanchorfalse
10681 \Hy@RestoreLastskip
10682 }
10683 \def\hyper@anchorstart#1{%
10684 \Hy@SaveLastskip
10685 \Hy@VerboseAnchor{#1}%
10686 \begingroup
10687 \hyper@chars
10688 \special{html:<a name=%
10689 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10690 \endgroup
10691 \Hy@activeanchortrue
10692 }
10693 \def\hyper@anchorend{%
10694 \special{html:</a>}%
10695 \Hy@activeanchorfalse
10696 \Hy@RestoreLastskip
10697 }
10698 \def\@urlltype{url}
10699 \def\hyper@linkstart#1#2{%
10700 \Hy@VerboseLinkStart{#1}{#2}%
10701 \expandafter\Hy@colorlink\csname @#1color\endcsname
10702 \def\Hy@tempa{#1}%
10703 \ifx\Hy@tempa\@urlltype
10704 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10705 \else
10706 \begingroup
10707 \hyper@chars
10708 \special{%
10709 html:<a href=%
10710 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
10711 }%
10712 \endgroup
10713 \fi
10714 }
10715 \def\hyper@linkend{%
10716 \special{html:</a>}%
10717 \Hy@endcolorlink
10718 }
10719 \def\hyper@linkfile#1#2#3{%
10720 \hyper@linkurl{#1}{%
10721 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10722 }%
10723 }
10724 \def\hyper@linkurl#1#2{%
10725 \leavevmode
10726 \ifHy@raiselinks
10727 \setbox\@tempboxa=\color@hbox #1\color@endbox
10728 \@linkdim\dp\@tempboxa
10729 \lower\@linkdim\hbox{%
10730 \hyper@chars

```

```

10731 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10732 }%
10733 \Hy@colorlink\@urlcolor#1%
10734 \@linkdim\ht\@tempboxa
10735 \advance\@linkdim by -6.5\p@
10736 \raise\@linkdim\hbox{\special{html:</a>}}%
10737 \Hy@endcolorlink
10738 \else
10739 \begingroup
10740 \hyper@chars
10741 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10742 \Hy@colorlink\@urlcolor#1%
10743 \special{html:</a>}%
10744 \Hy@endcolorlink
10745 \endgroup
10746 \fi
10747 }

```

Very poor implementation of \hyper@link without considering #1.

```

10748 \def\hyper@link#1#2#3{%
10749 \Hy@VerboseLinkStart{#1}{#2}%
10750 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10751 }
10752 \def\hyper@image#1#2{%
10753 \begingroup
10754 \hyper@chars
10755 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10756 \endgroup
10757 }
10758 </textures>

```

46.12 dvipsone

```

10759 % \subsection{dvipsone driver}
10760 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10761 % |\special| commands.
10762 (*dvipsone)
10763 \providecommand*\XR@ext}{pdf}
10764 \def\Hy@raisedlink{}
10765 \providecommand*\@pdfborder{0 0 1}
10766 \providecommand*\@pdfborderstyle{}
10767 \def\literalps@out#1{\special{ps:#1}}%
10768 \def\headerps@out#1{\special{headertext=#1}}%
10769 \input{pdfmark.def}%
10770 \ifx\@pdfproducer\relax
10771 \def\@pdfproducer{dvipsone + Distiller}%
10772 \fi
10773 \HyInfo@AddonUnsupportedtrue
10774 \def\PDF@FinishDoc{%
10775 \Hy@UseMaketitleInfos
10776 \HyInfo@TrappedUnsupported
10777 \special{PDF: Keywords \@pdfkeywords}%
10778 \special{PDF: Title \@pdftitle}%
10779 \special{PDF: Creator \@pdfcreator}%
10780 \ifx\@pdfcreationdate\empty
10781 \else
10782 \special{PDF: CreationDate \@pdfcreationdate}%
10783 \fi

```

```

10784 \ifx\@pdfmoddate\@empty
10785 \else
10786 \special{PDF: ModDate \@pdfmoddate}%
10787 \fi
10788 \special{PDF: Author \@pdfauthor}%
10789 \ifx\@pdfproducer\relax
10790 \else
10791 \special{PDF: Producer \@pdfproducer}%
10792 \fi
10793 \special{PDF: Subject \@pdfsubject}%
10794 \Hy@DisableOption{pdfauthor}%
10795 \Hy@DisableOption{pdftitle}%
10796 \Hy@DisableOption{pdfsubject}%
10797 \Hy@DisableOption{pdfcreator}%
10798 \Hy@DisableOption{pdfcreationdate}%
10799 \Hy@DisableOption{pdfmoddate}%
10800 \Hy@DisableOption{pdfproducer}%
10801 \Hy@DisableOption{pdfkeywords}%
10802 \Hy@DisableOption{pdftrapped}%
10803 \Hy@DisableOption{pdfinfo}%
10804 }
10805 \def\PDF@SetupDoc{%
10806 \def\Hy@temp{}%
10807 \ifx\@pdfstartpage\@empty
10808 \else
10809 \ifx\@pdfstartview\@empty
10810 \else
10811 \edef\Hy@temp{%
10812 ,Page=\@pdfstartpage
10813 ,View=\@pdfstartview
10814 }%
10815 \fi
10816 \fi
10817 \edef\Hy@temp{%
10818 \noexpand\pdfmark{%
10819 pdfmark=/DOCVIEW,%
10820 PageMode=/\@pdfpagemode
10821 \Hy@temp
10822 }%
10823 }%
10824 \Hy@temp
10825 \ifx\@pdfpagescrop\@empty
10826 \else
10827 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10828 \fi
10829 \edef\Hy@temp{%
10830 \ifHy@toolbar\else /HideToolbar true\fi
10831 \ifHy@menubar\else /HideMenubar true\fi
10832 \ifHy>windowui\else /HideWindowUI true\fi
10833 \ifHy@fitwindow /FitWindow true\fi
10834 \ifHy@centerwindow /CenterWindow true\fi
10835 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10836 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10837 \Hy@UseNameKey{Direction}\@pdfdirection
10838 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10839 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10840 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

10841 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10842 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10843 \Hy@UseNameKey{Duplex}\@pdfduplex
10844 \ifx\@pdfpicktraybypdfsize\@empty
10845 \else
10846 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10847 \fi
10848 \ifx\@pdfprintpagerange\@empty
10849 \else
10850 /PrintPageRange[\@pdfprintpagerange]%
10851 \fi
10852 \ifx\@pdfnumcopies\@empty
10853 \else
10854 /NumCopies \@pdfnumcopies
10855 \fi
10856 }%
10857 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10858 \pdfmark{%
10859 pdfmark=/PUT,%
10860 Raw={%
10861 \string{Catalog\string}<<%
10862 \ifx\Hy@temp\@empty
10863 \else
10864 /ViewerPreferences<<\Hy@temp>>%
10865 \fi
10866 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10867 \ifx\@pdflang\@empty
10868 \else
10869 /Lang(\@pdflang)%
10870 \fi
10871 \ifx\@baseurl\@empty
10872 \else
10873 /URI<</Base(\Hy@pstringB)>>%
10874 \fi
10875 >>%
10876 }%
10877 }%
10878 }
10879 \providecommand*\@pdfview{XYZ}
10880 \providecommand*\@pdfviewparams{ %
10881 gsave revscl currentpoint grestore %
10882 72 add exch pop null exch null%
10883 }
10884 \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 .

```

10885 \g@addto@macro\Hy@FirstPageHook{%
10886 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

10887 /DvipsToPDF { 65781 div } def%
10888 /PDFToDvips { 65781 mul } def%
10889 /BPToDvips{65781 mul}def%
10890 /HyperBorder { 1 PDFToDvips } def%

```

```
10891 /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.

```
10892 /BorderArrayPatch{%
10893   [exch{%
10894     dup dup type/integertype eq exch type/realtype eq or%
10895     {BPToDvips}if%
10896   }forall]%
10897 }def%
10898 /H.S {%
10899   currentpoint %
10900   HyperBorder add /pdf@lly exch def %
10901   dup DvipsToPDF 72 add /pdf@hoff exch def %
10902   HyperBorder sub /pdf@llx exch def%
10903 } def%
10904 /H.L {%
10905   2 sub %
10906   PDFToDvips /HyperBase exch def %
10907   currentpoint %
10908   HyperBase sub /pdf@ury exch def%
10909   /pdf@urx exch def%
10910 } def%
10911 /H.A {%
10912   H.L %
10913   currentpoint exch pop %
10914   HyperBase sub % baseline skip
10915   DvipsToPDF /pdf@voff exch def%
10916 } def%
10917 /H.R {%
10918   currentpoint %
10919   HyperBorder sub /pdf@ury exch def %
10920   HyperBorder add /pdf@urx exch def %
10921   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10922 } def%
10923 }%
10924 }
10925 </dvipsone>
```

46.13 TeX4ht

```
10926 < *tex4ht>
10927 \providecommand*{\XR@ext}{html}
10928 \def\Hy@raisedlink{}
10929 \@ifpackageloaded{tex4ht}{%
10930   \typeout{hyperref tex4ht: tex4ht already loaded}%
10931 }{%
10932   \RequirePackage[hTeX4ht]{tex4ht}%
10933 }
10934 \hyperlinkfileprefix{}
10935 \def\PDF@FinishDoc{}
10936 \def\PDF@SetupDoc{%
10937   \ifx\@baseurl\@empty
10938   \else
10939     \special{t4ht=<base href="\@baseurl">}%
10940   \fi
10941 }
```



```

10942 \def\hyper@anchor#1{%
10943   \Hy@SaveLastskip
10944   \Hy@VerboseAnchor{#1}%
10945   \begingroup
10946     \let\protect=\string
10947     \special{t4ht=<a name=%
10948       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10949   \endgroup
10950   \Hy@activeanchortrue
10951   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10952   \special{t4ht=</a>}%
10953   \Hy@activeanchorfalse
10954   \Hy@RestoreLastskip
10955 }
10956 \def\hyper@anchorstart#1{%
10957   \Hy@SaveLastskip
10958   \Hy@VerboseAnchor{#1}%
10959   \begingroup
10960     \hyper@chars\special{t4ht=<a name=%
10961       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10962   \endgroup
10963   \Hy@activeanchortrue
10964 }
10965 \def\hyper@anchorend{%
10966   \special{t4ht=</a>}%
10967   \Hy@activeanchorfalse
10968   \Hy@RestoreLastskip
10969 }
10970 \def\@urltype{url}
10971 \def\hyper@linkstart#1#2{%
10972   \Hy@VerboseLinkStart{#1}{#2}%
10973   \expandafter\Hy@colorlink\csname @#1color\endcsname
10974   \def\Hy@tempa{#1}%
10975   \ifx\Hy@tempa\@urltype
10976     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10977   \else
10978     \begingroup
10979       \hyper@chars
10980       \special{t4ht=<a href=%
10981         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10982     \endgroup
10983   \fi
10984 }
10985 \def\hyper@linkend{%
10986   \special{t4ht=</a>}%
10987   \Hy@endcolorlink
10988 }
10989 \def\hyper@linkfile#1#2#3{%
10990   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10991 }
10992 \def\hyper@linkurl#1#2{%
10993   \leavevmode
10994   \ifHy@raiselinks
10995     \setbox\@tempboxa=\color@hbox #1\color@endbox
10996     \@linkdim\dp\@tempboxa
10997     \lower\@linkdim\hbox{%
10998       \begingroup

```

```

10999 \hyper@chars
11000 \special{%
11001 t4ht=<a href=\hyper@quote#2\hyper@quote>%
11002 }%
11003 \endgroup
11004 }%
11005 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11006 \@linkdim\ht\@tempboxa
11007 \advance\@linkdim by -6.5\p@
11008 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11009 \else
11010 \begingroup
11011 \hyper@chars
11012 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11013 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11014 \special{t4ht=</a>}%
11015 \endgroup
11016 \fi
11017 }

```

Poor implementation of \hyper@link without considering #1.

```

11018 \def\hyper@link#1#2#3{%
11019 \Hy@VerboseLinkStart{#1}{#2}%
11020 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11021 }
11022 \def\hyper@image#1#2{%
11023 \begingroup
11024 \hyper@chars
11025 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11026 \endgroup
11027 }
11028 \let\autoref\ref
11029 \ifx \rEfLiNK \UnDef
11030 \def\rEfLiNK #1#2{#2}%
11031 \fi
11032 \def\backref#1{}
11033 </tex4ht>
11034 <*tex4htcfg>
11035 \IfFileExists{\jobname.cfg}{\endinput}{}
11036 \Preamble{html}
11037 \begin{document}%
11038 \EndPreamble
11039 \def\TeX{TeX}
11040 \def\OMEGA{Omega}
11041 \def\LaTeX{LaTeX}
11042 \def\LaTeXe{\LaTeX2e}
11043 \def\eTeX{e-TeX}
11044 \def\MF{Metafont}
11045 \def\MP{MetaPost}
11046 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11047 <*pdfmark>
11048 \long\def\@Form[#1]{%
11049 \g@addto@macro\Hy@FirstPageHook{%

```

```

11050 \headerps@out{%
11051 [%
11052   /_objdef{pdfDocEncoding}%
11053   /type/dict%
11054 /OBJ pdfmark%
11055 [%
11056   {pdfDocEncoding}%
11057   <<%
11058     /Type/Encoding%
11059     /Differences[%
11060       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11061       /tilde %
11062       39/quotesingle %
11063       96/grave %
11064       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11065       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11066       /quotedblbase/quotedblleft/quotedblright/quoteleft%
11067       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11068       /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11069       164/currency %
11070       166/brokenbar %
11071       168/dieresis/copyright/ordfeminine %
11072       172/logicalnot/.notdef/registered/macron/degree/plusminus%
11073       /twosuperior/threesuperior/acute/mu %
11074       183/periodcentered/cedilla/onesuperior/ordmasculine %
11075       188/onequarter/onehalf/threequarters %
11076       192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11077       /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11078       /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11079       /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11080       /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11081       /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11082       /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11083       /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11084       /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11085       /ucircumflex/udieresis/yacute/thorn/ydieresis%
11086     ]%
11087   >>%
11088 /PUT pdfmark%
11089 [%
11090   /_objdef{ZaDb}%
11091   /type/dict%
11092 /OBJ pdfmark%
11093 [%
11094   {ZaDb}%
11095   <<%
11096     /Type/Font%
11097     /Subtype/Type1%
11098     /Name/ZaDb%
11099     /BaseFont/ZapfDingbats%
11100   >>%
11101 /PUT pdfmark%
11102 [%
11103   /_objdef{Helv}%
11104   /type/dict%
11105 /OBJ pdfmark%
11106 [%

```

```

11107 {Helv}%
11108 <<%
11109 /Type/Font%
11110 /Subtype/Type1%
11111 /Name/Helv%
11112 /BaseFont/Helvetica%
11113 /Encoding{pdfDocEncoding}%
11114 >>%
11115 /PUT pdfmark%
11116 [%
11117 /_objdef{aform}%
11118 /type/dict%
11119 /OBJ pdfmark%
11120 [%
11121 /_objdef{afields}%
11122 /type/array%
11123 /OBJ pdfmark%
11124 {%
11125 [%
11126 /BBox[0 0 100 100]%
11127 /_objdef{Check}%
11128 /BP pdfmark %
11129 1 0 0 setrgbcolor%
11130 /ZapfDingbats 80 selectfont %
11131 20 20 moveto%
11132 (4)show%
11133 [/EP pdfmark%
11134 [%
11135 /BBox[0 0 100 100]%
11136 /_objdef{Cross}%
11137 /BP pdfmark %
11138 1 0 0 setrgbcolor%
11139 /ZapfDingbats 80 selectfont %
11140 20 20 moveto%
11141 (8)show%
11142 [/EP pdfmark%
11143 [%
11144 /BBox[0 0 250 100]%
11145 /_objdef{Submit}%
11146 /BP pdfmark %
11147 0.6 setgray %
11148 0 0 250 100 rectfill %
11149 1 setgray %
11150 2 2 moveto %
11151 2 98 lineto %
11152 248 98 lineto %
11153 246 96 lineto %
11154 4 96 lineto %
11155 4 4 lineto %
11156 fill %
11157 0.34 setgray %
11158 248 98 moveto %
11159 248 2 lineto %
11160 2 2 lineto %
11161 4 4 lineto %
11162 246 4 lineto %
11163 246 96 lineto %

```

```

11164 fill%
11165 /Helvetica 76 selectfont %
11166 0 setgray %
11167 8 22.5 moveto%
11168 (Submit)show%
11169 [/EP pdfmark%
11170 [%
11171 /BBox[0 0 250 100]%
11172 /_objdef{SubmitP}%
11173 /BP pdfmark %
11174 0.6 setgray %
11175 0 0 250 100 rectfill %
11176 0.34 setgray %
11177 2 2 moveto %
11178 2 98 lineto %
11179 248 98 lineto %
11180 246 96 lineto %
11181 4 96 lineto %
11182 4 4 lineto %
11183 fill %
11184 1 setgray %
11185 248 98 moveto %
11186 248 2 lineto %
11187 2 2 lineto %
11188 4 4 lineto %
11189 246 4 lineto %
11190 246 96 lineto %
11191 fill%
11192 /Helvetica 76 selectfont %
11193 0 setgray %
11194 10 20.5 moveto%
11195 (Submit)show%
11196 [/EP pdfmark%
11197 } ?pdfmark%
11198 [%
11199 {aform}%
11200 <<%
11201 /Fields{afields}%
11202 /DR<<%
11203 /Font<<%
11204 /ZaDb{ZaDb}%
11205 /Helv{Helv}%
11206 >>%
11207 >>%
11208 /DA(/Helv 10 Tf 0 g)%
11209 /CO{corder}%
11210 \ifHy@pdfa
11211 \else
11212 /NeedAppearances true%
11213 \fi
11214 >>%
11215 /PUT pdfmark%
11216 [%
11217 {Catalog}%
11218 <<%
11219 /AcroForm{aform}%
11220 >>%

```

```

11221 /PUT pdfmark%
11222 [%
11223   /_objdef{corder}%
11224   /type/array%
11225 /OBJ pdfmark% dps
11226 }}%
11227   \setkeys{Form}{#1}%
11228 }
11229 \def\@endForm{}
11230 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11231   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11232 }
11233 \def\@TextField[#1]#2{% parameters, label
11234   \def\Fld@name{#2}%
11235   \def\Fld@default{}%
11236   \let\Fld@value\@empty
11237   \def\Fld@width{\DefaultWidthofText}%
11238   \def\Fld@height{%
11239     \ifFld@multiline
11240       \DefaultHeightofTextMultiline
11241     \else
11242       \DefaultHeightofText
11243     \fi
11244   }%
11245   \begingroup
11246     \Field@toks={ }%
11247     \expandafter\HyField@SetKeys\expandafter{%
11248       \DefaultOptionsofText,#1%
11249     }%
11250     \HyField@FlagsText
11251     \ifFld@hidden\def\Fld@width{1sp}\fi
11252     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11253     \LayoutTextField{#2}{%
11254       \Hy@escapeform\PDFForm@Text
11255       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11256         pdfmark=/ANN,Raw={\PDFForm@Text}%
11257       }%
11258     }%
11259   \endgroup
11260 }
11261 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11262   \def\Fld@name{#2}%
11263   \let\Fld@default\relax
11264   \let\Fld@value\relax
11265   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11266   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11267   \begingroup
11268     \Fld@menulength=0 %
11269     \@tempdima\z@
11270     \@for\@curropt:=#3\do{%
11271       \expandafter\Fld@checkequals\@curropt==\%
11272       \Hy@StepCount\Fld@menulength
11273       \settowidth{\@tempdimb}{\@currDisplay}%
11274       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11275     }%
11276     \advance\@tempdima by 15\p@
11277     \Field@toks={ }%

```

```

11278 \begingroup
11279 \HyField@SetKeys{#1}%
11280 \edef\x{\endgroup
11281 \noexpand\expandafter
11282 \noexpand\HyField@SetKeys
11283 \noexpand\expandafter{%
11284 \expandafter\noexpand\csname DefaultOptionsof%
11285 \ifFld@radio
11286 Radio%
11287 \else
11288 \ifFld@combo
11289 \ifFld@popdown
11290 PopdownBox%
11291 \else
11292 ComboBox%
11293 \fi
11294 \else
11295 ListBox%
11296 \fi
11297 \fi
11298 \endcsname
11299 }%
11300 }\x
11301 \HyField@SetKeys{#1}%
11302 \ifFld@hidden\def\Fld@width{1sp}\fi
11303 \ifx\Fld@value\relax
11304 \let\Fld@value\Fld@default
11305 \fi
11306 \LayoutChoiceField{#2}{%
11307 \ifFld@radio
11308 \HyField@FlagsRadioButton
11309 \@@Radio{#3}%
11310 \else
11311 \begingroup
11312 \HyField@FlagsChoice
11313 \ifdim\Fld@width<\@tempdima
11314 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11315 \edef\Fld@width{\the\@tempdima}%
11316 \fi
11317 \ifFld@combo
11318 \else
11319 \@tempdima=\the\Fld@menulength\Fld@charsize
11320 \advance\@tempdima by \Fld@borderwidth bp %
11321 \advance\@tempdima by \Fld@borderwidth bp %
11322 \edef\Fld@height{\the\@tempdima}%
11323 \fi
11324 \@@ListBox{#3}%
11325 \endgroup
11326 \fi
11327 }%
11328 \endgroup
11329 }
11330 \def\@@Radio#1{%
11331 \Fld@listcount=0 %
11332 \@for\@curropt:=#1\do{%
11333 \expandafter\Fld@checkequals\@curropt==\\%
11334 \Hy@StepCount\Fld@listcount

```

```

11335 \currDisplay\space
11336 \Hy@escapeform\PDFForm@Radio
11337 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11338 pdfmark=/ANN,%
11339 Raw={%
11340 \PDFForm@Radio /AP <</N <</\currValue\space {Check}>> >>%
11341 }%
11342 } % deliberate space between radio buttons
11343 }%
11344 }
11345 \newcount\Fld@listcount
11346 \def\@@ListBox#1{%
11347 \HyField@PDFChoices{#1}%
11348 \Hy@escapeform\PDFForm@List
11349 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11350 pdfmark=/ANN,Raw={\PDFForm@List}%
11351 }%
11352 }
11353 \def\@PushButton[#1]#2{% parameters, label
11354 \def\Fld@name{#2}%
11355 \begingroup
11356 \Field@toks={ }%
11357 \expandafter\HyField@SetKeys\expandafter{%
11358 \DefaultOptionsofPushButton,#1%
11359 }%
11360 \ifHy@pdfa
11361 \PackageError{hyperref}{%
11362 PDF/A: Push button with JavaScript is prohibited%
11363 }\@ehc
11364 \LayoutPushButtonField{%
11365 \leavevmode
11366 \MakeButtonField{#2}%
11367 }%
11368 \else
11369 \HyField@FlagsPushButton
11370 \ifFld@hidden\def\Fld@width{1sp}\fi
11371 \LayoutPushButtonField{%
11372 \leavevmode
11373 \Hy@escapeform\PDFForm@Push
11374 \pdfmark[\MakeButtonField{#2}]{%
11375 pdfmark=/ANN,Raw={\PDFForm@Push}%
11376 }%
11377 }%
11378 \fi
11379 \endgroup
11380 }
11381 \def\@Submit[#1]#2{%
11382 \Field@toks={ }%
11383 \def\Fld@width{\DefaultWidthofSubmit}%
11384 \def\Fld@height{\DefaultHeightofSubmit}%
11385 \begingroup
11386 \expandafter\HyField@SetKeys\expandafter{%
11387 \DefaultOptionsofSubmit,#1%
11388 }%
11389 \HyField@FlagsPushButton
11390 \HyField@FlagsSubmit
11391 \ifFld@hidden\def\Fld@width{1sp}\fi

```



```

11392 \Hy@escapeform\PDFForm@Submit
11393 \pdfmark[\MakeButtonField{#2}]{%
11394 pdfmark=/ANN,%
11395 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11396 }%
11397 \endgroup
11398 }
11399 \def\@Reset[#1]#2{%
11400 \Field@toks={ }%
11401 \def\Fld@width{\DefaultWidthofReset}%
11402 \def\Fld@height{\DefaultHeightofReset}%
11403 \begingroup
11404 \expandafter\HyField@SetKeys\expandafter{%
11405 \DefaultOptionsofReset,#1%
11406 }%
11407 \leavevmode
11408 \ifHy@pdfa
11409 \PackageError{hyperref}{%
11410 PDF/A: Reset action is prohibited%
11411 }\@ehc
11412 \MakeButtonField{#2}%
11413 \else
11414 \HyField@FlagsPushButton
11415 \ifFld@hidden\def\Fld@width{1sp}\fi
11416 \Hy@escapeform\PDFForm@Reset
11417 \pdfmark[\MakeButtonField{#2}]{%
11418 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11419 }%
11420 \fi
11421 \endgroup
11422 }%
11423 \def\@CheckBox[#1]#2{% parameters, label
11424 \def\Fld@name{#2}%
11425 \def\Fld@default{0}%
11426 \begingroup
11427 \def\Fld@width{\DefaultWidthofCheckBox}%
11428 \def\Fld@height{\DefaultHeightofCheckBox}%
11429 \Field@toks={ }%
11430 \expandafter\HyField@SetKeys\expandafter{%
11431 \DefaultOptionsofCheckBox,#1%
11432 }%
11433 \HyField@FlagsCheckBox
11434 \ifFld@hidden\def\Fld@width{1sp}\fi
11435 \LayoutCheckField{#2}{%
11436 \Hy@escapeform\PDFForm@Check
11437 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11438 pdfmark=/ANN,Raw={\PDFForm@Check}%
11439 }%
11440 }%
11441 \endgroup
11442 }
11443 \pdfmark

```

47.2 HyperTeX

```

11444 \*hypertex
11445 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11446 \def\@endForm{}

```

```

11447 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11448 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11449 }
11450 \def\@TextField[#1]#2{% parameters, label
11451 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11452 }
11453 \def\@CheckBox[#1]#2{% parameters, label
11454 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11455 }
11456 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11457 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11458 }
11459 \def\@PushButton[#1]#2{% parameters, label
11460 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11461 }
11462 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11463 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11464 \end{hypertex}

```

47.3 TeX4ht

```

11465 \*tex4ht
11466 \def\@Form[#1]{%
11467 \setkeys{Form}{#1}%
11468 \HCode{<form action="\Form@action" method="\Form@method">}%
11469 }
11470 \def\@endForm{\HCode{</form>}}
11471 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11472 \typeout{Sorry, TeX4ht does not support gauges}%
11473 }
11474 \def\@TextField[#1]#2{% parameters, label
11475 \let\Hy@reserved@a\@empty
11476 \def\Fld@name{#2}%
11477 \def\Fld@default{}%
11478 \bgroup
11479 \Field@toks={ }%
11480 \setkeys{Field}{#1}%
11481 \HCode{<label for="\Fld@name">#2</label>}%
11482 \ifFld@password
11483 \@@PasswordField
11484 \else
11485 \@@TextField
11486 \fi
11487 \egroup
11488 }
11489 \def\@@PasswordField{%
11490 \HCode{%
11491 <input type="password" %
11492 id="\Fld@name" %
11493 name="\Fld@name" %
11494 \ifFld@hidden type="hidden" \fi
11495 value="\Fld@default" %
11496 \the\Fld@toks
11497 >%
11498 }%
11499 }
11500 \def\@@TextField{%
11501 \ifFld@multiline

```

```

11502 \HCode{<textarea %
11503 \ifFld@readonly readonly \fi
11504 id="\Fld@name" %
11505 name="\Fld@name" %
11506 \ifFld@hidden type="hidden" \fi
11507 \the\Field@toks>%
11508 }%
11509 \Fld@default
11510 \HCode{</textarea>}%
11511 \else
11512 \HCode{<input type="textbox" %
11513 \ifFld@readonly readonly \fi
11514 id="\Fld@name" %
11515 name="\Fld@name" %
11516 \ifFld@hidden type="hidden" \fi
11517 value="\Fld@default" %
11518 \the\Field@toks>%
11519 }%
11520 \fi
11521 }
11522 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11523 \def\Fld@name{#2}%
11524 \def\Fld@default{}%
11525 \let\Hy@reserved@a\relax
11526 \begingroup
11527 \expandafter\Fld@findlength#3\\%
11528 \Field@toks={ }%
11529 \setkeys{Field}{#1}%
11530 #2%
11531 \ifFld@radio
11532 \expandafter\@@Radio#3\\%
11533 \else
11534 \expandafter\@@Menu#3\\%
11535 \fi
11536 \endgroup
11537 }
11538 \def\Fld@findlength#1\\{%
11539 \Fld@menulength=0 %
11540 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11541 }
11542 \def\@@Menu#1\\{%
11543 \HCode{<select size="\the\Fld@menulength" %
11544 name="\Fld@name" %
11545 \the\Field@toks>%
11546 }%
11547 \@for\@curropt:=#1\do{%
11548 \expandafter\Fld@checkequals\@curropt==\\%
11549 \HCode{<option %
11550 \ifx\@curropt\Fld@default selected \fi
11551 value="\@currValue">\@currDisplay</option>%
11552 }%
11553 }%
11554 \HCode{</select>}%
11555 }
11556 \def\@@Radio#1\\{%
11557 \@for\@curropt:=#1\do{%
11558 \expandafter\Fld@checkequals\@curropt==\\%

```

```

11559 \HCode{<input type="radio" %
11560 \ifx\@curropt\Fld@default checked \fi
11561 name="\Fld@name" %
11562 value="\@currValue" %
11563 \the\Fld@toks>%
11564 }%
11565 \@currDisplay
11566 }%
11567 }
11568 \def\@PushButton[#1]#2{% parameters, label
11569 \def\Fld@name{#2}%
11570 \bgroup
11571 \Field@toks={ }%
11572 \setkeys{Field}{#1}%
11573 \HCode{<input type="button" %
11574 name="\Fld@name" %
11575 value="#2" %
11576 \the\Fld@toks>%
11577 }%
11578 \HCode{</button>}%
11579 \egroup
11580 }
11581 \def\@Submit[#1]#2{%
11582 \HCode{<button type="submit">#2</button>}%
11583 }
11584 \def\@Reset[#1]#2{%
11585 \HCode{<button type="reset">#2</button>}%
11586 }
11587 \def\@CheckBox[#1]#2{% parameters, label
11588 \let\Hy@reserved@a\@empty
11589 \def\Fld@name{#2}%
11590 \def\Fld@default{0}%
11591 \bgroup
11592 \Field@toks={ }%
11593 \setkeys{Field}{#1}%
11594 \HCode{<input type="checkbox" %
11595 \ifFld@checked checked \fi
11596 \ifFld@disabled disabled \fi
11597 \ifFld@readonly readonly \fi
11598 name="\Fld@name" %
11599 \ifFld@hidden type="hidden" \fi
11600 value="\Fld@default" %
11601 \the\Fld@toks>%
11602 #2%
11603 }%
11604 \egroup
11605 }
11606 </tex4ht>

```

47.4 pdfTeX

```

11607 <*pdfTeX>
11608 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11609 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11610 }
11611 \def\MakeFieldObject#1#2{\sbox0{#1}%
11612 \immediate\pdfxform0 %
11613 \expandafter\edef\csname #2Object\endcsname{%

```

```

11614 \the\pdflastxform\space 0 R%
11615 }%
11616 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}}%
11617 }%
11618 \def\HyField@afields{}
11619 \begingroup\expandafter\expandafter\expandafter\endgroup
11620 \expandafter\ifx\csname pdflastlink\endcsname\relax
11621 \let\HyField@AddToFields\relax
11622 \PackageInfo{hyperref}{%
11623   You need pdfTeX 1.40.0 for setting the /Fields entry.%
11624   \MessageBreak
11625   Adobe Reader/Acrobat accepts an empty /Field array,%
11626   \MessageBreak
11627   but other PDF viewers might complain%
11628 }%
11629 \else
11630 \def\HyField@AuxAddToFields#1{%
11631 \def\HyField@AfterAuxOpen{\AtBeginDocument}%
11632 \AtBeginDocument{%
11633   \if@filesw
11634     \immediate\write\@mainaux{%
11635       \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11636     }%
11637   \fi
11638   \let\HyField@AfterAuxOpen\@firstofone
11639   \def\HyField@AuxAddToFields#1{%
11640     \xdef\HyField@afields{%
11641       \ifx\HyField@afields\@empty
11642       \else
11643         \HyField@afields
11644         \space
11645       \fi
11646       #1 0 R%
11647     }%
11648   }%
11649 }%
11650 \def\HyField@AddToFields{%
11651 \expandafter\HyField@@AddToFields\expandafter{%
11652   \the\pdflastlink
11653 }%
11654 }%
11655 \def\HyField@@AddToFields#1{%
11656 \HyField@AfterAuxOpen{%
11657   \if@filesw
11658     \write\@mainaux{%
11659       \string\HyField@AuxAddToFields{#1}%
11660     }%
11661   \fi
11662 }%
11663 }%
11664 \fi
11665 \def\@Form[#1]{%
11666 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11667 \setkeys{Form}{#1}%
11668 \Hy@FormObjects
11669 \ifnum\pdfTeXversion>13 %
11670 \pdfrefobj\OBJ@pdfdocencoding

```

```

11671 \pdfrefobj\OBJ@ZaDb
11672 \pdfrefobj\OBJ@Helv
11673 \fi
11674 \AtVeryEndDocument{%
11675 \immediate\pdfobj{%
11676 <<%
11677 /Fields\HyField@afields}%
11678 /DR<<%
11679 /Font<<%
11680 /ZaDb \OBJ@ZaDb\space 0 R%
11681 /Helv \OBJ@Helv\space 0 R%
11682 >>%
11683 >>%
11684 /DA(/Helv 10 Tf 0 g)%
11685 \ifHy@pdfa
11686 \else
11687 /NeedAppearances true%
11688 \fi
11689 >>%
11690 }%
11691 \edef\OBJ@acroform{\the\pdfastobj}%
11692 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11693 }%
11694 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

11695 \begingroup
11696 \fontfamily{pzd}%
11697 \fontencoding{U}%
11698 \fontseries{m}%
11699 \fontshape{n}%
11700 \selectfont
11701 \char123 %
11702 \endgroup
11703 }{Ding}%
11704 \MakeFieldObject{%
11705 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11706 }{Submit}%
11707 \MakeFieldObject{%
11708 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11709 }{SubmitP}%
11710 }
11711 \def\@endForm{}
11712 \def\@TextField[#1]#2{% parameters, label
11713 \def\Fld@name{#2}%
11714 \def\Fld@default{}%
11715 \let\Fld@value\@empty
11716 \def\Fld@width{\DefaultWidthofText}%
11717 \def\Fld@height{%
11718 \ifFld@multiline
11719 \DefaultHeightofTextMultiline
11720 \else
11721 \DefaultHeightofText
11722 \fi
11723 }%
11724 \begingroup
11725 \Field@toks={ }%
11726 \expandafter\HyField@SetKeys\expandafter{%

```

```

11727 \DefaultOptionsofText,#1%
11728 }%
11729 \PDFForm@Name
11730 \HyField@FlagsText
11731 \ifFld@hidden\def\Fld@width{1sp}\fi
11732 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
11733 \LayoutTextField{#2}{%
11734 \Hy@escapeform\PDFForm@Text
11735 \pdfstartlink user {\PDFForm@Text}\relax
11736 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11737 \HyField@AddToFields
11738 }%
11739 \endgroup
11740 }
11741 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11742 \def\Fld@name{#2}%
11743 \let\Fld@default\relax
11744 \let\Fld@value\relax
11745 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11746 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11747 \begingroup
11748 \Fld@menulength=0 %
11749 \@tempdima\z@
11750 \@for\@curropt:=#3\do{%
11751 \expandafter\Fld@checkequals\@curropt==\%
11752 \Hy@StepCount\Fld@menulength
11753 \settowidth{\@tempdimb}{\@currDisplay}%
11754 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11755 }%
11756 \advance\@tempdima by 15\p@
11757 \Field@toks={ }%
11758 \begingroup
11759 \HyField@SetKeys{#1}%
11760 \edef\x{\endgroup
11761 \noexpand\expandafter
11762 \noexpand\HyField@SetKeys
11763 \noexpand\expandafter{%
11764 \expandafter\noexpand\csname DefaultOptionsof%
11765 \ifFld@radio
11766 Radio%
11767 \else
11768 \ifFld@combo
11769 \ifFld@popdown
11770 PopdownBox%
11771 \else
11772 ComboBox%
11773 \fi
11774 \else
11775 ListBox%
11776 \fi
11777 \fi
11778 \endcsname
11779 }%
11780 }\x
11781 \HyField@SetKeys{#1}%
11782 \PDFForm@Name
11783 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

11784 \ifx\Fld@value\relax
11785 \let\Fld@value\Fld@default
11786 \fi
11787 \LayoutChoiceField{#2}{%
11788 \ifFld@radio
11789 \HyField@FlagsRadioButton
11790 \@@Radio{#3}%
11791 \else
11792 \begin{group}
11793 \HyField@FlagsChoice
11794 \ifdim\Fld@width<\@tempdima
11795 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11796 \edef\Fld@width{\the\@tempdima}%
11797 \fi
11798 \ifFld@combo
11799 \else
11800 \@tempdima=\the\Fld@menulength\Fld@charsize
11801 \advance\@tempdima by \Fld@borderwidth bp %
11802 \advance\@tempdima by \Fld@borderwidth bp %
11803 \edef\Fld@height{\the\@tempdima}%
11804 \fi
11805 \@@ListBox{#3}%
11806 \end{group}
11807 \fi
11808 }%
11809 \end{group}
11810 }
11811 \def\@@Radio#1{%
11812 \Fld@listcount=0 %
11813 \@for\@curropt:=#1\do{%
11814 \expandafter\Fld@checkequals\@curropt==\%
11815 \Hy@StepCount\Fld@listcount
11816 \@currDisplay\space
11817 \leavevmode
11818 \Hy@escapeform\PDFForm@Radio
11819 \pdfstartlink user {%
11820 \PDFForm@Radio
11821 /AP<<%
11822 /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.

```

11823 /\@currValue\space \DingObject
11824 >>%
11825 >>%
11826 }%
11827 \relax
11828 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11829 \ifnum\Fld@listcount=1 %
11830 \HyField@AddToFields
11831 \fi
11832 \space % deliberate space between radio buttons
11833 }%
11834 }
11835 \newcount\Fld@listcount
11836 \def\@@ListBox#1{%
11837 \HyField@PDFChoices{#1}%

```



```

11838 \leavevmode
11839 \Hy@escapeform\PDFForm@List
11840 \pdfstartlink user {\PDFForm@List}\relax
11841 \MakeChoiceField{\Fld@width}{\Fld@height}%
11842 \pdfendlink
11843 \HyField@AddToFields
11844 }
11845 \def\@PushButton[#1]#2{% parameters, label
11846 \def\Fld@name{#2}%
11847 \begingroup
11848 \Field@toks={ }%
11849 \expandafter\HyField@SetKeys\expandafter{%
11850 \DefaultOptionsofPushButton,#1%
11851 }%
11852 \PDFForm@Name
11853 \ifHy@pdfa
11854 \PackageError{hyperref}{%
11855 PDF/A: Push button with JavaScript is prohibited%
11856 }\@ehc
11857 \LayoutPushButtonField{%
11858 \leavevmode
11859 \MakeButtonField{#2}%
11860 }%
11861 \else
11862 \HyField@FlagsPushButton
11863 \ifFld@hidden\def\Fld@width{1sp}\fi
11864 \LayoutPushButtonField{%
11865 \leavevmode
11866 \Hy@escapeform\PDFForm@Push
11867 \pdfstartlink user {\PDFForm@Push}\relax
11868 \MakeButtonField{#2}%
11869 \pdfendlink
11870 \HyField@AddToFields
11871 }%
11872 \fi
11873 \endgroup
11874 }
11875 \def\@Submit[#1]#2{%
11876 \Field@toks={ }%
11877 \def\Fld@width{\DefaultWidthofSubmit}%
11878 \def\Fld@height{\DefaultHeightofSubmit}%
11879 \begingroup
11880 \expandafter\HyField@SetKeys\expandafter{%
11881 \DefaultOptionsofSubmit,#1%
11882 }%
11883 \HyField@FlagsPushButton
11884 \HyField@FlagsSubmit
11885 \ifFld@hidden\def\Fld@width{1sp}\fi
11886 \leavevmode
11887 \Hy@escapeform\PDFForm@Submit
11888 \pdfstartlink user {%
11889 \PDFForm@Submit
11890 /AP<</N \SubmitObject/D \SubmitPObject>>%
11891 }%
11892 \relax
11893 \MakeButtonField{#2}%
11894 \pdfendlink

```

```

11895 \HyField@AddToFields
11896 \endgroup
11897 }
11898 \def\@Reset[#1]#2{%
11899 \Field@toks={ }%
11900 \def\Fld@width{\DefaultWidthofReset}%
11901 \def\Fld@height{\DefaultHeightofReset}%
11902 \begingroup
11903 \expandafter\HyField@SetKeys\expandafter{%
11904 \DefaultOptionsofReset,#1%
11905 }%
11906 \leavevmode
11907 \ifHy@pdfa
11908 \PackageError{hyperref}{%
11909 PDF/A: Reset action is prohibited%
11910 }\@ehc
11911 \MakeButtonField{#2}%
11912 \else
11913 \HyField@FlagsPushButton
11914 \ifFld@hidden\def\Fld@width{1sp}\fi
11915 \Hy@escapeform\PDFForm@Reset
11916 \pdfstartlink user {\PDFForm@Reset}\relax
11917 \MakeButtonField{#2}%
11918 \pdfendlink
11919 \HyField@AddToFields
11920 \fi
11921 \endgroup
11922 }
11923 \def\@CheckBox[#1]#2{% parameters, label
11924 \def\Fld@name{#2}%
11925 \def\Fld@default{0}%
11926 \begingroup
11927 \def\Fld@width{\DefaultWidthofCheckBox}%
11928 \def\Fld@height{\DefaultHeightofCheckBox}%
11929 \Field@toks={ }%
11930 \expandafter\HyField@SetKeys\expandafter{%
11931 \DefaultOptionsofCheckBox,#1%
11932 }%
11933 \PDFForm@Name
11934 \HyField@FlagsCheckBox
11935 \ifFld@hidden\def\Fld@width{1sp}\fi
11936 \LayoutCheckField{#2}{%
11937 \Hy@escapeform\PDFForm@Check
11938 \pdfstartlink user {\PDFForm@Check}\relax
11939 \MakeCheckField{\Fld@width}{\Fld@height}%
11940 \pdfendlink
11941 \HyField@AddToFields
11942 }%
11943 \endgroup
11944 }
11945 \def\Hy@FormObjects{%
11946 \pdfobj {%
11947 <<%
11948 /Type/Encoding%
11949 /Differences[%
11950 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
11951 /ring/tilde %

```

```

11952 39/quotesingle %
11953 96/grave %
11954 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11955 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11956 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11957 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
11958 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11959 164/currency %
11960 166/brokenbar %
11961 168/dieresis/copyright/ordfeminine %
11962 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11963 /twosuperior/threesuperior/acute/mu %
11964 183/periodcentered/cedilla/onesuperior/ordmasculine %
11965 188/onequarter/onehalf/threequarters %
11966 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11967 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11968 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11969 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11970 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11971 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11972 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11973 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11974 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
11975 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
11976 ]%
11977 >>%
11978 }%
11979 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
11980 \pdfobj{%
11981 <<%
11982 /Type/Font%
11983 /Subtype/Type1%
11984 /Name/ZaDb%
11985 /BaseFont/ZapfDingbats%
11986 >>%
11987 }%
11988 \xdef\OBJ@ZaDb{\the\pdflastobj}%
11989 \pdfobj{%
11990 <<%
11991 /Type/Font%
11992 /Subtype/Type1%
11993 /Name/Helv%
11994 /BaseFont/Helvetica%
11995 /Encoding \OBJ@pdfdocencoding\space 0 R%
11996 >>%
11997 }%
11998 \xdef\OBJ@Helv{\the\pdflastobj}%
11999 \global\let\Hy@FormObjects\relax
12000 }
12001 </pdfTeX>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf_T_EX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
12002 < *dvipdfm | xetex>
```

\@Gauge

```

12003 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12004 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12005 }

```

\@Form

```

12006 \def\@Form[#1]{%
12007 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
12008 \setkeys{Form}{#1}%
12009 \Hy@FormObjects
12010 \@pdfm@mark{obj @afields []}%
12011 \@pdfm@mark{obj @corder []}%
12012 \@pdfm@mark{%
12013 obj @aform <<%
12014 /Fields @afields%
12015 /DR<<%
12016 /Font<<%
12017 /ZaDb @OBJZaDb%
12018 /Helv @OBJHelv%
12019 >>%
12020 >>%
12021 /DA(/Helv 10 Tf 0 g)%
12022 /CO @corder%
12023 \ifHy@pdfa
12024 \else
12025 /NeedAppearances true%
12026 \fi
12027 >>%
12028 }%
12029 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
12030 }

```

\@endForm

```

12031 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

12032 \def\dvipdfm@setdim{%
12033 height \the\ht\pdfm@box\space
12034 width \the\wd\pdfm@box\space
12035 depth \the\dp\pdfm@box\space
12036 }

```

\HyField@AnnotCount

```

12037 \newcount\HyField@AnnotCount
12038 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

12039 \def\HyField@AdvanceAnnotCount{%
12040 \global\advance\HyField@AnnotCount\@ne
12041 }

```

\HyField@TheAnnotCount

```

12042 \def\HyField@TheAnnotCount{%
12043 \the\HyField@AnnotCount
12044 }

```

\@TextField

```

12045 \def\@TextField[#1]#2{% parameters, label
12046   \def\Fld@name{#2}%
12047   \def\Fld@default{}%
12048   \let\Fld@value\@empty
12049   \def\Fld@width{\DefaultWidthofText}%
12050   \def\Fld@height{%
12051     \ifFld@multiline
12052       \DefaultHeightofTextMultiline
12053     \else
12054       \DefaultHeightofText
12055     \fi
12056   }%
12057   \begingroup
12058     \Field@toks={ }%
12059     \expandafter\HyField@SetKeys\expandafter{%
12060       \DefaultOptionsofText,#1%
12061     }%
12062     \PDFForm@Name
12063     \HyField@FlagsText
12064     \ifFld@hidden\def\Fld@width{1sp}\fi
12065     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12066     \setbox\pdfm@box=\hbox{%
12067       \MakeTextField{\Fld@width}{\Fld@height}%
12068     }%
12069     \HyField@AdvanceAnnotCount
12070     \LayoutTextField{#2}{%
12071       \Hy@escapeform\PDFForm@Text
12072       \@pdfm@mark{%
12073         ann @text\HyField@TheAnnotCount\space
12074         \dvipdfm@setdim << \PDFForm@Text >>%
12075       }%
12076     }%
12077     \unhbox\pdfm@box
12078     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12079     % record in @afields array
12080   \endgroup
12081 }

```

\@ChoiceMenu

```

12082 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12083   \def\Fld@name{#2}%
12084   \let\Fld@default\relax
12085   \let\Fld@value\relax
12086   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12087   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12088   \begingroup
12089     \Fld@menulength=0 %
12090     \@tempdima\z@
12091     \@for\@curropt=#3\do{%
12092       \expandafter\Fld@checkequals\@curropt==\%
12093       \Hy@StepCount\Fld@menulength
12094       \settowidth{\@tempdimb}{\@currDisplay}%
12095       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12096     }%
12097     \advance\@tempdima by 15\p@
12098     \Field@toks={ }%

```

```

12099 \begingroup
12100   \HyField@SetKeys{#1}%
12101 \edef\x{\endgroup
12102   \noexpand\expandafter
12103   \noexpand\HyField@SetKeys
12104   \noexpand\expandafter{%
12105     \expandafter\noexpand\csname DefaultOptionsof%
12106     \ifFld@radio
12107       Radio%
12108     \else
12109       \ifFld@combo
12110       \ifFld@popdown
12111         PopdownBox%
12112       \else
12113         ComboBox%
12114       \fi
12115     \else
12116       ListBox%
12117     \fi
12118   \fi
12119   \endcsname
12120   }%
12121 } \x
12122 \HyField@SetKeys{#1}%
12123 \PDFForm@Name
12124 \ifFld@hidden\def\Fld@width{1sp}\fi
12125 \ifx\Fld@value\relax
12126   \let\Fld@value\Fld@default
12127 \fi
12128 \LayoutChoiceField{#2}{%
12129   \ifFld@radio
12130     \HyField@FlagsRadioButton
12131     \@@Radio{#3}%
12132   \else
12133     \begingroup
12134       \HyField@FlagsChoice
12135       \ifdim\Fld@width<\@tempdima
12136         \ifdim\@tempdima<1cm\@tempdima1cm\fi
12137         \edef\Fld@width{\the\@tempdima}%
12138       \fi
12139       \ifFld@combo
12140       \else
12141         \@tempdima=\the\Fld@menulength\Fld@charsize
12142         \advance\@tempdima by \Fld@borderwidth bp %
12143         \advance\@tempdima by \Fld@borderwidth bp %
12144         \edef\Fld@height{\the\@tempdima}%
12145       \fi
12146       \@@ListBox{#3}%
12147     \endgroup
12148   \fi
12149 }%
12150 \endgroup
12151 }

```

\@@Radio

```

12152 \def\@@Radio#1{%
12153   \Fld@listcount=0 %

```

```

12154 \setbox\pdfm@box=\hbox{%
12155   \MakeRadioField{\Fld@width}{\Fld@height}%
12156 }%
12157 \@for\@curropt:=#1\do{%
12158   \expandafter\Fld@checkequals\@curropt==\%
12159   \Hy@StepCount\Fld@listcount
12160   \@currDisplay\space
12161   \leavevmode
12162   \Hy@escapeform\PDFForm@Radio
12163   \ifnum\Fld@listcount=1 %
12164     \HyField@AdvanceAnnotCount
12165   \fi
12166   \@pdfm@mark{%
12167     ann %
12168     \ifnum\Fld@listcount=1 %
12169       @radio\HyField@TheAnnotCount%
12170     \space
12171   \fi
12172   \dvipdfm@setdim
12173   <<%
12174     \PDFForm@Radio
12175     /AP<</N<</\@currValue /null>>>>%
12176   >>%
12177 }%
12178 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12179 \ifnum\Fld@listcount=1 %
12180   \@pdfm@mark{%
12181     put @afields @radio\HyField@TheAnnotCount
12182   }%
12183 \fi
12184 }%
12185 }

```

\Fld@listcount

```

12186 \newcount\Fld@listcount

```

\@@ListBox

```

12187 \def\@@ListBox#1{%
12188   \HyField@PDFChoices{#1}%
12189   \setbox\pdfm@box=\hbox{%
12190     \MakeChoiceField{\Fld@width}{\Fld@height}%
12191   }%
12192   \leavevmode
12193   \Hy@escapeform\PDFForm@List
12194   \HyField@AdvanceAnnotCount
12195   \@pdfm@mark{%
12196     ann @list\HyField@TheAnnotCount\space
12197     \dvipdfm@setdim
12198     <<\PDFForm@List>>%
12199   }%
12200   \unhbox\pdfm@box
12201   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12202 }

```

\@PushButton

```

12203 \def\@PushButton[#1]#2{% parameters, label
12204   \def\Fld@name{#2}%

```

```

12205 \begingroup
12206 \Field@toks={ }%
12207 \expandafter\HyField@SetKeys\expandafter{%
12208 \DefaultOptionsofPushButton,#1%
12209 }%
12210 \PDFForm@Name
12211 \ifHy@pdfa
12212 \PackageError{hyperref}{%
12213 PDF/A: Push button with JavaScript is prohibited%
12214 }\@ehc
12215 \LayoutPushButtonField{%
12216 \leavevmode
12217 \MakeButtonField{#2}%
12218 }%
12219 \else
12220 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12221 \HyField@FlagsPushButton
12222 \ifFld@hidden\def\Fld@width{1sp}\fi
12223 \HyField@AdvanceAnnotCount
12224 \LayoutPushButtonField{%
12225 \leavevmode
12226 \Hy@escapeform\PDFForm@Push
12227 \@pdfm@mark{%
12228 ann @push\HyField@TheAnnotCount\space
12229 \dvipdfm@setdim
12230 <<\PDFForm@Push>>%
12231 }%
12232 }%
12233 \unhbox\pdfm@box
12234 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12235 \fi
12236 \endgroup
12237 }

```

\@Submit

```

12238 \def\@Submit[#1]#2{%
12239 \Field@toks={ }%
12240 \def\Fld@width{\DefaultWidthofSubmit}%
12241 \def\Fld@height{\DefaultHeightofSubmit}%
12242 \begingroup
12243 \expandafter\HyField@SetKeys\expandafter{%
12244 \DefaultOptionsofSubmit,#1%
12245 }%
12246 \HyField@FlagsPushButton
12247 \HyField@FlagsSubmit
12248 \ifFld@hidden\def\Fld@width{1sp}\fi
12249 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12250 \leavevmode
12251 \Hy@escapeform\PDFForm@Submit
12252 \HyField@AdvanceAnnotCount
12253 \@pdfm@mark{%
12254 ann @submit\HyField@TheAnnotCount\space
12255 \dvipdfm@setdim
12256 <<\PDFForm@Submit>>%
12257 }%
12258 \unhbox\pdfm@box%
12259 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%

```



```

12260 \endgroup
12261 }

\@Reset
12262 \def\@Reset[#1]#2{%
12263   \Field@toks={ }%
12264   \def\Fld@width{\DefaultWidthofReset}%
12265   \def\Fld@height{\DefaultHeightofReset}%
12266   \begingroup
12267     \expandafter\HyField@SetKeys\expandafter{%
12268       \DefaultOptionsofReset,#1%
12269     }%
12270   \leavevmode
12271   \ifHy@pdfa
12272     \PackageError{hyperref}{%
12273       PDF/A: Reset action is prohibited%
12274     }\@ehc
12275     \MakeButtonField{#2}%
12276   \else
12277     \HyField@FlagsPushButton
12278     \ifFld@hidden\def\Fld@width{1sp}\fi
12279     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12280     \Hy@escapeform\PDFForm@Reset
12281     \HyField@AdvanceAnnotCount
12282     \@pdfm@mark{%
12283       ann @reset\HyField@TheAnnotCount\space
12284       \dvipdfm@setdim
12285       <<\PDFForm@Reset>>%
12286     }%
12287     \unhbox\pdfm@box
12288     \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12289   \fi
12290 \endgroup
12291 }

\@CheckBox
12292 \def\@CheckBox[#1]#2{% parameters, label
12293   \def\Fld@name{#2}%
12294   \def\Fld@default{0}%
12295   \begingroup
12296     \def\Fld@width{\DefaultWidthofCheckBox}%
12297     \def\Fld@height{\DefaultHeightofCheckBox}%
12298     \Field@toks={ }%
12299     \expandafter\HyField@SetKeys\expandafter{%
12300       \DefaultOptionsofCheckBox,#1%
12301     }%
12302     \PDFForm@Name
12303     \HyField@FlagsCheckBox
12304     \ifFld@hidden\def\Fld@width{1sp}\fi
12305     \setbox\pdfm@box=\hbox{%
12306       \MakeCheckField{\Fld@width}{\Fld@height}%
12307     }%
12308     \HyField@AdvanceAnnotCount
12309     \LayoutCheckField{#2}{%
12310       \Hy@escapeform\PDFForm@Check
12311       \@pdfm@mark{%
12312         ann @check\HyField@TheAnnotCount\space

```

```

12313     \dviptdfm@setdim
12314     <<\PDFForm@Check>>%
12315     }%
12316     \unhbox\pdfm@box
12317     \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12318     }%
12319 \endgroup
12320 }

12321 \def\Hy@FormObjects{%
12322   \@pdfm@mark{obj @OBJpdfdocencoding%
12323     <<%
12324       /Type/Encoding%
12325       /Differences[%
12326         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12327         39/quotesingle %
12328         96/grave %
12329         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12330         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12331         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12332         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12333         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12334         164/currency %
12335         166/brokenbar %
12336         168/dieresis/copyright/ordfeminine %
12337         172/logicalnot/.notdef/registered/macron/degree/plusminus%
12338         /twosuperior/threesuperior/acute/mu %
12339         183/periodcentered/cedilla/onesuperior/ordmasculine %
12340         188/onequarter/onehalf/threequarters %
12341         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12342         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12343         /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12344         /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12345         /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12346         /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12347         /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12348         /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
12349         /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12350         /thorn/ydieresis%
12351       ]%
12352     >>%
12353   }%
12354   \@pdfm@mark{obj @OBJZaDb%
12355     <<%
12356       /Type/Font%
12357       /Subtype/Type1%
12358       /Name/ZaDb%
12359       /BaseFont/ZapfDingbats%
12360     >>%
12361   }%
12362   \@pdfm@mark{obj @OBJHelv%
12363     <<%
12364       /Type/Font%
12365       /Subtype/Type1%
12366       /Name/Helv%
12367       /BaseFont/Helvetica%
12368       /Encoding @OBJpdfdocencoding%
12369     >>%

```

```

12370 }%
12371 \global\let\Hy@FormObjects\relax
12372 }
12373 </dvipdfm | xetex>

```

47.6 Common forms part

```
12374 <*pdfform>
```

\Hy@escapestring

```

12375 \begingroup\expandafter\expandafter\expandafter\endgroup
12376 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12377 \let\Hy@escapestring\@firstofone
12378 \def\Hy@escapeform#1{%
12379   \ifHy@escapeform
12380     \def\Hy@escapestring##1{%
12381       \noexpand\Hy@escapestring{\noexpand##1}%
12382     }%
12383     \edef\Hy@temp{#1}%
12384     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
12385     \def\Hy@escapestring##1{%
12386       \@ifundefined{Hy@esc@\string##1}{%
12387         ##1%
12388         \ThisShouldNotHappen
12389       }{%
12390         \csname Hy@esc@\string##1\endcsname
12391       }%
12392     }%
12393   \else
12394     \let\Hy@escapestring\@firstofone
12395   \fi
12396 }%
12397 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12398   \ifx\#3\%
12399   \else
12400     \expandafter
12401     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12402     \Hy@ReturnAfterFi{%
12403       \Hy@@escapeform#3\@nil
12404     }%
12405   \fi
12406 }%
12407 \else
12408   \def\Hy@escapeform#1{%
12409     \ifHy@escapeform
12410       \let\Hy@escapestring\pdfescapestring
12411     \else
12412       \let\Hy@escapestring\@firstofone
12413     \fi
12414   }%
12415   \Hy@escapeform{ }%
12416 \fi

```

\PDFForm@Name

```

12417 \def\PDFForm@Name{%
12418   \begingroup
12419   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7

```

```

12420 \ifHy@unicode
12421 \Hy@unicodedefalse
12422 \fi
12423 \fi
12424 \HyPsd@XeTeXBigCharstrue
12425 \pdfstringdef\Hy@gtemp\Fld@name
12426 \endgroup
12427 \let\Fld@name\Hy@gtemp
12428 }

```

\PDFForm@Check

```

12429 \def\PDFForm@Check{%
12430 /Subtype/Widget%
12431 \Fld@annotflags
12432 /T(\Fld@name)%
12433 /FT/Btn%
12434 \Fld@flags
12435 /Q \Fld@align
12436 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12437 /MK<<%
12438 \ifnum\Fld@rotation=\z@
12439 \else
12440 /R \Fld@rotation
12441 \fi
12442 \ifx\Fld@bordercolor\relax
12443 \else
12444 /BC[\Fld@bordercolor]%
12445 \fi
12446 \ifx\Fld@bcolor\relax
12447 \else
12448 /BG[\Fld@bcolor]%
12449 \fi
12450 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12451 >>%
12452 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12453 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12454 /H/P%
12455 \ifFld@checked /V/Yes\else /V/Off\fi
12456 }

```

\PDFForm@Push

```

12457 \ifHy@pdfa
12458 \else
12459 \def\PDFForm@Push{%
12460 /Subtype/Widget%
12461 \Fld@annotflags
12462 /T(\Fld@name)%
12463 /FT/Btn%
12464 \Fld@flags
12465 /H/P%
12466 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12467 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12468 \ifx\Fld@bordercolor\relax\else 1\fi
12469 \space
12470 \else
12471 /MK<<%
12472 \ifnum\Fld@rotation=\z@

```

```

12473     \else
12474         /R \Fld@rotation
12475     \fi
12476     \ifx\Fld@bordercolor\relax
12477     \else
12478         /BC[\Fld@bordercolor]%
12479     \fi
12480     >>%
12481 \fi
12482 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12483 }%
12484 \fi

```

\Fld@additionalactions

```

12485 \def\Fld@@additionalactions{%
K input (keystroke) format
12486 \ifx\Fld@keystroke@code\@empty
12487 \else
12488     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12489 \fi

```

F display format

```

12490 \ifx\Fld@format@code\@empty
12491 \else
12492     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12493 \fi

```

V validation

```

12494 \ifx\Fld@validate@code\@empty
12495 \else
12496     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12497 \fi

```

C calculation

```

12498 \ifx\Fld@calculate@code\@empty
12499 \else
12500     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12501 \fi

```

Fo receiving the input focus

```

12502 \ifx\Fld@onfocus@code\@empty
12503 \else
12504     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12505 \fi

```

Bl loosing the input focus (blurred)

```

12506 \ifx\Fld@onblur@code\@empty
12507 \else
12508     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12509 \fi

```

D pressing the mouse button (down)

```

12510 \ifx\Fld@onmousedown@code\@empty
12511 \else
12512     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12513 \fi

```

U releasing the mouse button (up)

```

12514 \ifx\Fld@onmouseup@code\@empty

```

```

12515 \else
12516   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12517 \fi

```

E cursor enters the annotation's active area.

```

12518 \ifx\Fld@onenter@code\@empty
12519 \else
12520   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12521 \fi

```

X cursor exits the annotation's active area.

```

12522 \ifx\Fld@onexit@code\@empty
12523 \else
12524   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12525 \fi
12526 }
12527 \def\Fld@additionalactions{%
12528 \if\Fld@@additionalactions-%
12529 \else
12530   \ifHy@pdfa
12531   \else
12532     /AA<<\Fld@@additionalactions>>%
12533   \fi
12534 \fi
12535 }

```

\PDFForm@List

```

12536 \def\PDFForm@List{%
12537   /Subtype/Widget%
12538   \Fld@annotflags
12539   /T(\Fld@name)%
12540   /FT/Ch%
12541   \Fld@flags
12542   /Q \Fld@align
12543   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12544   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12545     \ifx\Fld@bordercolor\relax\else 1\fi
12546     \ifx\Fld@bcolor\relax \else 1\fi
12547     \space
12548   \else
12549     /MK<<%
12550     \ifnum\Fld@rotation=\z@
12551     \else
12552       /R \Fld@rotation
12553     \fi
12554     \ifx\Fld@bordercolor\relax
12555     \else
12556       /BC[\Fld@bordercolor]%
12557     \fi
12558     \ifx\Fld@bcolor\relax
12559     \else
12560       /BG[\Fld@bcolor]%
12561     \fi
12562     >>%
12563   \fi
12564   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12565     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12566   \Fld@choices

```

```

12567 \Fld@additionalactions
12568 }

```

\PDFForm@Radio

```

12569 \def\PDFForm@Radio{%
12570 /Subtype/Widget%
12571 \Fld@annotflags
12572 /T(\Fld@name)%
12573 /FT/Btn%
12574 \Fld@flags
12575 /H/P%
12576 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12577 /MK<<%
12578 \ifnum\Fld@rotation=\z@
12579 \else
12580 /R \Fld@rotation
12581 \fi
12582 \ifx\Fld@bordercolor\relax
12583 \else
12584 /BC[\Fld@bordercolor]%
12585 \fi
12586 \ifx\Fld@bcolor\relax
12587 \else
12588 /BG[\Fld@bcolor]%
12589 \fi
12590 /CA(\Fld@radiosymbol)%
12591 >>%
12592 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12593 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12594 \ifx\@currValue\Fld@default
12595 /V/\Fld@default
12596 \else
12597 /V/Off%
12598 \fi
12599 \Fld@additionalactions
12600 }

```

\PDFForm@Text

```

12601 \def\PDFForm@Text{%
12602 /Subtype/Widget%
12603 \Fld@annotflags
12604 /T(\Fld@name)%
12605 /FT/Tx%
12606 \Fld@flags
12607 /Q \Fld@align
12608 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12609 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12610 \ifx\Fld@bordercolor\relax\else 1\fi
12611 \ifx\Fld@bcolor\relax \else 1\fi
12612 \space
12613 \else
12614 /MK<<%
12615 \ifnum\Fld@rotation=\z@
12616 \else
12617 /R \Fld@rotation
12618 \fi
12619 \ifx\Fld@bordercolor\relax

```

```

12620     \else
12621         /BC[\Fld@bordercolor]%
12622     \fi
12623     \ifx\Fld@bcolor\relax
12624     \else
12625         /BG[\Fld@bcolor]%
12626     \fi
12627     >>%
12628 \fi
12629 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12630     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12631 /DV(\Hy@escapestring{\Fld@default})%
12632 /V(\Hy@escapestring{\Fld@value})%
12633 \Fld@additionalactions
12634 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12635 }

```

\PDFForm@Submit

```

12636 \def\PDFForm@Submit{%
12637 /Subtype/Widget%
12638 \Fld@annotflags
12639 /T(\Fld@name)%
12640 /FT/Btn%
12641 \Fld@flags
12642 /H/P%
12643 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12644 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12645     \ifx\Fld@bordercolor\relax\else 1\fi
12646     \space
12647 \else
12648 /MK<<%
12649     \ifnum\Fld@rotation=\z@
12650     \else
12651         /R \Fld@rotation
12652     \fi
12653     \ifx\Fld@bordercolor\relax
12654     \else
12655         /BC[\Fld@bordercolor]%
12656     \fi
12657     >>%
12658 \fi
12659 /A<<%
12660 /S/SubmitForm%
12661 /F<<%
12662     /FS/URL%
12663     /F(\Hy@escapestring{\Form@action})%
12664     >>%
12665     \Fld@submitflags
12666     >>%
12667 }

```

\PDFForm@Reset

```

12668 \ifHy@pdfa
12669 \else
12670 \def\PDFForm@Reset{%
12671 /Subtype/Widget%
12672 \Fld@annotflags

```



```

12673 /T(\Fld@name)%
12674 /FT/Btn%
12675 \Fld@flags
12676 /H/P%
12677 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12678 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12679 \ifx\Fld@bordercolor\relax\else 1\fi
12680 \space
12681 \else
12682 /MK<<%
12683 \ifnum\Fld@rotation=\z@
12684 \else
12685 /R \Fld@rotation
12686 \fi
12687 \ifx\Fld@bordercolor\relax
12688 \else
12689 /BC[\Fld@bordercolor]%
12690 \fi
12691 % /CA (Clear)
12692 % /AC (Done)
12693 >>%
12694 \fi
12695 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12696 /A<</S/ResetForm>>%
12697 }%
12698 \fi

12699 </pdfform>
12700 <*package>

```

48 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 `\@sssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

12701 \def\phantomsection{%
12702 \Hy@GlobalStepCount\Hy@linkcounter
12703 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12704 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12705 }
12706 </package>

```

48.1 Bookmarks

```
12707 <*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 -T_EX, the order of the \BOOKMARK commands written to the \@outlinefile could appear wrong, because of mis-feature of ε -T_EX'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.

```

12708 \def\Hy@writebookmark#1#2#3#4#5{%
12709   % section number, text, label, level, file
12710   \ifx\WriteBookmarks\relax%
12711   \else
12712     \ifnum#4>\Hy@bookmarksdepth\relax
12713     \else
12714       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12715     \fi
12716   \fi
12717 }
12718 \def\Hy@currentbookmarklevel{0}
12719 \def\Hy@numberline#1{#1 }
12720 \def\@@writetorep#1#2#3#4#5{%
12721   \begingroup
12722     \edef\Hy@tempa{#5}%
12723     \ifx\Hy@tempa\Hy@bookmarkstype
12724       \edef\Hy@level{#4}%
12725       \ifx\Hy@levelcheck Y%
12726         \@tempcnta\Hy@level\relax
12727         \advance\@tempcnta by -1 %
12728         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12729           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12730           \advance\@tempcnta by 1 %
12731           \Hy@Warning{%
12732             Difference (\the\@tempcnta) between bookmark levels is %
12733             greater \MessageBreak than one, level fixed%
12734           }%
12735           \@tempcnta\Hy@currentbookmarklevel
12736           \advance\@tempcnta by 1 %
12737           \edef\Hy@level{\the\@tempcnta}%
12738         \fi
12739       \else
12740         \global\let\Hy@levelcheck Y%
12741       \fi
12742       \global\let\Hy@currentbookmarklevel\Hy@level
12743       \@tempcnta\Hy@level\relax
12744       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12745       \advance\@tempcnta by -1 %
12746       \edef\Hy@tempa{#3}%
12747       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12748       \ifx\Hy@tempa\Hy@tempb
12749         \Hy@Warning{%
12750           The anchor of a bookmark and its parent's must not%
12751           \MessageBreak be the same. Added a new anchor%
12752         }%
12753       \phantomsection
12754     \fi
12755     \ifHy@bookmarksnumbered

```

```

12756 \let\numberline\Hy@numberline
12757 \let\partnumberline\Hy@numberline
12758 \let\chapternumberline\Hy@numberline
12759 \else
12760 \let\numberline\@gobble
12761 \let\partnumberline\@gobble
12762 \let\chapternumberline\@gobble
12763 \fi
12764 \HyPsd@XeTeXBigCharstrue
12765 \pdfstringdef\Hy@tempa{#2}%
12766 \if@filesw
12767 \stepcounter{bookmark@seq@number}%
12768 \ifundefined{@outlinefile}{%
12769 }{%
12770 \protected@write{@outlinefile}{}%
12771 \protect\BOOKMARK
12772 [\Hy@level][@bookmarkopenstatus{\Hy@level}]{#3}%
12773 {\Hy@tempa}{\Hy@tempb}%
12774 \@percentchar\space\thebookmark@seq@number
12775 }%
12776 }%
12777 \fi
12778 \fi
12779 \endgroup
12780 }
12781 \newcounter{bookmark@seq@number}

```

In the call of `\BOOKMARK` the braces around `#4` are omitted, because it is not likely, that the level number contains `]`.

```

12782 \newcommand{\currentpdfbookmark}{%
12783 \pdfbookmark[\Hy@currentbookmarklevel]%
12784 }
12785 \newcommand{\subpdfbookmark}{%
12786 \@tempcnta\Hy@currentbookmarklevel
12787 \Hy@StepCount\@tempcnta
12788 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12789 }
12790 \newcommand{\belowpdfbookmark}[2]{%
12791 \@tempcnta\Hy@currentbookmarklevel
12792 \Hy@StepCount\@tempcnta
12793 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12794 \advance\@tempcnta by -1 %
12795 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12796 }

```

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.

```

12797 \renewcommand{\pdfbookmark}[3][0]{%
12798 \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12799 \hyper@anchorstart{#3.#1}\hyper@anchorend
12800 }
12801 \def\BOOKMARK{%
12802 \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
12803 }
12804 \def\@BOOKMARK[#1]{%
12805 \@ifnextchar[{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
12806 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo.pdf macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```
12807 \RequirePackage{rerunfilecheck}[2009/12/10]
12808 \def\Hy@OutlineRerunCheck{%
12809   \RerunFileCheck{\jobname.out}{%
12810     \immediate\closeout\@outlinefile
12811   }{%
12812     Rerun to get outlines right\MessageBreak
12813     or use package 'bookmark'%
12814   }%
12815 }
```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by 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.

```
12816 <*vtex>
12817 \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.

```
12818 \begingroup
12819   \catcode'\'=12 %
12820   \ifnum\Hy@VTeXversion<650 %
12821     \catcode'\ "=12 %
12822     \gdef\hv@pdf@char#1#2#3{%
12823       \char
12824       \ifcase'#1#2#3 %
12825         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12826         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12827         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12828         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12829         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12830         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12831         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12832         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12833         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12834         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12835         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12836         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12837         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12838         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12839         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12840         \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12841         \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12842         \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12843         \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12844         \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12845         \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12846         \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
```

```

12847 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12848 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12849 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12850 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12851 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12852 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12853 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12854 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12855 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12856 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12857 \fi
12858 }%
12859 \else
12860 \gdef\hv@pdf@char{\char'}%
12861 \fi
12862 \endgroup

```

\@@BOOKMARK

```

12863 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12864 \expandafter\edef\csname @count@#3\endcsname{%
12865 \the\@serial@counter
12866 }%
12867 \edef\@mycount{\the\@serial@counter}%
12868 \Hy@StepCount\@serial@counter
12869 \edef\@parcount{%
12870 \expandafter\ifx\csname @count@#5\endcsname\relax
12871 0%
12872 \else
12873 \csname @count@#5\endcsname
12874 \fi
12875 }%
12876 \immediate\special{%
12877 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12878 s=\ifx#2-c\else o\fi,t=#4%
12879 }%
12880 }%

```

\ReadBookmarks

```

12881 \def\ReadBookmarks{%
12882 \begingroup
12883 \def\0{\hv@pdf@char 0}%
12884 \def\1{\hv@pdf@char 1}%
12885 \def\2{\hv@pdf@char 2}%
12886 \def\3{\hv@pdf@char 3}%
12887 \def\{({}%
12888 \def\)}{)%
12889 \def\do##1{%
12890 \ifnum\the\catcode'##1=\active
12891 \@makeother##1%
12892 \fi
12893 }%
12894 \dospecials
12895 \InputIfFileExists{\jobname.out}{\}{}%
12896 \endgroup
12897 \ifx\WriteBookmarks\relax
12898 \else
12899 \if@filesw

```

```

12900 \newwrite\@outlinefile
12901 \Hy@OutlineRerunCheck
12902 \immediate\openout\@outlinefile=\jobname.out\relax
12903 \ifHy@typexml
12904 \immediate\write\@outlinefile{<relaxxml>\relax}%
12905 \fi
12906 \fi
12907 \fi
12908 }

12909 </vtex>
12910 <!*vtex>
12911 \def\ReadBookmarks{%
12912 \begingroup
12913 \escapechar='\'%
12914 \let\escapechar\@gobble %
12915 \def\@@BOOKMARK[##1][##2]###3###4###5{%
12916 \calc@bm@number{##5}%
12917 }%
12918 \InputIfFileExists{\jobname.out}{-}{-}%
12919 \ifx\WriteBookmarks\relax
12920 \global\let\WriteBookmarks\relax
12921 \fi
12922 \def\@@BOOKMARK[##1][##2]###3###4###5{%
12923 \def\Hy@temp{##4}%
12924 <*pdftex>
12925 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12926 \Hy@OutlineName{}\Hy@pstringName{%
12927 ##2\check@bm@number{##3}%
12928 }{%
12929 \expandafter\strip@prefix\meaning\Hy@temp
12930 }%
12931 </pdftex>
12932 <*pdfmark>
12933 \pdfmark{%
12934 pdfmark=/OUT,%
12935 Count={##2\check@bm@number{##3}},%
12936 Dest={##3},%
12937 Title=\expandafter\strip@prefix\meaning\Hy@temp
12938 }%
12939 </pdfmark>
12940 <*dvipdfm|xetex>
12941 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12942 \@pdfm@mark{%
12943 outline \ifHy@DvipdfmxOutlineOpen
12944 [%
12945 \ifnum##21>\z@
12946 \else
12947 -%
12948 \fi
12949 ] %
12950 \fi
12951 ##1<<%
12952 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
12953 /A<<%
12954 /S/GoTo%
12955 /D(\Hy@pstringName)%
12956 >>%

```

```

12957      >>%
12958    }%
12959  </dvipdfm | xetex>
12960  }%
12961  {%
12962    \def\WriteBookmarks{0}%
12963    \InputIfFileExists{\jobname.out}{\relax}%
12964  }%
12965  {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
12966  \ifx\WriteBookmarks\relax
12967  \else
12968    \if@filesw
12969      \newwrite\@outlinefile
12970      \Hy@OutlineRerunCheck
12971      \immediate\openout\@outlinefile=\jobname.out\relax
12972      \ifHy@typexml
12973        \immediate\write\@outlinefile{<relaxxml>\relax}%
12974      \fi
12975    \fi
12976  \fi
12977  \endgroup
12978 }
12979 <*pdfTeX>
12980 \def\Hy@OutlineName#1#2#3#4{%
12981   \pdfoutline goto name{#2}count#3{#4}%
12982 }
12983 </pdfTeX>
12984 \def\check@bm@number#1{%
12985   \expandafter\ifx\csname B_#1\endcsname\relax
12986     0%
12987   \else
12988     \csname B_#1\endcsname
12989   \fi
12990 }
12991 \def\calc@bm@number#1{%
12992   \@tempcnta=\check@bm@number{#1}\relax
12993   \advance\@tempcnta by 1 %
12994   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
12995 }
12996 </!vTeX>
12997 \ifHy@implicit
12998 \else
12999   \expandafter\endinput
13000 \fi
13001 </outlines>
13002 <*outlines | hypertex>
13003 \newlength\Hy@SectionHShift
13004 \def\Hy@SectionAnchorHref#1{%
13005   \ifx\protect\@typeset@protect
13006     \Hy@@@SectionAnchor{#1}%
13007   \fi
13008 }
13009 \DeclareRobustCommand*{\Hy@@@SectionAnchor}[1]{%
13010   \leavevmode
13011   \hbox to 0pt{%
13012     \kern-\Hy@SectionHShift

```

```

13013 \Hy@raisedlink{%
13014 \hyper@anchorstart{#1}\hyper@anchorend
13015 }%
13016 \hss
13017 }%
13018 }
13019 \let\H@old@ssect\@ssect
13020 \def\@ssect#1#2#3#4#5{%
13021 \Hy@GlobalStepCount\Hy@linkcounter
13022 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
13023 \setlength{\Hy@SectionHShift}{#1}%
13024 \begingroup
13025 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13026 \toks\tw@\expandafter{%
13027 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13028 #5%
13029 }%
13030 \edef\x{\endgroup
13031 \the\toks@\the\toks\tw@}%
13032 }\x
13033 }
13034 \let\H@old@schapter\@schapter
13035 \def\@schapter#1{%
13036 \begingroup
13037 \let\@mkboth\@gobbletwo
13038 \Hy@GlobalStepCount\Hy@linkcounter
13039 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13040 \Hy@raisedlink{%
13041 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13042 }%
13043 \endgroup
13044 \H@old@schapter{#1}%
13045 }

```

If there is no chapter number (\frontmatter or \backmatter) then \refstepcounter{chapter} is not executed, so there will be no destination for \ddcontentsline. So \@chapter is overloaded to avoid this:

```

13046 \ltx@ifundefined{@chapter}{}{%
13047 \let\Hy@org@chapter\@chapter
13048 \def\@chapter{%
13049 \def\Hy@next{%
13050 \Hy@GlobalStepCount\Hy@linkcounter
13051 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13052 \Hy@raisedlink{%
13053 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13054 }%
13055 }%
13056 \ifnum\c@secnumdepth>\m@ne
13057 \ltx@ifundefined{if@mainmatter}%
13058 \iftrue{\csname if@mainmatter\endcsname}%
13059 \let\Hy@next\relax
13060 \fi
13061 \fi
13062 \Hy@next
13063 \Hy@org@chapter
13064 }%
13065 }

```



```

13066 \let\H@old@part\@part
13067 \begingroup\expandafter\expandafter\expandafter\endgroup
13068 \expandafter\ifx\csname chapter\endcsname\relax
13069   \let\Hy@secnum@part\z@
13070 \else
13071   \let\Hy@secnum@part\m@ne
13072 \fi
13073 \def\@part{%
13074   \ifnum\Hy@secnum@part>\c@secnumdepth
13075     \phantomsection
13076   \fi
13077   \H@old@part
13078 }

13079 \let\H@old@spart\@spart
13080 \def\@spart#1{%
13081   \Hy@GlobalStepCount\Hy@linkcounter
13082   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
13083   \Hy@raisedlink{%
13084     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13085   }%
13086   \H@old@spart{#1}%
13087 }

13088 \let\H@old@sect\@sect
13089 \def\@sect#1#2#3#4#5#6[#7]#8{%
13090   \ifnum #2>\c@secnumdepth
13091     \expandafter\@firstoftwo
13092   \else
13093     \expandafter\@secondoftwo
13094   \fi
13095   {%
13096     \Hy@GlobalStepCount\Hy@linkcounter
13097     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
13098     \setlength{\Hy@SectionHShift}{#3}%
13099     \begingroup
13100       \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13101       \toks\tw@\expandafter{%
13102         \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13103         #8%
13104       }%
13105       \edef\x{\endgroup
13106         \the\toks@{\the\toks\tw@}}%
13107       }\x
13108     }{%
13109       \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13110     }%
13111   }

13112 </outlines | hypertex>
13113 <*outlines>

13114 \expandafter\def\csname Parent-4\endcsname{}
13115 \expandafter\def\csname Parent-3\endcsname{}
13116 \expandafter\def\csname Parent-2\endcsname{}
13117 \expandafter\def\csname Parent-1\endcsname{}
13118 \expandafter\def\csname Parent0\endcsname{}
13119 \expandafter\def\csname Parent1\endcsname{}
13120 \expandafter\def\csname Parent2\endcsname{}
13121 \expandafter\def\csname Parent3\endcsname{}

```

```

13122 \expandafter\def\csname Parent4\endcsname{}
13123 \</outlines>

```

49 Compatibility with koma-script classes

```

13124 \*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.

```

13125 \def\Hy@tempa{%
13126   \def\@addchap{##1}##2{%
13127     \typeout{##2}%
13128     \if@twoside
13129       \@mkboth{##1}{}%
13130     \else
13131       \@mkboth{}{##1}%
13132     \fi
13133     \addtocontents{lof}{\protect\addvspace{10\p@}}%
13134     \addtocontents{lot}{\protect\addvspace{10\p@}}%
13135     \Hy@GlobalStepCount\Hy@linkcounter
13136     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13137     \Hy@raisedlink{%
13138       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13139     }%
13140     \if@twocolumn
13141       \@topnewpage[\@makeschapterhead{##2}]%
13142     \else
13143       \@makeschapterhead{##2}%
13144       \@afterheading
13145     \fi
13146     \addcontentsline{toc}{chapter}{##1}%
13147   }%
13148 }
13149 \ifclassloaded{scrbook}{%
13150   \ifclasslater{scrbook}{2001/01/01}{%
13151     \let\Hy@tempa\@empty
13152   }{}%
13153 }{%
13154   \ifclassloaded{scrreprt}{%
13155     \ifclasslater{scrreprt}{2001/01/01}{%
13156       \let\Hy@tempa\@empty
13157     }{}%
13158   }{%
13159     \let\Hy@tempa\@empty
13160   }%
13161 }%
13162 \Hy@tempa
13163 \</outlines | hypertex)

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

13164 `*pdlenc)`

13165 `\DeclareFontEncoding{PD1}{-}{-}`

Accents

13166 `\DeclareTextAccent{\`}{PD1}{\textasciigrave}`

13167 `\DeclareTextAccent{\'}{PD1}{\textacute}`

13168 `\DeclareTextAccent{\~}{PD1}{\textasciicircum}`

13169 `\DeclareTextAccent{\~}{PD1}{\texttilde}`

13170 `\DeclareTextAccent{\"}{PD1}{\textasciidieresis}`

13171 `\DeclareTextAccent{\r}{PD1}{\textring}`

13172 `\DeclareTextAccent{\v}{PD1}{\textasciicaron}`

13173 `\DeclareTextAccent{\.}{PD1}{\textdotaccent}`

13174 `\DeclareTextAccent{\c}{PD1}{\textcedilla}`

13175 `\DeclareTextAccent{\=}{PD1}{\textasciimacron}`

13176 `\DeclareTextAccent{\b}{PD1}{\textmacronbelow}`

13177 `\DeclareTextAccent{\d}{PD1}{\textdotbelow}`

13178 `\DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}`

13179 `\DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}`

13180 `\DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}`

13181 `\DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}`

13182 `\DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}`

13183 `\DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}`

13184 `\DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}`

13185 `\DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}`

13186 `\DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}`

13187 `\DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}`

13188 `\DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}`

13189 `\DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}`

13190 `\DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}`

13191 `\DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}`

13192 `\DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}`

13193 `\DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}`

13194 `\DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}`

13195 `\DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}`

13196 `\DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}`

13197 `\DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}`

13198 `\DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}`

13199 `\DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}`

13200 `\DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}`

13201 `\DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}`

13202 `\DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}}{#1}`

13203 `\DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}}{#1}`

13204 `\DeclareTextCommand{\newtie}{PD1}[1]{%`

13205 `\TextSymbolUnavailable{\newtie{#1}}}{#1}%`

13206 `}`

Special white space escape characters not for use in bookmarks but for other PDF strings.

13207 `% U+0009 (CHARACTER TABULATION)`

13208 `\DeclareTextCommand{\textHT}{PD1}{\011}% U+0009`

13209 `% U+000A (LINE FEED)`

13210 `\DeclareTextCommand{\textLF}{PD1}{\012}% U+000A`

13211 `% U+000D (CARRIAGE RETURN)`

13212 `\DeclareTextCommand{\textCR}{PD1}{\015}% U+000D`

Accent glyph names

13213 `% U+02D8 BREVE; breve`

13214 `\DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8`

13215 `% U+02C7 CARON; caron`

13216 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13217 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13218 \DeclareTextCommand{\textcirc{}}{PD1}{\032}% U+02C6
13219 % U+02D9 DOT ABOVE; dotaccent
13220 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13221 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13222 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13223 % U+02DB OGONEK; ogonek
13224 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13225 % U+02DA RING ABOVE; ring
13226 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13227 % U+02DC SMALL TILDE; ilde, *tilde
13228 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
13229 % U+0022 QUOTATION MARK; quotedbl
13230 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13231 % U+0023 NUMBER SIGN; numbersign
13232 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13233 % U+0024 DOLLAR SIGN; dollar
13234 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13235 % U+0025 PERCENT SIGN; percent
13236 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13237 % U+0026 AMPERSAND; ampersand
13238 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

13239 % U+0028 LEFT PARENTHESIS; parenleft
13240 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
13241 % U+0029 RIGHT PARENTHESIS; parenright
13242 \DeclareTextCommand{\textparenright}{PD1}{\string\)%}% \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
13243 % U+002E FULL STOP; period
13244 \DeclareTextCommand{\textdotbelow}{PD1}{\string\.)}% \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
13245 % U+003C LESS-THAN SIGN; less
13246 \DeclareTextCommand{\textless}{PD1}{\string\<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal
13247 % U+003E GREATER-THAN SIGN; greater
13248 \DeclareTextCommand{\textgreater}{PD1}{\string\>}% \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
 13249 % U+005C REVERSE SOLIDUS; backslash
 13250 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13251 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13252 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13253 % U+005F LOW LINE; underscore
 13254 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13255 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13256 % U+0060 GRAVE ACCENT; grave
 13257 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13258 % U+0069 LATIN SMALL LETTER I; i
 13259 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13260 % U+007B LEFT CURLY BRACKET; braceleft
 13261 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13262 % U+007C VERTICAL LINE; *bar, verticalbar
 13263 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13264 % U+007D RIGHT CURLY BRACKET; braceright
 13265 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13266 % U+007E TILDE; asciitilde
 13267 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13268 % U+2022 BULLET; bullet
 13269 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13270 % U+2020 DAGGER; dagger
 13271 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13272 % U+2021 DOUBLE DAGGER; daggerdbl
 13273 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13274 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13275 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13276 % U+2014 EM DASH; emdash
 13277 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13278 % U+2013 EN DASH; endash
 13279 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13280 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13281 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13282 % U+2044 FRACTION SLASH; fraction
 13283 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13284 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 13285 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 13286 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 13287 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 13288 % U+2212 MINUS SIGN; minus
 13289 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 13290 % U+2030 PER MILLE SIGN; perthousand
 13291 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 13292 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase

13293 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13294 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13295 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13296 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13297 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13298 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13299 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13300 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13301 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13302 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13303 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13304 % U+2122 TRADE MARK SIGN; trademark
13305 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13306 % U+FB01 LATIN SMALL LIGATURE FI; fi
13307 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13308 % U+FB02 LATIN SMALL LIGATURE FL; fl
13309 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13310 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13311 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13312 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13313 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13314 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13315 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13316 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13317 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
13318 \DeclareTextCommand{\IJ}{PD1}{\230}
13319 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13320 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13321 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13322 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13323 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13324 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13325 % U+0153 LATIN SMALL LIGATURE OE; oe
13326 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13327 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13328 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13329 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13330 \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.

13331 % U+20AC EURO SIGN; *Euro, euro
13332 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
13333 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
13334 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
13335 % U+00A2 CENT SIGN; cent
13336 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
13337 % U+00A3 POUND SIGN; sterling
13338 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
13339 % U+00A4 CURRENCY SIGN; currency
13340 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
13341 % U+00A5 YEN SIGN; yen
13342 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
13343 % U+00A6 BROKEN BAR; brokenbar
13344 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
13345 % U+00A7 SECTION SIGN; section
13346 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
13347 % U+00A8 DIAERESIS; dieresis

13348 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13349 % U+00A9 COPYRIGHT SIGN; copyright
 13350 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13351 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13352 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13353 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13354 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13355 % U+00AC NOT SIGN; logicalnot
 13356 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13357 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 13358 % U+00AE REGISTERED SIGN; registered
 13359 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13360 % U+00AF MACRON; *macron, overscore
 13361 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13362 % U+00B0 DEGREE SIGN; degree
 13363 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13364 % U+00B1 PLUS-MINUS SIGN; plusminus
 13365 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13366 % U+00B2 SUPERScript TWO; twosuperior
 13367 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13368 % U+00B3 SUPERScript THREE; threesuperior
 13369 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13370 % U+00B4 ACUTE ACCENT; acute
 13371 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13372 % U+00B5 MICRO SIGN; mu, mul
 13373 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13374 % U+00B6 PILCROW SIGN; paragraph
 13375 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13376 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13377 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 13378 % U+00B8 CEDILLA; cedilla
 13379 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13380 % U+00B9 SUPERScript ONE; onesuperior
 13381 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 13382 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13383 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 13384 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13385 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 13386 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13387 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 13388 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13389 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 13390 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13391 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 13392 % U+00BF INVERTED QUESTION MARK; questiondown
 13393 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 13394 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13395 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 13396 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13397 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 13398 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13399 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 13400 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13401 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3

13402 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13403 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
13404 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13405 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13406 % U+00C6 LATIN CAPITAL LETTER AE; AE
13407 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13408 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13409 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13410 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13411 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13412 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13413 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13414 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13415 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13416 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13417 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
13418 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13419 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13420 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13421 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13422 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13423 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13424 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13425 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
13426 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13427 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13428 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13429 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13430 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13431 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13432 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13433 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13434 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13435 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13436 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13437 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13438 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13439 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13440 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13441 % U+00D7 MULTIPLICATION SIGN; multiply
13442 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13443 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13444 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13445 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13446 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13447 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13448 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13449 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13450 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13451 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13452 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13453 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13454 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13455 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13456 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13457 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13458 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF

13459 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13460 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13461 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13462 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13463 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13464 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13465 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13466 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13467 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13468 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13469 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13470 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13471 % U+00E6 LATIN SMALL LETTER AE; ae
13472 \DeclareTextCompositeCommand{\ae}{PD1}{\346}% U+00E6
13473 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13474 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13475 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13476 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13477 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13478 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13479 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13480 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13481 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13482 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13483 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13484 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13485 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13486 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13487 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13488 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
13489 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13490 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13491 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13492 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13493 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13494 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13495 % U+00F0 LATIN SMALL LETTER ETH; eth
13496 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13497 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13498 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13499 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13500 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13501 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13502 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13503 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13504 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13505 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13506 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
13507 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13508 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13509 % U+00F7 DIVISION SIGN; divide
13510 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13511 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13512 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13513 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13514 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13515 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute

```

13516 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13517 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13518 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
13519 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13520 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13521 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13522 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13523 % U+00FE LATIN SMALL LETTER THORN; thorn
13524 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13525 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13526 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13527 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

13528 \DeclareTextCommand{\SS}{PD1}{SS}
13529 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

13530 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13531 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13532 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13533 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
13534 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13535 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13536 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13537 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

13538 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13539 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13540 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13541 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13542 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13543 \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).

```

13544 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13545 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13546 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13547 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13548 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13549 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13550 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13551 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13552 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13553 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13554 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13555 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13556 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13557 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

13558 \end{fontenc}

```

50.2 PU encoding

```

13559 \newcommand{\*puenc}
13560 \DeclareFontEncoding{PU}{-}{}

```

50.2.1 NFSS2 accents

13561 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13562 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
 13563 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13564 \DeclareTextCommand{\~}{PU}[1]{#1\83\001}% U+0301
 13565 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13566 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13567 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13568 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13569 % U+0304 COMBINING MACRON; macroncmb
 13570 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13571 % U+0306 COMBINING BREVE; brevecmb
 13572 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13573 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13574 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13575 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13576 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13577 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13578 % U+030A COMBINING RING ABOVE; ringcmb
 13579 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13580 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13581 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13582 % U+030C COMBINING CARON; caroncmb
 13583 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13584 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13585 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13586 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13587 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13588 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13589 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13590 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13591 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13592 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13593 % U+0327 COMBINING CEDILLA; cedillacmb
 13594 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13595 % U+0328 COMBINING OGONEK; ogonekcmb
 13596 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13597 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13598 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13599 % U+20DD COMBINING ENCLOSING CIRCLE
 13600 \DeclareTextCommand{\textcircled}{PU}[1]{#1\9040\335}% U+20DD

\@empty is an artefact of the NFSS2 machinery, it gets inserted for empty arguments and spaces.

13601 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
 13602 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textacute}
 13603 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
 13604 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13605 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
 13606 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
 13607 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
 13608 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
 13609 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
 13610 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
 13611 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
 13612 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
 13613 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
 13614 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
 13615 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}

```

13616 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13617 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13618 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13619 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13620 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13621 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13622 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
13623 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13624 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidiieresis}
13625 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13626 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13627 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13628 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13629 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13630 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13631 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13632 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13633 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13634 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13635 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13636 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13637 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13638 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13639 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13640 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13641 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13642 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13643 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13644 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13645 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13646 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13647 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13648 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13649 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13650 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13651 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13652 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13653 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

13654 % U+0009 (CHARACTER TABULATION)
13655 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13656 % U+000A (LINE FEED)
13657 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13658 % U+000D (CARRIAGE RETURN)
13659 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam
13660 % U+0022 QUOTATION MARK; quotedbl
13661 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13662 % U+0023 NUMBER SIGN; numbersign
13663 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13664 % U+0024 DOLLAR SIGN; dollar
13665 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

```

13666 % U+0025 PERCENT SIGN; percent
 13667 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 13668 % U+0026 AMPERSAND; ampersand
 13669 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 13670 % U+0027 APOSTROPHE; quotesingle
 13671 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 13672 % U+0028 LEFT PARENTHESIS; parenleft
 13673 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 13674 % U+0029 RIGHT PARENTHESIS; parenright
 13675 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 13676 % U+002A ASTERISK; asterisk
 13677 \DeclareTextCommand{\textasteriskcentered}{PU}{\80\052}% U+002A (?)
 \80\053: U+002B PLUS SIGN; plus
 \80\054: U+002C COMMA; comma
 \80\055: U+002D HYPHEN-MINUS; hyphen
 \80\056: U+002E FULL STOP; period
 \80\057: U+002F SOLIDUS; slash
 \80\060: U+0030 DIGIT ZERO; zero
 ...
 \80\071: U+0039 DIGIT NINE; nine
 \80\072: U+003A COLON; colon
 \80\073: U+003B SEMICOLON; semicolon
 13678 % U+003C LESS-THAN SIGN; less
 13679 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 13680 % U+003E GREATER-THAN SIGN; greater
 13681 \DeclareTextCommand{\textgreater}{PU}{>}% \80\076 U+003E
 \80\077: U+003F QUESTION MARK; question
 \80\100: U+0040 COMMERCIAL AT; at
 \80\101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \80\132: U+005A LATIN CAPITAL LETTER Z; Z
 \80\133: U+005B LEFT SQUARE BRACKET; bracketleft
 13682 % U+005C REVERSE SOLIDUS; backslash
 13683 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13684 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13685 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13686 % U+005F LOW LINE; underscore
 13687 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13688 % U+0060 GRAVE ACCENT; grave
 13689 \DeclareTextCommand{\textasciigrave}{PU}{\80\140}% U+0060
 \80\141: U+0061 LATIN SMALL LETTER A; a
 ...
 \80\150: U+0068 LATIN SMALL LETTER H; h
 13690 % U+0069 LATIN SMALL LETTER I; i
 13691 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 13692 \DeclareTextCompositeCommand{\.}{PU}{i}{i}% \80\151 U+0069
 \80\152: U+006A LATIN SMALL LETTER J; j
 ...
 \80\172: U+007A LATIN SMALL LETTER Z; z
 13693 % U+007B LEFT CURLY BRACKET; braceleft

13694 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13695 % U+007C VERTICAL LINE; *bar, verticalbar
 13696 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13697 % U+007D RIGHT CURLY BRACKET; braceright
 13698 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13699 % U+007E TILDE; asciitilde
 13700 \DeclareTextCommand{\textasciitilde}{PU}{\80\176}% U+007E

50.2.3 Latin-1 Supplement: U+0080 to U+00FF

\80\240: U+00A0 NO-BREAK SPACE; nbspace, nonbreakingspace
 13701 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13702 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13703 % U+00A2 CENT SIGN; cent
 13704 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13705 % U+00A3 POUND SIGN; sterling
 13706 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13707 % U+00A4 CURRENCY SIGN; currency
 13708 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13709 % U+00A5 YEN SIGN; yen
 13710 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13711 % U+00A6 BROKEN BAR; brokenbar
 13712 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13713 % U+00A7 SECTION SIGN; section
 13714 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13715 % U+00A8 DIAERESIS; dieresis
 13716 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13717 % U+00A9 COPYRIGHT SIGN; copyright
 13718 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13719 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13720 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13721 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13722 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13723 % U+00AC NOT SIGN; logicalnot
 13724 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13725 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13726 % U+00AE REGISTERED SIGN; registered
 13727 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13728 % U+00AF MACRON; *macron, overscore
 13729 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13730 % U+00B0 DEGREE SIGN; degree
 13731 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13732 % U+00B1 PLUS-MINUS SIGN; plusminus
 13733 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13734 % U+00B2 SUPERSCRIFT TWO; twosuperior
 13735 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13736 % U+00B3 SUPERSCRIFT THREE; threesuperior
 13737 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13738 % U+00B4 ACUTE ACCENT; acute
 13739 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13740 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13741 % U+00B5 MICRO SIGN; mu, mu1
 13742 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13743 % U+00B6 PILCROW SIGN; paragraph
 13744 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

13745 % U+00B7 MIDDLE DOT; middot, *periodcentered
13746 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
13747 % U+00B8 CEDILLA; cedilla
13748 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
13749 % U+00B9 SUPERSCRIPT ONE; onesuperior
13750 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
13751 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13752 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
13753 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13754 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
13755 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13756 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
13757 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13758 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
13759 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13760 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
13761 % U+00BF INVERTED QUESTION MARK; questiondown
13762 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
13763 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13764 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
13765 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13766 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
13767 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13768 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
13769 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13770 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
13771 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13772 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
13773 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13774 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
13775 % U+00C6 LATIN CAPITAL LETTER AE; AE
13776 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
13777 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13778 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
13779 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13780 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
13781 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13782 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
13783 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13784 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
13785 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13786 \DeclareTextCompositeCommand{\\"}{PU}{E}{\80\313}% U+00CB
13787 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13788 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
13789 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13790 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
13791 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13792 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
13793 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13794 \DeclareTextCompositeCommand{\\"}{PU}{I}{\80\317}% U+00CF
13795 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13796 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
13797 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13798 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
13799 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13800 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2

13801 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13802 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13803 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13804 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\324}% U+00D4
13805 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13806 \DeclareTextCompositeCommand{\-}{PU}{O}{\80\325}% U+00D5
13807 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13808 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
13809 % U+00D7 MULTIPLICATION SIGN; multiply
13810 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13811 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13812 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13813 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13814 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
13815 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13816 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
13817 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13818 \DeclareTextCompositeCommand{\~}{PU}{U}{\80\333}% U+00DB
13819 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13820 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
13821 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13822 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
13823 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13824 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13825 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13826 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13827 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13828 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
13829 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13830 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
13831 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13832 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
13833 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13834 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}% U+00E3
13835 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13836 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
13837 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13838 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
13839 % U+00E6 LATIN SMALL LETTER AE; ae
13840 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
13841 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13842 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
13843 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13844 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}% U+00E8
13845 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13846 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
13847 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13848 \DeclareTextCompositeCommand{\~}{PU}{e}{\80\352}% U+00EA
13849 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13850 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
13851 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13852 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
13853 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
13854 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13855 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
13856 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
13857 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex

13858 \DeclareTextCompositeCommand{\~}{PU}{i}{\80\356}% U+00EE
 13859 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
 13860 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 13861 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
 13862 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\357}% U+00EF
 13863 % U+00F0 LATIN SMALL LETTER ETH; eth
 13864 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 13865 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 13866 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
 13867 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 13868 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
 13869 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 13870 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
 13871 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 13872 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
 13873 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 13874 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 13875 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13876 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 13877 % U+00F7 DIVISION SIGN; divide
 13878 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 13879 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13880 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 13881 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13882 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
 13883 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13884 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 13885 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13886 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 13887 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13888 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 13889 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13890 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 13891 % U+00FE LATIN SMALL LETTER THORN; thorn
 13892 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 13893 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13894 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

13895 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 13896 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 13897 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 13898 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 13899 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 13900 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 13901 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 13902 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 13903 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 13904 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 13905 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 13906 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 13907 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 13908 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 13909 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 13910 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 13911 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex

13912 \DeclareTextCompositeCommand{\~}{PU}{C}{\81\010}% U+0108
13913 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
13914 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
13915 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
13916 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
13917 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
13918 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
13919 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
13920 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
13921 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
13922 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
13923 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
13924 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
13925 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
13926 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
13927 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
13928 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
13929 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
13930 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
13931 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
13932 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
13933 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
13934 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
13935 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
13936 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
13937 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
13938 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
13939 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
13940 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
13941 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
13942 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
13943 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
13944 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
13945 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
13946 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
13947 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
13948 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
13949 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
13950 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
13951 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
13952 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
13953 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
13954 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
13955 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
13956 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
13957 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
13958 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
13959 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
13960 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
13961 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
13962 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
13963 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
13964 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
13965 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
13966 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
13967 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex

13968 \DeclareTextCompositeCommand{\~}{PU}{H}{\81\044}% U+0124
13969 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
13970 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
13971 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
13972 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
13973 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
13974 \DeclareTextCommand{\textthslash}{PU}{\81\047}% U+0127
13975 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
13976 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
13977 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
13978 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
13979 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}% U+0129
13980 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
13981 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
13982 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
13983 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
13984 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
13985 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
13986 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
13987 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
13988 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
13989 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
13990 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
13991 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
13992 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
13993 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
13994 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
13995 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
13996 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
13997 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13998 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
13999 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14000 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14001 % U+0133 LATIN SMALL LIGATURE IJ; ij
14002 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14003 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14004 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
14005 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14006 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14007 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14008 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
14009 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14010 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14011 \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 choosen \textkra.
14012 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14013 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14014 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14015 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14016 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14017 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14018 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
14019 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B

14020 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
14021 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
14022 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
14023 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
14024 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
14025 \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.
14026 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
14027 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
14028 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
14029 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
14030 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14031 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
14032 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14033 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
14034 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
14035 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
14036 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
14037 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
14038 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
14039 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
14040 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
14041 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
14042 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
14043 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
14044 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
14045 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
14046 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
14047 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
14048 % U+014A LATIN CAPITAL LETTER ENG; Eng
14049 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
14050 % U+014B LATIN SMALL LETTER ENG; eng
14051 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
14052 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
14053 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
14054 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
14055 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
14056 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
14057 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
14058 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
14059 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
14060 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
14061 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
14062 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
14063 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
14064 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14065 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
14066 % U+0153 LATIN SMALL LIGATURE OE; oe
14067 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
14068 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
14069 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
14070 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

14071 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14072 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14073 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14074 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14075 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14076 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14077 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14078 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14079 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14080 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14081 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14082 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14083 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14084 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14085 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14086 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14087 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14088 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14089 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14090 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14091 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14092 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14093 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14094 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14095 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14096 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14097 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14098 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14099 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14100 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14101 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14102 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14103 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14104 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14105 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14106 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14107 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14108 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14109 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14110 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14111 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14112 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14113 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14114 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14115 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14116 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14117 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14118 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14119 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14120 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14121 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14122 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14123 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14124 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut

14125 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14126 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhun-
 garumlaut
 14127 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14128 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14129 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14130 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14131 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14132 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14133 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14134 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14135 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14136 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14137 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14138 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14139 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14140 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14141 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14142 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14143 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14144 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14145 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14146 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14147 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14148 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14149 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14150 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14151 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14152 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14153 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14154 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14155 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

14156 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14157 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14158 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14159 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14160 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14161 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14162 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14163 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14164 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14165 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14166 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14167 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14168 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14169 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14170 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 14171 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 14172 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 14173 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 14174 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 14175 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 14176 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 14177 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 14178 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5

14179 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14180 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14181 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14182 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14183 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14184 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14185 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14186 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14187 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14188 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14189 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14190 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14191 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14192 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14193 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14194 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14195 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14196 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14197 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14198 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14199 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14200 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14201 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14202 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14203 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
14204 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14205 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
14206 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14207 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
14208 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14209 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
14210 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14211 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14212 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14213 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14214 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14215 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14216 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14217 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14218 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14219 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14220 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14221 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14222 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14223 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14224 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14225 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
14226 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
14227 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
14228 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
14229 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
14230 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
14231 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
14232 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
14233 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave

14234 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14235 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14236 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14237 % U+021F LATIN SMALL LETTER H WITH CARON
 14238 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14239 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14240 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14241 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14242 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14243 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14244 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14245 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14246 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14247 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14248 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14249 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14250 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14251 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14252 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14253 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14254 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14255 % U+0237 LATIN SMALL LETTER DOTLESS J
 14256 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14257 % U+02C7 CARON; caron
 14258 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14259 % U+02D8 BREVE; breve
 14260 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14261 % U+02D9 DOT ABOVE; dotaccent
 14262 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14263 % U+02DA RING ABOVE; ring
 14264 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14265 % U+02DB OGONEK; ogonek
 14266 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14267 % U+02DC SMALL TILDE; ilde, *tilde
 14268 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14269 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14270 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14271 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14272 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14273 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14274 % U+02F7 MODIFIER LETTER LOW TILDE
 14275 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14276 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14277 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14278 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14279 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14280 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14281 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14282 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14283 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14284 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14285 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14286 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
14287 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
14288 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
14289 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
14290 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
14291 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
14292 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
14293 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
14294 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
14295 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
14296 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
14297 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
14298 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
crintonos
14299 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
14300 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
14301 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
14302 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
14303 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
14304 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
tadiesisistonos
14305 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
14306 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
14307 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
14308 % U+0392 GREEK CAPITAL LETTER BETA; Beta
14309 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
14310 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
14311 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
14312 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
14313 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
14314 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
14315 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
14316 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14317 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14318 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14319 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14320 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14321 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14322 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14323 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14324 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14325 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14326 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14327 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14328 % U+039C GREEK CAPITAL LETTER MU; Mu
14329 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14330 % U+039D GREEK CAPITAL LETTER NU; Nu
14331 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14332 % U+039E GREEK CAPITAL LETTER XI; Xi
14333 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14334 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14335 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14336 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14337 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14338 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14339 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1

14340 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 14341 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 14342 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 14343 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 14344 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 14345 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 14346 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 14347 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 14348 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 14349 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 14350 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 14351 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 14352 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
 14353 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
 14354 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
 14355 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
 14356 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
 14357 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
 14358 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 14359 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
 14360 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
 14361 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
 14362 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 14363 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
 14364 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 14365 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
 14366 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 14367 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilonondieresis
 14368 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
 14369 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 14370 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
 14371 % U+03B2 GREEK SMALL LETTER BETA; beta
 14372 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 14373 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 14374 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 14375 % U+03B4 GREEK SMALL LETTER DELTA; delta
 14376 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 14377 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 14378 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 14379 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 14380 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 14381 % U+03B7 GREEK SMALL LETTER ETA; eta
 14382 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 14383 % U+03B8 GREEK SMALL LETTER THETA; theta
 14384 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 14385 % U+03B9 GREEK SMALL LETTER IOTA; iota
 14386 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
 14387 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 14388 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 14389 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 14390 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 14391 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 14392 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 14393 % U+03BD GREEK SMALL LETTER NU; nu
 14394 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD

14395 % U+03BE GREEK SMALL LETTER XI; xi
 14396 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 14397 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 14398 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 14399 % U+03C0 GREEK SMALL LETTER PI; pi
 14400 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 14401 % U+03C1 GREEK SMALL LETTER RHO; rho
 14402 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 14403 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 14404 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 14405 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 14406 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 14407 % U+03C4 GREEK SMALL LETTER TAU; tau
 14408 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 14409 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 14410 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 14411 % U+03C6 GREEK SMALL LETTER PHI; phi
 14412 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 14413 % U+03C7 GREEK SMALL LETTER CHI; chi
 14414 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 14415 % U+03C8 GREEK SMALL LETTER PSI; psi
 14416 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 14417 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 14418 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 14419 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iodadieresis
 14420 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 14421 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 14422 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 14423 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 14424 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 14425 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 14426 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 14427 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 14428 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 14429 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 14430 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 14431 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 14432 % U+03DB GREEK SMALL LETTER STIGMA
 14433 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14434 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14435 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14436 % U+03DD GREEK SMALL LETTER DIGAMMA
 14437 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14438 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14439 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14440 % U+03DF GREEK SMALL LETTER KOPPA
 14441 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14442 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14443 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14444 % U+03E1 GREEK SMALL LETTER SAMPI
 14445 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

14446 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE

14447 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14448 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
14449 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14450 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
14451 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14452 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14453 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14454 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14455 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
14456 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14457 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14458 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14459 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
14460 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14461 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
14462 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14463 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
14464 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14465 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14466 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14467 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14468 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14469 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14470 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14471 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14472 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14473 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14474 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14475 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14476 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
14477 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14478 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14479 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrrillic, *afii10145
14480 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14481 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrrillic, *afii10017
14482 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14483 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrrillic, *afii10018
14484 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14485 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrrillic, *afii10019
14486 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14487 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrrillic, *afii10020
14488 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14489 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrrillic, *afii10021
14490 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14491 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrrillic, *afii10022
14492 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14493 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrrillic, *afii10024
14494 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14495 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrrillic, *afii10025
14496 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14497 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrrillic, *afii10026
14498 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14499 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrrillic, *afii10027
14500 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14501 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14502 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrrillic, *afii10028

14503 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14504 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14505 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14506 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14507 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14508 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14509 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14510 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14511 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14512 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14513 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14514 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14515 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14516 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14517 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14518 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14519 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14520 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14521 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14522 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14523 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14524 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14525 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14526 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14527 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14528 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14529 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14530 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14531 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14532 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14533 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14534 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14535 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14536 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14537 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14538 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14539 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14540 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14541 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14542 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14543 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14544 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14545 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14546 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14547 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14548 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14549 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14550 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14551 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14552 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14553 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14554 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14555 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14556 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14557 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14558 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhacyrillic
14559 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436

14560 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14561 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14562 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14563 \DeclareTextCommand{\cyrj}{PU}{\84\070}% U+0438
14564 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14565 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14566 \DeclareTextCompositeCommand{\U}{PU}{\cyrj}{\84\071}% U+0439
14567 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14568 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14569 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14570 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
14571 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14572 \DeclareTextCommand{\cyrmm}{PU}{\84\074}% U+043C
14573 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14574 \DeclareTextCommand{\cyrnn}{PU}{\84\075}% U+043D
14575 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14576 \DeclareTextCommand{\cyrro}{PU}{\84\076}% U+043E
14577 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14578 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14579 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14580 \DeclareTextCommand{\cyrre}{PU}{\84\100}% U+0440
14581 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14582 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
14583 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14584 \DeclareTextCommand{\cyrte}{PU}{\84\102}% U+0442
14585 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14586 \DeclareTextCommand{\cyrur}{PU}{\84\103}% U+0443
14587 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14588 \DeclareTextCommand{\cyrfe}{PU}{\84\104}% U+0444
14589 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14590 \DeclareTextCommand{\cyrhe}{PU}{\84\105}% U+0445
14591 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14592 \DeclareTextCommand{\cyrte}{PU}{\84\106}% U+0446
14593 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14594 \DeclareTextCommand{\cyrche}{PU}{\84\107}% U+0447
14595 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14596 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14597 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14598 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14599 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14600 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14601 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14602 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14603 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14604 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
14605 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14606 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14607 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14608 \DeclareTextCommand{\cyrur}{PU}{\84\116}% U+044E
14609 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14610 \DeclareTextCommand{\cyrur}{PU}{\84\117}% U+044F
14611 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14612 \DeclareTextCompositeCommand{\'}{PU}{\cyrre}{\84\120}% U+0450
14613 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14614 \DeclareTextCommand{\cyrro}{PU}{\84\121}% U+0451
14615 \DeclareTextCompositeCommand{\"}{PU}{\cyrre}{\84\121}% U+0451
14616 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic

14617 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14618 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14619 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14620 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14621 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14622 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14623 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14624 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyril-
lic
14625 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14626 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14627 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14628 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
14629 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14630 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14631 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14632 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14633 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14634 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14635 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14636 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14637 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14638 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14639 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14640 \DeclareTextCompositeCommand{\`}{PU}{\cyri}{\84\135}% U+045D
14641 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14642 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14643 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14644 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14645 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14646 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14647 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14648 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14649 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14650 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14651 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14652 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14653 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14654 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14655 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14656 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14657 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14658 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14659 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14660 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14661 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14662 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14663 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14664 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14665 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14666 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14667 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14668 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14669 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B

14670 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-cyrillic
 14671 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14672 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigitifiedcyrillic
 14673 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14674 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14675 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14676 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14677 \DeclareTextCommand{\cyrkxi}{PU}{\84\157}% U+046F
 14678 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14679 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14680 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14681 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14682 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 14683 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14684 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 14685 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 14686 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 14687 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14688 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 14689 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14690 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 14691 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14692 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 14693 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14694 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14695 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14696 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14697 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14698 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 14699 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14700 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14701 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14702 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 14703 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14704 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 14705 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14706 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14707 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14708 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14709 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14710 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14711 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14712 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14713 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14714 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14715 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumata-

cyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14716 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14717 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14718 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14719 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14720 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14721 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14722 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14723 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14724 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14725 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14726 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14727 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14728 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afi10050
 14729 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14730 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afi10098, gheupturncyrillic
 14731 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14732 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14733 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14734 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14735 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14736 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14737 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14738 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14739 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14740 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14741 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14742 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14743 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14744 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14745 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14746 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14747 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14748 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 14749 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14750 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14751 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14752 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 14753 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 14754 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic

14755 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 14756 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
 ticalstrokecyrillic
 14757 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 14758 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 14759 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 14760 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 14761 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 14762 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 14763 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 14764 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 14765 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 14766 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 14767 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 14768 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 14769 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 14770 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 14771 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 14772 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 14773 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 14774 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 14775 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 14776 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 14777 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 14778 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 14779 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 14780 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 14781 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 14782 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescen-
 dercyrillic
 14783 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 14784 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 14785 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-
 cyrillic
 14786 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 14787 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
 14788 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescen-
 dercyrillic
 14789 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 14790 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-
 cyrillic
 14791 \DeclareTextCommand{\cyrtndsc}{PU}{\84\255}% U+04AD
 14792 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 14793 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 14794 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 14795 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 14796 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Us-
 traightstrokecyrillic
 14797 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 14798 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; us-
 traightstrokecyrillic
 14799 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1

14800 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hades-
 cendercyrillic
 14801 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 14802 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescen-
 dercyrillic
 14803 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
 14804 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 14805 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 14806 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 14807 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 14808 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescen-
 dercyrillic
 14809 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 14810 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescen-
 dercyrillic
 14811 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 14812 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 erticalstrokecyrillic
 14813 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 14814 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 erticalstrokecyrillic
 14815 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 14816 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 14817 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 14818 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 14819 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 14820 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
 cyrillic
 14821 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 14822 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyril-
 lic
 14823 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 14824 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 14825 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 14826 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 14827 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 14828 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 14829 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 14830 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 14831 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 14832 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 14833 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 14834 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 14835 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 14836 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 14837 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 14838 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 14839 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 14840 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 14841 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 14842 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 14843 \DeclareTextCommand{\cyrl}{PU}{\84\306}% U+04C6
 14844 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 14845 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 14846 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic

14847 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
14848 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
14849 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
14850 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
14851 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
14852 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
14853 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
14854 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
14855 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
14856 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevacyrillic
14857 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
14858 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevacyrillic
14859 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
14860 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
14861 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
14862 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
14863 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
14864 % U+04D4 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Aicyrillic
14865 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
14866 % U+04D5 CYRILLIC SMALL LETTER A WITH DIAERESIS; aicyrillic
14867 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
14868 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
14869 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
14870 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
14871 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
14872 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
14873 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
14874 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
14875 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
14876 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
14877 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
14878 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
14879 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
14880 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
14881 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
14882 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
14883 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
14884 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
14885 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
14886 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
14887 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
14888 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
14889 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
14890 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
14891 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
14892 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
14893 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2

14894 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
14895 \DeclareTextCompositeCommand{\=} {PU}{\cyri}{\84\343}% U+04E3
14896 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
14897 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
14898 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
14899 \DeclareTextCompositeCommand{\'} {PU}{\cyri}{\84\345}% U+04E5
14900 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
14901 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
14902 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
14903 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
14904 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
14905 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
14906 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
14907 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
14908 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
14909 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
14910 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
14911 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
14912 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
14913 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
14914 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
14915 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
14916 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
14917 \DeclareTextCompositeCommand{\=} {PU}{\CYRU}{\84\356}% U+04EE
14918 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
14919 \DeclareTextCompositeCommand{\=} {PU}{\cyru}{\84\357}% U+04EF
14920 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
14921 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
14922 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
14923 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
14924 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
14925 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
14926 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
14927 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
14928 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
14929 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
14930 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
14931 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
14932 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
14933 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
14934 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
14935 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
14936 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
14937 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
14938 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
14939 \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

14940 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 14941 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 14942 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 14943 \DeclareTextCommand{\cyrhhk}{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

50.2.10 Thai: U+0E00 to U+0E7F

14944 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 14945 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

14946 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 14947 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 14948 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 14949 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 14950 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 14951 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 14952 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 14953 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 14954 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 14955 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 14956 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 14957 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 14958 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 14959 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 14960 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 14961 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 14962 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 14963 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 14964 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 14965 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 14966 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 14967 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 14968 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 14969 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 14970 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 14971 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
 14972 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 14973 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
 14974 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 14975 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
 14976 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 14977 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
 14978 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 14979 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
 14980 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 14981 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
 14982 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 14983 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
 14984 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
 14985 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
 14986 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
 14987 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
 14988 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
 14989 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31

14990 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
14991 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
14992 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
14993 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
14994 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
14995 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
14996 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
14997 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
14998 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
14999 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15000 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15001 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15002 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15003 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15004 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15005 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15006 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15007 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15008 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15009 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15010 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15011 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15012 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15013 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15014 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15015 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15016 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15017 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15018 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15019 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15020 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15021 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15022 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15023 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15024 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15025 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15026 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15027 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15028 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15029 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15030 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15031 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15032 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15033 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15034 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15035 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15036 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15037 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15038 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15039 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15040 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15041 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15042 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15043 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\200}% U+1E80
15044 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15045 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
15046 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute

15047 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\202}% U+1E82
 15048 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
 15049 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\203}% U+1E83
 15050 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
 15051 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
 15052 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
 15053 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
 15054 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
 15055 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
 15056 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
 15057 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
 15058 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
 15059 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
 15060 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
 15061 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
 15062 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
 15063 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
 15064 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
 15065 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
 15066 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
 15067 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
 15068 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
 15069 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
 15070 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15071 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
 15072 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15073 \DeclareTextCompositeCommand{^}{PU}{z}{\9036\221}% U+1E91
 15074 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15075 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15076 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15077 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15078 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15079 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15080 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15081 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15082 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15083 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15084 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15085 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15086 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15087 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15088 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15089 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15090 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15091 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15092 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15093 \DeclareTextCompositeCommand{'}{PU}{Y}{\9036\362}% U+1EF2
 15094 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15095 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}% U+1EF3
 15096 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15097 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15098 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15099 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15100 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner

15101 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15102 % U+2013 EN DASH; endash
 15103 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15104 % U+2014 EM DASH; emdash
 15105 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15106 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15107 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15108 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15109 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15110 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15111 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15112 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15113 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15114 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15115 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 15116 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15117 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15118 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15119 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15120 % U+2020 DAGGER; dagger
 15121 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15122 % U+2021 DOUBLE DAGGER; daggerdbl
 15123 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15124 % U+2022 BULLET; bullet
 15125 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15126 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15127 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15128 % U+2030 PER MILLE SIGN; perthousand
 15129 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15130 % U+2031 PER TEN THOUSAND SIGN
 15131 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15132 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 15133 % left
 15133 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 15134 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 15135 % right
 15135 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 15136 % U+203B REFERENCE MARK; referencemark
 15137 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15138 % U+203D INTERROBANG
 15139 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15140 % U+2044 FRACTION SLASH; fraction
 15141 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15142 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15143 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15144 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15145 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15146 % U+2052 COMMERCIAL MINUS SIGN
 15147 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15148 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15149 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15150 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15151 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15152 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15153 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075

15154 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15155 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15156 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15157 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15158 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15159 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15160 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15161 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15162 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15163 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15164 % U+207B SUPERSCRIPT MINUS
 15165 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15166 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15167 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 15168 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15169 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15170 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15171 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15172 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15173 \DeclareTextCommand{\textnssuperior}{PU}{\9040\177}
 15174 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15175 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15176 % U+2081 SUBSCRIPT ONE; oneinferior
 15177 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15178 % U+2082 SUBSCRIPT TWO; twoinferior
 15179 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15180 % U+2083 SUBSCRIPT THREE; threeinferior
 15181 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15182 % U+2084 SUBSCRIPT FOUR; fourinferior
 15183 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15184 % U+2085 SUBSCRIPT FIVE; fiveinferior
 15185 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15186 % U+2086 SUBSCRIPT SIX; sixinferior
 15187 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15188 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15189 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15190 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15191 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15192 % U+2089 SUBSCRIPT NINE; nineinferior
 15193 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15194 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15195 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15196 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15197 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15198 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15199 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15200 % U+20A4 LIRA SIGN; afi08941, *lira
 15201 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15202 % U+20A6 NAIRA SIGN
 15203 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15204 % U+20A7 PESETA SIGN; peseta
 15205 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15206 % U+20A9 WON SIGN; won
 15207 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15208 % U+20AB DONG SIGN; dong

15209 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15210 % U+20AC EURO SIGN; *Euro, euro
 15211 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15212 % U+20B1 PESO SIGN
 15213 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15214 % U+20B2 GUARANI SIGN
 15215 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15216 % U+2103 DEGREE CELSIUS; centigrade
 15217 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15218 % U+2116 NUMERO SIGN; *afi61352, numero
 15219 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15220 % U+2117 SOUND RECORDING COPYRIGHT
 15221 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15222 % U+211E PRESCRIPTION TAKE; prescription
 15223 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15224 % U+2120 SERVICE MARK
 15225 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15226 % U+2122 TRADE MARK SIGN; trademark
 15227 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15228 % U+2126 OHM SIGN; Ohm, Omega
 15229 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15230 % U+2127 INVERTED OHM SIGN
 15231 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15232 % U+212B ANGSTROM SIGN; angstrom
 15233 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15234 % U+212E ESTIMATED SYMBOL; estimated
 15235 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15236 % U+2135 ALEF SYMBOL; aleph
 15237 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15238 % U+2190 LEFTWARDS ARROW; arrowleft
 15239 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15240 % U+2191 UPWARDS ARROW; arrowup
 15241 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15242 % U+2192 RIGHTWARDS ARROW; arrowright
 15243 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15244 % U+2193 DOWNWARDS ARROW; arrowdown
 15245 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15246 % U+2212 MINUS SIGN; minus
 15247 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15248 % U+221A SQUARE ROOT; radical
 15249 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15250 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 15251 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 15252 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 15253 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15254 % U+2422 BLANK SYMBOL
 15255 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422

15256 % U+2423 OPEN BOX; blank
 15257 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15258 % U+2460 CIRCLED DIGIT ONE; onecircle
 15259 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 15260 % U+2461 CIRCLED DIGIT TWO; twocircle
 15261 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 15262 % U+2462 CIRCLED DIGIT THREE; threecircle
 15263 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 15264 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 15265 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 15266 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 15267 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 15268 % U+2465 CIRCLED DIGIT SIX; sixcircle
 15269 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 15270 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 15271 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 15272 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 15273 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 15274 % U+2468 CIRCLED DIGIT NINE; ninecircle
 15275 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 15276 % U+2469 CIRCLED NUMBER TEN; tencircle
 15277 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 15278 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 15279 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 15280 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 15281 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 15282 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 15283 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 15284 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 15285 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15286 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15287 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15288 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15289 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15290 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15291 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15292 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15293 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15294 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15295 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15296 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15297 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15298 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15299 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15300 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15301 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15302 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15303 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15304 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15305 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15306 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15307 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15308 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15309 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15310 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle

15311 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
15312 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
15313 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
15314 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
15315 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
15316 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
15317 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
15318 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
15319 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
15320 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
15321 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
15322 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
15323 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
15324 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
15325 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
15326 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
15327 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
15328 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
15329 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
15330 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
15331 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
15332 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
15333 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
15334 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
15335 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
15336 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
15337 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
15338 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
15339 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
15340 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
15341 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
15342 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15343 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15344 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15345 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15346 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15347 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15348 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15349 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15350 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15351 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15352 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15353 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15354 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15355 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15356 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15357 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15358 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15359 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15360 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15361 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15362 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15363 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15364 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15365 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15366 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15367 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8

15368 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15369 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15370 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15371 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15372 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15373 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15374 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15375 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15376 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15377 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15378 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15379 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15380 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15381 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15382 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15383 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15384 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15385 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15386 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15387 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15388 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15389 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15390 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15391 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15392 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15393 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15394 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15395 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15396 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15397 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15398 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15399 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15400 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15401 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15402 % U+24EA CIRCLED DIGIT ZERO
 15403 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15404 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15405 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15406 % U+25EF LARGE CIRCLE; largecircle
 15407 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15408 % U+266A EIGHTH NOTE; musicalnote
 15409 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15410 % U+26AD MARRIAGE SYMBOL
 15411 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15412 % U+26AE DIVORCE SYMBOL
 15413 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15414 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15415 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15416 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15417 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
15418 % U+FB01 LATIN SMALL LIGATURE FI; fi
15419 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
15420 % U+FB02 LATIN SMALL LIGATURE FL; fl
15421 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
15422 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
15423 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15424 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15425 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15426 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15427 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15428 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15429 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15430 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
15431 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15432 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15433 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15434 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15435 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
15436 </puenc>
```

50.3 PU encoding, additions for VnT_EX

This file is provided by Han The Thanh.

```
15437 <*puvnenc>
15438 \DeclareTextCommand{\abreve}{PU}{\81\003}
15439 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15440 \DeclareTextCommand{\dj}{PU}{\81\021}
15441 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15442 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15443 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15444 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15445 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15446 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15447 \DeclareTextCommand{\DJ}{PU}{\81\020}
15448 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15449 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15450 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15451 \DeclareTextCommand{\UHORN}{PU}{\81\257}
15452 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15453 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15454 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15455 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15456 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15457 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15458 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15459 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15460 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
```

15461 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15462 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15463 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15464 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15465 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15466 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15467 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15468 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15469 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15470 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15471 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15472 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15473 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15474 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15475 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15476 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15477 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15478 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15479 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15480 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15481 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15482 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15483 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15484 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15485 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15486 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15487 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15488 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15489 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15490 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15491 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15492 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15493 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15494 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15495 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15496 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15497 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15498 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15499 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15500 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15501 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15502 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15503 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15504 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15505 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15506 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15507 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15508 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15509 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15510 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15511 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15512 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15513 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15514 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15515 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15516 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15517 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}

15518 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15519 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15520 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15521 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15522 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15523 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15524 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15525 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15526 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15527 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15528 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15529 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15530 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15531 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15532 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15533 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15534 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15535 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15536 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15537 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15538 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15539 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15540 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15541 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15542 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15543 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15544 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15545 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15546 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15547 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
15548 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15549 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15550 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15551 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15552 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15553 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15554 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15555 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15556 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15557 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15558 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15559 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15560 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15561 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15562 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15563 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15564 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15565 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15566 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15567 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15568 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15569 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15570 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15571 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15572 </puvnenc>

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
15573 \DeclareTextCommand{\puarenc}
15574 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
TER HAMZA
15575 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15576 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15577 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15578 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15579 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15580 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
15581 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
15582 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
15583 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
15584 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
TER THEH
15585 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
TER JEEM
15586 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
15587 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
15588 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
15589 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
15590 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
15591 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
15592 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
15593 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
TER SHEEN
15594 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
15595 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
15596 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
15597 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
15598 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
15599 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
TER GHAIN
15600 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
15601 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
15602 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
15603 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
15604 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
15605 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LET-
TER MEEM
15606 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
15607 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
15608 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
15609 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LET-
TER ALEF MAKSURA
15610 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
15611 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
15612 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
15613 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
15614 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
```

```

15615 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15616 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15617 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15618 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi

15619 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15620 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
    TER TCHEH
15621 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15622 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
    TER KAF
15623 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15624 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
    TER YEH

15625 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15626 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15627 </puarenc>

```

51 End of file hyccheck.tex

```

15628 <*check>
15629 \typeout{}
15630 \begin{document}
15631 \end{document}
15632 </check>

```

52 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			
\!	195, 220		\@@Menu 11534, 11542
\"	202, 227, 2882, 12821, 13170, 13182, 13194, 13317, 13403, 13417, 13425, 13440, 13452, 13468, 13482, 13493, 13494, 13508, 13520, 13526, 13577, 13605, 13624, 13645, 13772, 13786, 13794, 13808, 13820, 13836, 13850, 13861, 13862, 13876, 13888, 13894, 14141, 14356, 14358, 14368, 14420, 14422, 14450, 14463, 14615, 14628, 14861, 14863, 14877, 14879, 14881, 14883, 14885, 14887, 14897, 14899, 14901, 14903, 14909, 14911, 14913, 14915, 14921, 14923, 14929, 14931, 14937, 14939, 14979, 14981, 15051, 15053, 15063, 15065, 15081		\@@PasswordField . 11483, 11489
\#	411, 1977, 1978, 4107, 4118, 4120, 4136, 4168, 4226, 7700, 7702, 8455, 8464, 8492, 9217, 10710, 10721, 10750, 10981, 10990, 11020		\@@Radio . . 11309, 11330, 11532, 11556, 11790, 11811, 12131, 12152
\\$	184, 209, 412, 4109, 4225		\@@TextField 11485, 11500
\%	413, 1952, 1953, 4106, 4115, 4117, 4169, 7702		\@@commahyperpage . 7209, 7210
\&	185, 210, 414, 4110, 4121, 4123, 10760		\@@hyperref 4260, 4261
\'	203, 228, 2822, 2836, 2877, 2879, 2880, 2881, 2882, 2887, 2888, 2890, 2895, 2901, 2905, 2906, 2909, 2952, 2953, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2967, 2971, 2984, 12819, 13167, 13179, 13191, 13397, 13413, 13421, 13434, 13448, 13454, 13462, 13478, 13487, 13488, 13502, 13516, 13522, 13545, 13547, 13548, 13549, 13552, 13554, 13555, 13556, 13564, 13602, 13621, 13642, 13766, 13782, 13790, 13802, 13816, 13822, 13830, 13846, 13855, 13856, 13870, 13884, 13890, 13908, 13910, 14015, 14017, 14035, 14037, 14069, 14071, 14081, 14083, 14143, 14145, 14195, 14197, 14203, 14205, 14207, 14209,	(. . 190, 215, 610, 613, 615, 12887, 13240	\@@latextohtmlX 2715, 4447
) . . 191, 216, 582, 588, 591, 12888, 13242	\@@@wrindex 7137, 7138
			\@@@writetorep 12714, 12720
			\@Alph . . . 5901, 5902, 5905, 5906
			\@Alph@bul 5905
			\@BIBLABEL . . 6631, 6637, 6643
			\@BOOKMARK . . 12802, 12804
			\@CITE 6708, 6716
			\@CITEX 6710
			\@CheckBox . . 5133, 9282, 11423, 11453, 11587, 11923, 12292
			\@ChoiceMenu . 5130, 9285, 11261, 11456, 11522, 11741, 12082
			\@Form . 4905, 9272, 11048, 11445, 11466, 11665, 12006
			\@Gauge 5139, 9276, 11230, 11447, 11471, 11608, 12003
			\@Localurifalse 9225
			\@Localurltrue 9222
			\@M 983, 2239, 4214, 6259
			\@MM 6393
			\@PushButton . 5136, 9288, 11353, 11459, 11568, 11845, 12203
			\@Refstar 7509, 7516
			\@Reset . 5145, 9291, 11399, 11462, 11584, 11898, 12262
			\@Roman 486
			\@SCTR 7256, 7308
			\@SetMaxRnhefLabel 6705
			\@Submit 5142, 9294, 11381, 11463, 11581, 11875, 12238
			\@TextField . . . 5127, 9279, 11233, 11450, 11474, 11712, 12045
			\@addchap 13126
			\@addtoreset . . 7031, 7032, 7046, 7253
			\@afterheading 13144
			\@alph 5908, 5909
			\@alph@bul 5908
			\@anchorcolor . 8424, 8512, 9339, 10678, 10951
			\@arabic 953, 958, 962, 5902, 5906, 5909

<code>\@auxout</code> . 2194, 4305, 5355, 5357, 5977, 6005, 6651, 6666, 6682, 6692, 6722, 6745, 6771, 6777, 6801	<code>\@currentHref</code> . 2202, 5235, 5872, 5933, 5936, 6017, 6020, 6022, 6032, 6070, 6081, 6083, 6122, 6133, 6137, 6144, 6168, 6253, 6317, 6328, 6331, 6333, 6378, 6407, 6505, 6531, 6535, 6550, 6552, 6780, 6906, 6929, 6942, 6949, 7000, 7001, 7025, 7027, 12703, 12704, 13022, 13027, 13039, 13041, 13051, 13053, 13082, 13084, 13097, 13102, 13136, 13138	<code>\@firstoftwo</code> . 495, 774, 945, 1611, 5325, 13091
<code>\@backslashchar</code> 704, 707, 710, 1202, 1872, 1876, 1879, 1999, 2016, 2022, 2026, 2034, 4131, 7715, 7725	<code>\@currentlabel</code> . 6396, 6773, 6780, 7006, 7013, 7262, 7314	<code>\@footnotemark</code> 6269, 6323, 6416, 6428, 6430, 6442, 6443, 6473, 6475
<code>\@baseurl</code> 3178, 3180, 4399, 8147, 8150, 8409, 8411, 8662, 8664, 9130, 9140, 9190, 9192, 9704, 9706, 10069, 10083, 10663, 10665, 10857, 10871, 10937, 10939	<code>\@currentlabelname</code> . . 2192, 6318, 6379, 6408, 6510	<code>\@footnotetext</code> . 6268, 6275, 6304, 6429, 6431, 6445, 6446, 6466
<code>\@begintheorem</code> 6227, 6233	<code>\@currentlabstr</code> 2191, 2199	<code>\@for</code> 3197, 4513, 6717, 6740, 11270, 11332, 11540, 11547, 11557, 11750, 11813, 12091, 12157
<code>\@bibitem</code> 6658, 6689	<code>\@curropt</code> . . 11270, 11271, 11332, 11333, 11540, 11547, 11548, 11550, 11557, 11558, 11560, 11750, 11751, 11813, 11814, 12091, 12092, 12157, 12158	<code>\@fourthoffive</code> . 4059, 4293, 7573, 7580
<code>\@biblabel</code> 6631, 6678	<code>\@dblarg</code> 2292, 6500, 6581	<code>\@gobble</code> 49, 56, 117, 429, 430, 431, 432, 469, 470, 471, 472, 498, 499, 500, 509, 511, 668, 781, 817, 828, 969, 973, 976, 1341, 1402, 1421, 1434, 1438, 1500, 1563, 1564, 1571, 1576, 1590, 1595, 2229, 2461, 2473, 3510, 3663, 3665, 3717, 4097, 4856, 5035, 5289, 5293, 5311, 5313, 5329, 5330, 5331, 5333, 5334, 5336, 5767, 5782, 5786, 6216, 6487, 6576, 6905, 7638, 8321, 9584, 9587, 11666, 12007, 12760, 12761, 12762, 12914
<code>\@bookmarkopenstatus</code> . . . 3945, 3962, 12772	<code>\@definecounter</code> 6985, 6986	<code>\@gobblefour</code> 435, 534, 1098, 1099, 1100, 3329, 7377
<code>\@bookmarksopenlevel</code> 3141, 3143, 3948	<code>\@ehc</code> 2521, 3715, 4363, 4617, 4741, 4936, 5082, 5118, 11363, 11411, 11856, 11910, 12214, 12274	<code>\@gobbleopt</code> 5336, 5338
<code>\@bsphack</code> 2187, 4298, 6775	<code>\@ehd</code> 63, 6486, 6575	<code>\@gobbletwo</code> 433, 502, 527, 535, 536, 681, 1097, 1518, 1595, 1599, 2346, 3327, 3328, 3667, 4802, 5315, 5324, 5332, 5336, 7561, 13037
<code>\@capstartfalse</code> 6525	<code>\@endForm</code> . . . 4906, 9275, 11229, 11446, 11470, 11711, 12031	<code>\@harvarditem</code> 6790, 6792
<code>\@caption</code> 6490, 6502, 6545, 6581, 6583	<code>\@endpary</code> 6223	<code>\@hyper@anchor</code> . . . 4408, 4409
<code>\@capytype</code> 2196, 6485, 6489, 6493, 6500, 6507, 6549, 6574, 6578, 6581	<code>\@eqnncr</code> 6152	<code>\@hyper@itemfalse</code> . . . 5818, 5834, 5848
<code>\@car</code> 1483, 1499, 1517, 1537, 3120, 4523, 8099, 8110	<code>\@eqnstarfalse</code> 6128, 6155	<code>\@hyper@itemtrue</code> 5819
<code>\@cdr</code> 8100, 8111	<code>\@eqnstartrue</code> 6152	<code>\@hyper@launch</code> 4369, 4378, 8040, 9482, 10399
<code>\@chapter</code> 13047, 13048	<code>\@eqnswtrue</code> 6098, 6107	<code>\@hyper@linkfile</code> 4350, 4353, 4357, 4389
<code>\@cite</code> 6708, 6739, 6836, 6842	<code>\@esphack</code> . 2208, 4309, 6785, 7149	<code>\@hyper@readexternallink</code> . 4344, 4348
<code>\@cite@opt</code> . 6837, 6843, 6847, 6857	<code>\@extra@b@citeb</code> 6616, 6619, 6636, 6641, 6661, 6709, 6731, 6747, 6754	<code>\@hyperdef</code> 4268, 4269
<code>\@citea</code> . . 6711, 6718, 6719, 6738, 6741, 6742	<code>\@extra@binfo</code> . . 6615, 6618, 6622	<code>\@hyperpage</code> 7201, 7202
<code>\@citeb</code> . . 6717, 6720, 6722, 6724, 6728, 6731, 6740, 6743, 6745, 6747, 6751, 6754	<code>\@fifthoffive</code> 3675, 4060, 4292, 7463, 7578	<code>\@hyperref</code> 4249, 4260
<code>\@citebordercolor</code> 3602	<code>\@filebordercolor</code> 3600, 8016, 8018, 8986, 8988, 9418, 9420, 10387	<code>\@ifclasslater</code> 13150, 13155
<code>\@citedata@opt</code> . 6838, 6844, 6846	<code>\@filecolor</code> 3170, 8036, 8610, 8622, 8998, 9424	<code>\@ifclassloaded</code> 2179, 5949, 5986, 6700, 7237, 7241, 8324, 13149, 13154
<code>\@citedatax</code> 6853, 6858	<code>\@firstoffive</code> 4056, 4065, 7502, 7583	<code>\@ifnextchar</code> 12, 88, 103, 123, 528, 4219, 4249, 4268, 4317, 4905, 5127, 5130, 5133, 5136, 5139, 5142, 5145, 5336, 5400,
<code>\@citedatax@opt</code> 6850, 6856	<code>\@firstofone</code> 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 476, 664, 819, 830, 1063, 1067, 1071, 1404, 3522, 3947, 4871, 4877, 5045, 5788, 5899, 5912, 5964, 6498, 6579, 6720, 6743, 6869, 7092, 8319, 11638, 12377, 12394, 12412	
<code>\@citeseppen</code> 6835, 6841		
<code>\@citex</code> 6737		
<code>\@clubpenalty</code> 6261		
<code>\@commahyperpage</code> . . 7204, 7209		
<code>\@currDisplay</code> 4959, 11273, 11335, 11551, 11565, 11753, 11816, 12094, 12160		
<code>\@currValue</code> . . . 4961, 4963, 11340, 11551, 11562, 11823, 12175, 12594		
<code>\@currentHlabel</code> 5932, 5935, 6069, 6080, 6316, 6327, 6330, 6332, 6377, 6406		

5409, 6432, 6450, 6790, 6848,
10094, 10325, 10339, 12802,
12805
\@ifpackagelater . 839, 2210, 5940,
7056
\@ifpackageloaded . 365, 734, 838,
2182, 2573, 3097, 3101, 3654,
3797, 5856, 5939, 5952, 6014,
6048, 6052, 6060, 6094, 6208,
6265, 6340, 6385, 6546, 6760,
6833, 6997, 7055, 7097, 7098,
7099, 7246, 7508, 7651, 7655,
10929
\@ifpackagewith 3655, 7021
\@ifstar 66, 4081, 4083, 5270, 5274,
5342, 5346, 7516, 7542, 7561
\@ifundefined 34, 244, 753, 761, 777,
780, 2323, 2435, 2503, 2586,
3042, 3050, 3057, 3070, 3118,
3625, 4612, 4931, 5720, 5860,
5865, 5900, 6054, 6063, 6117,
6139, 6163, 6200, 6491, 6509,
6625, 6708, 6724, 6747, 6994,
7036, 7044, 7045, 7058, 7059,
7066, 7755, 9166, 9772, 9773,
10493, 11666, 12007, 12386,
12768
\@indexfile 7141, 7156, 7164, 7168,
7173
\@inlabelfalse 6243
\@inmathwarn 405, 406
\@inpenc@undefined@ 2054
\@labels 6256
\@latex@ 5431, 5432
\@latex@error . 2656, 2674, 2684,
2691, 6486, 6575
\@latex@warning 4287, 6727, 6750,
7438, 7458, 7475, 7589
\@lbibitem 6632, 6677
\@linkbordercolor 3597, 7972, 9329
\@linkcolor 10116
\@linkdim 332,
8470, 8471, 8476, 8477, 8478,
8543, 8544, 8553, 8554, 8555,
8572, 8573, 8582, 8583, 8584,
8602, 8603, 8612, 8613, 8614,
10728, 10729, 10734, 10735,
10736, 10996, 10997, 11006,
11007, 11008
\@listctr 6667, 6693
\@m 966, 6719, 6742, 9631
\@mainaux 5353, 5354, 5750, 5758,
11634, 11658
\@makecaption . 6526, 6528, 6594
\@makefnmark 6335, 6478
\@makefntext 6397
\@makeother . . 166, 167, 179, 180,
182, 183, 188, 189, 190, 191,
192, 193, 194, 195, 196, 197,
198, 199, 200, 201, 202, 203,
4121, 7687, 12891
\@makeschapterhead 13141, 13143
\@menubordercolor . . 3599, 8379,
8381, 9041, 9043, 9516, 9518
\@menucolor . . . 8392, 9047, 9522
\@minipagefalse 6239
\@mkboth 502, 7359, 13037, 13129,
13131
\@mpfn 6272, 6451, 6463
\@mpfootnotetext 6275, 6288, 6289
\@mycount 12867, 12877
\@namedef 2596, 2597, 2598, 2599,
2600, 2601, 2602, 2603, 4623,
4624, 4625, 4626, 4947, 4948,
5950, 6151, 6154, 6765, 6766,
6767, 6768
\@nameuse . 2196, 2593, 4629, 4939
\@ne . 952, 2540, 2635, 8923, 8928,
9683, 10518, 12040
\@newctr 6990, 6991
\@newl@bel 5394, 6618
\@newlistfalse 6240
\@nil 351, 355, 360, 364, 379,
1396, 1399, 1407, 1483, 1501,
1519, 1535, 1537, 1540, 1543,
1546, 2063, 2065, 2081, 2083,
3120, 4153, 4157, 4162, 4523,
5026, 5029, 5048, 5419, 5422,
5429, 5431, 5432, 5517, 5564,
5565, 5567, 5590, 5607, 5655,
5657, 6064, 6074, 6076, 6089,
7188, 7190, 7197, 7220, 7223,
7233, 7442, 7445, 7597, 7628,
7711, 7717, 7721, 7727, 8099,
8100, 8110, 8111, 9549, 9551,
12384, 12397, 12403
\@nobreakfalse 5391, 6259
\@nocnterr 7045, 7059
\@nocounterr 7044, 7058
\@noparitemfalse 6241
\@number 5899, 5964, 6869
\@nx 7048, 7062, 7065, 7067
\@onelevel@sanitize . . 2339, 2343,
2555, 3119, 3692, 3722, 4187,
4613, 4849, 4932, 5617, 5619,
6935, 7488, 8780
\@oparg 6227, 6233
\@outlinefile . 12770, 12810, 12900,
12902, 12904, 12969, 12971,
12973
\@pagerefstar . . . 4083, 7504, 7532
\@pagesetref 7454
\@parboxrestore . 6395, 6518, 6589
\@parcount 12869, 12877
\@part 13066, 13073
\@pdfauthor . . 3345, 3605, 8206,
8644, 9077, 9745, 9995, 10788
\@pdfborder 2719, 3223, 3226, 3228, 4028,
7902, 8798, 9327, 9864, 9956,
10317, 10329, 10344, 10365,
10384, 10409, 10437, 10524,
10612, 10765
\@pdfborderstyle 3224, 3230, 3232, 4029,
7903, 8799, 9328, 9865, 9957,
10318, 10330, 10345, 10366,
10385, 10410, 10438, 10525,
10613, 10766
\@pdfcreationdate 3362, 3608, 8210, 8212, 8636,
8638, 9069, 9071, 9970, 9972,
10780, 10782
\@pdfcreator . . 3357, 3607, 8209,
8635, 9068, 9748, 9994, 10779
\@pdfdirection . 8170, 8700, 9110,
9716, 10049, 10837
\@pdfduplex . . 8176, 8706, 9116,
9722, 10055, 10843
\@pdfhighlight . 3216, 3603, 7922,
7924, 7983, 8012, 8014, 8048,
8050, 8375, 8377, 9863, 9955,
10316, 10364, 10383, 10408
\@pdfhightlight 7981
\@pdfkeywords . 3381, 3611, 8222,
8633, 9082, 9753, 9996, 10777
\@pdflang 3589, 3617, 8196,
8198, 8728, 8730, 9150, 9152,
10079, 10081, 10867, 10869
\@pdfm@dest . . . 8742, 8801, 8805
\@pdfm@mark 5738, 8741,
8793, 8813, 8827, 8829, 8843,
8845, 8850, 8851, 8881, 8905,
8907, 8912, 8930, 8952, 8980,
9007, 9031, 9064, 9131, 9158,
12010, 12011, 12012, 12029,
12072, 12078, 12166, 12180,
12195, 12201, 12227, 12234,
12253, 12259, 12282, 12288,
12311, 12317, 12322, 12354,
12362, 12942
\@pdfmoddate . 3368, 3609, 8214,
8216, 8640, 8642, 9073, 9075,
9974, 9978, 10784, 10786
\@pdfnonfullscreenpagemode 8169, 8699, 9109, 9715,
10048, 10836
\@pdfnumcopies 8185, 8187, 8715,
8717, 9125, 9127, 9731, 9733,
10064, 10066, 10852, 10854

\@pdfpageduration . . . 3186, 8265, 8269, 8274, 9640, 9642, 9645, 9900, 9902, 9910	\@pdfview 3512, 7890, 7895, 8748, 8752, 8756, 8760, 8764, 8768, 8769, 8772, 8773, 8776, 8780, 8782, 8797, 9326, 9336, 9348, 9810, 9830, 10439, 10526, 10614, 10879	10727, 10728, 10734, 10995, 10996, 11006
\@pdfpagelayout 8195, 8727, 9149, 9736, 9738, 10078, 10866	\@pdfviewarea . 8171, 8701, 9111, 9717, 10050, 10838	\@tempcnta . 12726, 12727, 12728, 12729, 12730, 12732, 12735, 12736, 12737, 12743, 12745, 12747, 12786, 12787, 12788, 12791, 12792, 12793, 12794, 12795, 12992, 12993, 12994
\@pdfpagemode 3785, 3786, 3958, 3959, 3968, 3969, 8149, 8683, 9144, 9703, 10032, 10820	\@pdfviewclip . 8172, 8702, 9112, 9718, 10051, 10839	\@tempdima 2242, 5167, 5168, 5169, 5170, 5171, 5172, 5173, 5174, 7883, 11269, 11274, 11276, 11313, 11314, 11315, 11319, 11320, 11321, 11322, 11749, 11754, 11756, 11794, 11795, 11796, 11800, 11801, 11802, 11803, 12090, 12095, 12097, 12135, 12136, 12137, 12141, 12142, 12143, 12144
\@pdfpagescrop 3543, 3613, 8134, 8138, 8666, 8667, 8688, 8690, 9156, 9158, 9692, 9694, 10037, 10039, 10825, 10827	\@pdfviewparams 3514, 3516, 9810, 9830, 10440, 10527, 10615, 10880	\@tempdimb 11273, 11274, 11753, 11754, 12094, 12095
\@pdfpagetransition . . 3184, 8241, 8245, 8250, 9529, 9531, 9533, 9883, 9885, 9893	\@percentchar . 4116, 4117, 4169, 12774	\@tempswafalse 6852
\@pdfpicktraybypdfsize 8177, 8179, 8707, 8709, 9117, 9119, 9723, 9725, 10056, 10058, 10844, 10846	\@processme . . 4955, 4956, 8247, 8253, 8271, 8277, 8293, 8299, 10097, 10098, 10167, 10168, 10171, 10172	\@tempswatruetrue 6822, 6825, 6828, 6849
\@pdfprintarea . 8173, 8703, 9113, 9719, 10052, 10840	\@protected@testopt 531	\@temptokena . 2989, 2994, 2997, 2999
\@pdfprintclip . 8174, 8704, 9114, 9720, 10053, 10841	\@protected@testopt@xargs . 532	\@tfor 6181
\@pdfprintpagerange 3297, 3616, 8181, 8183, 8711, 8713, 9121, 9123, 9727, 9729, 10060, 10062, 10848, 10850	\@refstar 4081, 7501	\@the@H@page 6871, 6873
\@pdfprintscaling 8175, 8705, 9115, 9721, 10054, 10842	\@runbordercolor 3601, 8052, 8054, 9500, 9502, 10412	\@thefnmark . . 6273, 6284, 6354, 6355, 6396, 6414, 6421, 6452, 6464, 6471
\@pdfproducer . 3351, 3606, 8075, 8218, 8220, 8626, 8627, 8645, 8647, 9053, 9054, 9058, 9078, 9080, 9660, 9661, 9665, 9668, 9669, 9749, 9751, 9981, 9985, 10434, 10435, 10517, 10519, 10521, 10609, 10610, 10770, 10771, 10789, 10791	\@runcolor 8071, 9506	\@thirdoffive 4058
\@pdfstartpage 3531, 3533, 3615, 8155, 8159, 8670, 8675, 9133, 9137, 9696, 9700, 10019, 10024, 10807, 10812	\@safe@activesfalse 484, 4062	\@thm 6209
\@pdfstartview 3538, 3540, 3614, 8029, 8157, 8159, 8672, 8676, 8993, 9135, 9137, 9698, 10021, 10025, 10393, 10809, 10813	\@safe@activetrue 483, 4061	\@topnewpage 13141
\@pdfsubject . . 3375, 3610, 8208, 8649, 9067, 9747, 9993, 10793	\@schapter 13034, 13035	\@topsep 6222
\@pdftempa 4355, 4356, 4359	\@secondoffive . 3676, 4057, 4070, 7464, 7465, 7505	\@topsepadd 6223
\@pdftempwordfile . . 4346, 4356	\@secondoftwo . 473, 501, 772, 948, 1609, 3675, 3676, 13093	\@typeset@protect 13005
\@pdftempwordrun . . 4347, 4359	\@sect 13088, 13089	\@undefined 537, 2993, 5326, 5358, 5378, 5579, 5597, 5636, 6485, 6548, 6560, 6565, 6574, 7496, 7881, 8079, 8088, 9299, 9671, 9685
\@pdftitle 3339, 3604, 8207, 8634, 9066, 9746, 9992, 10778	\@seqncr 6152	\@undottedtocline 7423
\@pdftrapped . . 3386, 3389, 3392, 3401, 3410, 3612, 8223, 8225, 9083, 9085, 9997	\@serial@counter . . 12817, 12865, 12867, 12868	\@unprocessedoptions 3907
	\@seteqlabel 7022, 7023	\@urlbordercolor 3598, 7985, 7987, 9013, 9015, 9437, 9439, 10367
	\@setminipage 6520, 6591	\@urlcolor 8000, 8475, 8484, 8580, 8592, 9023, 9443, 10733, 10742, 11005, 11013
	\@setref . . 4065, 4070, 7433, 7434, 7471	\@urltype 8444, 8449, 9195, 9221, 9356, 9370, 10698, 10703, 10970, 10975
	\@sharp 6064, 6071	\@vpageref 7526
	\@skiphyperreffalse . . 5835, 6647, 6659	\@whilenum 1114
	\@skiphyperreftrue . . 6633, 6659	\@wrindex 7105, 7106, 7137
	\@spart 13079, 13080	\@writefile 6778
	\@ssect 13019, 13020	\@x@sf 6325, 6337, 6477, 6479
	\@startlos 7371, 7378, 7427	
	\@starttoc 5379	
	\@tempa . 6226, 6232, 6236, 6342, 6346, 6349, 6365	
	\@tempb 6180, 6184	
	\@tempboxa 8469, 8470, 8476, 8540, 8543, 8546, 8547, 8553, 8558, 8559, 8570, 8572, 8575, 8576, 8582, 8587, 8588, 8600, 8602, 8605, 8606, 8612, 8617, 8618,	

`\@xfootnote` 6450
`\@xfootnotemark` 6281, 6468
`\@xfootnotenext` 6270, 6461
`\@xp` 7012, 7047, 7048, 7061, 7062,
7064, 7065
`\l` 192, 217
`\{` 408
`\}` 409
`\j` 193, 218
`\^` 186, 211, 1992,
1993, 2900, 4104, 4105, 4113,
13168, 13180, 13192, 13399,
13415, 13423, 13436, 13450,
13464, 13480, 13490, 13491,
13504, 13518, 13566, 13603,
13622, 13643, 13768, 13784,
13792, 13804, 13818, 13832,
13848, 13858, 13859, 13872,
13886, 13912, 13914, 13952,
13954, 13968, 13970, 14004,
14006, 14007, 14085, 14087,
14133, 14135, 14137, 14139,
15071, 15073
`_` . 187, 212, 416, 4108, 4125, 4126
`\'` 166, 172, 179, 182,
2836, 2970, 2973, 2975, 2983,
13166, 13178, 13190, 13395,
13411, 13419, 13432, 13446,
13460, 13476, 13484, 13485,
13500, 13514, 13562, 13601,
13620, 13641, 13764, 13780,
13788, 13800, 13814, 13828,
13844, 13852, 13853, 13868,
13882, 14199, 14201, 14447,
14475, 14612, 14640, 15043,
15045, 15093, 15095, 15454,
15459, 15464, 15469, 15474,
15479, 15484, 15489, 15494,
15499, 15504, 15509, 15514,
15519, 15524, 15529, 15534,
15539, 15544, 15549, 15554,
15559, 15564, 15569
`\l` 188, 213, 1818, 1934, 2782, 3640,
7101, 7686, 7696
`\~` 415, 1116, 2042, 2894,
2902, 2903, 2904, 3736, 4129,
13169, 13181, 13193, 13401,
13430, 13438, 13466, 13498,
13506, 13568, 13604, 13623,
13644, 13770, 13798, 13806,
13834, 13866, 13874, 13976,
13978, 13979, 14109, 14111,
15039, 15041, 15089, 15091,
15097, 15099, 15456, 15461,
15466, 15471, 15476, 15481,
15486, 15491, 15496, 15501,
15506, 15511, 15516, 15521,

15526, 15531, 15536, 15541,
15546, 15551, 15556, 15561,
15566, 15571

Numbers

`\3` 393, 1160, 1161,
1162, 1163, 1164, 1165, 1166,
1167, 1276, 1277, 1278, 1279,
1280, 1281, 1282, 1283, 2156,
12886, 13395, 13397, 13399,
13401, 13403, 13405, 13407,
13409, 13411, 13413, 13415,
13417, 13419, 13421, 13423,
13425, 13427, 13428, 13430,
13432, 13434, 13436, 13438,
13440, 13442, 13444, 13446,
13448, 13450, 13452, 13454,
13456, 13458, 13460, 13462,
13464, 13466, 13468, 13470,
13472, 13474, 13476, 13478,
13480, 13482, 13484, 13485,
13487, 13488, 13490, 13491,
13493, 13494, 13496, 13498,
13500, 13502, 13504, 13506,
13508, 13510, 13512, 13514,
13516, 13518, 13520, 13522,
13524, 13526, 13527, 13600,
13764, 13766, 13768, 13770,
13772, 13774, 13776, 13778,
13780, 13782, 13784, 13786,
13788, 13790, 13792, 13794,
13796, 13798, 13800, 13802,
13804, 13806, 13808, 13810,
13812, 13814, 13816, 13818,
13820, 13822, 13824, 13826,
13828, 13830, 13832, 13834,
13836, 13838, 13840, 13842,
13844, 13846, 13848, 13850,
13852, 13853, 13855, 13856,
13858, 13859, 13861, 13862,
13864, 13866, 13868, 13870,
13872, 13874, 13876, 13878,
13880, 13882, 13884, 13886,
13888, 13890, 13892, 13894,
14159, 14161, 14163, 14165,
14166, 14168, 14170, 14172,
14174, 14176, 14178, 14180,
14182, 14184, 14186, 14188,
14190, 14192, 14193, 14195,
14197, 14199, 14201, 14203,
14205, 14207, 14209, 14258,
14260, 14262, 14264, 14266,
14268, 14270, 14273, 14275,
14400, 14402, 14404, 14406,
14408, 14410, 14412, 14414,
14416, 14418, 14420, 14422,
14424, 14426, 14427, 14429,
14431, 14433, 14435, 14437,

14439, 14441, 14443, 14445,
14831, 14833, 14835, 14837,
14839, 14841, 14843, 14845,
14847, 14849, 14851, 14853,
14855, 14857, 14859, 14861,
14863, 14865, 14867, 14869,
14871, 14873, 14875, 14877,
14879, 14881, 14883, 14885,
14887, 14889, 14891, 14893,
14895, 14897, 14899, 14901,
14903, 14905, 14907, 14909,
14911, 14913, 14915, 14917,
14919, 14921, 14923, 14925,
14927, 14929, 14931, 14933,
14935, 14937, 14939, 14941,
14943, 15093, 15095, 15097,
15099, 15319, 15321, 15323,
15325, 15327, 15329, 15331,
15333, 15335, 15337, 15339,
15341, 15343, 15345, 15347,
15349, 15351, 15353, 15355,
15357, 15359, 15361, 15363,
15365, 15367, 15369, 15371,
15373, 15375, 15377, 15379,
15381, 15383, 15385, 15387,
15389, 15391, 15393, 15395,
15397, 15399, 15401, 15403,
15405, 15407, 15415, 15417,
15439, 15441, 15442, 15446,
15448, 15449, 15452, 15454,
15456, 15467, 15469, 15473,
15474, 15475, 15476, 15477,
15478, 15479, 15480, 15482,
15483, 15484, 15485, 15486,
15487, 15488, 15489, 15490,
15491, 15492, 15493, 15494,
15495, 15496, 15497, 15498,
15499, 15500, 15502, 15503,
15504, 15505, 15506, 15507,
15508, 15509, 15510, 15511,
15512, 15514, 15516, 15527,
15529, 15533, 15534, 15535,
15536, 15537, 15538, 15539,
15540, 15542, 15543, 15544,
15545, 15546, 15547, 15548,
15549, 15550, 15551, 15552,
15553, 15554, 15555, 15556,
15557, 15558, 15559, 15560,
15562, 15563, 15564, 15565,
15566, 15567, 15568, 15569,
15570, 15571, 15624, 15626

`\9` 396, 1180, 1183, 1214,
2084, 2099, 2108, 2136, 2156,
13600, 14945, 14947, 14949,
14951, 14953, 14955, 14957,
14959, 14961, 14963, 14965,
14967, 14969, 14971, 14973,

14975, 14977, 14979, 14981,	15459, 15460, 15461, 15462,	\addtocounter . 5961, 5984, 5993,
14983, 14985, 14987, 14989,	15463, 15464, 15465, 15466,	6004, 6008, 6202, 8932
14991, 14993, 14995, 14997,	15468, 15470, 15471, 15472,	\addvspace 13133, 13134
14999, 15001, 15003, 15005,	15473, 15474, 15475, 15476,	\advance 330, 331,
15007, 15009, 15011, 15013,	15478, 15480, 15483, 15485,	1115, 4473, 4801, 4847, 5168,
15015, 15017, 15019, 15021,	15487, 15488, 15489, 15490,	5169, 5172, 5173, 5534, 8124,
15023, 15025, 15027, 15029,	15491, 15492, 15493, 15494,	8477, 8554, 8583, 8613, 9667,
15031, 15033, 15035, 15037,	15495, 15496, 15498, 15500,	10735, 11007, 11276, 11320,
15039, 15041, 15043, 15045,	15502, 15503, 15504, 15505,	11321, 11756, 11801, 11802,
15047, 15049, 15051, 15053,	15506, 15508, 15509, 15510,	12040, 12097, 12142, 12143,
15055, 15057, 15059, 15061,	15511, 15513, 15515, 15517,	12727, 12729, 12730, 12736,
15063, 15065, 15067, 15069,	15518, 15519, 15520, 15521,	12745, 12794, 12993
15071, 15073, 15075, 15077,	15522, 15523, 15524, 15525,	\AE 13407, 13776, 14203
15079, 15081, 15083, 15085,	15526, 15528, 15530, 15531,	\ae 13472, 13840, 14205
15087, 15089, 15091, 15093,	15532, 15533, 15534, 15535,	\afterassignment 1707, 1713, 1719
15095, 15097, 15099, 15101,	15536, 15538, 15540, 15543,	\AfterBeginDocument 244, 2613,
15103, 15105, 15107, 15109,	15545, 15547, 15548, 15549,	2667, 3776, 3876, 4086, 5237,
15111, 15113, 15115, 15117,	15550, 15551, 15552, 15553,	5350, 5756, 10617, 10655
15119, 15121, 15123, 15125,	15554, 15555, 15556, 15558,	\aftergroup 6400
15127, 15129, 15131, 15133,	15560, 15562, 15563, 15564,	\alef 15580
15135, 15137, 15139, 15141,	15565, 15566, 15568, 15569,	\alefhamza 15576
15143, 15145, 15147, 15149,	15570, 15571, 15625	\aleflowerhamza 15578
15151, 15153, 15155, 15157,		\alefmadda 15575
15159, 15161, 15163, 15165,		\alefmaqsura 15609
15167, 15169, 15171, 15173,	_ 516, 2917, 2920, 6719, 6742,	\Alph 5583, 5887, 5888
15175, 15177, 15179, 15181,	13190, 13191, 13192, 13193,	\alph 5584, 6173, 6204
15183, 15185, 15187, 15189,	13194, 13195, 13196, 13197,	\AMSautorefname 7660
15191, 15193, 15195, 15197,	13198, 13199, 13200, 13201,	\anchor@spot 4413, 4426, 4433,
15199, 15201, 15203, 15205,	13620, 13621, 13622, 13623,	4439, 7942, 8424, 8512, 9267,
15207, 15209, 15211, 15213,	13624, 13625, 13626, 13627,	9339, 9807, 10678, 10951
15215, 15217, 15219, 15221,	13628, 13629, 13630, 13631,	\appendix 5884, 5885
15223, 15225, 15227, 15229,	13632, 13633, 13634, 13635,	\appendixautorefname 2792, 2810,
15231, 15233, 15235, 15237,	13636, 13637, 13638	2828, 2846, 2864, 2882, 2900,
15239, 15241, 15243, 15245,		2932, 2933, 2958, 2976, 7670
15247, 15249, 15251, 15253,	A	\arabic 5580, 5793, 5796, 5799,
15255, 15257, 15259, 15261,	\ABREVE . . 15445, 15517, 15518,	5800, 5801, 5803, 5804, 5805,
15263, 15265, 15267, 15269,	15519, 15520, 15521	5806, 5808, 5809, 5810, 5811,
15271, 15273, 15275, 15277,	\abreve 15438, 15457, 15458, 15459,	5812, 5813, 5816, 5826, 5827,
15279, 15281, 15283, 15285,	15460, 15461	5866, 5968, 6988, 6994, 7043,
15287, 15289, 15291, 15293,	\AccFancyVerbLineautorefname .	7057, 7242, 7247, 7249
15295, 15297, 15299, 15301, 2944	\AtBeginDocument 245, 849, 2512,
15303, 15305, 15307, 15309,	\Accfootnoteautorefname . . 2924	2572, 2715, 3068, 3623, 3661,
15311, 15313, 15315, 15317,	\Acctheoremautorefname . . 2948	3782, 4012, 5948, 6761, 7507,
15319, 15321, 15323, 15325,	\ACIRCUMFLEX . 15446, 15522,	7654, 7850, 8317, 8891, 9321,
15327, 15329, 15331, 15333,	15523, 15524, 15525, 15526	11631, 11632
15335, 15337, 15339, 15341,	\acircumflex . . 2975, 15439, 15462,	\AtBeginShipout 5463, 8403, 8878
15343, 15345, 15347, 15349,	15463, 15464, 15465, 15466	\AtBeginShipoutBox . 5467, 5470,
15351, 15353, 15355, 15357,	\Acrobatmenu . 2231, 3672, 5323,	8398, 8399, 8879, 8880
15359, 15361, 15363, 15365,	8370, 9028, 9509, 10311	\AtBeginShipoutFirst 5474, 9163,
15367, 15369, 15371, 15373,	\active 1094, 1101, 4105, 4106,	10490, 10605
15375, 15377, 15379, 15381,	4107, 4108, 4109, 4110, 4113,	\AtEndDocument 5370
15383, 15385, 15387, 15389,	4115, 4118, 4126, 12890	\AtEndOfPackage 743, 2180, 3041,
15391, 15393, 15395, 15397,	\add@accent 407	3049, 3056, 3764, 3790, 3796,
15399, 15401, 15403, 15405,	\addcontentsline 6514, 6585, 6903,	3941, 3964
15407, 15409, 15411, 15413,	6908, 6979, 13146	\AtVeryEndDocument 5676, 11674
15415, 15417, 15419, 15421,	\addtocontents 6948, 6980, 7254,	\author 5399, 5409
15453, 15455, 15457, 15458,	7306, 13133, 13134	\autopageref 3784, 7541

\autoref . . . 506, 3783, 7560, 11028
\ayn 15598

B

\b . . . 735, 739, 745, 13176, 13188,
13200, 13592, 13615, 13634,
14951, 14953, 14959, 14961,
14991, 14993, 14995, 14997,
15011, 15013, 15027, 15029,
15035, 15037, 15075, 15077,
15079
\baa 15581
\back@none 2727, 2737, 2750
\back@page 2729, 2742
\back@section . . 2728, 2734, 2740,
2746
\back@slide 2730, 2739
\backcite 6779
\backref 6810, 11032
\baselineskip . . 2234, 5181, 5182,
5183, 5184, 5185, 5186, 8531,
9826, 9849, 10473
\bbl@cite@choice 6626
\BeforeTeXIVht 2609
\begin 11037, 15630
\belowpdfbookmark 12790
\bffseries . . . 451, 6725, 6748, 7437,
7457, 7474, 7588
\bgroup 525,
4219, 6387, 6399, 9267, 9840,
11478, 11570, 11591
\bibcite . . 6617, 6623, 6627, 6652,
6667, 6683, 6693
\bitsetGetDec . . 4525, 4658, 4676,
4690, 4703, 4719, 4751, 4776
\bitsetGetHex 4526
\bitsetGetSetBitList 4514
\bitsetIsEmpty 4655, 4673, 4687,
4700, 4716, 4748, 4773
\bitsetReset . . . 4628, 4662, 4681,
4695, 4708, 4724, 4756
\bitsetSetValue 4494, 4504
\BOOKMARK 12771, 12801
\box 5175, 5470, 7869, 8910, 10150
\bullet 7389, 7397, 7407, 7415

C

\C 13586, 14691, 14693
\c 736, 740, 746, 2894,
2902, 2903, 2904, 5422, 5429,
13174, 13186, 13198, 13409,
13474, 13594, 13609, 13628,
13639, 13778, 13842, 13964,
13966, 14009, 14011, 14019,
14021, 14039, 14041, 14073,
14075, 14089, 14091, 14097,
14099, 14244, 14246, 14746,

14749, 14963, 14965, 14983,
14985
\c@footnote 6283, 6344, 6352, 6470
\c@page . . 5516, 5534, 5535, 5539,
5551, 5553, 5558, 5565, 5567,
5569, 5598, 6866
\c@secnumdepth . . 13056, 13074,
13090
\c@slide@section . . 7255, 7383, 7384
\c@slide@subsection 7307
\c@tocdepth 3111, 3116
\calc@bm@number . . 12916, 12991
\calculate@pdfview . . 3508, 3511
\capitalacute 13642
\capitalbreve 13649
\capitalcaron 13648
\capitalcedilla 13639
\capitalcircumflex 13643
\capitaldieresis 13645
\capitaldotaccent 13651
\capitalgrave 13641
\capitalhungarumlaut . . . 13646
\capitalmacron 13650
\capitalnewtie 13653
\capitalogonek 13640
\capitalring 13647
\capitaltie 13652
\capitaltilde 13644
\caption . . . 6484, 6486, 6573, 6575
\catcode 172, 173,
184, 185, 186, 187, 206, 661,
662, 798, 1094, 1101, 1818,
1819, 1934, 1935, 1991, 1992,
1993, 3978, 3980, 4104, 4105,
4106, 4107, 4108, 4109, 4110,
4113, 4115, 4118, 4126, 4136,
4225, 4226, 7686, 9876, 9877,
12819, 12821, 12890
\cf@encoding 1419
\chapterautorefname . 2793, 2811,
2829, 2847, 2865, 2883, 2901,
2930, 2959, 2977, 7671
\chapternumberline 12758, 12762
\char 11701, 12823, 12860
\chardef . . 2425, 2426, 2427, 2428,
2635, 2637
\check@bm@number 12927, 12935,
12984, 12992
\CheckBox 5132
\CheckCommand 6341
\checkcommand . . 42, 6003, 6461,
6468, 6475, 6573, 6583, 6677,
6689, 6979, 6982, 7043, 7471
\checklatex . . 4, 6460, 6572, 6676,
6978, 7470
\checkpackage 9, 6002, 7042
\ChoiceBox 4851

\ChoiceMenu 5129
\citation 6722, 6745, 6771
\citeauthoryear 6837, 6843
\citeN 6834
\CJK@char 1097
\CJK@charx 1098
\CJK@CJK 1086
\CJK@eight 1297, 1300, 1414
\CJK@five 1297, 1299, 1414
\CJK@four 1296, 1299, 1413
\CJK@hundred 1363
\CJK@hundredmillion 1326
\CJK@ignorespaces 1096
\CJK@kern 1084
\CJK@minus 1288
\CJK@nine 1297, 1301, 1414
\CJK@null 1390
\CJK@one 1296, 1298, 1413
\CJK@punctchar 1099
\CJK@punctcharx 1100
\CJK@seven 1297, 1300, 1414
\CJK@six 1297, 1300, 1414
\CJK@ten 1298, 1299, 1300, 1301,
1378
\CJK@tenthousand . . 1311, 1332
\CJK@thousand 1348
\CJK@three 1296, 1299, 1413
\CJK@two 1296, 1298, 1413
\CJK@zero 1296, 1314, 1331, 1335,
1351, 1366, 1388
\CJKdigits 1173
\CJKkern 1085
\CJKnumber 1172
\close@pdflink . . 7936, 7961, 7970,
8001, 8037, 8072, 8393
\closeout 5353, 12810
\clubpenalty 6259, 6261
\codeof 6801
\color@endbox 7862,
8469, 8540, 8570, 8600, 8903,
10727, 10995
\color@hbox 7855, 8469, 8540, 8570,
8600, 8896, 10727, 10995
\columnwidth 6394
\comma@entry . . 4842, 4849, 4851
\comma@parse 4841
\contentsline . . 5359, 5360, 5371,
6949, 6953, 6980, 6982
\copy 6076, 6085, 7865, 8399, 8880,
8906
\count@ 700, 702,
703, 706, 709, 712, 715, 1113,
1114, 1115, 1116, 1708, 3127,
3128, 3133, 3134, 4472, 4473,
4488, 4784, 4799, 4801, 4825,
4847, 4863, 8119, 8120, 8121,

8122, 8123, 8124, 8127, 9663, 9664, 9665, 9666, 9667, 9670	\cyreref 14915	\CYRKDSC 14751
\CurrentBorderColor . . 7926, 7928, 7955, 7957, 7965, 7967, 7972, 9329, 9363, 9365, 9376, 9378, 9397, 9399, 9450, 9452, 9469, 9471	\CYREREV 14541, 14913	\cyrkdsc 14753
\currentpdfbookmark . . . 12782	\cyrerev 14606	\CYRKHCRS 14759
\curu 14643	\CYRERY 14537, 14937	\cyrkhrs 14761
\cyr . . 485, 2912, 2914, 2917, 2920, 2923, 2924, 2925, 2926, 2927, 2928, 2929, 2930, 2931, 2932, 2934, 2936, 2937, 2938, 2939, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 2949	\cyrery . . 2912, 2914, 14602, 14939	\CYRKHK 14837
\CYRA 14482, 14857, 14861	\CYRF 14523	\cyrkhk 14839
\cyra 2914, 2921, 2923, 2928, 2931, 2936, 2937, 2943, 2947, 14547, 14859, 14863	\cyrf 14588	\CYRKOPPA 14711
\CYRABHCH 14821, 14826	\CYRFITA 14683	\cyrkoppa 14713
\cyrabhch 14823, 14829	\cyrfita 14685	\CYRKSI 14675
\CYRABHCHDSC 14825	\CYRG 14454, 14488	\cyrksi 14677
\cyrabhchdsc 14828	\cyrg 2930, 14553, 14619	\CYRKVCRS 14755
\CYRABHDZE 14889	\CYRGDSC 14933	\cyrkvcrs 14757
\cyrabhdze 14891	\cyrgdsc 14935	\CYRL 14505
\CYRABHHA 14779	\CYRGHCRS 14733	\cyr1 2928, 2930, 2932, 2934, 14570
\cyrabhha 14781	\cyrghrs 14735	\CYRLDSC 14841
\CYRAE 14865	\CYRGHK 14737	\cyrldsc 14843
\cyrae 14867	\cyrghk 14739	\CYRLJE 14467
\CYRB 14484	\CYRGUP 14729	\cyrlje 14632
\cyrb 2928, 14549	\cyrgup 14731	\CYRLYUS 14659
\CYRBYUS 14667	\CYRH 14525	\cyrlyus 14661
\cyrbyus 14669	\cyrh 14590	\CYRM 14507
\CYRC 14527	\CYRHDSC 14801	\cyrm 2917, 2921, 2947, 2948, 14572
\cyrc 14592	\cyrhdsc 14803	\CYRMDSC 14853
\CYRCH 14529, 14929	\CYRHHK 14941	\cyrmdsc 14855
\cyrch . . 2920, 2921, 2929, 14594, 14931	\cyrhhk 14943	\CYRN 14509
\CYRCHLDSC 14849	\CYRHRDSN 14535	\cyrn 2914, 2920, 2921, 2923, 2924, 2926, 2934, 2940, 2941, 14574
\cyrchldsc 14851	\cyrhrdsn 14600	\CYRNDSC 14767
\CYRCHRDSC 14809	\CYRI 14475, 14498, 14501, 14893, 14897	\cyrndsc 14769
\cyrchrds 14811	\cyri 2914, 2917, 2921, 2927, 2932, 2934, 14563, 14566, 14640, 14895, 14899	\CYRNG 14771
\CYRCHVCRS 14813	\CYRIE 14456	\cyrng 14773
\cyrchvcrs 14815	\cyrie 14621	\CYRNHK 14845
\CYRD 14490	\CYRII 14460, 14463	\cyrnhk 14847
\cyrd 2917, 2920, 2931, 2936, 2937, 14555	\cyrii 14625, 14628	\CYRNJE 14469
\CYRDJE 14452	\CYRIOTBYUS 14671	\cyrnje 14634
\cyrdje 14617	\cyriotbyus 14673	\CYRO 14511, 14901
\CYRDZE 14458	\CYRIOTE 14655	\cyro 2917, 2920, 2923, 2924, 2934, 2943, 2944, 2946, 2947, 2948, 14576, 14903
\cyrdze 14623	\cyriote 14657	\CYROMEGA 14647
\CYRDZHE 14480	\CYRIOTLYUS 14663	\cyromega 14649
\cyrdzhe 14645	\cyriotlyus 14665	\CYROMEGARND 14699
\CYRE 14447, 14450, 14492, 14869	\CYRISHRT 14500	\cyromegarnd 14701
\cyre 2914, 2920, 2921, 2934, 2946, 2947, 2948, 14557, 14612, 14615, 14871	\cyrishrt 14565	\CYROMEGATITLO . . . 14703
	\CYRISHRTDSC 14717	\cyromegatitlo 14705
	\cyrishrtdsc 14719	\CYROT 14707
	\CYRIZH 14687, 14691	\cyrot 14709
	\cyrizh 14689, 14693	\CYROTLD 14905, 14909
	\CYRJE 14465	\cyrotld 14907, 14911
	\cyrje 14630	\CYRP 14513
	\CYRK 14473, 14503	\cyrp 2917, 2920, 2921, 2925, 2926, 2932, 2934, 2938, 2939, 2940, 2941, 14578
	\cyrk 2923, 2924, 2926, 2940, 2941, 2943, 2944, 2945, 14568, 14638	\CYRpalochka 14831
	\CYRKBEAK 14763	\CYRPHK 14775
	\cyrkbeak 14765	\cyrphk 14777
		\CYRPSI 14679

\cyrpsi	14681	\cyryi	14627	\DefaultHeightofReset	5179, 11402, 11901, 12265
\CYRR	14515	\CYRYO	14449	\DefaultHeightofSubmit ...	5177, 11384, 11878, 12241
\cyr 2912, 2914, 2917, 2920, 2921, 2927, 2931, 2932, 2934, 2936, 2937, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 14580		\cyryo	14614	\DefaultHeightofText	5185, 11242, 11721, 12054
\CYRTICK	14725	\CYRYU	14543	\DefaultHeightofTextMultiline ..	5186, 11240, 11719, 12052
\cyrrtick	14727	\cyryu	14608	\DefaultOptionsofCheckBox	5191, 11431, 11931, 12300
\CYRS	14517, 14784	\CYRZ	14496, 14746, 14885	\DefaultOptionsofComboBox	5194
\cyr 2917, 2920, 2923, 2924, 2927, 2942, 2943, 2944, 2945, 2949, 14582, 14787		\cyrz ...	2931, 2936, 2937, 14561, 14749, 14887	\DefaultOptionsofListBox	5193
\CYRSCHWA	14873, 14877	\CYRZDSC	14745	\DefaultOptionsofPopdownBox	5195
\cyrschwa	14875, 14879	\cyrzdsc	14748	\DefaultOptionsofPushButton ..	5190, 11358, 11850, 12208
\CYRSDSC	14783, 14784	\CYRZH ...	14494, 14833, 14881	\DefaultOptionsofRadio ...	5196
\cyrsdsc	14786	\cyrzh ..	2914, 2934, 14559, 14835, 14883	\DefaultOptionsofReset ...	5189, 11405, 11904, 12268
\CYRSEMISFTSN	14721	\CYRZHDSC	14741	\DefaultOptionsofSubmit ...	5188, 11387, 11881, 12244
\cyrsemisftsn	14723	\cyrzhdsc	14743	\DefaultOptionsofText	5192, 11248, 11727, 12060
\CYRSFTSN	14539			\DefaultWidthofCheckBox	5182, 11427, 11927, 12296
\cyrsoftsn	14604			\DefaultWidthofChoiceMenu ...	5184, 11265, 11745, 12086
\CYRSH	14531			\DefaultWidthofReset	5180, 11401, 11900, 12264
\cyrsh	14596			\DefaultWidthofSubmit ...	5178, 11383, 11877, 12240
\CYRSHCH	14533			\DefaultWidthofText	5187, 11237, 11716, 12049
\cyrshch	14598			\define@key	2324, 2326, 2369, 2384, 2387, 2390, 2398, 2401, 2411, 2414, 2417, 2434, 2446, 2448, 2451, 2454, 2471, 2475, 2478, 2481, 2484, 2487, 2490, 2493, 2528, 2585, 2605, 2606, 2620, 2623, 2626, 2629, 2632, 2640, 2643, 2646, 2649, 2653, 2681, 2697, 2708, 2711, 2714, 2717, 2721, 2724, 2731, 2760, 2779, 2782, 3008, 3039, 3047, 3055, 3062, 3065, 3080, 3105, 3108, 3112, 3140, 3145, 3149, 3152, 3159, 3171, 3179, 3182, 3185, 3187, 3190, 3199, 3209, 3216, 3223, 3224, 3296, 3305, 3335, 3341, 3347, 3353, 3359, 3365, 3371, 3377, 3383, 3416, 3423, 3457, 3508, 3509, 3529, 3536, 3543, 3544, 3547, 3550, 3553, 3556, 3559, 3562, 3565, 3588, 3591, 3594, 4466, 4554, 4610, 4912, 4917, 4929, 4966, 4969, 4972, 4975, 4978,
\CYRSHHA	14817				
\cyrshha	14819				
\CYRT	14519				
\cyr 2917, 2920, 2926, 2928, 2940, 2941, 2942, 2943, 2944, 2945, 2946, 2947, 2948, 14584					
\CYRTDSC	14789				
\cyrtdsc	14791				
\CYRTETSE	14805				
\cyrtdetse	14807				
\cyrthousands	14715				
\CYRTSHE	14471				
\cyrtshe	14636				
\CYRU 14478, 14521, 14917, 14921, 14925					
\cyru	2924, 2926, 2940, 2941, 2944, 2948, 14586, 14919, 14923, 14927				
\CYRUK	14695				
\cyruk	14697				
\CYRUSHRT	14477				
\cyrushrt	14642				
\CYRV	14486				
\cyrv	2912, 2914, 14551				
\CYRY	14793				
\cyry	14795				
\CYRYA	14545				
\cyrya	14610				
\CYRYAT	14651				
\cyryat	14653				
\CYRYHCRS	14797				
\cyrhcrs	14799				
\CYRYI	14462				

\Fld@bordercolor	4898, 5058, 12442, 12444, 12468, 12476, 12478, 12545, 12554, 12556, 12582, 12584, 12610, 12619, 12621, 12645, 12653, 12655, 12679, 12687, 12689	11828, 11841, 11878, 11901, 11928, 11939, 12050, 12067, 12087, 12144, 12155, 12190, 12241, 12265, 12297, 12306	12580, 12609, 12615, 12617, 12644, 12649, 12651, 12678, 12683, 12685
\Fld@bordersep	4899, 5007		\Fld@submitflags
\Fld@borderstyle	4901, 5004, 12436, 12466, 12543, 12576, 12608, 12643, 12695	\Fld@hiddenfalse	12665
\Fld@borderwidth . . .	4900, 5001, 5165, 5168, 5169, 5172, 5173, 11320, 11321, 11801, 11802, 12142, 12143, 12436, 12466, 12543, 12576, 12608, 12643, 12695	\Fld@hiddentrue	\Fld@temp 5025, 5027, 5030, 5031, 5040, 5041
\Fld@calculate@code 5066, 12498,	12500	\Fld@invisiblefalse	\Fld@validate@code . 5065, 12494, 12496
\Fld@cbsymbol 4902, 5019, 12450		\Fld@invisibletrue	\Fld@value 4807, 4814, 4816, 5016, 11236, 11252, 11264, 11303, 11304, 11715, 11732, 11744, 11784, 11785, 12048, 12065, 12085, 12125, 12126, 12632
\Fld@charsize . . . 4892, 4893, 4998,	11319, 11800, 12141, 12452, 12564, 12592, 12629, 12677	\Fld@keystroke@code 5067, 12486, 12488	\Fld@width . . 4985, 11237, 11251, 11255, 11265, 11302, 11313, 11315, 11337, 11349, 11370, 11383, 11391, 11401, 11415, 11427, 11434, 11437, 11716, 11731, 11736, 11745, 11783, 11794, 11796, 11828, 11841, 11863, 11877, 11885, 11900, 11914, 11927, 11935, 11939, 12049, 12064, 12067, 12086, 12124, 12135, 12137, 12155, 12190, 12222, 12240, 12248, 12264, 12278, 12296, 12304, 12306
\Fld@checkedfalse	4888	\Fld@listcount 11331, 11334, 11345, 11812, 11815, 11829, 11835, 12153, 12159, 12163, 12168, 12179, 12186	\float@caption
\Fld@checkequals . . . 4958, 11271,	11333, 11548, 11558, 11751, 11814, 12092, 12158	\Fld@loc	6494, 6554
\Fld@choices . . . 4781, 4789, 4791,	4795, 4804, 4812, 4817, 4865, 4867, 4875, 4876, 12566	\Fld@maxlen . . . 4894, 4989, 12634	\float@makebox
\Fld@color 4896, 5061, 12453,	12565, 12593, 12630	\Fld@menulength 4890, 4992, 11268, 11272, 11319, 11539, 11540, 11543, 11748, 11752, 11800, 12089, 12093, 12141	6556, 6557
\Fld@default	4806, 4809, 4811, 5010, 11235, 11252, 11263, 11304, 11425, 11477, 11495, 11509, 11517, 11524, 11550, 11560, 11590, 11600, 11714, 11732, 11743, 11785, 11925, 12047, 12065, 12084, 12126, 12294, 12594, 12595, 12631	\Fld@name . . . 4982, 11234, 11262, 11354, 11424, 11476, 11481, 11492, 11493, 11504, 11505, 11514, 11515, 11523, 11544, 11561, 11569, 11574, 11589, 11598, 11713, 11742, 11846, 11924, 12046, 12083, 12204, 12293, 12425, 12427, 12432, 12462, 12539, 12572, 12604, 12639, 12673	\floatingpenalty
\Fld@DingDef . . . 5019, 5022, 5024		\Fld@norotatefalse	6393
\Fld@disabledfalse	4889	\Fld@norotatetrue	\flq
\Fld@export 4619, 4622, 4629, 4921		\Fld@noviewfalse	493
\Fld@findlength . . . 11527, 11538		\Fld@noviewtrue	\flqq
\Fld@flags	4688, 4690, 4701, 4703, 4717, 4719, 4749, 4751, 4774, 4776, 12434, 12464, 12541, 12574, 12606, 12641, 12675	\Fld@nozoomfalse	491
\Fld@format@code . . 5064, 12490,	12492	\Fld@nozoomtrue	\fmtname
\Fld@getmethodfalse	4940	\Fld@onblur@code . . 5069, 12506, 12508	7
\Fld@getmethodtrue	4942	\Fld@onclick@code . . 5063, 5122, 12482	\fmtversion
\Fld@height . . . 4995, 11238, 11255,	11266, 11322, 11337, 11349, 11384, 11402, 11428, 11437, 11717, 11736, 11746, 11803,	\Fld@onenter@code . 5072, 12518, 12520	7
		\Fld@onexit@code . . 5073, 12522, 12524	\fontencoding 397, 401, 429, 11697
		\Fld@onfocus@code . 5068, 12502, 12504	\fontfamily
		\Fld@onmousedown@code . 5070, 12510, 12512	430, 11696
		\Fld@onmouseup@code . . 5071, 12514, 12516	\fontseries
		\Fld@printfalse	431, 6217, 11698
		\Fld@printrtrue	\fontshape
		\Fld@radiosymbol . . . 4903, 5022, 12590	432, 4044, 11699
		\Fld@rotation . 4904, 5052, 12438, 12440, 12467, 12472, 12474, 12544, 12550, 12552, 12578,	\fontsize
			433
			\footins
			6387
			\footnote
			4443
			\footnoteautorefname 2787, 2805, 2823, 2841, 2859, 2877, 2895, 2916, 2919, 2953, 2971, 7661, 7665
			\footnotesep
			6391, 6398
			\footnotesize
			462, 6389
			\footnotetext
			6344
			\footref
			6418, 6419
			\Form
			4905
			\Form@action 4915, 11468, 12663
			\Form@boolkey
			4909
			\Form@htmlfalse 4908, 4926
			\Form@htmltrue
			4920
			\Form@method 4938, 4946, 11468
			\frq
			494

\frqq 492
 \futurelet 546, 1438
 \FV@SetLineNo 5942
 \FV@StepLineNo 5941, 5943, 5944

G

\G ... 13585, 13611, 13630, 14211,
 14213, 14215, 14217, 14219,
 14221, 14222, 14224, 14226,
 14228, 14230, 14232, 14234
 \g@addto@macro 5477, 5628,
 6626, 6900, 8310, 9654, 9927,
 10442, 10528, 10590, 10885,
 11049
 \G@refundefinedtrue . 4286, 6726,
 6749, 7436, 7456, 7473, 7587
 \gaf 15623
 \Gauge 5138
 \GenericError 534, 3329
 \GenericInfo 536, 3327
 \GenericWarning 535, 3328
 \getpagerefnumber 6057
 \getrefbykeydefault .. 6012, 6013
 \gexmode 9685, 9686, 9774
 \ghayn 15599
 \Gin@setfile 7081, 7082
 \glossary 500
 \glq 489
 \glqq 487
 \greek@Alph 5901
 \Greeknumeral 941
 \greeknumeral 940
 \grq 490
 \grqq 488
 \guill@spacing 870
 \guillemotleft .. 910, 13354, 13534,
 13722, 15427
 \guillemotright 911, 13385, 13535,
 13754, 15428
 \guilsinglleft 13285, 13536, 15133,
 15429
 \guilsinglright 13287, 13537, 15135,
 15430

H

\H ... 13581, 13613, 13632, 13646,
 14061, 14063, 14125, 14127,
 14925, 14927
 \h 2974, 15455, 15460, 15465, 15470,
 15475, 15480, 15485, 15490,
 15495, 15500, 15505, 15510,
 15515, 15520, 15525, 15530,
 15535, 15540, 15545, 15550,
 15555, 15560, 15565, 15570
 \H@@footnotemark .. 6269, 6286,
 6423, 6430, 6442, 6453
 \H@@footnotetext ... 6268, 6278,
 6305, 6370, 6431, 6445, 6453

\H@@mpfootnotetext . 6276, 6288,
 6290
 \H@definecounter 6985, 6987
 \H@endeqnarray 6130, 6149
 \H@endequation 6093, 6125
 \H@endsubeqnarray .. 6159, 6171
 \H@eqnarray 6129, 6134
 \H@equation 6092, 6116
 \H@item .. 5814, 5820, 6634, 6659
 \H@newctr 6990, 6992
 \H@old@part 13066, 13077
 \H@old@schapter .. 13034, 13044
 \H@old@sect 13088, 13100, 13109
 \H@old@spart 13079, 13086
 \H@old@ssect 13019, 13025
 \H@refstepcounter ... 5829, 5839,
 5943, 6067, 6115, 6230, 6489,
 7252, 7305
 \H@seteqlabel 7022, 7024
 \H@subeqnarray 6158, 6162
 \ha 15607
 \Haa 15586
 \halign 509
 \hamza 15574
 \HAR@checkcitations 6814
 \HAR@citetoaux 6770
 \HAR@tempa .. 6815, 6816, 6817,
 6818, 6819, 6820
 \harvardcite 6764, 6801
 \harvarditem 6789
 \hbox 1706, 1712, 1718, 2246,
 3126, 3132, 4986, 5159, 5160,
 5161, 5162, 6754, 6885, 8398,
 8471, 8478, 8544, 8555, 8573,
 8584, 8603, 8614, 8879, 9840,
 10145, 10156, 10729, 10736,
 10997, 11008, 11616, 12066,
 12154, 12189, 12220, 12249,
 12279, 12305, 13011
 \hc@currentHref 6505
 \HCode 11468, 11470, 11481, 11490,
 11502, 11510, 11512, 11543,
 11549, 11554, 11559, 11573,
 11578, 11582, 11585, 11594
 \headerps@out 5723, 10432, 10443,
 10515, 10529, 10582, 10591,
 10604, 10618, 10657, 10768,
 10886, 11050
 \hfill 5159, 5160, 5161, 5162, 6645,
 6678
 \Hfootnoteautorefname ... 7661
 \hhyperref 4448
 \hoffset 6886
 \hphantom 472
 \href . 501, 4218, 4442, 4443, 5331
 \href@ 4219, 4222, 4227
 \href@split 4227, 4228

\hspace 6394
 \hskip 1717, 1795, 2282, 2283, 4215,
 5165, 11616
 \hspace 497, 6804, 6805
 \hss 6894, 13016
 \ht 5167, 5170,
 8476, 8547, 8553, 8559, 8576,
 8582, 8588, 8606, 8612, 8618,
 10141, 10734, 11006, 12033
 \htmladdimg 4441
 \htmladdnormallink 4442
 \htmladdnormallinkfoot ... 4443
 \htmlref 4444
 \Huge 459
 \huge 463
 \Hurl 4234, 4236, 4238
 \hv@pdf@char 12818, 12883, 12884,
 12885, 12886
 \hvtex@buffer . 9549, 9553, 9561,
 9564, 9573, 9577, 9593
 \hvtex@gettoken 9548, 9562, 9566,
 9575, 9579
 \hvtex@gettoken@ ... 9549, 9551
 \hvtex@par@dimension 9544, 9585
 \hvtex@par@direction 9545, 9588
 \hvtex@par@duration . 9546, 9580
 \hvtex@par@motion .. 9547, 9582
 \hvtex@param@dimension . 9557,
 9586, 9604, 9607
 \hvtex@param@direction .. 9558,
 9589, 9615, 9623
 \hvtex@param@duration .. 9559,
 9581, 9628, 9630
 \hvtex@param@motion 9560, 9583,
 9604, 9611
 \hvtex@parse@trans .. 9533, 9555
 \hvtex@produce@trans 9594, 9600
 \hvtex@token .. 9552, 9563, 9569,
 9576, 9581, 9584, 9587, 9589
 \hvtex@trans@code .. 9537, 9538,
 9539, 9540, 9541, 9542, 9543,
 9556, 9602, 9603, 9605, 9607,
 9609, 9611, 9613, 9615, 9617,
 9618, 9619, 9620, 9621, 9623
 \hvtex@trans@effect@Blinds 9537
 \hvtex@trans@effect@Box .. 9538
 \hvtex@trans@effect@Dissolve ..
 9539
 \hvtex@trans@effect@Glitter 9540
 \hvtex@trans@effect@R ... 9543
 \hvtex@trans@effect@Split . 9541
 \hvtex@trans@effect@Wipe . 9542
 \hvtex@trans@par ... 9576, 9580,
 9582, 9585, 9588
 \hvtex@trans@params 9570, 9572,
 9596
 \Hy@@boolkey 2292, 2293

\Hy@@DefNameKey . . 2366, 2368	\Hy@breaklinksunhbox . . 10132, 10148	9097, 9098, 9099, 9181, 9323, 9754, 9755, 9756, 9757, 9758, 9759, 9760, 9761, 9762, 9763, 10006, 10007, 10008, 10009, 10010, 10011, 10012, 10013, 10014, 10015, 10508, 10794, 10795, 10796, 10797, 10798, 10799, 10800, 10801, 10802, 10803
\Hy@Cescapeform . 12384, 12397, 12403	\Hy@CatcodeWrapper 3973, 4032, 4076, 4089	\Hy@displaydoctitlefalse . . . 328
\Hy@CSectionAnchor 13006, 13009	\Hy@centerwindowfalse 298	\Hy@DistillerDestFix . 6862, 9767, 9769
\Hy@Ctemp 3156, 3158, 5075, 5077	\Hy@chapapp . . 5883, 5889, 5896, 13039, 13051, 13136	\Hy@draftfalse 258
\Hy@abspage . . 5497, 5562, 5672, 5749	\Hy@chapterstring . . . 5878, 5880, 5883, 5895	\Hy@drafttrue 259
\Hy@Acrobatmenu . . . 3688, 3729, 8371, 9029, 9510, 10312	\Hy@CheckOptionValue . . . 2336, 2373	\Hy@driver 333, 2465, 2610, 2621, 2624, 2627, 2630, 2641, 2644, 2647, 2650, 2661, 2664, 2689, 2698, 2709, 2712, 2718, 3798, 3801, 3805, 3808, 3812, 3815, 3817, 3821, 3825, 3829, 3832, 3836, 3840, 3844, 3847, 3851, 3854, 3856, 3860, 3864, 3867, 3870, 3873, 3884, 3887, 3889, 3895, 3897, 3902, 3904, 3906
\Hy@Activeanchorfalse 4101, 7950, 8426, 8441, 8513, 8523, 8808, 9252, 9269, 9340, 9353, 9833, 10680, 10695, 10953, 10967	\Hy@CJKbookmarksfalse . . . 299	\Hy@DvipdfmxOutlineOpentru 3914, 3921
\Hy@Activeanchortrue 7946, 8423, 8437, 8511, 8520, 8804, 9248, 9266, 9338, 9350, 9823, 10677, 10691, 10950, 10963	\Hy@cjkpu 1107, 1109, 1130	\Hy@EndAnnot 8927, 8971, 9001, 9026, 9050
\Hy@ActiveCarriageReturn 4137, 4140	\Hy@colorlink 4036, 4044, 4048, 7851, 7931, 8000, 8036, 8071, 8392, 8424, 8447, 8475, 8484, 8512, 8528, 8550, 8562, 8580, 8592, 8610, 8622, 8892, 8968, 8998, 9023, 9047, 9339, 9361, 9424, 9443, 9476, 9506, 9522, 9842, 10116, 10118, 10678, 10701, 10733, 10742, 10951, 10973, 11005, 11013	\Hy@endcolorlink 4040, 4045, 4049, 7860, 7937, 8424, 8461, 8479, 8486, 8512, 8536, 8551, 8563, 8580, 8592, 8610, 8622, 8901, 8929, 9339, 9407, 9424, 9443, 9476, 9506, 9522, 9869, 10125, 10678, 10717, 10737, 10744, 10951, 10987, 11005, 11013
\Hy@AllowHyphens . . 4211, 9821, 9844, 10137	\Hy@ColorList 3196, 3197	\Hy@EndWrap . 3974, 3976, 3977, 4010
\Hy@AnchorName . . . 4271, 4273, 4276, 4278, 4300, 4302, 4306, 4311, 4313	\Hy@CounterExists . . 5779, 5792, 5795	\Hy@escapeform . . 11254, 11336, 11348, 11373, 11392, 11416, 11436, 11734, 11818, 11839, 11866, 11887, 11915, 11937, 12071, 12162, 12193, 12226, 12251, 12280, 12310, 12378, 12408, 12415
\Hy@appendixstring . 5882, 5889	\Hy@currentbookmarklevel 12718, 12728, 12729, 12735, 12742, 12783, 12786, 12791, 12795	\Hy@escapeformfalse 300
\Hy@author 5411, 5415	\Hy@defaultdriver 3865, 3889, 3895	\Hy@escapestring . . 12375, 12450, 12482, 12488, 12492, 12496, 12500, 12504, 12508, 12512, 12516, 12520, 12524, 12631, 12632, 12663
\Hy@babelnormalise . 4249, 4251	\Hy@DefFormAction . 4913, 4915	\Hy@EveryPageAnchor 6861, 6901
\Hy@backout . . 4097, 5289, 5293, 6600	\Hy@DefNameKey . . . 2365, 3217, 3235, 3243, 3251, 3255, 3262, 3269, 3276, 3283, 3287, 3292, 3299, 3580	\Hy@EveryPageBoxHook . . 5461, 5465, 5469, 6900, 9654, 9927
\Hy@backreffalse 293, 2751, 2773, 3788	\Hy@DEST 10133, 10158	\Hy@EveryPageHook . 5460, 5464, 5628, 8310
\Hy@backreftrue 2744, 2748, 2770	\Hy@DestName 7895, 7899	
\Hy@BeginAnnot 8921, 8937, 8977, 9005, 9030	\Hy@DisableOption . . 2322, 3681, 3682, 3683, 3685, 3769, 3795, 3924, 3925, 3926, 3927, 3928, 3929, 3930, 3931, 3932, 3933, 3934, 3935, 3936, 3937, 3938, 3939, 3940, 3942, 3972, 4025, 4053, 4054, 4099, 4100, 5241, 5242, 5243, 5244, 5245, 5246, 5247, 5248, 5249, 5250, 5251, 5252, 5253, 5254, 5255, 5256, 5257, 5258, 5259, 5260, 5261, 5262, 5263, 5264, 5435, 5630, 6457, 7086, 7184, 7185, 7777, 7878, 8229, 8230, 8231, 8232, 8233, 8234, 8235, 8236, 8237, 8238, 8366, 8650, 8651, 8652, 8653, 8654, 8655, 8656, 8657, 8658, 8659, 8919, 9090, 9091, 9092, 9093, 9094, 9095, 9096,	
\Hy@bookmarksdepth 3111, 3116, 3128, 3134, 12712		
\Hy@bookmarksnumberedfalse 294		
\Hy@bookmarksopenfalse . . . 295		
\Hy@bookmarkstrue 296		
\Hy@bookmarkstype . 3146, 3148, 6916, 12723		
\Hy@boolkey . . 2292, 2385, 2388, 2391, 2412, 2415, 2418, 2449, 2452, 2455, 2472, 2476, 2479, 2482, 2485, 2488, 2491, 2494, 2722, 2725, 2780, 3063, 3066, 3081, 3106, 3109, 3150, 3153, 3191, 3306, 3545, 3548, 3551, 3554, 3557, 3560, 3563, 3571, 3592, 3595, 5690		
\Hy@BorderArrayPatch . . 10191, 10194, 10441, 10884		
\Hy@breaklinks@unsupported 2460, 9802		
\Hy@breaklinksfalse 297		

\Hy@ExchangeLeftParenthesis	7711, 7717	\Hy@level	12724, 12726, 12737, 12742, 12743, 12744, 12772	\Hy@Org@chapter	13047, 13063
\Hy@ExchangeRightParenthesis	7721, 7727	\Hy@levelcheck	12725, 12740	\Hy@OutlineName	12926, 12980
\Hy@false	2228, 2303, 2736, 2772	\Hy@linkcounter	335, 337, 5927, 5928, 6016, 6017, 6999, 7000, 7025, 7294, 7295, 7299, 7345, 7346, 7350, 12702, 12703, 13021, 13022, 13038, 13039, 13050, 13051, 13081, 13082, 13096, 13097, 13135, 13136	\Hy@OutlineRerunCheck	12807, 12901, 12970
\Hy@figuresfalse	301	\Hy@linkfileprefix	3181, 4380, 4401, 8464, 9217, 10721, 10990	\Hy@pageanchortrue	314
\Hy@finalfalse	259	\Hy@linktoc	2420, 2422, 2430, 2432, 2442, 6957	\Hy@pagecounter	336, 338, 5974, 6876, 6878
\Hy@finaltrue	258	\Hy@linktoc@all	2428	\Hy@pageheight	3637, 10530, 10619
\Hy@FirstPage	3699	\Hy@linktoc@none	2425	\Hy@pagelabelsfalse	5484
\Hy@FirstPageHook	5462, 5475, 5477, 5721, 5722, 10442, 10528, 10590, 10885, 11049	\Hy@linktoc@page	2420, 2427, 2430	\Hy@pagelabelstrue	315
\Hy@fitwindowfalse	302	\Hy@linktoc@section	2422, 2426, 2432	\Hy@param	5894, 5895, 5896, 5924, 5928
\Hy@FixNotFirstPage	8396, 8397, 8403	\Hy@linktocpagefalse	307	\Hy@pdfafalse	329
\Hy@float@caption	6495, 6545, 6547	\Hy@localanchornamefalse	308	\Hy@pdfencoding@pdfdoc	2567
\Hy@float@currentHref	6548, 6550, 6552, 6560, 6563, 6565	\Hy@LT@currentHlabel	6069, 6080	\Hy@pdfmarkerrorfalse	10096
\Hy@footnote@currentHlabel	6316, 6330, 6362, 6406	\Hy@LT@currentHref	6070, 6081	\Hy@pdfmarkerrortrue	10224, 10233
\Hy@footnote@currentHref	5236, 6293, 6298, 6308, 6313, 6317, 6331, 6334, 6361, 6403, 6407	\Hy@LT@footnotetext	6359, 6369	\Hy@pdfminorversion	7744, 7750, 7753, 7761, 7766, 7768, 7771, 7775
\Hy@FormObjects	11668, 11945, 11999, 12009, 12321, 12371	\Hy@make@anchor	6998, 7005, 7011	\Hy@pdfpagehiddenfalse	316
\Hy@Gin@setfile	7081, 7083	\Hy@make@df@tag@@	7003, 7018	\Hy@pdfstringdef	657, 4786, 4794
\Hy@GlobalStepCount	331, 5562, 5927, 6016, 6876, 6999, 7294, 7345, 12702, 13021, 13038, 13050, 13081, 13096, 13135	\Hy@make@df@tag@@@	7009, 7019	\Hy@pdfstringfalse	317, 5266
\Hy@GlobalTempHlabel	5913, 5915, 5924, 5932, 5935	\Hy@maketitle@end	6434, 6439, 6441	\Hy@pdfstringtrue	513, 5238
\Hy@GlobalTempHref	5923, 5928, 5933, 5936	\Hy@maketitle@optarg	6432, 6437	\Hy@pdfversion	2593, 2604, 4788, 7766, 7768, 7772, 7775, 12419
\Hy@gtemp	658, 659, 4811, 4812, 4816, 4817, 4828, 4842, 7735, 7737, 12425, 12427	\Hy@MaybeStopNow	2652, 2657, 2675, 2685, 2692, 3648	\Hy@plainpagesfalse	318
\Hy@href	4219, 4221	\Hy@menubartrue	309	\Hy@PrevPage	3696
\Hy@hyperfootnotesfalse	6265	\Hy@naturalnamesfalse	310	\Hy@Ps@CR	10572, 10579, 10584, 10585, 10602, 10623, 10624, 10625, 10631, 10638, 10645, 10652
\Hy@hyperfootnotetrue	303	\Hy@nestingfalse	311	\Hy@pstringB	8147, 8152, 9130, 9142, 10069, 10085, 10857, 10873
\Hy@hyperindextrue	304	\Hy@newline@author	5454	\Hy@pstringD	8007, 8031, 8979, 8993, 10377, 10393
\Hy@hypertextnamesfalse	2184	\Hy@newline@title	5453	\Hy@pstringdef	7681, 7894, 7915, 7975, 8006, 8007, 8042, 8043, 8147, 8746, 8946, 8978, 8979, 9006, 9130, 9360, 9429, 9483, 9484, 10069, 10222, 10231, 10358, 10376, 10377, 10401, 10402, 10857, 12401, 12925, 12941
\Hy@hypertextnamestrue	305	\Hy@newwindowfalse	313	\Hy@pstringDest	7894, 7895, 8746, 8793, 10222, 10223, 10227, 10231, 10232, 10236
\Hy@implittrue	306	\Hy@newwindowsetfalse	312, 3568	\Hy@pstringF	8006, 8025, 8042, 8061, 8066, 8978, 8992, 9483, 9490, 9494, 10376, 10392, 10401, 10417, 10420
\Hy@Info	243, 2311, 3739, 3741, 3744, 3746, 3749, 3751, 3754, 3756, 3759, 3761, 3957, 3963, 4041, 4046, 4050, 4180, 4207, 4521, 5198, 5200, 5203, 5205, 5208, 5210, 5213, 5215, 5218, 5220, 5223, 5225, 5228, 5230, 6701, 6762, 6921, 6938	\Hy@newwindowsettrue	3570	\Hy@pstringName	12925, 12926, 12941, 12955
\Hy@LastPage	3702	\Hy@next	5578, 5588, 5593, 13049, 13059, 13062		
		\Hy@nextfalse	3731, 7096		
		\Hy@NextPage	3693		
		\Hy@nexttrue	3732, 3733, 3734, 7097, 7098, 7099		
		\Hy@number	3521, 3525, 3533		
		\Hy@numberline	12719, 12756, 12757, 12758		
		\Hy@ObsoletePaperOption	2394, 2402		
		\Hy@ocgcolor	7854, 7868, 8895, 8909		
		\Hy@ocgcolorlinksfalse	4020		

\Hy@pstringP . 8043, 8066, 9484, 9494, 10402, 10420	\Hy@SaveLastskip 2250, 7892, 8415, 8430, 8505, 8517, 8743, 9240, 9256, 9331, 9344, 9804, 9818, 10670, 10684, 10943, 10957	5094, 5095, 5096, 5097, 5098, 5103, 5104, 5105, 5106, 5107, 5108, 5109, 5110, 5111, 5112, 5113, 5519, 5522, 5531, 5533, 5537, 5541, 5585, 5587, 5968, 5971, 5974, 5980, 6095, 6101, 6412, 6418, 7193, 7194, 8162, 8191, 8193, 8669, 8674, 8680, 8684, 8687, 8692, 8723, 8725, 9102, 9145, 9147, 9969, 9972, 9976, 9977, 9983, 9984, 9990, 10018, 10023, 10029, 10033, 10036, 10041, 10074, 10076, 10188, 10189, 10197, 10198, 10302, 10303, 10806, 10811, 10817, 10821, 10824, 10829, 10862, 10864, 12383, 12384, 12923, 12929, 12937, 12952
\Hy@pstringURI 7975, 7996, 9006, 9019, 9360, 9372, 9429, 9433, 10358, 10368	\Hy@scanauthor 5409, 5414	\Hy@temp@A 572, 573, 1664, 1666, 1677, 1679, 1684, 1685, 1688, 3420, 3422, 7115, 7116, 7117, 7124, 7152, 7153, 7154, 7163
\Hy@PutCatalog 5624, 5632, 5738	\Hy@scanoptauthor . . . 5409, 5410	\Hy@temp@B 1665, 1666
\Hy@raisedlink 2235, 5871, 6019, 6040, 6041, 6042, 6045, 6082, 6122, 6125, 6252, 6296, 6311, 6374, 6401, 6533, 6611, 6635, 6640, 6660, 7001, 7026, 10430, 10513, 10764, 10928, 12704, 13013, 13040, 13052, 13083, 13137	\Hy@scanopttitle 5400, 5401	\Hy@tempa 2294, 2296, 2298, 2299, 2301, 2303, 2305, 2308, 2311, 2312, 2732, 2733, 2734, 2736, 2737, 2739, 2740, 2742, 2746, 2750, 2761, 2763, 2765, 2766, 2768, 2772, 4139, 4140, 4151, 4155, 4254, 4258, 4321, 4324, 4333, 4335, 4918, 4919, 5568, 5570, 5608, 5610, 5749, 5751, 6179, 6181, 6182, 6185, 6186, 6187, 6490, 6495, 6500, 6915, 6916, 6934, 6935, 6941, 7258, 7259, 7310, 7311, 8448, 8449, 9221, 9369, 9370, 10702, 10703, 10974, 10975, 12722, 12723, 12746, 12748, 12765, 12773, 13125, 13151, 13156, 13159, 13162
\Hy@raiselinksfalse . . . 319, 6763	\Hy@scantitle 5400, 5405	\Hy@tempb 5569, 5570, 5609, 5610, 12747, 12748, 12773
\Hy@RemoveDurPageAttr . 8268, 8281	\Hy@secnum@part . 13069, 13071, 13074	\Hy@tempcolor 9851, 9853, 9866, 9939, 9941, 9953
\Hy@RemoveHidPageAttr . 8291, 8303	\Hy@SectionAnchorHref 511, 13004, 13027, 13102	\Hy@TempPageAnchor . . . 6866, 6873, 6877, 6893
\Hy@RemovePercentCr . . . 4153, 4157, 4162	\Hy@SectionHShift 13003, 13012, 13023, 13098	\Hy@testname . 7907, 7908, 7913, 7915, 7916, 7930, 8938, 8939, 8944, 8946, 8948, 8964, 9383, 9384, 9389, 9393, 9455, 9456, 9461, 9465, 9944, 9945, 9950, 9961
\Hy@RemoveTransPageAttr 8243, 8257	\Hy@seminarslidesfalse . . . 7244	\Hy@texhtfalse 321
\Hy@Reserved@a 4316, 6132, 6161, 11475, 11525, 11588	\Hy@seminarstrue 7242	\Hy@texhttrue 2607, 3799
\Hy@RestoreCatcodes 205, 3644, 3908	\Hy@setbreaklinks . . . 2457, 2461, 2473, 7743, 8739	\Hy@title 5402, 5406
\Hy@RestoreLastskip 2250, 7896, 8427, 8442, 8514, 8524, 8795, 9253, 9270, 9341, 9354, 9814, 9834, 10681, 10696, 10954, 10968	\Hy@SetCatcodes 181, 231, 3646	\Hy@toclevel . . . 6926, 6930, 6943
\Hy@ReturnAfterElseFi 339, 4141	\Hy@SetNewWindow 3574, 8027, 8063, 8994, 9491, 10391, 10416	
\Hy@ReturnAfterElseFiFiEnd 343, 1680	\Hy@setouterhbox . 10131, 10137	
\Hy@ReturnAfterFi 339, 359, 1858, 4145, 4161, 7196, 7232, 7716, 7726, 12402	\Hy@setpagesizetrue 320	
\Hy@ReturnAfterFiFiEnd . . 342, 1672, 1686, 1764, 1771	\Hy@setpdfborder . . . 3225, 7921, 7980, 8011, 8047, 8374, 8957, 8985, 9012, 9040, 9375, 9396, 9417, 9436, 9468, 9499, 9515	
\Hy@ReturnEnd . . 341, 342, 343, 1692, 1776	\Hy@setpdfversiontrue 2592	
\Hy@safe@activesfalse 344, 4066, 4071, 4330, 7576	\Hy@setref@link 7442, 7445	
\Hy@safe@activetrue . 344, 4064, 4069, 4133, 4170, 4178, 4206, 4253, 4322, 7486, 7565	\Hy@slidetitle . 7271, 7273, 7280, 7288, 7298, 7322, 7324, 7331, 7339, 7349	
\Hy@saved@currentHlabel . 6327, 6332	\Hy@StartlinkName . . 7919, 7933	
\Hy@saved@currentHref . . . 6328, 6333	\Hy@StepCount 330, 5539, 11272, 11334, 11540, 11752, 11815, 12093, 12159, 12787, 12792, 12868	
\Hy@saved@footnotemark . 6428, 6443	\Hy@temp 541, 548, 661, 733, 837, 840, 848, 849, 2400, 2405, 2406, 2407, 2408, 2409, 2410, 3155, 3164, 3165, 3166, 3167, 3168, 3169, 3170, 3197, 3198, 3199, 3202, 3204, 3207, 3384, 3385, 3388, 3391, 3394, 3419, 3427, 3428, 3429, 3430, 3431, 3432, 3433, 3434, 3435, 3566, 3567, 3720, 3724, 3725, 3726, 3727, 3803, 3805, 3810, 3812, 3815, 3827, 3829, 3834, 3836, 3842, 3844, 3849, 3851, 3854, 3896, 3897, 4511, 4515, 4516, 4527, 4611, 4612, 4613, 4615, 4619, 4930, 4931, 4932, 4934, 4938, 4939, 5074, 5090, 5091, 5092, 5093,	
\Hy@saved@footnotetext . . 6429, 6446	\Hy@temp@temp 541, 548, 661, 733, 837, 840, 848, 849, 2400, 2405, 2406, 2407, 2408, 2409, 2410, 3155, 3164, 3165, 3166, 3167, 3168, 3169, 3170, 3197, 3198, 3199, 3202, 3204, 3207, 3384, 3385, 3388, 3391, 3394, 3419, 3427, 3428, 3429, 3430, 3431, 3432, 3433, 3434, 3435, 3566, 3567, 3720, 3724, 3725, 3726, 3727, 3803, 3805, 3810, 3812, 3815, 3827, 3829, 3834, 3836, 3842, 3844, 3849, 3851, 3854, 3896, 3897, 4511, 4515, 4516, 4527, 4611, 4612, 4613, 4615, 4619, 4930, 4931, 4932, 4934, 4938, 4939, 5074, 5090, 5091, 5092, 5093,	
\Hy@saved@hook 5439, 5449		

\Hy@toolbartrue	322		
\Hy@true	2227, 2299, 2301, 2766, 2768		
\Hy@typexmlfalse	323		
\Hy@undefinedname	7904, 7911, 7913, 8934, 8942, 8944, 9357, 9387, 9389, 9459, 9461, 9935, 9948, 9950		
\Hy@unicodedefalse	324, 638, 647, 2523, 2524, 2532, 3361, 3367, 5970, 6870, 12421		
\Hy@unicodetrue	2524, 5683, 5697		
\Hy@usehidkeyfalse	3189		
\Hy@usehidkeytrue	3193		
\Hy@usemaketitleinfos	5455, 8203, 8631, 9062, 9743, 9967, 10775		
\Hy@usemaketitlestring	5436, 5456, 5457		
\Hy@useNameKey	2378, 8169, 8170, 8171, 8172, 8173, 8174, 8175, 8176, 8195, 8699, 8700, 8701, 8702, 8703, 8704, 8705, 8706, 8727, 9109, 9110, 9111, 9112, 9113, 9114, 9115, 9116, 9149, 9715, 9716, 9717, 9718, 9719, 9720, 9721, 9722, 10048, 10049, 10050, 10051, 10052, 10053, 10054, 10055, 10078, 10836, 10837, 10838, 10839, 10840, 10841, 10842, 10843, 10866		
\Hy@usetitlefalse	325		
\Hy@varioref@undefined	6051, 6055, 7571		
\Hy@VerboseAnchor	4203, 7893, 8416, 8431, 8506, 8518, 8744, 9241, 9257, 9332, 9345, 9805, 9819, 10671, 10685, 10944, 10958		
\Hy@verbosefalse	326		
\Hy@VerboseGlobalTemp	4179, 4180, 4181, 4182, 4186		
\Hy@VerboseLinkInfo	4186, 4187, 4190, 4197		
\Hy@VerboseLinkStart	4175, 7953, 7963, 8446, 8491, 8527, 8539, 8936, 9197, 9220, 9359, 9448, 9837, 9937, 10700, 10749, 10972, 11019		
\Hy@VerboseLinkStop	4191, 7938		
\Hy@vt@PutCatalog	5655, 5657		
\Hy@VTeXversion	5635, 5647, 9413, 9526, 9662, 12820		
\Hy@Warning	241, 366, 1604, 2316, 2331, 2356, 2436, 2551, 2556, 3072, 3124, 3396, 3443, 3451, 4016, 4336, 4411, 4568, 5693, 6907, 7552, 7601, 7909, 8777, 8781, 8940, 9385, 9457, 9946, 10225, 10234, 12731, 12749		
\Hy@WarningNoLine	242, 2395, 2463, 2577, 3175, 3213, 3312, 3412, 3630, 3679, 3807, 3816, 3831, 3846, 3855, 5383, 5485, 5649, 5763, 5955, 6917, 7073, 10104		
\Hy@WarningPageBorderColor	3210, 3212, 3214		
\Hy@WarningPageColor	3172, 3174, 3176		
\Hy@WarnOptionDisabled	2328, 2330		
\Hy@WarnOptionValue	2309, 2315, 2753, 2775		
\Hy@windowuitrue	327		
\Hy@writebookmark	2232, 6927, 7278, 7286, 7296, 7329, 7337, 7347, 12708, 12798		
\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	360, 364		
\HyCal@scan	351, 355, 379		
\HyColor@FieldBColor	5055, 5058		
\HyColor@FieldColor	5061		
\HyColor@HyperrefBorderColor	3200		
\HyColor@HyperrefColor	3160		
\HyColor@UseColor	4038, 7857, 7868, 8898, 8909		
\HyField@@AddToFields	11651, 11655		
\HyField@@PDFChoices	4806, 4807, 4822		
\HyField@@SetFlag	4501, 4503		
\HyField@@UseFlag	4491, 4493		
\HyField@AddToFields	11621, 11650, 11737, 11830, 11843, 11870, 11895, 11919, 11941		
\HyField@AdvanceAnnotCount	12039, 12069, 12164, 12194, 12223, 12252, 12281, 12308		
\HyField@afields	11618, 11640, 11641, 11643, 11677		
\HyField@AfterAuxOpen	11631, 11638, 11656		
\HyField@AnnotCount	12037, 12040, 12043		
\HyField@AuxAddToFields	11630, 11635, 11639, 11659		
\HyField@FlagsAnnot	4661, 4680, 4694, 4707, 4723, 4755		
\HyField@FlagsCheckBox	4693, 11433, 11934, 12303		
\HyField@FlagsChoice	4754, 11312, 11793, 12134		
\HyField@FlagsPushButton	4679, 11369, 11389, 11414, 11862, 11883, 11913, 12221, 12246, 12277		
\HyField@FlagsRadioButton	4706, 11308, 11789, 12130		
\HyField@FlagsSubmit	4627, 11390, 11884, 12247		
\HyField@FlagsText	4722, 11250, 11730, 12063		
\HyField@NewBitsetFlag	4459, 4462, 4470		
\HyField@NewFlag	4457, 4533, 4534, 4535, 4536, 4537, 4538, 4539, 4540, 4541, 4542, 4543, 4544, 4545, 4546, 4547, 4548, 4549, 4550, 4551, 4552, 4557, 4558, 4559, 4560, 4561, 4562, 4563, 4564, 4565, 4598, 4600,		

4601, 4603, 4604, 4606, 4607,
 4608, 4609
 \HyField@NewFlagOnly . . . 4461,
 4599, 4602, 4605
 \HyField@NewOption 4458, 4464
 \HyField@PDFAFlagWarning . . .
 4567, 4575, 4579, 4583, 4587,
 4591, 4595
 \HyField@PDFChoices 4779,
 11347, 11837, 12188
 \HyField@PrintFlags . 4508, 4654,
 4672, 4686, 4699, 4715, 4747,
 4772
 \HyField@SetFlag . . . 4500, 4640,
 4646, 4651, 4685, 4713
 \HyField@SetKeys . . 4883, 11247,
 11279, 11282, 11301, 11357,
 11386, 11404, 11430, 11726,
 11759, 11762, 11781, 11849,
 11880, 11903, 11930, 12059,
 12100, 12103, 12122, 12207,
 12243, 12267, 12299
 \HyField@TheAnnotCount 12042,
 12073, 12078, 12169, 12181,
 12196, 12201, 12228, 12234,
 12254, 12259, 12283, 12288,
 12312, 12317
 \HyField@UseFlag . . . 4490, 4631,
 4632, 4633, 4634, 4635, 4636,
 4637, 4638, 4641, 4642, 4643,
 4644, 4647, 4648, 4649, 4652,
 4663, 4664, 4665, 4666, 4667,
 4668, 4669, 4670, 4671, 4682,
 4683, 4684, 4696, 4697, 4698,
 4709, 4710, 4711, 4712, 4714,
 4725, 4726, 4727, 4728, 4729,
 4730, 4731, 4732, 4743, 4746,
 4757, 4758, 4759, 4760, 4762,
 4764, 4765, 4768, 4771
 \HyInd@@@wrindex . . 7111, 7114,
 7145, 7151
 \HyInd@@@hyperpage . 7191, 7201
 \HyInd@@@wrindex . . . 7106, 7107
 \HyInd@EncapChar . . 2783, 3640,
 7101
 \HyInd@hyperpage . . . 7188, 7190,
 7197
 \HyInd@org@wrindex . 7105, 7109,
 7119, 7125, 7127, 7130
 \HyInd@pagelink 7206, 7212, 7214,
 7217
 \HyInd@ParenLeft . . . 7088, 7116,
 7153
 \HyInd@ParenRight . . 7089, 7117,
 7124, 7154, 7163
 \HyInd@removespaces 7220, 7223,
 7233
 \HyInfo@AddonHandler . . . 3438,
 3441
 \HyInfo@AddonList . . 3465, 3466,
 3500, 3507
 \HyInfo@Addons 3486, 3502, 8227,
 9087, 9999, 10003
 \HyInfo@AddonUnsupportedtrue
 . . . 8629, 9741, 10773
 \HyInfo@do 3440, 3467, 3490
 \HyInfo@GenerateAddons . 3484,
 8204, 9063, 9968
 \HyInfo@Key . . 3448, 3449, 3457,
 3462, 3467, 3470, 3477, 3491,
 3495
 \HyInfo@KeyEscaped . 3447, 3448
 \HyInfo@trapped@false 3388, 3407
 \HyInfo@trapped@true 3385, 3406
 \HyInfo@trapped@unknown 3391,
 3408
 \HyInfo@TrappedUnsupported . .
 3409, 3413, 8632, 9744,
 10776
 \HyInfo@Value 3461, 3463
 \HyLang@addto 2987, 3009, 3040,
 3048
 \HyLang@afrikaans 2785
 \HyLang@DeclareLang 3001, 3016,
 3017, 3018, 3019, 3020, 3021,
 3022, 3023, 3024, 3025, 3026,
 3027, 3028, 3029, 3030, 3031,
 3032, 3033, 3034, 3035, 3036,
 3037, 3038
 \HyLang@english 2803
 \HyLang@french 2821
 \HyLang@german 2839
 \HyLang@italian 2857
 \HyLang@magyar 2875
 \HyLang@portuges 2893
 \HyLang@russian 2911
 \HyLang@spanish 2951
 \HyLang@vietnamese . 2969, 3040,
 3048
 \HyLinguex@OrgB 735, 739
 \HyLinguex@OrgC 736, 740
 \HyLinguex@OrgD 737, 741
 \HyLinguex@Restore . . 738, 751,
 755, 763, 2505
 \HyOrg@addtoreset . . 7031, 7033,
 7060
 \HyOrg@appendix . . . 5884, 5890
 \HyOrg@author . 5399, 5412, 5416
 \HyOrg@float@makebox . . 6556,
 6558
 \HyOrg@hyperpage . . 7091, 7093,
 7094
 \HyOrg@languageshorthands 807,
 822, 833, 843
 \HyOrg@make@df@tag@@ . 7016
 \HyOrg@make@df@tag@@@ 7017
 \HyOrg@maketitle . . . 6426, 6433,
 6438
 \HyOrg@subequations 6196, 6203
 \HyOrg@title . . . 5398, 5403, 5407
 \HyOrg@url 4233
 \hyper@@@anchor 3663, 4243, 4245,
 4276, 4278, 4311, 4313, 4408,
 5278, 5294, 5311, 6292, 6297,
 6307, 6312, 6372, 6375, 6402,
 6531, 6534, 6562, 6866, 6873,
 6878, 7277, 7285, 7295, 7328,
 7336, 7346
 \hyper@@@link . . 4173, 4229, 4266,
 4290, 4292, 4316, 6619, 6765,
 6766, 6767, 6815, 6817, 6819,
 7447, 7462, 7561
 \hyper@@@normalise . . 4142, 4146,
 4150
 \hyper@anchor 4435,
 5281, 5296, 5358, 7941, 8414,
 8504, 8800, 9255, 9330, 9803,
 10669, 10942
 \hyper@anchorend 3666,
 5265, 5283, 5298, 5314, 5872,
 6021, 6083, 6125, 6144, 6168,
 6253, 6613, 6638, 6641, 6661,
 6794, 7001, 7027, 7948, 8439,
 8522, 8807, 9250, 9352, 9825,
 10693, 10965, 12704, 12799,
 13014, 13041, 13053, 13084,
 13138
 \hyper@anchorstart 3665,
 5265, 5282, 5297, 5313, 5872,
 6020, 6083, 6122, 6144, 6168,
 6253, 6611, 6636, 6641, 6661,
 6794, 7001, 7027, 7944, 8429,
 8516, 8803, 9239, 9343, 9817,
 10683, 10956, 12704, 12799,
 13014, 13041, 13053, 13084,
 13138
 \hyper@chars 4167, 7976,
 8419, 8433, 8453, 8472, 8482,
 8496, 8568, 8598, 9206, 9227,
 9243, 9260, 9335, 9347, 9430,
 10359, 10687, 10707, 10730,
 10740, 10754, 10960, 10979,
 10999, 11011, 11024
 \hyper@currentanchor 9822, 9831,
 9845, 9862
 \hyper@currentlinktype . . . 9846,
 9850, 9854
 \hyper@hash . . 4119, 4120, 4168,
 4372, 4384, 4401, 4404, 5232,
 9200

\hyper@image . 4239, 4240, 8494, 9479, 9932, 10752, 11022	\hyper@readexternallink . . 4327, 4343	\HyPL@LastNumber . 5500, 5535, 5558
\hyper@last 5374, 5378	\hyper@refstepcounter 5847, 5850, 5857	\HyPL@LastPrefix . . . 5501, 5529, 5560
\hyper@link 3664, 4325, 5279, 5280, 5295, 5306, 5312, 7962, 8490, 8538, 8972, 9196, 9447, 9936, 10748, 11018	\hyper@tilde 4128, 4129, 4130, 5233	\HyPL@LastType 5499, 5520, 5559
\hyper@link@ . . 3671, 4317, 4319, 5277, 5288, 5292, 5303, 5319	\hyperbaseurl . . 3178, 3179, 5330	\HyPL@page . . 5510, 5512, 5517, 5525
\hyper@linkend 3668, 5285, 5300, 5316, 6336, 6605, 6608, 6961, 6965, 6969, 6971, 7961, 8459, 8535, 8971, 8973, 9232, 9405, 9848, 10715, 10985	\hypercalcbp 346, 346	\HyPL@Prefix . 5525, 5527, 5529, 5543, 5546, 5548, 5560, 5574, 5612
\hyper@linkfile 3670, 4397, 5287, 5302, 5318, 8004, 8463, 8596, 8975, 9216, 9409, 10374, 10719, 10989	\hypercalcbpdef . . 348, 385, 3540	\HyPL@Roman 5503
\hyper@linkstart 3667, 5284, 5299, 5315, 6334, 6601, 6608, 6961, 6965, 6969, 6971, 7952, 8445, 8526, 8935, 8973, 9219, 9358, 9836, 10699, 10971	\hyperdef 4268, 5332	\HyPL@roman 5504
\hyper@linkurl 3669, 4238, 4372, 4379, 4400, 4404, 5286, 5301, 5317, 7973, 8464, 8466, 8492, 8566, 9003, 9204, 9217, 9427, 9480, 9933, 10356, 10720, 10724, 10750, 10990, 10992, 11020	\HyperDestNameFilter 3622, 4207, 7894, 7916, 8421, 8435, 8455, 8492, 8746, 8947, 9200, 9210, 9228, 9246, 9264, 9336, 9348, 9392, 9464, 10222, 10231, 10675, 10689, 10710, 10750, 10948, 10961, 10981, 11020, 12877, 12925, 12941	\HyPL@SetPageLabels 5618, 5677, 5765
\hyper@livelink 5279, 5306	\hypergetpageref 6013	\HyPL@storePageLabel . . . 5543, 5545, 5615, 5667, 5746
\hyper@makecurrent . 5868, 5892, 6068, 6121, 6143, 6167, 6231, 6329, 6507, 6549	\hypergetref 6012	\HyPL@thisLabel 5493, 5495, 5509, 5512, 5513
\hyper@n@rmalise . . . 4134, 4138	\hyperimage . . . 4239, 4441, 7083	\HyPL@Type . . 5515, 5520, 5524, 5542, 5550, 5559, 5573, 5611
\hyper@nat@current 6602	\hyperindexformat 7090	\HyPL@Useless 5616, 5622
\hyper@nat@anchorend 6613	\hyperlink 4172, 5333, 7229, 7367, 7375, 7390, 7398, 7408, 7416, 7423	\HyPsd@@@autoref . . 1525, 1527, 1530
\hyper@nat@anchorstart 6610	\hyperlinkfileprefix . . 3181, 3182, 3183, 10934	\HyPsd@@@CJKdigits 1396, 1399, 1407
\hyper@nat@linkbreak 6607	\hyperpage 5339, 7091, 7092, 7094, 7187	\HyPsd@@@nameref . . 1507, 1509, 1512
\hyper@nat@linkend 6604	\HyperRaiseLinkDefault . . 2234, 2243	\HyPsd@@@pageref . . 1489, 1491, 1494
\hyper@nat@linkstart 6599	\HyperRaiseLinkHook 2233, 2244	\HyPsd@@@ref . . 1473, 1475, 1478
\hyper@normalise . . . 3642, 3647, 4111, 4219, 4222, 4235, 4237, 4239, 4260, 4913	\HyperRaiseLinkLength . . . 2242, 2243, 2246	\HyPsd@@@UTFviii@four . . 2109, 2112
\hyper@pageduration . 8264, 8312, 9639, 9656, 9899, 9929	\hyperref . 4248, 4448, 4449, 5335, 7519, 7523, 7533, 7547	\HyPsd@@@AppendItalcorr . 1694
\hyper@pagehidden . . 8288, 8313, 9649, 9657, 9916, 9930	\hypersetup 2544, 3025, 3424, 3641, 3643, 5329	\HyPsd@@@autoref . . . 1522, 1523
\hyper@pagetransition 8240, 8311, 9528, 9655, 9882, 9928	\hypertarget 4241, 5334	\HyPsd@@@autorefname 1543, 1546
\hyper@quote . 5234, 8421, 8435, 8450, 8455, 8473, 8483, 8497, 9200, 9210, 9223, 9246, 9264, 10675, 10689, 10704, 10710, 10731, 10741, 10755, 10948, 10961, 10976, 10981, 11001, 11012, 11025	\HyPL@@@CheckThePage . 5589, 5607	\HyPsd@@@CJKdigits . 1388, 1390, 1393
	\HyPL@@@CheckThePage . . 5565, 5567	\HyPsd@@@CJKnumber 1289, 1291, 1294, 1347, 1362, 1375, 1377, 1381
	\HyPL@Alph 5505	\HyPsd@@@ConvertToUnicode 1988
	\HyPL@alph 5506	\HyPsd@@@GetNextTwoTokens 1986
	\HyPL@arabic 5502	\HyPsd@@@GlyphProcessWarning 1864, 1867
	\HyPL@CheckThePage 5517, 5564	\HyPsd@@@GreekNum . . 956, 965, 1064, 1068, 1072
	\HyPL@Entry . 5751, 5759, 5767, 5769	\HyPsd@@@hspace 1444, 1445
	\HyPL@EveryPage . . . 5507, 5628	\HyPsd@@@LetCommand . . 1567, 1588
	\HyPL@Format 5580, 5581, 5582, 5583, 5584, 5596	\HyPsd@@@nameref . . . 1504, 1505
	\HyPL@found . 5579, 5586, 5590, 5597, 5607, 5609	\HyPsd@@@pageref . . . 1486, 1487
	\HyPL@Labels . 5496, 5619, 5620, 5622, 5624, 5669, 5670, 5762, 5770, 5771	\HyPsd@@@ProtectSpacesFi . 1616, 1620, 1638, 1644, 1649
		\HyPsd@@@ref 1470, 1471
		\HyPsd@@@RemoveBraces . . 1662

[\HyPsd@@RemoveBracesFi](#) 1659, 1662
[\HyPsd@@RemoveCmdPrefix](#) 1821, 1824
[\HyPsd@@ReplaceFi](#) . 1891, 1897, 1902
[\HyPsd@@UTFviii@four](#) . . . 2093, 2098
[\HyPsd@add@accent](#) . . 407, 1433
[\HyPsd@AfterCountRemove](#) 1707, 1778
[\HyPsd@AfterDimenRemove](#) 1713, 1781
[\HyPsd@AfterSkipRemove](#) . 1719, 1793
[\HyPsd@AMSClassfix](#) . 496, 1454, 1456
[\HyPsd@AppendItalcrr](#) . . 1678, 1685, 1694
[\HyPsd@autoref](#) 506, 1522
[\HyPsd@autorefname](#) . 1534, 1540
[\HyPsd@babel@danish](#) 852
[\HyPsd@babel@dutch](#) 858
[\HyPsd@babel@finnish](#) 864
[\HyPsd@babel@frenchb](#) 869
[\HyPsd@babel@german](#) 874
[\HyPsd@babel@macedonian](#) . 881
[\HyPsd@babel@ngerman](#) . . . 887
[\HyPsd@babel@portuges](#) . . . 893
[\HyPsd@babel@russian](#) 898
[\HyPsd@babel@slovene](#) 904
[\HyPsd@babel@spanish](#) 909
[\HyPsd@babel@swedish](#) 919
[\HyPsd@babel@ukrainian](#) . . . 925
[\HyPsd@babel@usorbian](#) . . . 931
[\HyPsd@BabelPatch](#) 482, 806, 842
[\HyPsd@CatcodeWarning](#) . 1723, 1740, 1743, 1746, 1749, 1805
[\HyPsd@Char](#) 1990
[\HyPsd@CharOctByte](#) 2010, 2012, 2015, 2024, 2029
[\HyPsd@CharSurrogate](#) . . . 2004, 2021
[\HyPsd@CharTwoByte](#) 2002, 2009
[\HyPsd@CheckCatcodes](#) 559, 1700
[\HyPsd@CJK@Unicode](#) 1171, 1175
[\HyPsd@CJKActiveChars](#) . 1111, 1126
[\HyPsd@CJKdigit](#) . . . 1400, 1410
[\HyPsd@CJKdigits](#) . . 1173, 1386
[\HyPsd@CJKhook](#) 512, 1082, 1093
[\HyPsd@CJKhook@bookmarks](#) 1088, 1122
[\HyPsd@CJKhook@unicode](#) 1090, 1170
[\HyPsd@CJKnumber](#) . 1172, 1286
[\HyPsd@CJKnumberFour](#) . 1304, 1308, 1312, 1325, 1329, 1333, 1339
[\HyPsd@CJKnumberLarge](#) . 1317, 1324
[\HyPsd@CJKnumberThree](#) 1345, 1349, 1355
[\HyPsd@CJKnumberTwo](#) . . 1360, 1364, 1370
[\HyPsd@ConvertToUnicode](#) . 627, 1936
[\HyPsd@DecimalToOctal](#) . . 1103, 1134
[\HyPsd@DecimalToOctalFirst](#) 1177, 1213
[\HyPsd@DecimalToOctalSecond](#) 1178, 1187, 1250
[\HyPsd@DefCommand](#) . 542, 543, 544, 545, 1556
[\HyPsd@DisableCommands](#) . 786, 788
[\HyPsd@DoConvert](#) . . 1938, 1948
[\HyPsd@DoEscape](#) 1962
[\HyPsd@doxspace](#) 599, 1909
[\HyPsd@empty](#) 584, 586, 590, 591, 593, 601, 608
[\HyPsd@End](#) 559, 563, 1617, 1620, 1623, 1626, 1629, 1642, 1652, 1659, 1662, 1700, 1708, 1714, 1720, 1765, 1772, 1778, 1781, 1793
[\HyPsd@EndWithElse](#) 1423, 1432
[\HyPsd@fi](#) . 1634, 1640, 1644, 1650
[\HyPsd@GetNextTwoTokens](#) 1986
[\HyPsd@GetOneBye](#) 1981
[\HyPsd@GetTwoBytes](#) 1977
[\HyPsd@GLYPHERR](#) 564, 1420, 1434, 1441
[\HyPsd@GlyphProcess](#) 566, 1852, 1865
[\HyPsd@GlyphProcessWarning](#) 1859, 1863
[\HyPsd@GobbleFiFi](#) . 1425, 1431
[\HyPsd@GreekNum](#) 945, 948, 950
[\HyPsd@greeknumeral](#) . 941, 947
[\HyPsd@greeknumeral](#) . . 940, 944
[\HyPsd@GreekNumI](#) . . 968, 994, 1037, 1063
[\HyPsd@GreekNumII](#) . 972, 1016, 1060, 1067
[\HyPsd@GreekNumIII](#) 975, 1039, 1071
[\HyPsd@GreekNumIV](#) . 984, 1062
[\HyPsd@GreekNumV](#) . . 987, 1066
[\HyPsd@GreekNumVI](#) . 989, 1070
[\HyPsd@GreekPatch](#) 480, 937, 939
[\HyPsd@HighA](#) 1181, 1190
[\HyPsd@HighB](#) 1191, 1196
[\HyPsd@HighC](#) 1197, 1200
[\HyPsd@HighD](#) 1193, 1205
[\HyPsd@hspace](#) 497, 1444
[\HyPsd@hspacetest](#) . . 1447, 1449, 1452
[\HyPsd@ifnextchar](#) 528, 529, 530, 1593
[\HyPsd@ignorespaces](#) . . . 510, 797
[\HyPsd@InitUnicode](#) 760
[\HyPsd@inmathwarn](#) . . 406, 1417
[\HyPsd@ITALCORR](#) . . 520, 524, 1441
[\HyPsd@langshort@system](#) . . 813, 816
[\HyPsd@LanguageShorthands](#) 808, 814, 826
[\HyPsd@LetCommand](#) . 546, 547, 1556
[\HyPsd@LetUnexpandableSpace](#) 515, 516, 517, 518, 1437, 1440
[\HyPsd@LoadStringEnc](#) . . . 2548, 2568, 2570, 2574, 2576, 5688
[\HyPsd@LoadUnicode](#) 2497, 2502, 2510, 2513, 2515, 2522, 5682
[\HyPsd@nameref](#) 505, 1504
[\HyPsd@pageref](#) 504, 1486
[\HyPsd@pdfencoding](#) . 628, 2496, 2499, 2531, 2543, 2546, 2547, 2552, 2567, 5684, 5686, 5703, 5706
[\HyPsd@pdfencoding@auto](#) . 628, 2537, 2547, 2564, 5686, 5705
[\HyPsd@pdfencoding@pdfdoc](#) 2530, 2552, 2565
[\HyPsd@pdfencoding@unicode](#) 2534, 2566, 5684, 5702
[\HyPsd@PrerenderUnicode](#) 3322, 3338, 3344, 3350, 3356, 3374, 3380, 3460
[\HyPsd@protected@testopt](#) . 531, 532, 1597
[\HyPsd@ProtectSpaces](#) 552, 1614, 1635, 1684
[\HyPsd@ref](#) 503, 1470
[\HyPsd@RemoveBraces](#) 554, 1656, 1673, 1681, 1687
[\HyPsd@RemoveCmdPrefix](#) 1814, 1820
[\HyPsd@RemoveMask](#) 562, 1623, 1629, 1642, 1652
[\HyPsd@RemoveSpaceWarning](#) 1788, 1800, 1826
[\HyPsd@ReplaceSpaceWarning](#) 1783, 1795, 1839

\HyPsd@Rest . . . 1701, 1761, 1769, 1772, 1779, 1784, 1790, 1796, 1802	\HyPsd@XeTeXBigCharsfalse 653, 667, 672	\if@hyper@item 5832, 5845
\HyPsd@SPACEOPTI . . . 556, 571, 572, 574, 576, 578, 579, 618, 620, 1736, 1920	\HyPsd@XeTeXBigCharstrue 666, 675, 3337, 3343, 3349, 3355, 3373, 3379, 3459, 12424, 12764	\if@inlabel 6242
\HyPsd@spaceopti 620, 1883	\HyPsd@XSPACE 522, 598, 1441	\if@Localurl 9187, 9233
\HyPsd@SpanishPatch . . 481, 1074	\HyPsd@xspace 596, 598, 599	\if@mid@expandable 495
\HyPsd@String 553, 555, 558, 560, 565, 567, 1667, 1668, 1678, 1730, 1731, 1735, 1736, 1751, 1752, 1782, 1794, 1853, 1854	\HyRef@@StarSetRef . . 7490, 7495	\if@minipage 6519, 6590
\HyPsd@StringSubst . . . 568, 570, 576, 582, 585, 588, 591, 610, 613, 615, 1906	\HyRef@autopageref . . 7544, 7546	\if@nmbrrlist 5819
\HyPsd@Subst 564, 573, 577, 583, 589, 593, 597, 602, 603, 604, 605, 606, 607, 611, 614, 1890, 1907	\HyRef@autopagerefname . . 7543, 7547, 7549	\if@nobreak 6258
\HyPsd@temp 631, 633, 634, 636, 637, 643, 645, 646, 2529, 2530, 2531, 2534, 2537, 2543, 2555, 2559, 5701, 5702, 5703, 5705, 5706, 5711	\HyRef@autoref 7561, 7563	\if@skiphyperref 5833, 5843
\HyPsd@ToBigChar 686, 687, 696	\HyRef@autosetref . . . 7566, 7569	\if@twocolumn 13140
\HyPsd@ToBigChars . . . 640, 678	\HyRef@CaseStar 7630, 7636	\if@twoside 13128
\HyPsd@tocsection . . . 1457, 1458, 1459, 1460, 1461, 1462, 1463, 1465	\HyRef@currentHtag . . . 7582, 7600, 7603, 7609, 7616, 7622, 7637	\ifcase 1001, 1023, 1046, 1135, 1184, 1206, 1209, 1215, 1251, 1295, 1411, 2087, 2534, 3121, 4629, 4734, 4863, 4939, 6957, 7116, 7153, 7382, 7571, 9675, 12467, 12544, 12609, 12644, 12678, 12824
\HyPsd@UnescapedString . . . 633, 680, 681, 687	\HyRef@MakeUppercaseFirstOfFive 7510, 7512	\ifcat 1702, 1729, 1734, 1739, 1742, 1745, 1748, 4419, 4421
\HyPsd@UnexpandableSpace 1440, 1625, 1649, 1784, 1796	\HyRef@name 7598, 7599, 7604, 7611, 7629, 7630, 7631, 7633	\ifdim 1452, 1782, 1786, 1794, 1798, 2253, 2272, 3627, 3912, 8330, 8334, 8339, 8343, 8350, 8353, 8357, 8360, 9167, 9168, 9173, 9174, 9306, 9309, 9313, 9316, 10142, 10153, 10494, 10495, 10500, 10501, 11274, 11313, 11314, 11754, 11794, 11795, 12095, 12135, 12136
\HyPsd@unichar 2051, 2118, 2124, 2129	\HyRef@Ref 7516, 7518	\ifetex@unexpanded 1608
\HyPsd@unichar@first@byte 2137, 2157	\HyRef@ShowKeysInit 7639, 7652, 7656	\iffalse 673
\HyPsd@unichar@octtwo . . . 2159, 2167, 2173	\HyRef@ShowKeysRef 7570, 7638	\IfFileExists 5382, 11035
\HyPsd@unichar@second@byte 2145, 2165	\HyRef@StarSetRef . . . 7484, 7502, 7505, 7510	\ifFld@checked 4886, 11595, 12455
\HyPsd@UnicodeReplacementCharacter 2121, 2156	\HyRef@StripStar 7597, 7628	\ifFld@comb 4733
\HyPsd@UTFviii . . . 398, 2039, 2044	\HyRef@testreftype . . . 7575, 7594	\ifFld@combo 4761, 4766, 11288, 11317, 11768, 11798, 12109, 12139
\HyPsd@UTFviii@@three . . . 2074, 2083	\HyRef@thisref 7572, 7575	\ifFld@disabled 4887, 11596
\HyPsd@UTFviii@@two 2059, 2065	\HyTmp@found 4833, 4843, 4846	\ifFld@edit 4767
\HyPsd@UTFviii@ccxliv@def 2049, 2055	\HyTmp@key 4827, 4828	\ifFld@fileselect 4736
\HyPsd@UTFviii@ccxliv@undef 2048, 2054	\HyTmp@optitem 4783, 4799, 4826, 4831, 4837, 4858, 4869	\ifFld@hidden 11251, 11302, 11370, 11391, 11415, 11434, 11494, 11506, 11516, 11599, 11731, 11783, 11863, 11885, 11914, 11935, 12064, 12124, 12222, 12248, 12278, 12304
\HyPsd@UTFviii@four 2047, 2092	\HyTmp@optlist 4782, 4797, 4798, 4829, 4830, 4835, 4836, 4844, 4845, 4865, 4867, 4874, 4877	\ifFld@multiline 4734, 11239, 11501, 11718, 12051
\HyPsd@UTFviii@three 2046, 2073	\HyWarning 5708	\ifFld@multiselect 4805
\HyPsd@UTFviii@two 2045, 2058	\HyXeTeX@CheckUnicode . . 3308, 3319, 3336, 3342, 3348, 3354, 3372, 3378, 3458, 5716	\ifFld@password 4735, 11482
\HyPsd@Warning 1601, 1806, 1827, 1840, 1869, 1875		\ifFld@popdown 4553, 11289, 11769, 12110
		\ifFld@radio 11285, 11307, 11531, 11765, 11788, 12106, 12129
		\ifFld@readonly 11503, 11513, 11597
		\ifForm@html 4907

<code>\ifhmode</code> . 2271, 2280, 4213, 6210, 6325, 6337, 6477, 6479	8984, 9011, 9035, 9374, 9395, 9416, 9435, 9467, 9498, 9514, 10246, 11210, 11360, 11408, 11685, 11853, 11907, 12023, 12211, 12271, 12457, 12530, 12668	12168, 12179, 12419, 12438, 12467, 12472, 12544, 12550, 12578, 12609, 12615, 12634, 12644, 12649, 12678, 12683, 12712, 12728, 12820, 12890, 12945, 13056, 13074, 13090
<code>\ifHy@activeanchor</code> . . . 248, 4432	<code>\ifHy@pdfmarkerror</code> 10093, 10101	<code>\ifodd</code> 2101, 2106, 6887
<code>\ifHy@backref</code> . . 249, 3758, 4094, 5212, 6772, 6808	<code>\ifHy@pdfpagehidden</code> . 278, 3192, 8292, 9651, 9922	<code>\ifpdf</code> 2700, 3804, 3866
<code>\ifHy@bookmarks</code> 250, 3956	<code>\ifHy@pdfstring</code> . . 279, 771, 5837	<code>\ifpdfstringunicode</code> 399, 402
<code>\ifHy@bookmarksnumbered</code> . 251, 7270, 7321, 12755	<code>\ifHy@plainpages</code> 280, 3753, 5967, 6865	<code>\ifportrait</code> 8329
<code>\ifHy@bookmarksopen</code> . 252, 3946	<code>\ifHy@psize</code> 281	<code>\ifthenelse</code> 6798
<code>\ifHy@breaklinks</code> 253, 2462, 9838, 9870, 10136, 10147	<code>\ifHy@raiselinks</code> . 282, 8468, 8542, 8571, 8601, 10726, 10994	<code>\iftrue</code> 676, 1615, 1637, 1901, 13058
<code>\ifHy@centerwindow</code> 254, 8167, 8697, 9107, 9713, 10046, 10834	<code>\ifHy@seminarslides</code> 283	<code>\ifvmode</code> 2236, 2252, 2261
<code>\ifHy@CJKbookmarks</code> . 255, 1087	<code>\ifHy@setpagesize</code> 284, 8318, 9164, 9303, 10491	<code>\ifvoid</code> 6076, 6085, 6246
<code>\ifHy@colorlinks</code> . 256, 4027, 5217, 10656	<code>\ifHy@setpdfversion</code> . . 2584, 7765	<code>\ifvtexhtml</code> 3843, 3872
<code>\ifHy@displaydoctitle</code> 291, 8168, 8698, 9108, 9714, 10047, 10835	<code>\ifHy@texht</code> 285, 4055, 4087, 5265, 7430	<code>\ifvtexpdf</code> 3883
<code>\ifHy@draft</code> 257, 3662	<code>\ifHy@toolbar</code> . . 286, 8163, 8693, 9103, 9709, 10042, 10830	<code>\ifvtexps</code> 3886
<code>\ifHy@DvipdfmxOutlineOpen</code> 3910, 12943	<code>\ifHy@typexml</code> . . 247, 3763, 4030, 4074, 5352, 12903, 12972	<code>\ifxetex</code> 632, 663, 2702, 3309, 3828, 3869, 3911
<code>\ifHy@escapeform</code> . . . 260, 12379, 12409	<code>\ifHy@unicode</code> . . . 287, 394, 569, 581, 609, 617, 626, 951, 1106, 1808, 1829, 1842, 1871, 1877, 2119, 2495, 2545, 3310, 5691, 12420	<code>\ignorespaces</code> . . . 510, 6049, 6205, 6409, 6515, 6526, 6529, 6586, 6594, 6656, 6671, 6687, 6696, 6806, 7255, 7307
<code>\ifHy@figures</code> 261, 3738, 5197, 7080	<code>\ifHy@useHidKey</code> 3188, 8289, 9650, 9917	<code>\IJ</code> 13318, 14000
<code>\ifHy@fitwindow</code> 262, 8166, 8696, 9106, 9712, 10045, 10833	<code>\ifHy@usetitle</code> 288, 5397	<code>\ij</code> 13527, 14002
<code>\ifHy@frenchlinks</code> 263, 4043	<code>\ifHy@verbose</code> . . 289, 4176, 4192, 4204, 4509, 6932	<code>\immediate</code> 5353, 5354, 5355, 5357, 5389, 5660, 5750, 5758, 5977, 6005, 6651, 6666, 6682, 6692, 6722, 6745, 6771, 6801, 7779, 7794, 7809, 9777, 10515, 11612, 11634, 11675, 12810, 12876, 12902, 12904, 12971, 12973
<code>\ifHy@hyperfootnotes</code> . 264, 6266	<code>\ifHy@windowui</code> . 290, 8165, 8695, 9105, 9711, 10044, 10832	<code>\incr@eqnum</code> 6096, 6109
<code>\ifHy@hyperindex</code> 265, 3748, 5207, 7087	<code>\ifHyInfo@AddonUnsupported</code> 3436, 3450, 3485	<code>\index</code> 499
<code>\ifHy@hypertextnames</code> 266, 5898, 5966, 6864, 7275, 7326	<code>\ifHyPsd@XeTeXBigChars</code> . . 671, 673, 676, 679	<code>\indexentry</code> 7142, 7157, 7165, 7169, 7174
<code>\ifHy@implicit</code> . . 267, 3770, 12997	<code>\ifmeasuring@</code> 5856, 5869	<code>\input</code> 754, 762, 2504, 3043, 3051, 3058, 3906, 10433, 10516, 10607, 10769
<code>\ifHy@linktocpage</code> 268, 2419, 2429	<code>\ifnum</code> 703, 706, 709, 712, 715, 827, 952, 955, 966, 967, 971, 979, 983, 986, 996, 1018, 1041, 1176, 1287, 1303, 1307, 1327, 1340, 1343, 1356, 1358, 1371, 1373, 1379, 1998, 2001, 2077, 2120, 2123, 2135, 2660, 2663, 2688, 3122, 3123, 3920, 3947, 4788, 4859, 4870, 5516, 5535, 5551, 5647, 7384, 7422, 7761, 7766, 8083, 8090, 8096, 8104, 8923, 8928, 9413, 9526, 9662, 9670, 9672, 9673, 9683, 9686, 9772, 9774, 9879, 10518, 11669, 11829, 12163,	<code>\InputIfFileExists</code> . . 3645, 12895, 12918, 12963, 12965
<code>\ifHy@localanchorname</code> 269, 5931		<code>\inputlineno</code> 4183, 4424
<code>\ifHy@menubar</code> . 270, 8164, 8694, 9104, 9710, 10043, 10831		<code>\insert</code> 6387
<code>\ifHy@naturalnames</code> . . 271, 5911, 7276, 7327		<code>\IntCalcAdd</code> 2027
<code>\ifHy@nesting</code> . . 272, 3743, 4242, 4275, 4310, 4417, 5202, 6291, 6306, 6371, 6530		<code>\IntCalcDec</code> 1198
<code>\ifHy@newwindow</code> 274, 3577, 9413		<code>\IntCalcDiv</code> 1192, 1201, 1206, 1309, 1318, 1330, 1347, 1362, 1377, 2011, 2017, 2023
<code>\ifHy@newwindowset</code> . . 273, 3575		<code>\intcalcDiv</code> . 1182, 2018, 2025, 2028
<code>\ifHy@next</code> 850, 3735, 7104		<code>\IntCalcMod</code> . . 1194, 1203, 1209, 1313, 1319, 1334, 1350, 1365, 1379, 1381, 2013, 2018, 2019, 2025, 2028, 2030
<code>\ifHy@ocgcolorlinks</code> . . 275, 3071, 4013, 4023, 5222, 7760, 7778, 7853, 7861, 8811, 8894, 8902		<code>\intcalcMod</code> 1184
<code>\ifHy@pageanchor</code> 276, 5953, 5965, 5980, 6863		<code>\intcalcSub</code> 2005
<code>\ifHy@pagelabels</code> 277, 5481, 5667, 5745		<code>\interfootnotelinepenalty</code> . . 6390
<code>\ifHy@pdfa</code> 292, 3686, 4015, 4360, 4566, 5078, 5114, 5227, 7920, 7992, 8023, 8059, 8386, 8956,		

`\interlinepenalty` 6390
`\item` 5814, 5817, 6678, 6690, 6793
`\itemautorefname` 7662
`\itemautorefname` . . . 2788, 2806,
 2824, 2842, 2860, 2878, 2896,
 2925, 2926, 2954, 2972, 7662,
 7663, 7666
`\itemindent` 6247
`\itshape` 453

J

`\j` 14007, 14192, 14256
`\jarr` 15613
`\jeem` 15585
`\jeh` 15621
`\jobname` 5354, 5382, 5389, 11035,
 12809, 12895, 12902, 12918,
 12963, 12965, 12971

K

`\k` . . . 13202, 13544, 13546, 13551,
 13553, 13596, 13614, 13633,
 13640, 13904, 13906, 13944,
 13946, 13991, 13993, 13994,
 14129, 14131, 14188, 14190,
 14787, 14826, 14829
`\kaf` 15603
`\kasra` 15616
`\keepPDF@SetupDoc` 10660, 10667
`\kern` 1711, 1783, 1788, 1800, 6247,
 6882, 6883, 6884, 6886, 6887,
 6892, 13012
`\kernel@ifnextchar` 529
`\kha` 15587
`\KV@Hyp@draft` 2393
`\KV@Hyp@nolinks` 2393
`\kv@key` . . 3444, 3447, 3454, 4786,
 4789, 4791, 4795, 4799
`\kv@parse` 4785
`\kv@parse@normalized` 3469, 3476
`\kv@processor@default` 3472, 3479
`\kv@set@family@handler` . . 3437
`\kv@value` . 3442, 4787, 4794, 4795
`\kvsetkeys` 3417

L

`\L` 13311, 14031
`\l` 13324, 14033
`\l@slide` . . 7255, 7365, 7370, 7374,
 7381
`\l@subslide` . 7307, 7370, 7377, 7421
`\label` 498, 6905
`\label@hyperref` . . . 4282, 4284
`\label@hyperdef` 4268, 4296
`\label@hyperref` . 4249, 4281, 4445
`\labelsep` 6805
`\labelwidth` 6804
`\lam` 15604

`\language@group` 478
`\languageshorthands` 807, 808, 843
`\LARGE` 460
`\Large` 461
`\large` . 464, 7387, 7395, 7405, 7413
`\lastbox` 6245
`\lastpage@putlabel` 5948
`\lastskip` . 2253, 2257, 2264, 2272,
 2276, 2283
`\LaTeX` . . . 423, 424, 11041, 11042
`\LaTeXe` 424, 11042
`\LayoutCheckField` . 5153, 11435,
 11936, 12309
`\LayoutChoiceField` . 5150, 11306,
 11787, 12128
`\LayoutPushButtonField` . . 5156,
 11364, 11371, 11857, 11864,
 12215, 12224
`\LayoutTextField` . . . 5147, 11253,
 11733, 12070
`\lccode` 702, 1116, 2042, 5038, 7101,
 7102
`\ldots` 418
`\leavevmode`
 507, 2231, 3672, 3689, 3729,
 4365, 5323, 6324, 6476, 6712,
 7522, 7530, 7906, 7977, 8008,
 8044, 8467, 8541, 8569, 8599,
 8976, 9004, 9198, 9207, 9261,
 9410, 9431, 9454, 9485, 9840,
 10135, 10360, 10378, 10403,
 10725, 10993, 11365, 11372,
 11407, 11817, 11838, 11858,
 11865, 11886, 11906, 12161,
 12192, 12216, 12225, 12250,
 12270, 13010
`\LetLtxMacro` . 5268, 5272, 5340,
 5344
`\limits` 4159
`\listofslides` 7356
`\listslidenam` . 7355, 7358, 7360,
 7362
`\literalps@out` 2229, 9766,
 9771, 9820, 9826, 9843, 9849,
 10111, 10122, 10143, 10145,
 10154, 10156, 10431, 10514,
 10577, 10767
`\lower` . . . 8471, 8544, 8573, 8603,
 10145, 10729, 10997
`\lowercase` . 722, 1117, 2043, 2295,
 2732, 2762, 3384, 3420, 4458,
 4459, 4462, 4467, 4491, 4501,
 4555, 4611, 4930, 4970, 4973,
 5039, 7103, 9878
`\lslide@flag` 7382, 7385, 7403, 7422,
 7426
`\LT@array` 6062

`\LT@firsthead` 6076, 6085
`\LT@p@ftn` . 6343, 6346, 6350, 6364
`\LT@p@ftntext` 6341, 6348
`\LT@start` 6078, 6089
`\ltx@ifpackageloaded` 1083
`\ltx@ifUndefined` 477, 519,
 594, 629, 745, 746, 747, 851,
 857, 863, 868, 873, 880, 886,
 892, 897, 903, 908, 918, 924,
 930, 936, 1453, 1547, 1548,
 2183, 2216, 3732, 3733, 3734,
 5437, 5798, 5886, 6157, 6614,
 7550, 7551, 7595, 7596, 7598,
 7599, 7954, 7964, 8349, 9305,
 9362, 9449, 9816, 9850, 9938,
 10115, 13046, 13057
`\luatexrevision` 8127
`\luatexversion` 8119, 8124

M

`\m@ne` . . . 4195, 4473, 5993, 6177,
 8932, 12965, 13056, 13071
`\make@df@tag@@` 7016, 7018
`\make@df@tag@@@` . . . 7017, 7019
`\make@stripped@name` 5861, 6118,
 6140, 6164, 6175
`\makeatletter` 3, 785, 5381
`\MakeButtonField` . . 5163, 11366,
 11374, 11393, 11412, 11417,
 11859, 11868, 11893, 11911,
 11917, 12217, 12220, 12249,
 12275, 12279
`\MakeCheckField` . . . 5160, 11437,
 11939, 12306
`\MakeChoiceField` . . 5162, 11349,
 11841, 12190
`\MakeFieldObject` . 11611, 11694,
 11704, 11707
`\MakeLowercase` 475
`\MakeLowercaseUnsupportedInPdfStrings`
 475
`\MakeRadioField` . . . 5159, 11337,
 11828, 12155
`\makeslideheading` 7265
`\makeslidesubheading` 7317
`\maketag@@@` 7005
`\MakeTextField` 5161, 11255,
 11736, 12067
`\maketitle` 6426, 6427
`\MakeUppercase` 474, 7360, 7362,
 7513
`\MakeUppercaseUnsupportedInPdfStrings`
 474
`\MathBSuppress` 9208, 9212
`\mathdisplay` 6099, 6108
`\mathdisplay@push` . . 6097, 6106
`\mathversion` 469

\maxdimen	3143, 11616	\newdimen	332, 4891, 4892	\nofrenchguillemets	537, 539
\MaybeStopEarly	334, 2611, 2665, 3774, 3874, 5778	\newif	247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 671, 850, 2584, 3188, 3436, 3910, 4465, 4553, 4886, 4887, 4907, 5832, 5833, 5856, 6127, 9187, 10093	\NoHy@OrgPageRef	5272, 5274, 5344, 5346
\mbox	508, 6725, 6748, 7863, 8904	\newlabel	2195, 4306, 5364, 5365, 5372, 5394, 5978, 6006	\NoHy@OrgRef	5268, 5270, 5340, 5342
\mddefault	6217	\newlength	5366, 5367	\NoHyper	5276
\mdseries	452	\newline	13003	\nohyperpage	5322, 7186, 7188, 7190
\meaning	62, 153, 159, 2192, 5421, 5924, 6182, 12929, 12937, 12952	\newname	5862, 6119, 6141, 6165, 6178, 6187	\nolinkurl	4235
\measuring@false	5856	\newsavebox	8740, 10130	\nolinkurl@	4235, 4236
\mediaheight	9299, 9301, 9307, 9314	\newtie	13204, 13205, 13588, 13618, 13637, 13653	\NomFancyVerbLineautorefname	2943
\mediawidth	9310, 9317	\newtoks	90, 4952, 9965, 10163, 10164	\Nomfootnoteautorefname	2923
\meem	15605	\newwrite	5388, 12900, 12969	\Nomtheoremautorefname	2947
\message	7383	\next	6799, 6800, 6801, 9594, 9596, 9598	\nonumber	6152, 6155
\MessageBreak	367, 1814, 1835, 1848, 1871, 1876, 1878, 2317, 2318, 2332, 2354, 2357, 2359, 2437, 2438, 2464, 2465, 2517, 2518, 2519, 2557, 2558, 2578, 2588, 2754, 3073, 3313, 3397, 3452, 3453, 3632, 3808, 3809, 3817, 3818, 3832, 3833, 3847, 3848, 3856, 3857, 4017, 4512, 4517, 4526, 4569, 4615, 4739, 4852, 4934, 5486, 5694, 5710, 5956, 6909, 6939, 6940, 6941, 6942, 6943, 7075, 7910, 8941, 9386, 9458, 9947, 11624, 11626, 12733, 12751, 12812	\nfss@text	7437, 7457, 7474, 7588	\normalfont	447, 6213
\MF	427, 11044	\NG	14049	\normalsize	465, 6522, 6593
\MP	428, 11045	\ng	14051	\NR@getttitle	6512
\multiply	8123, 9631, 9666	\noboundary	15626	\null	6790, 6798, 7479, 7584
N		\nobreak	2254, 2262, 2273, 2281, 6325, 6477	\number	969, 973, 976, 984, 987, 989, 1289, 1291, 1318, 1319, 2002, 2060, 2061, 2062, 2063, 2067, 2068, 2069, 2070, 2071, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2085, 2086, 2087, 2088, 2089, 2090, 2093, 2095, 2099, 2100, 2102, 2104, 2106, 2109, 2113, 2114, 2115, 2116, 2125, 2126, 2130, 2131, 2138, 2139, 2143, 2146, 2147, 2148, 2158, 2160, 2161, 2166, 2168, 2169, 2174, 2175, 3522, 3912, 3948, 4479, 7772, 7775, 8531, 8546, 8547, 8558, 8559, 8575, 8576, 8587, 8588, 8605, 8606, 8617, 8618
\n	713	\nobreakspace	518, 7525, 7554, 7557	\numberline	6515, 6586, 12756, 12760
\name@of@eq	5830, 5859	\noexpand	22, 93, 95, 108, 116, 169, 171, 172, 173, 176, 206, 691, 795, 1130, 1562, 1579, 1702, 2056, 2260, 2261, 2262, 2265, 2279, 2280, 2281, 2284, 3004, 3006, 3008, 3009, 3025, 3199, 3200, 3202, 3502, 4153, 4256, 4336, 4419, 4421, 4521, 5589, 5590, 5599, 5601, 5604, 5723, 5990, 5991, 5993, 6019, 6020, 6021, 6022, 6023, 6031, 6032, 6033, 6181, 6344, 6352, 6353, 6354, 6355, 6356, 6358, 6486, 6575, 6650, 6665, 6681, 7035, 7037, 7490, 7491, 7604, 7605, 7610, 7612, 7617, 7618, 7623, 7624, 8126, 8681, 10030, 10097, 10574, 10818, 11281, 11282, 11283, 11284, 11761, 11762, 11763, 11764, 12102, 12103, 12104, 12105, 12381	\numberwithin	7040
\name@of@slide	5831, 5841	\no	13444, 13812, 14207	\numexpr	2067, 2068, 2069, 2071, 2077, 2085, 2086, 2087, 2088, 2089, 2090, 2094, 2096, 2100, 2102, 2104, 2106, 2110, 2113, 2114, 2116, 2125, 2130, 2147, 2161, 2169, 2175, 3526
\nameref	505	O			
\nasb	15611	\O	13444, 13812, 14207	\obeylines	10573
\netscape	8503	\o	13512, 13880, 14209	\OBJ@acroform	11691, 11692
\new@ifnextchar	530	\obeylines	10573	\OBJ@Helv	11672, 11681, 11998
\new@pdfink	7891, 7942, 7945	\OBJ@OCG@print	7808, 7811, 7819, 7845, 8828, 8830, 8843, 8847, 8856, 8885		
\new@crefstepcounter	6091, 6123				
\newblock	6809				
\newcommand	4, 9, 42, 2230, 5327, 5793, 5796, 5799, 5800, 5801, 5803, 5804, 5805, 5806, 5808, 5809, 5810, 5811, 5812, 5813, 5822, 5823, 5824, 5825, 5826, 5827, 6173, 7043, 7242, 7247, 7248, 12782, 12785, 12790				
\newcount	335, 336, 4890, 5497, 11345, 11835, 12037, 12186, 12817				
\newcounter	5815, 6267, 8810, 12781				

\OBJ@OCG@view . . . 7793, 7811,
7844, 8812, 8814, 8827, 8847,
8884
\OBJ@OCGs . . . 7814, 7817, 7823,
7828, 7833, 8844, 8846, 8850,
8854, 8860, 8865, 8870
\OBJ@pdfdocencoding . . . 11670,
11979, 11995
\OBJ@ZaDb 11671, 11680, 11988
\OCIRCUMFLEX . 15449, 15547,
15548, 15549, 15550, 15551
\ocircumflex 15442, 15487, 15488,
15489, 15490, 15491
\oddsidemargin 6888
\OE 13313, 14065
\oe 13326, 14067
\offinterlineskip 5468
\OHORN 15450, 15552, 15553,
15554, 15555, 15556
\ohorn . . . 2970, 2977, 15443, 15492,
15493, 15494, 15495, 15496
\oldb 745
\oldc 746
\oldcontentsline . 5359, 5362, 5371
\oldd 747
\oldnewlabel . . . 5364, 5369, 5372
\OMEGA 11040
\on@line 6936, 6937
\openout 5354, 5389, 12902, 12971
\OpMode . 2660, 2663, 2674, 2688,
2691, 9683, 9774, 10518
\or 1003, 1004, 1005,
1006, 1007, 1008, 1009, 1010,
1011, 1025, 1026, 1027, 1028,
1029, 1030, 1031, 1032, 1033,
1048, 1049, 1050, 1051, 1052,
1053, 1054, 1055, 1056, 1136,
1137, 1138, 1139, 1140, 1141,
1142, 1143, 1144, 1145, 1146,
1147, 1148, 1149, 1150, 1151,
1152, 1153, 1154, 1155, 1156,
1157, 1158, 1159, 1160, 1161,
1162, 1163, 1164, 1165, 1166,
1167, 1185, 1207, 1210, 1216,
1217, 1218, 1219, 1220, 1221,
1222, 1223, 1224, 1225, 1226,
1227, 1228, 1229, 1230, 1231,
1232, 1233, 1234, 1235, 1236,
1237, 1238, 1239, 1240, 1241,
1242, 1243, 1244, 1245, 1246,
1247, 1252, 1253, 1254, 1255,
1256, 1257, 1258, 1259, 1260,
1261, 1262, 1263, 1264, 1265,
1266, 1267, 1268, 1269, 1270,
1271, 1272, 1273, 1274, 1275,
1276, 1277, 1278, 1279, 1280,
1281, 1282, 1283, 1296, 1297,

1298, 1299, 1300, 1412, 1413,
1414, 4639, 4645, 4650, 4864,
6959, 6963, 7402, 7411, 9676,
12825, 12826, 12827, 12828,
12829, 12830, 12831, 12832,
12833, 12834, 12835, 12836,
12837, 12838, 12839, 12840,
12841, 12842, 12843, 12844,
12845, 12846, 12847, 12848,
12849, 12850, 12851, 12852,
12853, 12854, 12855, 12856

P

\P 417
\p@ . 2126, 2131, 4893, 4899, 6219,
8477, 8554, 8583, 8613, 9630,
10735, 11007, 11276, 11756,
12097, 13133, 13134
\p@equation 7012
\PackageError 61, 2516, 3713, 4361,
4614, 4738, 4933, 5080, 5116,
11361, 11409, 11854, 11908,
12212, 12272
\PackageInfo 243, 7756, 7770,
11622
\PackageWarning . 241, 2587, 4850
\PackageWarningNoLine . . . 242
\pageautorefname . . . 2801, 2819,
2837, 2855, 2873, 2891, 2909,
2949, 2967, 2985, 7557, 7679
\pagename 7554
\pageref 504, 3784, 4082, 5272,
5273, 5344, 5345, 5956, 7543,
7547
\paperheight 3625, 8334,
8336, 8339, 8341, 8353, 8354,
9168, 9169, 9306, 9307, 9309,
10495, 10496
\paperwidth 8330, 8332, 8343,
8345, 8350, 8351, 9167, 9169,
9310, 10494, 10496
\par . 6211, 6514, 6542, 6584, 6594,
6792, 6812
\paragraphautorefname . . . 2797,
2815, 2833, 2851, 2869, 2887,
2905, 2938, 2940, 2963, 2981,
7675
\partautorefname 2791, 2809, 2827,
2845, 2863, 2881, 2899, 2929,
2957, 2975, 7669
\partnumberline . . . 12757, 12761
\PassOptionsToPackage . . . 2704,
2743, 2747, 2769, 3656, 3899
\pdf@addtoks 10166, 10185, 10191,
10200, 10207, 10211, 10213,
10215, 10217, 10219, 10227,
10236, 10240, 10242, 10244,
10247, 10256, 10260, 10262,

10264, 10266, 10268, 10270,
10272, 10274, 10276, 10278,
10280, 10282, 10284, 10286,
10288, 10290, 10291, 10292,
10293, 10294, 10295, 10296,
10297, 10298, 10299, 10300,
10305
\pdf@addtoksx 10160, 10170, 10183
\pdf@box 10130, 10137, 10139,
10141, 10142, 10145, 10152
\pdf@defaulttoks . . 10097, 10164,
10165, 10175
\pdf@docset 9965
\pdf@endanchor . 7898, 7942, 7949
\pdf@escapestring 7735
\PDF@FinishDoc 2614, 2615, 2668,
2669, 3619, 3674, 3777, 3778,
3877, 3878, 5321, 5478, 5479,
8202, 8407, 8630, 9061, 9188,
9742, 9966, 10774, 10935
\pdf@linktype 10115, 10119, 10180,
10181
\pdf@rect 10107, 10121, 10134
\PDF@SetupDoc 3618,
3673, 5239, 5240, 5320, 8133,
8408, 8661, 9101, 9189, 9691,
10017, 10662, 10805, 10936
\PDF@SetupDox 8133
\pdf@strcmp 827
\pdf@toks 10097, 10112, 10123,
10163, 10167, 10171
\pdf@type 10099, 10103, 10112,
10123, 10158, 10178
\pdfannotlink 7882
\pdfbookmark . . . 2230, 5326, 5327,
12783, 12788, 12793, 12797
\pdfcatalog 5632, 7815, 8148, 8190,
11692
\PDFdefaults 10174
\pdfdest 7900
\pdfendlink . . . 7939, 11736, 11828,
11842, 11869, 11894, 11918,
11940
\pdfescapestring 12410
\pdfform 7884
\PDFForm@Check . 11436, 11438,
11937, 11938, 12310, 12314,
12429
\PDFForm@List . . . 11348, 11350,
11839, 11840, 12193, 12198,
12536
\PDFForm@Name . 11729, 11782,
11852, 11933, 12062, 12123,
12210, 12302, 12417
\PDFForm@Push . . 11373, 11375,
11866, 11867, 12226, 12230,
12457

\PDFForm@Radio . 11336, 11340, 11818, 11820, 12162, 12174, 12569
\PDFForm@Reset . 11416, 11418, 11915, 11916, 12280, 12285, 12668
\PDFForm@Submit 11392, 11395, 11887, 11889, 12251, 12256, 12636
\PDFForm@Text . . 11254, 11256, 11734, 11735, 12071, 12074, 12601
\pdfhorigin 8326
\pdfinfo 8205
\pdflastform 7885
\pdflastlink 11652
\pdflastobj 7793, 7808, 7814, 11691, 11979, 11988, 11998
\pdflastxform . 7885, 11614, 11616
\pdfinkmargin . . 7880, 7883, 7888
\pdfliteral 7864, 7866, 7871
\pdfm@box . . 8740, 12033, 12034, 12035, 12066, 12077, 12154, 12178, 12189, 12200, 12220, 12233, 12249, 12258, 12279, 12287, 12305, 12316
\pdfmark 5741, 8681, 8690, 8720, 9807, 9827, 9857, 9889, 9906, 9918, 9952, 9989, 10001, 10030, 10039, 10070, 10094, 10313, 10327, 10342, 10354, 10361, 10379, 10404, 10818, 10827, 10858, 11255, 11337, 11349, 11374, 11393, 11417, 11437, 12933
\pdfmark@ 10094, 10095
\pdfminorversion 7753
\PDFNextPage 10325
\PDFNextPage@ . . 10325, 10326
\pdfobj . 7779, 7794, 7809, 11675, 11946, 11980, 11989
\PDFOpen 10353
\pdfoptionpdfminorversion 7750
\pdfoutline 12981
\pdfpageattr . . 8244, 8248, 8249, 8259, 8268, 8272, 8273, 8283, 8291, 8294, 8295, 8305
\pdfpageheight 8336, 8345, 8354, 8361
\pdfpageresources 7842
\pdfpagesattr . . 8137, 8139, 8141
\pdfpagewidth . 8332, 8341, 8351, 8358
\PDFPreviousPage 10338
\PDFPreviousPage@ 10339, 10341
\pdfrefxform 7886
\pdfrefobj . . 11670, 11671, 11672
\pdfrefxform 7886, 11616
\pdfstartlink 7881, 7882, 7934, 7978, 8009, 8045, 8372, 11735, 11819, 11840, 11867, 11888, 11916, 11938
\pdfstringdef 387, 658, 3339, 3345, 3351, 3357, 3362, 3368, 3375, 3381, 3461, 4811, 4816, 4842, 5445, 5525, 5527, 5971, 6871, 12425, 12765
\pdfstringdefDisableCommands 744, 783, 5324, 5440
\pdfstringdefPostHook . . 654, 777
\pdfstringdefPreHook . 514, 777, 789, 791, 5439, 5449
\pdfstringdefWarn . 420, 421, 509, 794, 1570, 1575, 1594, 1598
\pdfTeXrevision . 8093, 8101, 8112
\pdfTeXversion . 8088, 8090, 8093, 8096, 8099, 8100, 8104, 8110, 8111, 11669
\pdfvorigin 8327
\pdfxform 7884, 11612
\peh 15619
\penalty . . 1705, 2239, 4214, 6719, 6742
\phantom 470
\phantomsection 3620, 5328, 6911, 12701, 12753, 13075
\Preamble 11036
\PrerenderUnicode 3330
\process@me . . 5419, 5431, 5432, 8136, 8145
\ProcessKeyvalOptions . . . 3660
\protect 1703, 4286, 6515, 6586, 6650, 6665, 6681, 6797, 6804, 6805, 6949, 6980, 7255, 7307, 7436, 7456, 7462, 7473, 7587, 8418, 8508, 9259, 9334, 10673, 10946, 12771, 13005, 13133, 13134
\protected@edef 4321, 5585, 6179, 6199, 7907, 8938, 9383, 9455, 9944
\protected@write 2194, 4305, 6777, 7141, 7156, 7164, 7168, 7173, 12770
\protected@xdef . 6353, 6355, 6452
\providecommand 2211, 2212, 2719, 3098, 3099, 3102, 3103, 3865, 4061, 4062, 4167, 4240, 5615, 5634, 5759, 6615, 6616, 6631, 6709, 7238, 7239, 7355, 7660, 7661, 7662, 7663, 7664, 7665, 7666, 7667, 7668, 7669, 7670, 7671, 7672, 7673, 7674, 7675, 7676, 7677, 7678, 7679, 7742, 7890, 7902, 7903, 8406, 8502, 8503, 8738, 8797, 8798, 8799, 9185, 9304, 9326, 9327, 9328, 9767, 10131, 10132, 10429, 10437, 10438, 10439, 10440, 10512, 10524, 10525, 10526, 10527, 10571, 10612, 10613, 10614, 10615, 10763, 10765, 10766, 10879, 10880, 10927, 11635
\PushButton 5135
\put@me@back . . 4414, 4427, 4437

Q
\qaf 15602
\quotedblbase 13293, 13530, 15119, 15423
\quotesinglbase . . . 13303, 13532, 15113, 15425

R
\r . 716, 13171, 13183, 13195, 13405, 13470, 13579, 13606, 13625, 13647, 13774, 13838, 14121, 14123, 15083, 15085
\ra 15590
\raff 15612
\raise 2246, 8478, 8555, 8584, 8614, 10156, 10736, 11008
\ReadBookmarks 3659, 3677, 3791, 3965, 4090, 12881, 12911
\real@setref 7433, 7499
\realfootnote 6449
\Ref 7515, 7519, 7524
\ref . . 503, 3783, 4081, 4453, 5268, 5269, 5340, 5341, 6414, 6421, 7534, 11028
\ref@one 4262, 4263
\rEfLiNK 11029, 11030
\refstepcounter 5829, 5836, 6044, 6064, 6091, 6115, 6123, 6578
\rem@ptetc 9879, 9881
\renewcommand 2186, 6557, 7057, 12797
\RequirePackage 22, 232, 233, 234, 235, 236, 237, 238, 239, 240, 810, 1081, 1607, 2180, 2569, 3649, 3765, 3766, 4033, 4077, 4095, 4232, 4456, 5310, 5459, 5675, 7682, 9186, 10932, 12807
\RerunFileCheck 12809
\Reset 5144
\reset@font 6725, 6748, 7437, 7457, 7474, 7588
\revtex@checking 6702
\Rightarrow 7389
\rlap 7865, 8906

<code>\rm</code>	458	<code>\slide@subheading</code>	7304	<code>\surd</code>	7397
<code>\rmfamily</code>	448	<code>\slide@undottedcline</code>	7366		
<code>\Roman</code>	5581	<code>\slidenumberline</code> 7367, 7375, 7389, 7397, 7407, 7415		T	
<code>\roman</code>	5582	<code>\SliTeX</code>	426	<code>\T</code>	15582
<code>\romannumeral</code>	801, 802	<code>\slshape</code>	455	<code>\t</code>	13203, 13598, 13617, 13636, 13652
<code>\rule</code>	6398	<code>\small</code>	467	<code>\T@pageref</code>	4068, 4083, 7532
S		<code>\smash</code>	2240	<code>\T@ref</code>	4063, 4081
<code>\sad</code>	15594	<code>\spacefactor</code> 6325, 6337, 6477, 6479		<code>\T@temp</code>	6703, 6706
<code>\sbox</code>	3326, 5164, 10131, 10139, 11611	<code>\special@paper</code>	3621	<code>\Ta</code>	15596
<code>\scr@LT@array</code>	6063	<code>\SpecialDvipdfmxOutlineOpen</code>	2635, 2637, 3920	<code>\taa</code>	15583
<code>\scriptsize</code>	466	<code>\splitmaxdepth</code>	6392	<code>\tableautorefname</code>	2790, 2808, 2826, 2844, 2862, 2880, 2898, 2928, 2956, 2974, 7668
<code>\scriptstyle</code>	6715	<code>\splittopskip</code>	6391	<code>\tagform@</code>	7011
<code>\scrollmode</code> 1622, 1647, 1657, 1670, 1762, 1894		<code>\SS</code>	13528, 15422	<code>\tatwheel</code>	15600
<code>\scshape</code>	454	<code>\ss</code>	2841, 13458, 13543, 13826	<code>\tcheh</code>	15620
<code>\section</code>	7357	<code>\st@rredfalse</code>	6098, 6107	<code>\temp@online</code>	6936, 6939
<code>\sectionautorefname</code>	2794, 2812, 2830, 2848, 2866, 2884, 2902, 2931, 2960, 2978, 7672	<code>\stepcounter</code>	5846, 5991, 6198, 6326, 6451, 8922, 12767	<code>\TeX</code>	422, 423, 425, 426, 11039, 11041, 11043
<code>\seen</code>	15592	<code>\stockheight</code>	3625, 8360, 8361, 9174, 9175, 9313, 9314, 10501, 10502	<code>\texorpdfstring</code>	770, 5325
<code>\selectfont</code>	434, 4044, 11700	<code>\stockwidth</code> 8357, 8358, 9173, 9175, 9316, 9317, 10500, 10502		<code>\textacute</code>	13167, 13179, 13191, 13371, 13602, 13621, 13739
<code>\setbox</code>	1706, 1712, 1718, 3126, 3132, 4986, 5467, 6245, 7855, 8398, 8469, 8540, 8570, 8600, 8879, 8896, 10727, 10995, 12066, 12154, 12189, 12220, 12249, 12279, 12305	<code>\stop@hyper</code>	5291	<code>\textacutedbl</code>	14271
<code>\setkeys</code>	2608, 2699, 3316, 3641, 3687, 3898, 4014, 4884, 7762, 10100, 11227, 11467, 11480, 11529, 11572, 11593, 11667, 12008	<code>\StringEncodingConvertTest</code> 634, 643		<code>\textaleph</code>	15237
<code>\setlength</code>	371, 372, 2243, 8326, 8327, 8332, 8336, 8341, 8345, 8351, 8354, 8358, 8361, 9307, 9310, 9314, 9317, 9630, 13023, 13098	<code>\strip@period</code>	2199	<code>\textAlpha</code>	1003, 14291, 14307
<code>\setpdfinkmargin</code> 3509, 3510, 7880		<code>\strip@prefix</code> 62, 2192, 5421, 5924, 6182, 12929, 12937, 12952		<code>\textalpha</code>	1003, 14360, 14370
<code>\settowidth</code>	11273, 11753, 12094	<code>\strip@pt</code>	376, 383, 3637, 8332, 8336, 8341, 8345, 9633, 12452, 12564, 12592, 12629, 12677	<code>\textampersand</code> 414, 13238, 13669	
<code>\SetupKeyvalOptions</code>	3650	<code>\strip@pt&and@otherjunk</code>	9826, 9849, 9881	<code>\textangstrom</code>	15233
<code>\sffamily</code>	449	<code>\strutbox</code>	6392	<code>\textasciicaron</code>	13740
<code>\shadda</code>	15617	<code>\sub@label</code>	2186	<code>\textasciibreve</code>	13214, 13610, 13629, 14260
<code>\sheen</code>	15593	<code>\subeqnarray</code>	6158, 6160	<code>\textasciicaron</code>	13172, 13184, 13196, 13216, 13607, 13626, 14258
<code>\shortciteN</code>	6840	<code>\subequations</code>	6196, 6197	<code>\textasciicircum</code>	13168, 13180, 13192, 13252, 13603, 13622, 13685
<code>\SK@</code>	7646	<code>\subfig@oldlabel</code>	2188	<code>\textasciidieresis</code>	13170, 13182, 13194, 13348, 13605, 13624, 13716
<code>\SK@@ref</code>	7646	<code>\submit</code>	5141	<code>\textasciigrave</code> 13166, 13178, 13190, 13257, 13601, 13620, 13689	
<code>\SK@ref</code>	7643	<code>\submitObject</code>	11890	<code>\textasciimacron</code>	13175, 13187, 13199, 13361, 13612, 13631, 13729
<code>\skip@</code> 1720, 1794, 1795, 1798, 1800, 2257, 2263, 2276, 2282		<code>\submitPObject</code>	11890	<code>\textasciitilde</code>	415, 4130, 13267, 13700
<code>\slide@cline</code> 7375, 7388, 7396, 7406, 7414		<code>\subparagraphautorefname</code> 2798, 2816, 2834, 2852, 2870, 2888, 2906, 2939, 2941, 2964, 2982, 7676		<code>\textasteriskcentered</code>	13677
<code>\Slide@contents</code>	7380	<code>\subpdfbookmark</code>	12785	<code>\textbackslash</code>	410, 568, 13250, 13683
<code>\slide@contents</code>	7373	<code>\subsection</code>	10759	<code>\textbaht</code>	14945
<code>\slide@heading</code>	7251	<code>\subsectionautorefname</code>	2795, 2813, 2831, 2849, 2867, 2885, 2903, 2936, 2961, 2979, 7673	<code>\textbar</code>	13263, 13696
		<code>\subsubsectionautorefname</code> 2796, 2814, 2832, 2850, 2868, 2886, 2904, 2937, 2962, 2980, 7674		<code>\textbardbl</code>	15107
		<code>\sukun</code>	15618	<code>\textBeta</code>	1004, 14309
				<code>\textbeta</code>	1004, 13543, 14372
				<code>\textbf</code>	441

<code>\textbigcircle</code>	13619, 13638, 15407	<code>\textdotaccent</code>	13173, 13185, 13197, 13220, 13608, 13627, 14262	<code>\textKoppagreek</code>	1033, 14439
<code>\textblank</code>	15255	<code>\textdotbelow</code>	13177, 13189, 13201, 13244, 13616, 13635, 14281	<code>\textkoppagreek</code>	1033, 14441
<code>\textbraceleft</code>	408, 13261, 13694	<code>\textdoublegrave</code>	13611, 13630, 14277	<code>\textkra</code>	14013
<code>\textbraceright</code>	409, 13265, 13698	<code>\textdownarrow</code>	15245	<code>\textLambda</code>	1027, 14327
<code>\textbrokenbar</code>	13344, 13712	<code>\texteightinferior</code>	15191	<code>\textlambda</code>	1027, 14390
<code>\textbullet</code>	13269, 15125	<code>\teightsuperior</code>	15159	<code>\textlangle</code>	15251
<code>\textcdot</code>	13542, 15435	<code>\textellipsis</code>	418, 419, 13275, 15127	<code>\textlatin</code>	476, 5912
<code>\textcedilla</code>	13174, 13186, 13198, 13379, 13609, 13628, 13748	<code>\textemdash</code>	602, 13277, 15105	<code>\textlbrackdbl</code>	15415
<code>\textcelsius</code>	13529, 15217	<code>\textendash</code>	603, 13279, 15103	<code>\textleftarrow</code>	15239
<code>\textcent</code>	13336, 13704	<code>\textEpsilon</code>	1007, 14293, 14315	<code>\textless</code>	13246, 13679
<code>\textChi</code>	1053, 14349	<code>\textepsilon</code>	1007, 14362, 14378	<code>\textLF</code>	13210, 13657
<code>\textchi</code>	1053, 14414	<code>\textequalsuperior</code>	15167	<code>\textlira</code>	15201
<code>\textcircled</code>	13600, 13619, 13638, 15259, 15261, 15263, 15265, 15267, 15269, 15271, 15273, 15275, 15277, 15279, 15281, 15283, 15285, 15287, 15289, 15291, 15293, 15295, 15297, 15299, 15301, 15303, 15305, 15307, 15309, 15311, 15313, 15315, 15317, 15319, 15321, 15323, 15325, 15327, 15329, 15331, 15333, 15335, 15337, 15339, 15341, 15343, 15345, 15347, 15349, 15351, 15353, 15355, 15357, 15359, 15361, 15363, 15365, 15367, 15369, 15371, 15373, 15375, 15377, 15379, 15381, 15383, 15385, 15387, 15389, 15391, 15393, 15395, 15397, 15399, 15401, 15403	<code>\textestimated</code>	15235	<code>\textlnot</code>	13357, 13725
<code>\textcircledP</code>	15221	<code>\textEta</code>	1010, 14295, 14319	<code>\textlogicalnot</code>	13356, 13538, 13724, 15431
<code>\textcircumflex</code>	13218	<code>\texteta</code>	1010, 14364, 14382	<code>\textlongs</code>	14155, 15087
<code>\textcolonmonetary</code>	15199	<code>\texteuro</code>	13332, 15211	<code>\textlquill</code>	15143
<code>\textcolor</code>	473, 11666, 11705, 11708, 12007	<code>\textexclamdown</code>	606, 914, 13334, 13702	<code>\textmacronbelow</code>	13176, 13188, 13200, 13255, 13615, 13634, 14283
<code>\textcompwordmark</code>	15101	<code>\textfi</code>	604, 13307, 15419	<code>\textmarried</code>	15411
<code>\textcopyright</code>	13350, 13718	<code>\TextField</code>	5126	<code>\textmd</code>	442
<code>\textCR</code>	13212, 13659	<code>\textfiveinferior</code>	15185	<code>\textmho</code>	15231
<code>\textcurrency</code>	13340, 13708	<code>\textfivesuperior</code>	15153	<code>\textminus</code>	13289, 15247
<code>\textdagger</code>	13271, 15121	<code>\textfl</code>	605, 13309, 15421	<code>\textminussuperior</code>	15165
<code>\textdaggerdbl</code>	13273, 15123	<code>\textflorin</code>	13281, 14157	<code>\textMu</code>	1028, 14329
<code>\textdegree</code>	13363, 13529, 13731	<code>\textflq</code>	493, 13536, 15429	<code>\textmu</code>	1028, 13373, 13742
<code>\textDelta</code>	1006, 14313	<code>\textflqq</code>	491, 13534, 15427	<code>\textmugreek</code>	14392
<code>\textdelta</code>	1006, 14376	<code>\textfourinferior</code>	15183	<code>\textmultiply</code>	13442, 13539, 13810, 15432
<code>\textDigammagreek</code>	14435	<code>\textfoursuperior</code>	15151	<code>\textmusicalnote</code>	15409
<code>\textdigammagreek</code>	14437	<code>\textfractionsolidus</code>	13283, 15141	<code>\textnaira</code>	15203
<code>\textdiscount</code>	15147	<code>\textfrq</code>	494, 13537, 15430	<code>\textnapostrophe</code>	14047
<code>\textdiv</code>	13540, 15433	<code>\textfrqq</code>	492, 13535, 15428	<code>\textneg</code>	13538, 15431
<code>\textdivide</code>	13510, 13540, 13878, 15433	<code>\textGamma</code>	1005, 14311	<code>\textnewtie</code>	13618, 13637, 14279
<code>\textdivorced</code>	15413	<code>\textgamma</code>	1005, 14374	<code>\textnineinferior</code>	15193
<code>\textdollar</code>	412, 13234, 13665	<code>\textglq</code>	489, 13532, 15425	<code>\textninesuperior</code>	15161
<code>\textdong</code>	15209	<code>\textglqq</code>	487, 13530, 15423	<code>\textnormal</code>	437
		<code>\textgravedbl</code>	14273	<code>\textnsuperior</code>	15173
		<code>\textgreater</code>	13248, 13681	<code>\textNu</code>	1029, 14331
		<code>\textgrq</code>	490, 13533, 15426	<code>\textnu</code>	1029, 14394
		<code>\textgrqq</code>	488, 13531, 15424	<code>\textnumbersign</code>	411, 13232, 13663
		<code>\textGslash</code>	14176	<code>\textnumeralsigngreek</code>	980, 14287
		<code>\textgslash</code>	14178	<code>\textnumeralsignlowergreek</code>	997, 1019, 1042, 14289
		<code>\textguarani</code>	15215	<code>\textnumero</code>	15219
		<code>\textHslash</code>	13972	<code>\textogonek</code>	13224, 13614, 13633, 14266
		<code>\texthslash</code>	13974	<code>\textohm</code>	15229
		<code>\textHT</code>	13208, 13655	<code>\textOmega</code>	1055, 14303, 14353
		<code>\texthungarumlaut</code>	13222, 13613, 13632, 14270, 14271	<code>\textomega</code>	1055, 14418, 14429
		<code>\textinterrobang</code>	15139	<code>\textOmicron</code>	1031, 14299, 14335
		<code>\textIota</code>	1025, 14297, 14323, 14356	<code>\textomicron</code>	1031, 14398, 14424
		<code>\textiota</code>	1025, 14366, 14386, 14420	<code>\textonehalf</code>	13389, 13758
		<code>\textIotadieresis</code>	14305, 14355	<code>\textoneinferior</code>	15177
		<code>\textit</code>	443	<code>\textonequarter</code>	13387, 13756
		<code>\textKappa</code>	1026, 14325	<code>\textonesuperior</code>	13381, 13750
		<code>\textkappa</code>	1026, 14388		

<code>\textopenbullet</code>	15405	<code>\textsf</code>	439, 11705, 11708	<code>\theHchapter</code>	5803, 5804, 5805, 5806, 5888
<code>\textordfeminine</code>	13352, 13720	<code>\textSigma</code>	1049, 14341	<code>\theHenumi</code>	5822
<code>\textordmasculine</code>	13383, 13752	<code>\textsigma</code>	1049, 14406	<code>\theHenumii</code>	5823
<code>\textparagraph</code> 417, 13375, 13744		<code>\textsixinferior</code>	15187	<code>\theHenumiii</code>	5824
<code>\textparenleft</code>	610, 611, 13240, 13673	<code>\textsixsuperior</code>	15155	<code>\theHenumiv</code>	5825
<code>\textparenleftinferior</code>	15195	<code>\textsl</code>	445	<code>\theHequation</code>	5793, 5862, 6119, 6141, 6165, 6173, 6200, 6204
<code>\textparenleftsuperior</code>	15169	<code>\textsterling</code>	13338, 13706	<code>\theHfigure</code>	5800, 5804
<code>\textparenright</code>	13242, 13675	<code>\textStigmagreek</code>	1008, 14431	<code>\theHHfootnote</code>	5826, 5828
<code>\textparenrightinferior</code>	15197	<code>\textstigmagreek</code>	1008, 14433	<code>\theHHmpfootnote</code>	5828
<code>\textparenrightsuperior</code>	15171	<code>\textsurd</code>	15249	<code>\theHitem</code> 5816, 5822, 5823, 5824, 5825	
<code>\textpercent</code>	413, 13236, 13667	<code>\TextSymbolUnavailable</code>	13202, 13203, 13205	<code>\theHlisting</code>	3102
<code>\textperiodcentered</code> 13377, 13542, 13746, 15435		<code>\textTau</code>	1050, 14343	<code>\theHlstlisting</code>	3098
<code>\textpertenthousand</code>	15131	<code>\texttau</code>	1050, 14408	<code>\theHmpfootnote</code>	5827
<code>\textperthousand</code>	13291, 15129	<code>\textTheta</code>	1011, 14321	<code>\theHparagraph</code>	5810, 5811
<code>\textpeseta</code>	15205	<code>\texttheta</code>	1011, 14384	<code>\theHparentequation</code>	6199, 6204
<code>\textpeso</code>	15213	<code>\textthreeinferior</code>	15181	<code>\theHpart</code>	5796
<code>\textPhi</code>	1052, 14347	<code>\textthreequarters</code>	13391, 13760	<code>\theHsection</code>	5793, 5799, 5806, 5808, 5812, 5813, 5887
<code>\textphi</code>	1052, 14412	<code>\textthreesuperior</code>	13369, 13737	<code>\theHslide</code>	7242
<code>\textPi</code>	1032, 14337	<code>\texttie</code>	13617, 13636, 14285	<code>\theHslidesection</code> 7247, 7249, 7285, 7289	
<code>\textpi</code>	1032, 14400	<code>\texttilde</code>	3736, 13169, 13181, 13193, 13228, 13604, 13623, 14268	<code>\theHslidesubsection</code>	7248, 7336, 7340
<code>\textplusminus</code>	13365, 13541, 13733, 15434	<code>\texttildelow</code>	14275	<code>\theHsubequation</code>	6173
<code>\textplussuperior</code>	15163	<code>\texttimes</code>	13539, 15432	<code>\theHsubparagraph</code>	5811
<code>\textpm</code>	13541, 15434	<code>\texttrademark</code>	13305, 15227	<code>\theHsubsection</code>	5808, 5809
<code>\textPsi</code>	1054, 14351	<code>\textTslash</code>	14105	<code>\theHsubsubsection</code>	5809, 5810
<code>\textpsi</code>	1054, 14416	<code>\texttslash</code>	14107	<code>\theHtable</code>	5801, 5805
<code>\textquestiondown</code>	607, 915, 13393, 13762	<code>\texttt</code>	440	<code>\theHtheorem</code>	5812
<code>\textquotedbl</code>	13230, 13661	<code>\texttwoinferior</code>	15179	<code>\theHthm</code>	5813
<code>\textquotedblleft</code>	13295, 13531, 15115, 15424	<code>\texttwosuperior</code>	13367, 13735	<code>\thelisting</code>	3102
<code>\textquotedblright</code>	13297, 15117	<code>\textunderscore</code>	416, 4124, 4125, 4127, 13254, 13687	<code>\thelstlisting</code>	3098
<code>\textquoteleft</code> 13299, 13533, 15109, 15426		<code>\textup</code>	446	<code>\thempfn</code>	6273, 6354, 6356, 6452, 6464
<code>\textquoteright</code>	13301, 15111	<code>\textuparrow</code>	15241	<code>\theoremautorefname</code>	2800, 2818, 2836, 2854, 2872, 2890, 2908, 2946, 2966, 2984, 7678
<code>\textquotesingle</code>	13671	<code>\textUpsilon</code>	1051, 14301, 14345, 14358	<code>\thepage</code>	2197, 4288, 5487, 5510, 5971, 5979, 6006, 6728, 6751, 6780, 6871, 6949, 6980, 7142, 7159, 7165, 7169, 7176, 7439, 7459, 7476, 7590
<code>\texttrangle</code>	15253	<code>\textupsilon</code>	1051, 14410, 14422, 14427	<code>\theslideheading</code>	7268
<code>\texttrbrackdbl</code>	15417	<code>\textupsilonacute</code>	14368, 14426	<code>\theslidesection</code> 7256, 7263, 7271, 7277, 7279, 7281, 7287, 7297	
<code>\textrecipe</code>	15223	<code>\textvarsigma</code>	14404	<code>\theslidesubheading</code>	7269, 7320
<code>\textreferencemark</code>	15137	<code>\textvisiblespace</code>	15257	<code>\theslidesubsubsection</code>	7308, 7315, 7322, 7328, 7330, 7332, 7338, 7348
<code>\textregistered</code>	13359, 13727	<code>\textwon</code>	15207	<code>\This@name</code> 5840, 5841, 5858, 5859	
<code>\textRho</code>	1048, 14339	<code>\textXi</code>	1030, 14333	<code>\thispdfpagelabel</code>	5492
<code>\textrho</code>	1048, 14402	<code>\textxi</code>	1030, 14396	<code>\ThisShouldNotHappen</code>	12388
<code>\textrightarrow</code>	15243	<code>\textyen</code>	13342, 13710	<code>\thm@headpunct</code>	6218
<code>\textring</code>	13171, 13183, 13195, 13226, 13606, 13625, 14264	<code>\textzeroinferior</code>	15175	<code>\thm@headsep</code>	6219
<code>\textrm</code>	438	<code>\textzerosuperior</code>	15149		
<code>\textrquill</code>	15145	<code>\textZeta</code>	1009, 14317		
<code>\textSampigreek</code>	1056, 14443	<code>\textzeta</code>	1009, 14380		
<code>\textsampigreek</code>	1056, 14445	<code>\TH</code>	13456, 13824		
<code>\textsc</code>	444	<code>\th</code>	13524, 13892		
<code>\textsection</code>	13346, 13714	<code>\thaa</code>	15584		
<code>\textservicemark</code>	15225	<code>\thebookmark@seq@number</code> 12774			
<code>\textseveninferior</code>	15189	<code>\theequation</code>	5861, 6118, 6140, 6164, 6200		
<code>\textsevensuperior</code>	15157	<code>\thefootnote</code>	6284, 6471		

<code>\thm@notefont</code>	6217	<code>\ttl@Hy@Saveanchor</code>	6018, 6042	14095, 14101, 14103, 14151,
<code>\thm@postskip</code>	6223	<code>\ttl@Hy@SavedCurrentHref</code>	6022, 6033	14153, 14159, 14161, 14163,
<code>\thm@preskip</code>	6222			14165, 14166, 14168, 14170,
<code>\thm@space@setup</code>	6220	<code>\ttl@Hy@steplink</code>	6015	14172, 14174, 14180, 14182,
<code>\thm@swap</code>	6216	<code>\ttl@savewrite</code>	6029, 6031	14184, 14186, 14192, 14193,
<code>\thmheadnl</code>	6215	<code>\tw@</code>	13026, 13031, 13101, 13106	14236, 14238
<code>\tiny</code>	468	<code>\typeout</code>	5, 6, 7, 19, 26, 27, 36, 131, 155, 158, 159, 160, 2612, 2666, 3771, 3773, 3775, 3875, 3902, 3904, 4423, 4923, 9273, 9277, 9280, 9283, 9286, 9289, 9292, 9295, 10930, 11231, 11445, 11448, 11451, 11454, 11457, 11460, 11462, 11463, 11472, 11609, 12004, 13127, 15629	<code>\V@@@footnotetext</code> 6400
<code>\title</code>	5398, 5400			<code>\V@@footnotetext</code> 6386
<code>\TMP@EnsureCode</code>	3975, 3982, 3983, 3984, 3985, 3986, 3987, 3988, 3989, 3990, 3991, 3992, 3993, 3994, 3995, 3996, 3997, 3998, 3999, 4000, 4001, 4002, 4003, 4004, 4005, 4006, 4007, 4008			<code>\value</code> 6667, 6693, 6887, 7037, 8923, 8928
<code>\tocappendix</code>	1459			<code>\vbox</code> 5159, 5160, 5161, 5162, 5467, 6881
<code>\tocchapter</code>	1458			<code>\vfill</code> 5159, 5160, 5161, 5162
<code>\toclevel@chapter</code>	3089			<code>\voffset</code> 6882
<code>\toclevel@figure</code>	3095			<code>\vpageref</code> 7535
<code>\toclevel@listing</code>	3103			<code>\vphantom</code> 471
<code>\toclevel@lstlisting</code>	3099			<code>\Vr@f</code> 7521
<code>\toclevel@paragraph</code>	3093			<code>\vr@f</code> 7529
<code>\toclevel@part</code>	3085, 3087			<code>\vref@pagenum</code> 6053
<code>\toclevel@section</code>	3090			<code>\vref@space</code> 7522, 7525, 7530
<code>\toclevel@subfigure</code>	2211			<code>\vskip</code> 2263, 2264
<code>\toclevel@subparagraph</code>	3094			<code>\vss</code> 6896
<code>\toclevel@subsection</code>	3091			<code>\vtex@trans@special</code> 9601, 9603, 9606, 9610, 9614, 9618, 9620, 9622, 9626, 9632, 9633, 9636
<code>\toclevel@subsubsection</code>	3092			<code>\VTexInitMediaSize</code> 9304, 9321
<code>\toclevel@subtable</code>	2212			<code>\VTexXOS</code> 9671, 9672, 9673, 9675
<code>\toclevel@table</code>	3096			<code>\VTexXversion</code> 5636, 5639, 5642, 9663, 9667
<code>\tocparagraph</code>	1463			
<code>\tocpart</code>	1457			
<code>\tocsection</code>	1460			
<code>\tocsubsection</code>	1461			
<code>\tocsubsubsection</code>	1462			
<code>\toks</code>	789, 790, 791, 4325, 4327, 4329, 4333, 4338, 7447, 7448, 7450, 13026, 13031, 13101, 13106			
<code>\toks@</code>	171, 208, 350, 353, 356, 374, 375, 684, 691, 723, 724, 1095, 1118, 1121, 1123, 1630, 1631, 2996, 2997, 2999, 3489, 3493, 3494, 3502, 5587, 5589, 5669, 5671, 5721, 5733, 5988, 5992, 6029, 6034, 7012, 7013, 7219, 7224, 7226, 7229, 13025, 13031, 13100, 13106			
<code>\topmargin</code>	6883			
<code>\trivlist</code>	6214			
<code>\tryhyper@link</code>	4263, 4265			
<code>\ttfamily</code>	450			
<code>\ttl@b</code>	6040, 6045			
<code>\ttl@gobblecontents</code>	6049			
<code>\ttl@Hy@PatchSaveWrite</code>	6023, 6027			
<code>\ttl@Hy@refstepcounter</code>	6039			

3632, 3691, 3692, 3693, 3696, 3699, 3702, 4194, 4200, 4323, 4334, 4338, 4341, 4474, 4488, 4513, 4517, 4520, 4530, 5420, 5421, 5426, 5989, 5996, 6030, 6037, 6064, 6074, 6076, 6089, 7226, 7227, 7449, 7452, 7487, 7488, 7489, 7491, 7493, 7841, 7849, 8121, 8122, 8125, 8127, 8130, 8747, 8748, 8749, 8751, 8752, 8753, 8755, 8756, 8757, 8759, 8760, 8761, 8763, 8764, 8765, 8767, 8768, 8769, 8771, 8772, 8773, 8775, 8776, 8778, 8784, 8793, 9771, 9776, 9780, 10253, 10254, 11280, 11300, 11760, 11780, 12101, 12121, 13030, 13032, 13105, 13107	\XeTeXrevision 3912, 9058 \XeTeXversion 3912, 9058 \XR@cdURL 2218, 2219
\XR@addURL 2218 \XR@ext 2446, 2447, 4393, 4396, 5634, 7742, 8406, 8502, 8738, 9185, 10429, 10512, 10571, 10763, 10927 \XR@URL 2223 \xspace 520, 522	\y 701, 704, 707, 710, 713, 716, 725, 2340, 2345, 2350, 3120, 3121, 3122, 3123, 3694, 3697, 3700, 3703, 3705, 3711, 5421, 5429, 6062, 6063, 6066, 6074 \ya 15610 \yahamza 15579
Y	
Z	
\z 2342, 2343, 2344	\z@ 662, 702, 827, 97 1018, 1041, 1287, 1327 1356, 1371, 1379, 1452 1712, 1718, 1782, 1786 1798, 2253, 2272, 2535 2637, 3126, 3132, 3627 5637, 5640, 6245, 6246 8330, 8334, 8339, 8343 8353, 8357, 8360, 9167 9173, 9174, 9662, 9686 10142, 10153, 10494, 10500, 10501, 11269, 12038, 12090, 12438, 12472, 12544, 12550, 12609, 12615, 12634, 12649, 12678, 12683, 13069 \z@skip \za \zay \ZWNJ