

Hypertext marks in \LaTeX

Sebastian Rahtz

Email: `sebastian.rahtz@oucs.ox.ac.uk`

Heiko Oberdiek

Email: `oberdiek@uni-freiburg.de`

processed September 1, 2009

1 Documentation overview for `hyperref`

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

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

`backref.dtx` “Back referencing from bibliographical citations”

`nameref.dtx` “Section name references in \LaTeX ”

2 Contents

1	Documentation overview for hyperref	1
2	Contents	2
3	File hyccheck.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	14
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	Workaround for package <code>linguex</code>	27
6.3.2	PD1 encoding	27
6.3.3	PU encoding	27
6.4	Additional user commands	28
6.4.1	<code>\texorpdfstring</code>	28
6.4.2	Hooks for <code>\pdfstringdef</code>	28
6.5	Help macros for expansion	29
6.5.1	<code>\ignorespaces</code>	29
6.5.2	Babel languages	29
6.5.3	CJK bookmarks	33
6.5.4	<code>\@inmathwarn-Patch</code>	35
6.5.5	Unexpandable spaces	36
6.5.6	Marker for commands	36
6.5.7	<code>\hspace fix</code>	37
6.5.8	Fix for AMS classes	37
6.5.9	Reference commands	37
6.5.10	Redefining the defining commands	39
6.5.11	<code>\ifnextchar</code>	41
6.5.12	<code>\@protected@testoptifnextchar</code>	41
6.6	Help macros for postprocessing	41
6.6.1	Generic warning.	41
6.6.2	Protecting spaces	41
6.6.3	Remove grouping braces	42
6.6.4	Catcode check	44
6.6.5	Check for wrong glyphs	47
6.6.6	Replacing tokens	48
6.6.7	Support for package <code>xspace</code>	48
6.6.8	Converting to Unicode	49
6.6.9	Support for UTF-8 input encoding	50

7	Support of other packages	54
7.1	Class memoir	54
7.2	Package subfigure	54
7.3	Package xr and xr-hyper	54
8	Help macros for links	55
9	Options	56
9.1	Help macros	56
9.2	Defining the options	58
10	Options for different drivers	63
11	Options to add extra features	65
12	Language options	66
13	Options to change appearance of links	72
14	Bookmarking	73
15	PDF-specific options	75
15.1	PDF/A	81
15.2	Patch for babel's <code>\texttilde</code>	82
15.3	Patch for babel 3.8j	82
15.3.1	Driver loading	84
15.3.2	Bookmarks	86
16	User hypertext macros	89
17	Underlying basic hypertext macros	92
18	Compatibility with the <i>BT_EX2html</i> package	96
19	Forms creation	96
19.1	Field flags	96
19.1.1	Declarations of field flags	98
19.1.2	Set submit flags	100
19.1.3	Set annot flags in fields	101
19.1.4	Pushbutton field	101
19.1.5	Check box field	102
19.1.6	Radio button field	102
19.1.7	Text fields	102
19.1.8	Choice fields	103
19.2	Choice field	103
19.3	Forms	105
20	Setup	110
21	Low-level utility macros	111
22	Localized nullifying of package	112
23	Package nohyperref	113

24 The Mangling Of Aux and Toc Files	113
25 Title strings	115
26 Page numbers	116
27 Every page	116
27.1 PDF /PageLabels	116
27.1.1 pdfTeX and VTeX	120
27.1.2 pdfmarkbase, dvipdfm	121
28 Automated L^AT_EX hypertext cross-references	122
29 Package lastpage support	126
30 Package ifthen support	127
31 Package titlesec and titletoc support	128
32 Package varioref support	128
33 Package longtable support	128
34 Equations	129
35 Footnotes	133
36 Float captions	136
37 Bibliographic references	138
37.1 Package harvard	142
37.2 Package chicago	143
38 Page numbers	144
39 Table of contents	145
40 New counters	147
41 AMSL^AT_EX compatibility	147
41.1 \@addtoreset and \numberwithin patches	148
42 Included figures	149
43 hyperindex entries	149
44 Compatibility with foiltex	151
45 Compatibility with seminar slide package	152
46 Configuration files	160
46.1 PS/PDF strings	160
46.2 pdftex	161
46.2.1 Fix for problem with different nesting levels	173
46.3 hypertex	173
46.4 dviwindo	176

46.5	dvipdfm dvi to PDF converter	180
46.6	VTeX typesetting system	188
46.7	Fix for Adobe bug number 466320	199
46.8	Direct pdfmark support	200
46.9	Rokicki's dvips	212
46.10	VTeX's vtexpdfmark driver	213
46.11	Textures	215
46.12	dvipsone	219
46.13	TeX4ht	222
47	Driver-specific form support	224
47.1	pdfmarks	224
47.2	HyperTeX	231
47.3	TeX4ht	231
47.4	pdfTeX	234
47.5	dvipdfm	240
47.6	Common forms part	247
48	Bookmarks in the PDF file	254
48.1	Bookmarks	254
49	Compatibility with koma-script classes	261
50	Encoding definition files for encodings of PDF strings	262
50.1	PD1 encoding	262
50.2	PU encoding	269
50.2.1	NFSS2 accents	269
50.2.2	Basic Latin: U+0000 to U+007F	271
50.2.3	Latin-1 Supplement: U+0080 to U+00FF	273
50.2.4	Latin Extended-A: U+0080 to U+017F	276
50.2.5	Latin Extended-B: U+0180 to U+024F	281
50.2.6	Spacing Modifier Letters: U+02B0 to U+02FF	283
50.2.7	Combining Diacritical Marks: U+0300 to U+036F	283
50.2.8	Greek and Coptic: U+0370 to U+03FF	283
50.2.9	Cyrillic: U+0400 to U+04FF	286
50.2.10	Thai: U+0E00 to U+0E7F	295
50.2.11	Latin Extended Additional: U+1E00 to U+1EFF	295
50.2.12	General Punctuation: U+2000 to U+206F	298
50.2.13	Superscripts and Subscripts: U+2070 to U+209F	299
50.2.14	Currency Symbols: U+20A0 to U+20CF	300
50.2.15	Letterlike Symbols: U+2100 to U+214F	300
50.2.16	Arrows: U+2190 to U+21FF	301
50.2.17	Mathematical Operators: U+2200 to U+22FF	301
50.2.18	Miscellaneous Technical: U+2300 to U+23FF	301
50.2.19	Control Pictures: U+2400 to U+243F	301
50.2.20	Enclosed Alphanumerics: U+2460 to U+24FF	301
50.2.21	Box Drawing: U+2500 to U+257F	304
50.2.22	Miscellaneous Symbols: U+2600 to U+26FF	304
50.2.23	Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF	304
50.2.24	Alphabetic Presentation Forms: U+FB00 to U+FB4F	304
50.2.25	Miscellaneous	304
50.2.26	Aliases	304
50.3	PU encoding, additions for VnTeX	305

50.4 PU encoding, additions for Arabi	307
51 End of file hycheck.tex	308
52 Index	309

3 File hycheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19   \typeout{}%
20   \begingroup
21     \edef\x{\endgroup
22       \noexpand\RequirePackage{\HyC@package}%
23       \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi%
24     }%
25   \x
26   \typeout{}%
27   \typeout{%
28     * Package '\HyC@package'%
29     \ifx\HyC@date\@empty
30       \else
31         \space\HyC@date
32       \fi
33   }%
34   \@ifundefined{ver@\HyC@package.sty}{%
35     }{%
36     \typeout{%
37       \space\space Loaded: '\HyC@package' %
38       \csname ver@\HyC@package.sty\endcsname
39     }%
40   }%
41 }
```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \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 L^AT_EX 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\[%
218 \x\]%
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{keyval}[1997/11/10]
233 \RequirePackage{ifpdf}[2006/02/20]
234 \RequirePackage{ifvtex}
235 \RequirePackage{ifxetex}[2006/08/21]
236 \RequirePackage{hycolor}
237 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
238 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
239 \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`.

```

240 \@ifundefined{AfterBeginDocument}{%
241   \def\AfterBeginDocument{\AtBeginDocument}%
242 }{}%

```

4.3 Switches

```

243 \newif\ifHy@typexml
244 \newif\ifHy@activeanchor
245 \newif\ifHy@backref
246 \newif\ifHy@bookmarks
247 \newif\ifHy@bookmarksnumbered
248 \newif\ifHy@bookmarksopen
249 \newif\ifHy@breaklinks
250 \newif\ifHy@centerwindow
251 \newif\ifHy@CJKbookmarks
252 \newif\ifHy@colorlinks
253 \newif\ifHy@draft
254 \let\Hy@finaltrue\Hy@draftfalse
255 \let\Hy@finalfalse\Hy@drafttrue

```

```

256 \newif\ifHy@escapeform
257 \newif\ifHy@figures
258 \newif\ifHy@fitwindow
259 \newif\ifHy@frenchlinks
260 \newif\ifHy@hyperfootnotes
261 \newif\ifHy@hyperindex
262 \newif\ifHy@hypertextnames
263 \newif\ifHy@implicit
264 \newif\ifHy@linktocpage
265 \newif\ifHy@menubar
266 \newif\ifHy@naturalnames
267 \newif\ifHy@nesting
268 \newif\ifHy@newwindowset
269 \newif\ifHy@newwindow
270 \newif\ifHy@ocgcolorlinks
271 \newif\ifHy@pageanchor
272 \newif\ifHy@pagelabels
273 \newif\ifHy@pdfpagehidden
274 \newif\ifHy@pdfstring
275 \newif\ifHy@plainpages
276 \newif\ifHy@psize
277 \newif\ifHy@raiselinks
278 \newif\ifHy@seminarslides
279 \newif\ifHy@setpagesize
280 \newif\ifHy@texht
281 \newif\ifHy@toolbar
282 \newif\ifHy@unicode
283 \newif\ifHy@usetitle
284 \newif\ifHy@verbose
285 \newif\ifHy@windowui
286 \newif\ifHy@displaydoctitle
287 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

288 \Hy@backreffalse
289 \Hy@bookmarksnumberedfalse
290 \Hy@bookmarksopenfalse
291 \Hy@bookmarkstrue
292 \Hy@breaklinksfalse
293 \Hy@centerwindowfalse
294 \Hy@CJKbookmarksfalse
295 \Hy@escapeformfalse
296 \Hy@figuresfalse
297 \Hy@fitwindowfalse
298 \Hy@hyperfootnotetrue
299 \Hy@hyperindextrue
300 \Hy@hypertextnametrue
301 \Hy@implicittrue
302 \Hy@linktocpagefalse
303 \Hy@menubartrue
304 \Hy@naturalnamesfalse
305 \Hy@nestingfalse
306 \Hy@newwindowsetfalse
307 \Hy@newwindowfalse
308 \Hy@pageanchortrue
309 \Hy@pagelabelstrue
310 \Hy@pdfpagehiddenfalse
311 \Hy@pdfstringfalse

```

```

312 \Hy@plainpagesfalse
313 \Hy@raiselinksfalse
314 \Hy@setpagesizetrue
315 \Hy@texhtfalse
316 \Hy@toolbartrue
317 \Hy@typexmlfalse
318 \Hy@unicodetrue
319 \Hy@usetitlefalse
320 \Hy@verbosefalse
321 \Hy@windowuitrue
322 \Hy@displaydoctitlefalse
323 \Hy@pdfafalse

```

5 Common help macros

`\Hy@StepCount`

```

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

```

`\Hy@GlobalStepCount`

```

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

326 \newdimen\@linkdim
327 \let\Hy@driver\@empty
328 \let\MaybeStopEarly\relax
329 \newcount\Hy@linkcounter
330 \newcount\Hy@pagecounter
331 \Hy@linkcounter0
332 \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.

```

333 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
334 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

335 \let\Hy@ReturnEnd\@empty
336 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
337 \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.

```

338 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
339 \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 (T_EX):

```

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

\hypercalcbp
340 \begingroup\expandafter\expandafter\expandafter\endgroup
341 \expandafter\ifx\csname dimexpr\endcsname\relax
342   \def\hypercalcbpdef#1#2{%
343     \begingroup
344       \toks@{ }%
345       \HyCal@scan#2\hypercalcbp\@nil
346       \expandafter\endgroup
347       \expandafter\def\expandafter#1\expandafter{\the\toks@}%
348   }%
349   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
350     \toks@\expandafter{\the\toks@ #1}%
351     \ifx\#2\%
352       \else
353         \Hy@ReturnAfterFi{%
354           \HyCal@do#2\@nil
355         }%
356       \fi
357     }%
358     \def\HyCal@do#1#2\@nil{%
359       \@ifpackageloaded{calc}{ }{%
360         \Hy@Warning{%
361           For calculations \string\hypercalcbp\space needs\MessageBreak
362           package calc or e-TeX%
363         }%
364       }%
365       \setlength{\dimen@}{#1}%
366       \setlength{\dimen@}{0.99626401\dimen@}%
367       \edef\x{%
368         \toks@{
369           \the\toks@
370           \strip@pt\dimen@
371         }%
372       }\x
373       \HyCal@scan#2\@nil

```

```

374 }%
375 \else
376 \def\hypercalcbp#1{%
377 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
378 }%
379 \def\hypercalcbpdef{\def}%
380 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

Email: oberdiek@uni-freiburg.de.

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 processed by \TeX , because the tokens have only catcodes 10 until 12.

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

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

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

```
382 \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.

```
383 \escapechar'\%
```

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

```
384 \edef\0{\string\0}%
```

```
385 \edef\1{\string\1}%
```

```
386 \edef\2{\string\2}%
```

```
387 \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.

```
388 \ifHy@unicode
```

```
389 \edef\8{\string\8}%
```

```
390 \edef\9{\string\9}%
```

```
391 \fontencoding{PU}%
```

```
392 \HyPsd@UTFviii
```

```
393 \def\ifpdfstringunicode##1##2{##1}%
```

```
394 \else
```

```
395 \fontencoding{PD1}%
```

```
396 \def\ifpdfstringunicode##1##2{##2}%
```

```
397 \fi
```

```
398 \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).

```
399 \@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).

```
400 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
401 \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.

```
402 \let\{\textbraceleft
403 \let\}\textbraceright
404 \let\\textbackslash
405 \let\#\textnumbersign
406 \let\$\textdollar
407 \let\%\textpercent
408 \let\&\textampersand
409 % \let\~\textasciitilde
410 \let\_ \textunderscore
411 \let\textparagraph
412 \let\ldots\textellipsis
413 \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.

```
414 \def\{\pdfstringdefWarn\\}%
415 \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.

```
416 \def\TeX{\TeX}%
417 \def\LaTeX{La\TeX}%
418 \def\LaTeXe{LaTeX2e}%
419 \def\eTeX{e-\TeX}%
420 \def\SliTeX{Sli\TeX}%
421 \def\MF{Metafont}%
422 \def\MP{Metapost}%
```

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

```

423 \let\emph\@firstofone
424 \let\textnormal\@firstofone
425 \let\textrm\@firstofone
426 \let\textsf\@firstofone
427 \let\texttt\@firstofone
428 \let\textbf\@firstofone
429 \let\textmd\@firstofone
430 \let\textit\@firstofone
431 \let\textsc\@firstofone
432 \let\textsl\@firstofone
433 \let\textup\@firstofone
434 \let\normalfont\@empty
435 \let\rmfamily\@empty
436 \let\sffamily\@empty
437 \let\ttfamily\@empty
438 \let\bfseries\@empty
439 \let\mdseries\@empty
440 \let\itshape\@empty
441 \let\scshape\@empty
442 \let\slshape\@empty
443 \let\upshape\@empty
444 \let\em\@empty
445 \let\rm\@empty
446 \let\Huge\@empty
447 \let\LARGE\@empty
448 \let\Large\@empty
449 \let\footnotesize\@empty
450 \let\huge\@empty
451 \let\large\@empty
452 \let\normalsize\@empty
453 \let\scriptsize\@empty
454 \let\small\@empty
455 \let\tiny\@empty
456 \let\mathversion\@gobble
457 \let\phantom\@gobble
458 \let\vphantom\@gobble
459 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

461 \def\MakeUppercase{\MakeUppercaseIsNotSupportedInPdfStrings}%
462 \def\MakeLowercase{\MakeLowercaseIsNotSupportedInPdfStrings}%

```

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

```

463 \let\textlatin\@firstofone
464 \@ifundefined{language@group}{\{%
465 \csname HyPsd@babel@language@group\endcsname
466 }%
467 \HyPsd@GreekPatch

```

```

468 \let\@safe@activetrue\relax
469 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

470 \let\cyr\relax
    Redefine \es@roman, used in spanish.ldf.
471 \let\es@roman\@Roman

```

Package german.

```

472 \let\glqq\textglqq
473 \let\grqq\textgrqq
474 \let\glq\textglq
475 \let\grq\textgrq
476 \let\flqq\textflqq
477 \let\frqq\textfrqq
478 \let\flq\textflq
479 \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}
480 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

481 \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.

```

482 \let\hspace\HyPsd@hspace

```

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

```

483 \let\label\@gobble
484 \let\index\@gobble
485 \let\glossary\@gobble
486 \let\href\@secondoftwo
487 \let\@mkboth\@gobbletwo

```

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

```

488 \let\ref\HyPsd@ref
489 \let\pageref\HyPsd@pageref
490 \let\nameref\HyPsd@nameref
491 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

492 \let\leavevmode\@empty
493 \let\mbox\@empty

```

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

```

494 \def\halign{\pdfstringdefWarn\halign\@gobble}%
495 \let\ignorespaces\HyPsd@ignorespaces

```

Patch for cjk bookmarks.

```
496 \ifHy@CJKbookmarks
497 \HyPsd@CJKhook
498 \fi
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typeset 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`).

```
499 \Hy@pdfstringtrue
500 \pdfstringdefPreHook
```

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

```
501 \HyPsd@LetUnexpandableSpace\space
502 \HyPsd@LetUnexpandableSpace\ %
503 \HyPsd@LetUnexpandableSpace~%
504 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
505 \@ifundefined{@xspace}{%
506 \let\xspace\HyPsd@ITALCORR
507 }{%
508 \let\xspace\HyPsd@XSPACE
509 }%
510 \let\/\HyPsd@ITALCORR
511 \let\bgroup\/%
512 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
513 \let\discretionary\@gobbletwo
\@ifstar is defined in  $\text{\LaTeX}$  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 expandable 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:

```
514 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
515 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
516 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
517 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
518 \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 be 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 PDF1 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).

```
519 \begingroup
520 \let\GenericError\@gobblefour
521 \let\GenericWarning\@gobbletwo
522 \let\GenericInfo\@gobbletwo
```

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

```
523 \ifx\nofrenchguillemets\@undefined
524 \else
525 \nofrenchguillemets
526 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.10). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
527 \let\Hy@temp\xdef
528 \let\def\HyPsd@DefCommand
529 \let\gdef\HyPsd@DefCommand
```

```

530     \let\edef\HyPsd@DefCommand
531     \let\xdef\HyPsd@DefCommand
532     \let\futurelet\HyPsd@LetCommand
533     \let\let\HyPsd@LetCommand
534     \Hy@temp#1{#2}%
535 \endgroup

```

6.2.3 Postprocessing

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

```

536     \ifx#1\@empty
537     \else

```

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

- \TeX does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't find by \TeX 's argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by an marker for the xspace support.
- \TeX silently removes the outmost pair of braces of an argument. To prevent this on unwanted places, in the following the character | is appended to the string to make an outer brace to an inner one.

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

```

538     \HyPsd@ProtectSpaces#1%
539     \let\HyPsd@String\@empty
540     \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
541     \global\let#1\HyPsd@String

```

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

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

After $\text{\HyPsd@CheckCatcodes}$ 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 $\text{\HyPsd@CheckCatcodes}$ is called.

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

```

542 \let\HyPsd@SPACEOPTI\relax
543 {%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
546 \global\let#1\HyPsd@String
547 }%
548 \expandafter\HyPsd@RemoveMask\expandafter
549 |\expandafter\@empty#1\HyPsd@End#1%

```

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

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

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

```

550 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
551 \let\HyPsd@String\@empty
552 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
553 \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.

```
554 \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.1df can produce an additional space before \guillemotright, because \lastskip and \unskip do not work. Therefore it is removed here.

```

555 \ifHy@unicode
556 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
557 \HyPsd@SPACEOPTI#1%
558 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
559 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
560 {\HyPsd@SPACEOPTI\80\273}#1%
561 \else
562 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
563 \expandafter\HyPsd@Subst\expandafter{%
564 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
565 \string\273}{\HyPsd@SPACEOPTI\273}#1%
566 \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 removed later.


```

567 \ifHy@unicode
568 \HyPsd@StringSubst{\}){\80\051}#1%
569 \HyPsd@Subst){\80\051}#1%
570 \let\HyPsd@empty\relax
571 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
572 {\HyPsd@empty\80\051}#1%
573 \else
574 \HyPsd@StringSubst{\}){\051}#1%
575 \HyPsd@Subst){\051}#1%
576 \let\HyPsd@empty\relax
577 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})#1%
578 \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`.

```

579 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
580 \@ifundefined{@xspace}{%
581 }{%
582 \let\HyPsd@xspace\relax
583 \expandafter\HyPsd@Subst\expandafter
584 {\HyPsd@XSPACE}\HyPsd@xspace#1%
585 \let\HyPsd@xspace\HyPsd@doxspace
586 }%
587 \xdef#1{#1\HyPsd@empty}%

```

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

Since newer `AcrobatReader` versions now show the `en-` and `emdash` in a correct way (`AR7/Linux`, `AR8/Linux`), the substitution code for them is enabled starting with version 6.781.

```

588 \HyPsd@Subst{---}\textemdash#1%
589 \HyPsd@Subst{--}\textendash#1%
590 % \HyPsd@Subst{fi}\textfi#1%
591 % \HyPsd@Subst{fl}\textfl#1%
592 \HyPsd@Subst{!'}\texttexclamdown#1%
593 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

594 \let\HyPsd@empty\@empty

```

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

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

```

595     \ifHy@unicode
596         \HyPsd@StringSubst\(\textparenleft#1%
597         \HyPsd@Subst(\textparenleft#1%
598     \else
599         \HyPsd@StringSubst\({\050}#1%
600         \HyPsd@Subst({\050}#1%
601         \HyPsd@StringSubst{\050}{\string\()}#1%
602     \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.

```

603     \ifHy@unicode
604         \edef\HyPsd@SPACEOPTI{\80\040}%
605     \else
606         \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
607     \fi
608     \xdef#1{#1\@empty}%
609 \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.

```

610 \endgroup
611 \begingroup
612     \ifHy@unicode
613         \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

614     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
615         \ifundefined{StringEncodingConvertTest}{%
616             }{%
617                 \EdefUnescapeString\HyPsd@temp#1%
618                 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
619                                     {utf16be}{pdfdoc}{%
620                     \EdefEscapeString\HyPsd@temp\HyPsd@temp
621                     \global\let#1\HyPsd@temp
622                     \Hy@unicodedefalse
623                 }{}%
624             }%
625     \fi
626 \fi

```

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

```

627     \pdfstringdefPostHook#1%
628 \endgroup
629 }

```

`\Hy@pdfstringdef`

```
630 \def\Hy@pdfstringdef#1#2{%
631   \pdfstringdef\Hy@gtemp{#2}%
632   \let#1\Hy@gtemp
633 }
```

6.3 Encodings

6.3.1 Workaround for package linguex

```
634 \@ifpackageloaded{linguex}{%
635   \let\HyLinguex@OrgB\b
636   \let\HyLinguex@OrgC\c
637   \let\HyLinguex@OrgD\d
638   \def\HyLinguex@Restore{%
639     \let\b\HyLinguex@OrgB
640     \let\c\HyLinguex@OrgC
641     \let\d\HyLinguex@OrgD
642   }%
643   \AtEndOfPackage{%
644     \pdfstringdefDisableCommands{%
645       \@ifundefined{oldb}{\let\b\oldb}%
646       \@ifundefined{oldc}{\let\c\oldc}%
647       \@ifundefined{oldd}{\let\d\oldd}%
648     }%
649   }%
650 }{%
651   \let\HyLinguex@Restore\relax
652 }%
```

6.3.2 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.

```
653 \@ifundefined{T@PD1}{%
654   \input{pd1enc.def}%
655   \HyLinguex@Restore
656 }{}
657 \DeclareFontFamily{PD1}{pdf}{}
658 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
659 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.3 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.

```
660 \def\HyPsd@InitUnicode{%
661   \@ifundefined{T@PU}{%
```

```

662 \input{puenc.def}%
663 \HyLinguex@Restore
664 }{}%
665 \DeclareFontFamily{PU}{pdf}{}%
666 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
667 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
668 \let\HyPsd@InitUnicode\relax
669 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

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

```

670 \def\texorpdfstring{%
671   \ifHy@pdfstring
672     \expandafter\@secondoftwo
673   \else
674     \expandafter\@firstoftwo
675   \fi
676 }

```

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`.

```

677 \@ifundefined{pdfstringdefPreHook}{%
678   \let\pdfstringdefPreHook\@empty
679 }{}
680 \@ifundefined{pdfstringdefPostHook}{%
681   \let\pdfstringdefPostHook\@gobble
682 }{}

```

`\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`.

```

683 \def\pdfstringdefDisableCommands{%
684   \begingroup
685     \makeatletter
686     \HyPsd@DisableCommands
687 }

```

`\HyPsd@DisableCommands`

```
688 \long\def\HyPsd@DisableCommands#1{%
689   \toks0=\expandafter{\pdfstringdefPreHook}%
690   \toks1={#1}%
691   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
692 \endgroup
693 }
```

`\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`.

```
694 \def\pdfstringdefWarn#1{%
695   \expandafter\noexpand\csname\<>-string#1\endcsname
696 }
```

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.

```
697 \begingroup
698   \catcode0=12 %
699   \def\x{\endgroup
700     \def\HyPsd@ignorespaces{%
701       \romannumeral\expandafter'\expandafter^^@%
702       \romannumeral'^^@%
703     }%
704   }%
705 \x
```

6.5.2 Babel languages

```
706 \newif\ifHy@next
```

Nothing to do for english.

```
707 \@ifundefined{danish@sh@"@sel}{-}{%
708   \def\HyPsd@babel@danish{%
709     \declare@shorthand{danish}{"}{-}%
710     \declare@shorthand{danish}{"}{-}%
711   }%
712 }
713 \@ifundefined{dutch@sh@"@sel}{-}{%
714   \def\HyPsd@babel@dutch{%
715     \declare@shorthand{dutch}{"}{-}%
716     \declare@shorthand{dutch}{"}{-}%
717   }%
718 }
```

```

719 \@ifundefined{finnish@sh@"@sel}{-}{%
720   \def\HyPsd@babel@finnish{%
721     \declare@shorthand{finnish}{-}{-}%
722   }%
723 }
724 \@ifundefined{french@sh@"@sel}{-}{%
725   \def\HyPsd@babel@frenchb{%
726     \def\guill@spacing{ }%
727   }%
728 }
729 \@ifundefined{german@sh@"@sel}{-}{%
730   \def\HyPsd@babel@german{%
731     \declare@shorthand{german}{f}{f}%
732     \declare@shorthand{german}{-}{-}%
733     \declare@shorthand{german}{~}{-}%
734   }%
735 }
736 \@ifundefined{macedonian@sh@"@sel}{-}{%
737   \def\HyPsd@babel@macedonian{%
738     \declare@shorthand{macedonian}{-}{-}%
739     \declare@shorthand{macedonian}{~}{-}%
740   }%
741 }{-}
742 \@ifundefined{ngerman@sh@"@sel}{-}{%
743   \def\HyPsd@babel@ngerman{%
744     \declare@shorthand{ngerman}{-}{-}%
745     \declare@shorthand{ngerman}{~}{-}%
746   }%
747 }
748 \@ifundefined{portuges@sh@"@sel}{-}{%
749   \def\HyPsd@babel@portuges{%
750     \declare@shorthand{portuges}{-}{-}%
751   }%
752 }
753 \@ifundefined{russian@sh@"@sel}{-}{%
754   \def\HyPsd@babel@russian{%
755     \declare@shorthand{russian}{-}{-}%
756     \declare@shorthand{russian}{~}{-}%
757   }%
758 }
759 \@ifundefined{slovene@sh@"@sel}{-}{%
760   \def\HyPsd@babel@slovene{%
761     \declare@shorthand{slovene}{-}{-}%
762   }%
763 }

```

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

```

764 \@ifundefined{spanish@sh@>@sel}{-}{%
765   \def\HyPsd@babel@spanish{%
766     \declare@shorthand{spanish}{<<}{\guillemotleft}%
767     \declare@shorthand{spanish}{>>}{\guillemotright}%
768     \declare@shorthand{spanish}{=}{-}%
769     \declare@shorthand{spanish}{~}{-}%
770     \declare@shorthand{spanish}{!}{\textexclamdown}%
771     \declare@shorthand{spanish}{?}{\textquestiondown}%
772   }%
773 }
774 \@ifundefined{swedish@sh@"@sel}{-}{%

```

```

775 \def\HyPsd@babel@swedish{%
776   \declare@shorthand{swedish}{"}{|}%
777   \declare@shorthand{swedish}{"}{|}%
778 }%
779 }
780 \@ifundefined{ukrainian@sh@"@sel}{|}%
781 \def\HyPsd@babel@ukrainian{%
782   \declare@shorthand{ukrainian}{"}{|}%
783   \declare@shorthand{ukrainian}{"}{|}%
784 }%
785 }
786 \@ifundefined{usorbian@sh@"@sel}{|}%
787 \def\HyPsd@babel@usorbian{%
788   \declare@shorthand{usorbian}{"}{|}%
789   \declare@shorthand{usorbian}{"}{|}%
790 }%
791 }
792 \@ifundefined{greek@sh@\string~@sel}{|}%
793 \let\HyPsd@GreekPatch\empty
794 }{|}%
795 \def\HyPsd@GreekPatch{%
796   \let\greeknumeral\HyPsd@greeknumeral
797   \let\Greeknumeral\HyPsd@Greeknumeral
798 }%
799 }
800 \def\HyPsd@greeknumeral#1{%
801   \HyPsd@GreekNum\@firstoftwo{#1}%
802 }
803 \def\HyPsd@Greeknumeral#1{%
804   \HyPsd@GreekNum\@secondoftwo{#1}%
805 }
806 \def\HyPsd@GreekNum#1#2{%
807   \ifHy@unicode
808     \ifnum#2<\@one
809       \@arabic{#2}%
810     \else
811       \ifnum#2<1000000 %
812         \HyPsd@@GreekNum#1{#2}%
813       \else
814         \@arabic{#2}%
815       \fi
816     \fi
817   \else
818     \@arabic{#2}%
819   \fi
820 }
821 \def\HyPsd@@GreekNum#1#2{%
822   \ifnum#2<\@m
823     \ifnum#2<10 %
824       \expandafter\HyPsd@GreekNumI
825       \expandafter\@gobble\expandafter#1\number#2%
826     \else
827       \ifnum#2<100 %
828         \expandafter\HyPsd@GreekNumII
829         \expandafter\@gobble\expandafter#1\number#2%
830       \else
831         \expandafter\HyPsd@GreekNumIII

```

```

832         \expandafter\@gobble\expandafter#1\number#2%
833     \fi
834 \fi
835 \ifnum#2>\z@
836     \textnumeralsigngreek
837 \fi
838 \else
839     \ifnum#2<\@M
840         \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
841     \else
842         \ifnum#2<100000 %
843             \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
844         \else
845             \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
846         \fi
847     \fi
848 \fi
849 }
850 \def\HyPsd@GreekNumI#1#2#3{%
851     #1{%
852         \ifnum#3>\z@
853             \textnumeralsignlowergreek
854         \fi
855     }%
856     \expandafter#2%
857     \ifcase#3 %
858         {}{}%
859     \or\textalpha\textAlpha
860     \or\textbeta\textBeta
861     \or\textgamma\textGamma
862     \or\textdelta\textDelta
863     \or\textepsilon\textEpsilon
864     \or\textstigmagreek\textStigmagreek
865     \or\textzeta\textZeta
866     \or\texteta\textEta
867     \or\texttheta\textTheta
868     \else
869         {}{}%
870     \fi
871 }
872 \def\HyPsd@GreekNumII#1#2#3#4{%
873     #1{%
874         \ifnum#3>\z@
875             \textnumeralsignlowergreek
876         \fi
877     }%
878     \expandafter#2%
879     \ifcase#3 %
880         {}{}%
881     \or\textiota\textIota
882     \or\textkappa\textKappa
883     \or\textlambda\textLambda
884     \or\textmu\textMu
885     \or\textnu\textNu
886     \or\textxi\textXi
887     \or\textomicron\textOmicron
888     \or\textpi\textPi

```



```

889 \or\textkoppagreek\textKoppagreek
890 \else
891   {}{}%
892 \fi
893 \HyPsd@GreekNumI#1#2#4%
894 }
895 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
896   #1{%
897     \ifnum#3>\z@
898       \textnumeralsignlowergreek
899     \fi
900   }%
901   \expandafter#2%
902   \ifcase#3 %
903     {}{}%
904   \or\textrho\textRho
905   \or\textsigma\textSigma
906   \or\texttau\textTau
907   \or\textupsilon\textUpsilon
908   \or\textphi\textPhi
909   \or\textchi\textChi
910   \or\textpsi\textPsi
911   \or\textomega\textOmega
912   \or\textsampigreek\textSampigreek
913   \else
914     {}{}%
915   \fi
916   \HyPsd@GreekNumII#1#2#4#5%
917 }
918 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
919   \HyPsd@GreekNumI\@firstofone#1#2%
920   \HyPsd@GreekNum#1{#3#4#5}%
921 }
922 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
923   \HyPsd@GreekNumII\@firstofone#1#2#3%
924   \HyPsd@GreekNum#1{#4#5#6}%
925 }
926 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
927   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
928   \HyPsd@GreekNum#1{#5#6#7}%
929 }

```

6.5.3 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 ($\geq 0x40$).

```

930 \begingroup
931   \catcode"7F=\active
932   \toks@{%
933     \let\CJK@ignorespaces\empty

```

```

934 \def\CJK@char#1{\@gobbletwo}%
935 \let\CJK@charx\@gobblefour
936 \let\CJK@punctchar\@gobblefour
937 \def\CJK@punctcharx#1{\@gobblefour}%
938 \catcode"7F=\active
939 \def^^7f#1^^7f#2^^7f{%
940   \string #1\HyPsd@DecimalToOctal{#2}%
941 }%
942 % ... ?
943 \ifHy@unicode
944   \def\Hy@cjkpu{\80}%
945   \else
946     \let\Hy@cjkpu\@empty
947   \fi
948   \HyPsd@CJKActiveChars
949 }%
950 \count@=127 %
951 \@whilenum\count@<255 \do{%
952   \advance\count@ by 1 %
953   \lccode'\~=\count@
954   \lowercase{%
955     \toks@\expandafter{\the\toks@ ~}%
956   }%
957 }%
958 \toks@\expandafter{\the\toks@ !}%
959 \xdef\HyPsd@CJKhook{\the\toks@}%
960 \endgroup

```

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

```

961 \def\HyPsd@CJKActiveChars#1{%
962   \ifx#1!%
963     \let\HyPsd@CJKActiveChars\relax
964   \else
965     \edef#1{\noexpand\Hy@cjkpu\string#1}%
966   \fi
967   \HyPsd@CJKActiveChars
968 }

```

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

```

969 \def\HyPsd@DecimalToOctal#1{%
970   \ifcase #1 %
971     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
972     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
973     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
974     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
975     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
976     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
977     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
978     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
979     \or @\or A\or B\or C\or D\or E\or F\or G%
980     \or H\or I\or J\or K\or L\or M\or N\or O%
981     \or P\or Q\or R\or S\or T\or U\or V\or W%
982     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
983     \or \140\or a\or b\or c\or d\or e\or f\or g%
984     \or h\or i\or j\or k\or l\or m\or n\or o%
985     \or p\or q\or r\or s\or t\or u\or v\or w%

```

```

986 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
987 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
988 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
989 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
990 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
991 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
992 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
993 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
994 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
995 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
996 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
997 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
998 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
999 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1000 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1001 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1002 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1003 \fi
1004 }

```

6.5.4 \@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 L^AT_EX 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 (L^AT_EX 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}

1005 \def\HyPsd@inmathwarn#1#2{%
1006   \ifx#2\expandafter
1007     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1008       \HyPsd@GLYPHERR
1009       \expandafter\@gobble\string#1%
1010       >%
1011       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1012     \else
1013       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1014     \fi
1015   \else
1016     \expandafter#2%
1017   \fi
1018 }
1019 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1020 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1021 \def\HyPsd@add@accent#1#2{%
1022   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1023   #2%
1024 }%

```

6.5.5 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```

1025 \def\HyPsd@LetUnexpandableSpace#1{%
1026   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1027 }

```

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

```

1028 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 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.

```

1029 \edef\HyPsd@XSPACE{\string#\string X}
1030 \edef\HyPsd@ITALCORR{\string#\string I}
1031 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 \hspace fix

\HyPsd@hspace

```
1032 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1033 \def\HyPsd@@hspace#1*#2\END{%
1034   \ifx\#2\%
1035     \HyPsd@hspacetest{#1}%
1036   \else
1037     \expandafter\HyPsd@hspacetest
1038   \fi
1039 }
```

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

```
1040 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.8 Fix for AMS classes

```
1041 \@ifundefined{tocsection}{%
1042   \let\HyPsd@AMSclassfix\relax
1043 }{%
1044   \def\HyPsd@AMSclassfix{%
1045     \let\tocpart\HyPsd@tocsection
1046     \let\tocchapter\HyPsd@tocsection
1047     \let\tocappendix\HyPsd@tocsection
1048     \let\tocsection\HyPsd@tocsection
1049     \let\tocsubsection\HyPsd@tocsection
1050     \let\tocsubsubsection\HyPsd@tocsection
1051     \let\tocparagraph\HyPsd@tocsection
1052   }%
1053   \def\HyPsd@tocsection#1#2#3{%
1054     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1055     #3%
1056   }%
1057 }
```

6.5.9 Reference commands

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

```
1058 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1059 \def\HyPsd@@ref#1*#2\END{%
1060   \ifx\#2\%
1061     \HyPsd@@@ref{#1}%
1062   \else
1063     \expandafter\HyPsd@@@ref
1064   \fi
1065 }
```

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

```
1066 \def\HyPsd@@@ref#1{%
1067   \expandafter\ifx\csname r@#1\endcsname\relax
1068     ??%
```

```

1069 \else
1070   \expandafter\expandafter\expandafter
1071   \@car\csname r@#1\endcsname\@nil
1072 \fi
1073 }

\HyPsd@pageref Macro \HyPsd@pageref calls the macro \HyPsd@@pageref for star checking. The same
methods like in \HyPsd@hspace is used.
1074 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

\HyPsd@@pageref Macro \HyPsd@@pageref checks if a star is present.
1075 \def\HyPsd@@pageref#1*#2\END{%
1076   \ifx\#2\%
1077     \HyPsd@@@pageref{#1}%
1078   \else
1079     \expandafter\HyPsd@@@pageref
1080   \fi
1081 }

\HyPsd@@@pageref \HyPsd@@@pageref does the work and extracts the second argument.
1082 \def\HyPsd@@@pageref#1{%
1083   \expandafter\ifx\csname r@#1\endcsname\relax
1084     ??%
1085   \else
1086     \expandafter\expandafter\expandafter\expandafter
1087     \expandafter\expandafter\expandafter\@car
1088     \expandafter\expandafter\expandafter\@gobble
1089     \csname r@#1\endcsname{}\@nil
1090   \fi
1091 }

\HyPsd@nameref Macro \HyPsd@nameref calls the macro \HyPsd@@nameref for star checking. The same
methods like in \HyPsd@hspace is used.
1092 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

\HyPsd@@nameref Macro \HyPsd@@nameref checks if a star is present.
1093 \def\HyPsd@@nameref#1*#2\END{%
1094   \ifx\#2\%
1095     \HyPsd@@@nameref{#1}%
1096   \else
1097     \expandafter\HyPsd@@@nameref
1098   \fi
1099 }

\HyPsd@@@nameref \HyPsd@@@nameref does the work and extracts the third argument.
1100 \def\HyPsd@@@nameref#1{%
1101   \expandafter\ifx\csname r@#1\endcsname\relax
1102     ??%
1103   \else
1104     \expandafter\expandafter\expandafter\expandafter
1105     \expandafter\expandafter\expandafter\@car
1106     \expandafter\expandafter\expandafter\@gobbletwo
1107     \csname r@#1\endcsname{}\@nil
1108   \fi
1109 }

```

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

```
1110 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1111 \def\HyPsd@@autoref#1*#2\END{%
1112   \ifx\#2\%
1113     \HyPsd@@@autoref{#1}%
1114   \else
1115     \expandafter\HyPsd@@@autoref
1116   \fi
1117 }
```

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

```
1118 \def\HyPsd@@@autoref#1{%
1119   \expandafter\ifx\csname r@#1\endcsname\relax
1120     ??%
1121   \else
1122     \expandafter\expandafter\expandafter\HyPsd@autorefname
1123     \csname r@#1\endcsname{}{}{}{}\@nil
1124     \expandafter\expandafter\expandafter
1125     \@car\csname r@#1\endcsname\@nil
1126   \fi
1127 }
```

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

```
1128 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1129   \ifx\#4\%
1130   \else
1131     \HyPsd@@autorefname#4.\@nil
1132   \fi
1133 }
```

`\HyPsd@@autorefname`

```
1134 \def\HyPsd@@autorefname#1.#2\@nil{%
1135   \@ifundefined{#1autorefname}{%
1136     \@ifundefined{#1name}{%
1137       }{%
1138         \csname#1name\endcsname\space
1139       }%
1140     }{%
1141       \csname#1autorefname\endcsname\space
1142     }%
1143 }
```

6.5.10 Redefining the defining commands

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

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side

effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

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

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

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

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

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1144 \begingroup
1145   \def\x#1#2{%
1146     \endgroup
1147     \let#1\def
1148     \def\HyPsd@DefCommand##1##2##{%
1149       #1%
1150       \expandafter\noexpand
1151       \csname\expandafter@gobble\string##1\@empty\endcsname
1152       \@gobble
1153     }%
1154     \let#2\let
1155     \def\HyPsd@@LetCommand##1{%
1156       \expandafter\ifx\csname##1\expandafter\endcsname
1157         \csname iftrue\endcsname
1158         \pdfstringdefWarn\let
1159         \expandafter@gobble
1160       \else
1161         \expandafter\ifx\csname##1\expandafter\endcsname
1162           \csname iffalse\endcsname
1163           \pdfstringdefWarn\let
1164           \expandafter\expandafter\expandafter@gobble
1165         \else
1166           #2%
1167           \expandafter\noexpand
1168           \csname##1\expandafter\expandafter\expandafter\endcsname
1169         \fi
1170       \fi
1171     }%
1172   }%
1173   \expandafter\x\csname <def>-command\expandafter\endcsname
1174     \csname <let>-command\endcsname
1175   \def\HyPsd@LetCommand#1{%
1176     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1177     \expandafter\expandafter\expandafter{%
1178     \expandafter@gobble\string#1\@empty
```



```

1179 }%
1180 }

```

6.5.11 \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).

```

1181 \def\HyPsd@ifnextchar#1{%
1182   \pdfstringdefWarn#1%
1183   \expandafter\@gobbletwo\@gobble
1184 }

```

6.5.12 \@protected@testoptifnextchar

`\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`.

```

1185 \def\HyPsd@protected@testopt#1{%
1186   \pdfstringdefWarn#1%
1187   \@gobbletwo
1188 }

```

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:

```

1189 \def\HyPsd@Warning#1{%
1190   \begingroup
1191     \def\space{ }%
1192     \Hy@Warning{#1}%
1193   \endgroup
1194 }

```

6.6.2 Protecting spaces

```

1195 \RequirePackage{etexcmds}[2007/09/09]
1196 \ifetex@unexpanded
1197   \expandafter\@secondoftwo
1198 \else
1199   \expandafter\@firstoftwo
1200 \fi
1201 {%

```

`\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`.

```

1202 \def\HyPsd@ProtectSpaces#1{%
1203   \iftrue
1204     \expandafter\HyPsd@@ProtectSpacesFi
1205     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1206   \fi
1207 }%

```

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

```

1208 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1209   \fi
1210   \ifx\scrollmode#2\scrollmode
1211     \HyPsd@RemoveMask#1\HyPsd@End#3%
1212   \else
1213     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1214     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1215   \fi
1216 }%

```

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.

```

1217 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1218   \toks@{\expandafter{#1}}%
1219   \xdef#2{\the\toks@}%
1220 }%

1221 }{%
1222 \let\HyPsd@fi\fi
1223 \def\HyPsd@ProtectSpaces#1{%
1224   \xdef#1{%
1225     \iftrue
1226       \expandafter\HyPsd@@ProtectSpacesFi
1227       \expandafter|\expandafter\@empty#1| %
1228     \HyPsd@fi
1229   }%
1230   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1231 }%
1232 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1233   \fi
1234   \etex@unexpanded{#1}%
1235   \ifx\scrollmode#2\scrollmode
1236   \else
1237     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1238   \HyPsd@fi
1239 }%
1240 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1241   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1242 }%
1243 }

```

6.6.3 Remove grouping braces

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

```

1244 \def\HyPsd@RemoveBraces#1{%
1245   \ifx\scrollmode#1\scrollmode
1246   \else
1247     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1248   \fi
1249 }

```

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

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

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

```

1250 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1251   \fi
1252   \def\Hy@temp@A{#1#2}%
1253   \def\Hy@temp@B{#3}%
1254   \ifx\Hy@temp@A\Hy@temp@B
1255     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1256       \HyPsd@String#1%
1257     }%
1258     \ifx\scrollmode#2\scrollmode
1259     \else
1260       \Hy@ReturnAfterFiFiEnd{%
1261         \HyPsd@RemoveBraces{#2}%
1262       }%
1263     \fi
1264   \else
1265     \def\Hy@temp@A{#1}%
1266     \HyPsd@AppendItalcorr\HyPsd@String
1267     \ifx\Hy@temp@A\@empty
1268       \Hy@ReturnAfterElseFiFiEnd{%
1269         \HyPsd@RemoveBraces{#2}%
1270       }%
1271     \else
1272       \HyPsd@ProtectSpaces\Hy@temp@A
1273       \HyPsd@AppendItalcorr\Hy@temp@A
1274       \Hy@ReturnAfterFiFiEnd{%
1275         \expandafter\HyPsd@RemoveBraces\expandafter
1276           {\Hy@temp@A#2}%
1277       }%
1278     \fi
1279   \fi
1280   \Hy@ReturnEnd
1281 }

```

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

```

1282 \def\HyPsd@AppendItalcorr#1{%
1283   \expandafter\HyPsd@@AppendItalcorr\expandafter{/}#1%
1284 }
1285 \def\HyPsd@@AppendItalcorr#1#2{%
1286   \expandafter\def\expandafter#2\expandafter{#2#1}%
1287 }

```

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`).

```

1288 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1289   \global\let\HyPsd@Rest\relax
1290   \ifcat\relax\noexpand#1\relax
1291     \ifx#1\protect
1292     \else
1293       \ifx#1\penalty
1294         \setbox\z@=\hbox{%
1295           \afterassignment\HyPsd@AfterCountRemove
1296           \count@=#2\HyPsd@end
1297         }%
1298       \else
1299         \ifx#1\kern
1300         \setbox\z@=\hbox{%
1301           \afterassignment\HyPsd@AfterDimenRemove
1302           \dimen@=#2\HyPsd@end
1303         }%
1304       \else
1305         \ifx#1\hskip
1306         \setbox\z@=\hbox{%
1307           \afterassignment\HyPsd@AfterSkipRemove
1308           \skip@=#2\HyPsd@end
1309         }%
1310       \else
1311         \HyPsd@CatcodeWarning{#1}%
1312       \fi
1313     \fi
1314   \fi
1315 \fi
1316 \else
1317   \ifcat#1A% letter
1318   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1319     \HyPsd@String#1%
1320   }%
1321 \else
1322   \ifcat#1 % SPACE
1323   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1324     \HyPsd@String\HyPsd@SPACEOPTI
1325   }%
1326 \else
1327   \ifcat$#1%
1328   \HyPsd@CatcodeWarning{math shift}%
1329 \else
1330   \ifcat&#1%
1331   \HyPsd@CatcodeWarning{alignment tab}%

```

```

1332         \else
1333             \ifcat^#1%
1334                 \HyPsd@CatcodeWarning{superscript}%
1335             \else
1336                 \ifcat_#1%
1337                     \HyPsd@CatcodeWarning{subscript}%
1338                 \else
1339                     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1340                         \HyPsd@String#1%
1341                     }%
1342                 \fi
1343             \fi
1344         \fi
1345     \fi
1346 \fi
1347 \fi
1348 \fi
1349 \ifx\HyPsd@Rest\relax
1350     \ifx\scrollmode#2\scrollmode
1351     \else
1352         \Hy@ReturnAfterFiFiEnd{%
1353             \HyPsd@CheckCatcodes#2\HyPsd@End
1354         }%
1355     \fi
1356 \else
1357     \ifx\HyPsd@Rest\@empty
1358     \else
1359         \Hy@ReturnAfterFiFiEnd{%
1360             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1361         }%
1362     \fi
1363 \fi
1364 \Hy@ReturnEnd
1365 }

```

Remove counts, dimens, skips.

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

```

1366 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1367     \gdef\HyPsd@Rest{#1}%
1368 }

```

\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.

```

1369 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1370     \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@<\fi>1ex %
1371         \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1372         \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1373     \else
1374         \ifdim\dimen@=\z@
1375         \else
1376             \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1377         \fi
1378         \gdef\HyPsd@Rest{#1}%
1379     \fi

```

1380 }

`\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).

```
1381 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1382   \ifdim\ifx\HyPsd@String\@empty\z@else\skip@fi>1ex %
1383     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1384     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1385   \else
1386     \ifdim\skip@=\z@
1387     \else
1388       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1389     \fi
1390     \gdef\HyPsd@Rest{#1}%
1391   \fi
1392 }
```

Catcode warnings.

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

```
1393 \def\HyPsd@CatcodeWarning#1{%
1394   \HyPsd@Warning{%
1395     Token not allowed in a PDF string (%
1396     \ifHy@unicode
1397       Unicode%
1398     \else
1399       PDFDocEncoding%
1400     \fi
1401     ):%
1402     \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1403   }%
1404 }
1405 \begingroup
1406   \catcode'\|=0 %
1407   \catcode'\|=12 %
1408   \gdef\HyPsd@RemoveCmdPrefix#1{%
1409     \expandafter\HyPsd@@RemoveCmdPrefix
1410     \string#1\@empty\<>-|@empty|@empty
1411   }%
1412   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1413 \endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1414 \def\HyPsd@RemoveSpaceWarning#1{%
1415   \HyPsd@Warning{%
1416     Token not allowed in a PDF string (%
1417     \ifHy@unicode
1418       Unicode%
1419     \else
1420       PDFDocEncoding%
1421     \fi
1422     ):%
1423     \MessageBreak #1\MessageBreak
1424     removed%
1425   }%
1426 }
```

\HyPsd@ReplaceSpaceWarning

```
1427 \def\HyPsd@ReplaceSpaceWarning#1{%
1428   \HyPsd@Warning{%
1429     Token not allowed in a PDF string (%)
1430     \ifHy@unicode
1431       Unicode%
1432     \else
1433       PDFDocEncoding%
1434     \fi
1435   }:%
1436   \MessageBreak #1\MessageBreak
1437   replaced by space%
1438 }%
1439 }
```

6.6.5 Check for wrong glyphs

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

```
1440 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1441   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1442     \HyPsd@String#1%
1443   }%
1444   \ifx\#2\%
1445   \else
1446     \Hy@ReturnAfterFi{%
1447       \HyPsd@GlyphProcessWarning#2\@empty
1448     }%
1449   \fi
1450 }
1451 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1452   \HyPsd@@GlyphProcessWarning#1++>%
1453   \HyPsd@GlyphProcess#2\@empty
1454 }
1455 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1456   \ifx\#2\%
1457     \HyPsd@Warning{%
1458       Glyph not defined in %
1459       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1460       removing ‘\@backslashchar#1’%
1461     }%
1462   \else
1463     \HyPsd@Warning{%
1464       Composite letter ‘\@backslashchar#1+#2’\MessageBreak
1465       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1466       \MessageBreak
1467       removing ‘\@backslashchar#1’%
1468     }%
1469   \fi
1470 }
```

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.

```

1471 \def\HyPsd@spaceopti#1{ % first space
1472   \ifx\HyPsd@spaceopti#1%
1473     \040%
1474   \else
1475     #1%
1476   \fi
1477 }%

```

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.

```

1478 \def\HyPsd@Subst#1#2#3{%
1479   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1480     \fi
1481     ##1%
1482     \ifx\scrollmode##2\scrollmode
1483     \else
1484       #2%
1485       \HyPsd@@ReplaceFi##2\END
1486     \fi
1487   }%
1488   \xdef#3{%
1489     \iftrue
1490       \expandafter\HyPsd@@ReplaceFi#3#1\END
1491     \fi
1492   }%
1493 }

```

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

```

1494 \def\HyPsd@StringSubst#1{%
1495   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1496 }

```

6.6.7 Support for package `xspace`

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

```

1497 \def\HyPsd@doxspace#1{%
1498   \ifx#1\relax\else
1499   \ifx#1.\else
1500   \ifx#1:\else
1501   \ifx#1,\else
1502   \ifx#1;\else
1503   \ifx#1!\else
1504   \ifx#1?\else
1505   \ifx#1/\else
1506   \ifx#1-\else
1507   \ifx#1'\else
1508     \HyPsd@SPACEOPTI
1509   \fi

```



```

1510         \fi
1511         \fi
1512         \fi
1513         \fi
1514         \fi
1515         \fi
1516         \fi
1517         \fi
1518         \fi
1519         #1%
1520     }%

```

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.

```

1521 \begingroup
1522   \catcode'\|=0 %
1523   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1524 |gdef|HyPsd@ConvertToUnicode#1{%
1525   |xdef#1{%
1526     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1527   }%
1528   |ifx#1|@empty
1529   |else
1530     |xdef#1{%
1531       \376\377%
1532       #1%
1533     }%
1534   |fi
1535 }%

```

\HyPsd@DoConvert

```

1536 |gdef|HyPsd@DoConvert#1{%
1537   |ifx#1|@empty
1538   |else
1539     |Hy@ReturnAfterFi{%
1540       |ifx#1\%%
1541       \%%
1542       |expandafter|HyPsd@DoEscape
1543     |else
1544       \000#1%
1545       |expandafter|HyPsd@DoConvert
1546     |fi
1547   }%
1548   |fi
1549 }%

```

\HyPsd@DoEscape

```

1550 |gdef|HyPsd@DoEscape#1{%
1551   |ifx#19%
1552   |expandafter|HyPsd@GetTwoBytes
1553   |else

```

```

1554 |Hy@ReturnAfterFi{%
1555 |ifx#18%
1556 00%
1557 |expandafter|HyPsd@GetTwoBytes
1558 |else
1559 #1%
1560 |expandafter|HyPsd@GetOneByte
1561 |fi
1562 }%
1563 |fi
1564 }%

```

`\HyPsd@GetTwoBytes`

```

1565 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1566 #1\#2#3#4%
1567 |HyPsd@DoConvert
1568 }%

```

`\HyPsd@GetOneByte`

```

1569 |gdef|HyPsd@GetOneByte#1#2{%
1570 #1#2%
1571 |HyPsd@DoConvert
1572 }%
1573 |endgroup

```

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

```

1574 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1575 \xdef#4{#4#1#2}%
1576 \HyPsd@@ConvertToUnicode#3\END#4%
1577 }

```

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 `e \TeX 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`

```

1578 \begingroup\expandafter\expandafter\expandafter\endgroup
1579 \expandafter\ifx\cename numexpr\endcename\relax
1580 \let\HyPsd@UTFviii\relax
1581 \else
1582 \begingroup
1583 \lccode'\~='^^f4\relax
1584 \lowercase{\endgroup
1585 \def\HyPsd@UTFviii{%
1586 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1587 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1588 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1589 \ifx~\HyPsd@UTFviii@ccxliv@undef
1590 \let~\HyPsd@UTFviii@ccxliv@def

```

```

1591 \fi
1592 \let\unichar\HyPsd@unichar
1593 }%
1594 }%
1595 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1596 \edef\HyPsd@UTFviii@ccxliv@def{%
1597 \noexpand\UTFviii@four@octets\string ^f4%
1598 }%

```

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.

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

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

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

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

$$(5)$$

```

1599 \def\HyPsd@UTFviii@two#1#2{%
1600 \expandafter\HyPsd@UTFviii@@two
1601 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1602 \number'#1\expandafter|
1603 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
1604 \number'#2 \@nil
1605 }%
1606 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1607 \expandafter\8%
1608 \number\numexpr #1-48\expandafter\relax
1609 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1610 \number\numexpr #3-8*%
1611 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1612 \number\numexpr #4-8*#3\relax
1613 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1614 \def\HyPsd@UTFviii@three#1#2#3{%
1615 \expandafter\HyPsd@UTFviii@@three
1616 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1617 \number'#1\expandafter|
1618 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
1619 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
1620 \number'#2\expandafter|
1621 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
1622 \number'#3 \@nil

```

```

1623 }%
1624 \def\HyPsd@UTFviii@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1625   \expandafter\9%
1626   \number\numexpr #1-56\expandafter\relax
1627   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1628   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1629   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1630   \number\numexpr #6-16\expandafter\relax
1631   \number\numexpr #7-8*#6\relax
1632 }%

```

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

```

```

1633 \def\HyPsd@UTFviii@four#1#2{%
1634   \expandafter\HyPsd@UTFviii@four\number
1635   \numexpr-1+(' #1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1636   \expandafter|\number
1637   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1638 }%
1639 \def\HyPsd@UTFviii@four#1|#2|#3{%
1640   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1641   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1642   \ifodd#2 %
1643     \number\numexpr(#2-1)/2\relax
1644   \else
1645     \number\numexpr#2/2\relax
1646   \fi
1647   \number\numexpr\ifodd#2 4+\fi
1648   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1649   \933%
1650   \expandafter\HyPsd@UTFviii@four\number
1651   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1652 }%
1653 \def\HyPsd@UTFviii@four#1|#2{%
1654   \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1655   \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1656   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1657   \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1658 }%

```

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

```

1659 \def\HyPsd@unichar#1{%
1660   \ifHy@unicode
1661     \ifnum#1>"10FFFF %
1662       \HyPsd@UnicodeReplacementCharacter % illegal
1663     \else
1664       \ifnum#1>"FFFF %

```

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

```

1665   \expandafter\HyPsd@unichar\expandafter{%
1666     \number\numexpr 55296+%
1667     \dimexpr.0009765625\dimexpr\number#1sp-\p@

```

```

1668             \relax\relax\relax
1669         }%
Low-surrogate code point. ("DC00 = 56320, "DC00 - 65536 = -9216)
1670         \expandafter\HyPsd@unichar\expandafter{%
1671             \number\numexpr#1-9216%
1672             -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1673             \relax\relax\relax
1674         }%
1675         \else
1676             \ifnum#1>"7FF %
1677                 \9%
1678                 \expandafter\HyPsd@unichar@first@byte\expandafter{%
1679                     \number
1680                     \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1681                 }%
1682             \else
1683                 \8%
1684                 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1685             \fi
1686             \expandafter\HyPsd@unichar@second@byte\expandafter{%
1687                 \number
1688                 \numexpr#1-256*\number
1689                 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1690             }%
1691         \fi
1692     \fi
1693 \else
1694     .% unsupported (Unicode -> PDF Doc Encoding)
1695 \fi
1696 }%
1697 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1698 \def\HyPsd@unichar@first@byte#1{%
1699     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1700     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1701         \number
1702         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1703         \relax\relax\relax
1704     }%
1705 }%
1706 \def\HyPsd@unichar@second@byte#1{%
1707     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1708     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1709         \number
1710         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1711         \relax\relax\relax
1712     }%
1713 }%
1714 \def\HyPsd@unichar@octtwo#1{%
1715     \number\dimexpr.125\dimexpr#1sp\relax\relax
1716     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1717     \relax\relax\relax
1718 }%
1719 \fi

```

7 Support of other packages

7.1 Class memoir

```
1720 \@ifclassloaded{memoir}{%
1721   \AtEndOfPackage{\RequirePackage{memhfixc}}%
1722 }{}
```

7.2 Package subfigure

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

```
1723 \@ifpackageloaded{subfigure}{%
1724   \@ifundefined{sub@label}{%
1725     \Hy@hypertextnamesfalse
1726   }{%
1727     \renewcommand*{\sub@label}[1]{%
1728       \@bsphack
1729       \subfig@oldlabel{#1}%
1730       \if@filesw
1731         \begingroup
1732           \edef\@currentlabstr{%
1733             \expandafter\strip@prefix\meaning\@currentlabelname
1734           }%
1735           \protected@write\@auxout{}{%
1736             \string\newlabel{sub@#1}{%
1737               {\@nameuse{@@thesub\@capttype}}%
1738               {\thepage}%
1739             }%
1740             \expandafter\strip@period\@currentlabstr
1741             \relax.\relax\@@%
1742           }%
1743           {\@currentHref}%
1744           {}%
1745         }%
1746       }%
1747     \endgroup
1748     \fi
1749     \@esphack
1750   }%
1751   \@ifpackagelater{subfigure}{2002/03/26}{%
1752     \providecommand*{\toclevel@subfigure}{1}%
1753     \providecommand*{\toclevel@subtable}{1}%
1754   }%
1755 }%
1756 }{}
```

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:

```
1757 \@ifundefined{XR@addURL}{%
1758 }{}
```

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.

```
1759 \def\xr@addURL#1{\xr@dURL#1{}{}{}{}\\}%
1760 \def\xr@dURL#1#2#3#4#5\\{%
1761   {#1}{#2}%
1762 }
```

```

1762     \if!#4!%
1763     \else
1764         {#3}-{#4}-{\XR@URL}%
1765     \fi
1766 }%
1767 }

1768 \def\Hy@true{true}
1769 \def\Hy@false{false}

    Providing dummy definitions.

1770 \let\literalps@out\@gobble
1771 \newcommand\pdfbookmark[3][]{ }
1772 \def\Acrobatmenu#1#2{\leavevmode#2}
1773 \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

```

1774 \let\HyperRaiseLinkHook\@empty
1775 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

1776 \def\Hy@raisedlink#1{%
1777     \ifvmode
1778         #1%
1779     \else
1780         \penalty\@M
1781         \smash{%
1782             \begingroup
1783                 \let\HyperRaiseLinkLength\@tempdima
1784                 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1785                 \HyperRaiseLinkHook
1786             \expandafter\endgroup
1787             \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1788         }%
1789     \fi
1790 }

```

```

\Hy@SaveLastskip    Inserting a \special command to set a destination destroys the \lastskip value.
\Hy@RestoreLastskip
1791 \def\Hy@SaveLastskip{%
1792     \let\Hy@RestoreLastskip\relax
1793     \ifvmode
1794         \ifdim\lastskip=\z@
1795             \let\Hy@RestoreLastskip\nobreak
1796         \else

```

```

1797     \begingroup
1798     \skip@=-\lastskip
1799     \edef\x{%
1800     \endgroup
1801     \def\noexpand\Hy@RestoreLastskip{%
1802     \noexpand\ifvmode
1803     \noexpand\nobreak
1804     \vskip\the\skip@
1805     \vskip\the\lastskip\relax
1806     \noexpand\fi
1807     }%
1808     }%
1809     \x
1810     \fi
1811 \else
1812     \ifhmode
1813     \ifdim\lastskip=\z@
1814     \let\Hy@RestoreLastskip\nobreak
1815     \else
1816     \begingroup
1817     \skip@=-\lastskip
1818     \edef\x{%
1819     \endgroup
1820     \def\noexpand\Hy@RestoreLastskip{%
1821     \noexpand\ifhmode
1822     \noexpand\nobreak
1823     \hskip\the\skip@
1824     \hskip\the\lastskip\relax
1825     \noexpand\fi
1826     }%
1827     }%
1828     \x
1829     \fi
1830     \fi
1831 \fi
1832 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1833 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
1834 \def\Hy@@boolkey[#1]#2#3{%
1835     \edef\Hy@tempa{#3}%
1836     \lowercase\expandafter{%
1837         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
1838     }%
1839     \ifx\Hy@tempa\@empty
1840         \let\Hy@tempa\Hy@true
1841     \fi
1842     \ifx\Hy@tempa\Hy@true
1843     \else
1844         \ifx\Hy@tempa\Hy@false
1845         \else
1846             \let\Hy@tempa\relax

```



```

1847   \fi
1848 \fi
1849 \ifx\Hy@tempa\relax
1850   \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1851 \else
1852   \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1853   \csname Hy@#2\Hy@tempa\endcsname
1854 \fi
1855 }

```

\Hy@WarnOptionValue

```

1856 \def\Hy@WarnOptionValue#1#2#3{%
1857   \Hy@Warning{%
1858     Unexpected value ‘#1’\MessageBreak
1859     of option ‘#2’ instead of\MessageBreak
1860     #3%
1861   }%
1862 }

```

\Hy@DisableOption

```

1863 \def\Hy@DisableOption#1{%
1864   \@ifundefined{KV@Hyp@#1@default}{%
1865     \define@key{Hyp}{#1}%
1866   }{%
1867     \define@key{Hyp}{#1}[]%
1868   }%
1869   {\Hy@WarnOptionDisabled{#1}}%
1870 }

```

\Hy@WarnOptionDisabled

```

1871 \def\Hy@WarnOptionDisabled#1{%
1872   \Hy@Warning{%
1873     Option ‘#1’ has already been used,\MessageBreak
1874     setting the option has no effect%
1875   }%
1876 }

```

\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.

```

1877 \def\Hy@CheckOptionValue#1#2#3{%
1878   \begingroup
1879   \edef\x{#1}%
1880   \@onelevel@sanitize\x
1881   \let\y=y%
1882   \def\do##1##2{%
1883     \def\z{##1}%
1884     \@onelevel@sanitize\z
1885     \ifx\x\z
1886       \let\y=n%
1887       \let\do\@gobbletwo
1888     \fi
1889   }%
1890   #3%
1891   \ifx\y y%
1892     \def\do##1##2{%
1893       * ‘##1’%
1894       \ifx\\##2\\\else\space(##2)\fi

```

```

1895         \MessageBreak
1896     }%
1897     \Hy@Warning{%
1898         Values of option '#2':\MessageBreak
1899         #3%
1900         * An empty value disables the option.\MessageBreak
1901         Unknown value '\x'%
1902     }%
1903     \fi
1904 \endgroup
1905 }

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
1906 \def\Hy@DefNameKey#1{%
1907     \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1908 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
1909 \def\Hy@@DefNameKey#1#2#3{%
1910     \define@key{Hyp}{#2}{%
1911         \edef#1{##1}%
1912         \ifx#1\@empty
1913             \else
1914                 \Hy@CheckOptionValue{##1}{#2}{#3}%
1915             \fi
1916     }%
1917     \let#1\@empty
1918 }

\Hy@UseNameKey
1919 \def\Hy@UseNameKey#1#2{%
1920     \ifx#2\@empty
1921     \else
1922         /#1/#2%
1923     \fi
1924 }

```

9.2 Defining the options

```

1925 \define@key{Hyp}{implicit}[true]{%
1926     \Hy@boolkey{implicit}{#1}%
1927 }
1928 \define@key{Hyp}{draft}[true]{%
1929     \Hy@boolkey{draft}{#1}%
1930 }
1931 \define@key{Hyp}{final}[true]{%
1932     \Hy@boolkey{final}{#1}%
1933 }
1934 \let\KV@Hyp@nolinks\KV@Hyp@draft
1935 \define@key{Hyp}{a4paper}[true]{%
1936     \def\special@paper{210mm,297mm}%
1937     \def\Hy@pageheight{842}%

```

```

1938 }
1939 \define@key{Hyp}{a5paper}[true]{%
1940   \def\special@paper{148mm,210mm}%
1941   \def\Hy@pageheight{595}%
1942 }
1943 \define@key{Hyp}{b5paper}[true]{%
1944   \def\special@paper{176mm,250mm}%
1945   \def\Hy@pageheight{709}%
1946 }
1947 \define@key{Hyp}{letterpaper}[true]{%
1948   \def\special@paper{8.5in,11in}%
1949   \def\Hy@pageheight{792}%
1950 }
1951 \define@key{Hyp}{legalpaper}[true]{%
1952   \def\special@paper{8.5in,14in}%
1953   \def\Hy@pageheight{1008}%
1954 }
1955 \define@key{Hyp}{executivepaper}[true]{%
1956   \def\special@paper{7.25in,10.5in}%
1957   \def\Hy@pageheight{720}%
1958 }
1959 \define@key{Hyp}{setpagesize}[true]{%
1960   \Hy@boolkey{setpagesize}{#1}%
1961 }
1962 \define@key{Hyp}{debug}[true]{%
1963   \Hy@boolkey[debug]{verbose}{#1}%
1964 }
1965 \define@key{Hyp}{linktocpage}[true]{%
1966   \Hy@boolkey{linktocpage}{#1}%
1967   \ifHy@linktocpage
1968     \let\Hy@linktoc\Hy@linktoc@page
1969   \else
1970     \let\Hy@linktoc\Hy@linktoc@section
1971   \fi
1972 }
1973 \chardef\Hy@linktoc@none=0 %
1974 \chardef\Hy@linktoc@section=1 %
1975 \chardef\Hy@linktoc@page=2 %
1976 \chardef\Hy@linktoc@all=3 %
1977 \ifHy@linktocpage
1978   \let\Hy@linktoc\Hy@linktoc@page
1979 \else
1980   \let\Hy@linktoc\Hy@linktoc@section
1981 \fi
1982 \define@key{Hyp}{linktoc}{%
1983   \@ifundefined{Hy@linktoc@#1}{%
1984     \Hy@Warning{%
1985       Unexpected value ‘#1’ of\MessageBreak
1986       option ‘linktoc’ instead of ‘none’,\MessageBreak
1987       ‘section’, ‘page’ or ‘all’%
1988     }%
1989   }{%
1990     \expandafter\let\expandafter\Hy@linktoc
1991     \csname Hy@linktoc@#1\endcsname
1992   }%
1993 }
1994 \define@key{Hyp}{extension}{\def\XR@ext{#1}}

```

```

1995 \let\XR@ext\relax
1996 \define@key{Hyp}{verbose}[true]{%
1997   \Hy@boolkey{verbose}{#1}%
1998 }
1999 \define@key{Hyp}{typexml}[true]{%
2000   \Hy@boolkey{typexml}{#1}%
2001 }

```

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.

```

2002 \define@key{Hyp}{raiselinks}[true]{%
2003   \Hy@boolkey{raiselinks}{#1}%
2004 }

```

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

```

2005 \def\Hy@setbreaklinks#1{%
2006   \csname breaklinks#1\endcsname
2007 }

2008 \def\Hy@breaklinks@unsupported{%
2009   \ifx\Hy@setbreaklinks\@gobble
2010     \ifHy@breaklinks
2011       \Hy@WarningNoLine{%
2012         You have enabled option 'breaklinks'.\MessageBreak
2013         But driver '\Hy@driver.def' does not support this.\MessageBreak
2014         Expect trouble with the link areas of broken links%
2015       }%
2016     \fi
2017   \fi
2018 }

2019 \define@key{Hyp}{breaklinks}[true]{%
2020   \Hy@boolkey{breaklinks}{#1}%
2021   \let\Hy@setbreaklinks\@gobble
2022 }

```

Determines whether an automatic anchor is put on each page

```

2023 \define@key{Hyp}{pageanchor}[true]{%
2024   \Hy@boolkey{pageanchor}{#1}%
2025 }

```

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.

```

2026 \define@key{Hyp}{plainpages}[true]{%
2027   \Hy@boolkey{plainpages}{#1}%
2028 }

```

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

```

2029 \define@key{Hyp}{naturalnames}[true]{%
2030   \Hy@boolkey{naturalnames}{#1}%
2031 }

```

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

```

2032 \define@key{Hyp}{hypertextnames}[true]{%
2033   \Hy@boolkey{hypertextnames}{#1}%
2034 }

```

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

```

2035 \define@key{Hyp}{nesting}[true]{%
2036   \Hy@boolkey{nesting}{#1}%
2037 }

2038 \define@key{Hyp}{unicode}[true]{%
2039   \Hy@boolkey{unicode}{#1}%
2040   \ifHy@unicode
2041     \def\HyPsd@pdfencoding{unicode}%
2042   \else
2043     \def\HyPsd@pdfencoding{pdfdoc}%
2044   \fi
2045   \HyPsd@LoadUnicode
2046 }

2047 \def\HyPsd@LoadUnicode{%
2048   \@ifundefined{T@PU}{%
2049     \input{puenc.def}%
2050     \HyLinguex@Restore
2051   }{}%
2052   \DeclareFontFamily{PU}{pdf}{}%
2053   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2054   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2055   \global\let\HyPsd@LoadUnicode\relax
2056 }

2057 \AtBeginDocument{%
2058   \ifx\HyPsd@LoadUnicode\relax
2059   \else
2060     \def\HyPsd@LoadUnicode{%
2061       \PackageError{hyperref}{%
2062         Unicode support for bookmarks is not available.\MessageBreak
2063         Activate unicode support by using one of the options\MessageBreak
2064         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2065         in the preamble%
2066       }{\@ehc
2067         \global\let\HyPsd@LoadUnicode\relax
2068         \global\Hy@unicodetrue
2069         \global\let\Hy@unicodetrue\Hy@unicodetrue
2070       }%
2071     \fi
2072 }

2073 \define@key{Hyp}{pdfencoding}{%
2074   \edef\HyPsd@temp{#1}%
2075   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2076     \let\HyPsd@pdfencoding\HyPsd@temp
2077     \Hy@unicodetrue
2078   \else
2079     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2080       \z@
2081     \else
2082       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2083         \z@
2084       \else
2085         \@ne
2086       \fi
2087     \fi
2088     \let\HyPsd@pdfencoding\HyPsd@temp
2089     \hypersetup{unicode}%
2090     \ifHy@unicode
2091       \def\HyPsd@pdfencoding{#1}%

```

```

2092         \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2093         \HyPsd@LoadStringEnc
2094     \fi
2095     \else
2096         \Hy@Warning{Cannot switch to unicode bookmarks}%
2097         \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2098     \fi
2099     \else
2100         \@onelevel@sanitize\HyPsd@temp
2101         \Hy@Warning{%
2102             Values of option 'pdfencoding':\MessageBreak
2103             'pdfdoc', 'unicode', 'auto'.\MessageBreak
2104             Ignoring unknown value '\HyPsd@temp'%
2105         }%
2106     \fi
2107 \fi
2108 }
2109 \def\HyPsd@pdfencoding@auto{auto}
2110 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2111 \def\HyPsd@pdfencoding@unicode{unicode}
2112 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2113 \def\HyPsd@LoadStringEnc{%
2114     \RequirePackage{stringenc}[2007/06/14]%
2115     \let\HyPsd@LoadStringEnc\relax
2116 }
2117 \AtBeginDocument{%
2118     \@ifpackageloaded{stringenc}{%
2119         \let\HyPsd@LoadStringEnc\relax
2120     }{%
2121         \def\HyPsd@LoadStringEnc{%
2122             \Hy@WarningNoLine{%
2123                 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2124                 in the preamble or load the package there%
2125             }%
2126         }%
2127     }%
2128 }
2129 \newif\ifHy@setpdfversion
2130 \define@key{Hyp}{pdfversion}{%
2131     \@ifundefined{Hy@pdfversion@#1}{%
2132         \PackageWarning{hyperref}{%
2133             Unsupported PDF version '#1'.\MessageBreak
2134             Valid values: 1.2 until 1.9%
2135         }%
2136     }{%
2137         \Hy@setpdfversiontrue
2138         \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2139     }%
2140 }
2141 \@namedef{Hy@pdfversion@1.2}{2}%
2142 \@namedef{Hy@pdfversion@1.3}{3}%
2143 \@namedef{Hy@pdfversion@1.4}{4}%
2144 \@namedef{Hy@pdfversion@1.5}{5}%
2145 \@namedef{Hy@pdfversion@1.6}{6}%
2146 \@namedef{Hy@pdfversion@1.7}{7}%
2147 \@namedef{Hy@pdfversion@1.8}{8}%
2148 \@namedef{Hy@pdfversion@1.9}{9}%

```

```
2149 \def\Hy@pdfversion{2}
```

10 Options for different drivers

```
2150 \define@key{Hyp}{hyperref}[true]{}
2151 \define@key{Hyp}{tex4ht}[true]{%
2152   \Hy@texhttrue
2153   \setkeys{Hyp}{colorlinks=true}%
2154   \def\BeforeTeXIVht{\usepackage{color}}%
2155   \def\Hy@driver{htex4ht}%
2156   \def\MaybeStopEarly{%
2157     \typeout{Hyperref stopped early}%
2158     \AfterBeginDocument{%
2159       \PDF@FinishDoc
2160       \gdef\PDF@FinishDoc{}}%
2161   }%
2162   \endinput
2163 }%
2164 }
2165 \define@key{Hyp}{pdftex}[true]{%
2166   \def\Hy@driver{hpdftex}%
2167 }
2168 \define@key{Hyp}{nativepdf}[true]{%
2169   \def\Hy@driver{hdvips}%
2170 }
2171 \define@key{Hyp}{dvipdfm}[true]{%
2172   \def\Hy@driver{hdvipdfm}%
2173 }
2174 \define@key{Hyp}{dvipdfmx}[true]{%
2175   \def\Hy@driver{hdvipdfm}%
2176 }
2177 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2178   \expandafter\ifx\csname if#1\expandafter\endcsname
2179     \csname iftrue\endcsname
2180     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2181   \else
2182     \chardef\SpecialDvipdfmxOutlineOpen\z@
2183   \fi
2184 }
2185 \define@key{Hyp}{xetex}[true]{%
2186   \def\Hy@driver{hdvipdfm}%
2187 }
2188 \define@key{Hyp}{pdfmark}[true]{%
2189   \def\Hy@driver{hdvips}%
2190 }
2191 \define@key{Hyp}{dvips}[true]{%
2192   \def\Hy@driver{hdvips}%
2193 }
2194 \define@key{Hyp}{hypertex}[true]{%
2195   \def\Hy@driver{hypertex}%
2196 }
2197 \let\Hy@MaybeStopNow\relax
2198 \define@key{Hyp}{vtex}[true]{%
2199   \begingroup\expandafter\expandafter\expandafter\endgroup
2200   \expandafter\ifx\csname OpMode\endcsname\relax
2201     \@latex@error{Non-VTeX processor}{}%
2202     \global\let\Hy@MaybeStopNow\endinput
```

```

2203 \endinput
2204 \else
2205 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2206 \def\Hy@driver{hvtex}%
2207 \else
2208 \ifnum\OpMode=10\relax
2209 \def\Hy@driver{hvtexhtm}%
2210 \def\MaybeStopEarly{%
2211 \typeout{Hyperref stopped early}%
2212 \AfterBeginDocument{%
2213 \PDF@FinishDoc
2214 \gdef\PDF@FinishDoc{}%
2215 }%
2216 \endinput
2217 }%
2218 \else
2219 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2220 \global\let\Hy@MaybeStopNow\endinput
2221 \endinput
2222 \fi
2223 \fi
2224 \fi
2225 }
2226 \define@key{Hyp}{vtexpdfmark}[true]{%
2227 \begingroup\expandafter\expandafter\expandafter\endgroup
2228 \expandafter\ifx\cscname OpMode\endcscname\relax
2229 \@latex@error{Non-VTeX processor}{}%
2230 \let\Hy@MaybeStopNow\endinput
2231 \endinput
2232 \else
2233 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2234 \def\Hy@driver{hvtexmrk}%
2235 \else
2236 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2237 \let\Hy@MaybeStopNow\endinput
2238 \endinput
2239 \fi
2240 \fi
2241 }
2242 \define@key{Hyp}{dviwindo}[true]{%
2243 \def\Hy@driver{hdviwind}%
2244 \setkeys{Hyp}{colorlinks}%
2245 \PassOptionsToPackage{dviwindo}{color}%
2246 }
2247 \define@key{Hyp}{dvipsone}[true]{%
2248 \def\Hy@driver{hdvipson}%
2249 }
2250 \define@key{Hyp}{textures}[true]{%
2251 \def\Hy@driver{htexture}%
2252 }
2253 \define@key{Hyp}{latex2html}[true]{%
2254 \AtBeginDocument{\@@latextohtmlX}%
2255 }

```

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

```

2256 \define@key{Hyp}{ps2pdf}[true]{%
2257 \def\Hy@driver{hdvips}%
2258 \providecommand*\@pdfborder{0 0 1}%

```


2259 }

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.

```
2260 \define@key{Hyp}{hyperfigures}[true]{%
2261   \Hy@boolkey[hyperfigures]{figures}{#1}%
2262 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2263 \define@key{Hyp}{hyperfootnotes}[true]{%
2264   \Hy@boolkey{hyperfootnotes}{#1}%
2265 }
```

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

```
2266 \def\back@none{none}
2267 \def\back@section{section}
2268 \def\back@page{page}
2269 \def\back@slide{slide}
2270 \define@key{Hyp}{backref}[section]{%
2271   \lowercase{\def\Hy@tempa{#1}}%
2272   \ifx\Hy@tempa\@empty
2273     \let\Hy@tempa\back@section
2274   \fi
2275   \ifx\Hy@tempa\Hy@false
2276     \let\Hy@tempa\back@none
2277   \fi
2278   \ifx\Hy@tempa\back@slide
2279     \let\Hy@tempa\back@section
2280   \fi
2281   \ifx\Hy@tempa\back@page
2282     \PassOptionsToPackage{hyperpageref}{backref}%
2283     \Hy@backreftrue
2284   \else
2285     \ifx\Hy@tempa\back@section
2286       \PassOptionsToPackage{hyperref}{backref}%
2287       \Hy@backreftrue
2288     \else
2289       \ifx\Hy@tempa\back@none
2290         \Hy@backreffalse
2291       \else
2292         \Hy@WarnOptionValue{#1}{backref}{%
2293           'section', 'slide', 'page', 'none', \MessageBreak
2294           or 'false'}%
2295       \fi
2296     \fi
2297   \fi
2298 }
2299 \define@key{Hyp}{pagebackref}[true]{%
2300   \edef\Hy@tempa{#1}%
2301   \lowercase\expandafter{%
2302     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2303   }%
2304   \ifx\Hy@tempa\@empty
2305     \let\Hy@tempa\Hy@true
2306   \fi
2307   \ifx\Hy@tempa\Hy@true
```

```

2308 \PassOptionsToPackage{hyperpageref}{backref}%
2309 \Hy@backreftrue
2310 \else
2311 \ifx\Hy@tempa\Hy@false
2312 \Hy@backreffalse
2313 \else
2314 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
2315 \fi
2316 \fi
2317 }

```

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

```

2318 \define@key{Hyp}{hyperindex}[true]{%
2319 \Hy@boolkey{hyperindex}{#1}%
2320 }

```

Configuration of encap char.

```

2321 \define@key{Hyp}{encap}[\|]{%
2322 \def\HyInd@EncapChar{#1}%
2323 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2324 \def\HyLang@afrikaans{%
2325 \def\equationautorefname{Vergelyking}%
2326 \def\footnoteautorefname{Voetnota}%
2327 \def\itemautorefname{Item}%
2328 \def\figureautorefname{Figuur}%
2329 \def\tableautorefname{Tabel}%
2330 \def\partautorefname{Deel}%
2331 \def\appendixautorefname{Bylae}%
2332 \def\chapterautorefname{Hoofstuk}%
2333 \def\sectionautorefname{Afdeling}%
2334 \def\subsectionautorefname{Subafdeling}%
2335 \def\subsubsectionautorefname{Subsubafdeling}%
2336 \def\paragraphautorefname{Paragraaf}%
2337 \def\subparagraphautorefname{Subparagraaf}%
2338 \def\FancyVerbLineautorefname{Lyn}%
2339 \def\theoremautorefname{Teorema}%
2340 \def\pageautorefname{Bladsy}%
2341 }
2342 \def\HyLang@english{%
2343 \def\equationautorefname{Equation}%
2344 \def\footnoteautorefname{footnote}%
2345 \def\itemautorefname{item}%
2346 \def\figureautorefname{Figure}%
2347 \def\tableautorefname{Table}%
2348 \def\partautorefname{Part}%
2349 \def\appendixautorefname{Appendix}%
2350 \def\chapterautorefname{chapter}%
2351 \def\sectionautorefname{section}%
2352 \def\subsectionautorefname{subsection}%
2353 \def\subsubsectionautorefname{subsubsection}%
2354 \def\paragraphautorefname{paragraph}%
2355 \def\subparagraphautorefname{subparagraph}%

```

```

2356 \def\FancyVerbLineautorefname{line}%
2357 \def\theoremautorefname{Theorem}%
2358 \def\pageautorefname{page}%
2359 }
2360 \def\HyLang@french{%
2361 \def\equationautorefname{'Equation}%
2362 \def\footnoteautorefname{note}%
2363 \def\itemautorefname{item}%
2364 \def\figureautorefname{Figure}%
2365 \def\tableautorefname{Tableau}%
2366 \def\partautorefname{Partie}%
2367 \def\appendixautorefname{Appendice}%
2368 \def\chapterautorefname{chapitre}%
2369 \def\sectionautorefname{section}%
2370 \def\subsectionautorefname{sous-section}%
2371 \def\subsubsectionautorefname{sous-sous-section}%
2372 \def\paragraphautorefname{paragraphe}%
2373 \def\subparagraphautorefname{sous-paragraphe}%
2374 \def\FancyVerbLineautorefname{ligne}%
2375 \def\theoremautorefname{Th\'eor\'eme}%
2376 \def\pageautorefname{page}%
2377 }
2378 \def\HyLang@german{%
2379 \def\equationautorefname{Gleichung}%
2380 \def\footnoteautorefname{Fu\ss note}%
2381 \def\itemautorefname{Punkt}%
2382 \def\figureautorefname{Abbildung}%
2383 \def\tableautorefname{Tabelle}%
2384 \def\partautorefname{Teil}%
2385 \def\appendixautorefname{Anhang}%
2386 \def\chapterautorefname{Kapitel}%
2387 \def\sectionautorefname{Abschnitt}%
2388 \def\subsectionautorefname{Unterabschnitt}%
2389 \def\subsubsectionautorefname{Unterunterabschnitt}%
2390 \def\paragraphautorefname{Absatz}%
2391 \def\subparagraphautorefname{Unterabsatz}%
2392 \def\FancyVerbLineautorefname{Zeile}%
2393 \def\theoremautorefname{Theorem}%
2394 \def\pageautorefname{Seite}%
2395 }
2396 \def\HyLang@italian{%
2397 \def\equationautorefname{Equazione}%
2398 \def\footnoteautorefname{nota}%
2399 \def\itemautorefname{punto}%
2400 \def\figureautorefname{Figura}%
2401 \def\tableautorefname{Tabella}%
2402 \def\partautorefname{Parte}%
2403 \def\appendixautorefname{Appendice}%
2404 \def\chapterautorefname{Capitolo}%
2405 \def\sectionautorefname{sezione}%
2406 \def\subsectionautorefname{sottosezione}%
2407 \def\subsubsectionautorefname{sottosottosezione}%
2408 \def\paragraphautorefname{paragrafo}%
2409 \def\subparagraphautorefname{sottoparagrafo}%
2410 \def\FancyVerbLineautorefname{linea}%
2411 \def\theoremautorefname{Teorema}%
2412 \def\pageautorefname{Pag.\@}%

```

```

2413 }
2414 \def\HyLang@magyar{%
2415   \def\equationautorefname{Egyenlet}%
2416   \def\footnoteautorefname{l\'abjegyzet}%
2417   \def\itemautorefname{Elem}%
2418   \def\figureautorefname{\'Abra}%
2419   \def\tableautorefname{T\'abl\'azat}%
2420   \def\partautorefname{R\'esz}%
2421   \def\appendixautorefname{F\'uggel\'ek}%
2422   \def\chapterautorefname{fejezet}%
2423   \def\sectionautorefname{szakasz}%
2424   \def\subsectionautorefname{alszakasz}%
2425   \def\subsubsectionautorefname{alalszakasz}%
2426   \def\paragraphautorefname{bekezd\'es}%
2427   \def\subparagraphautorefname{albekezd\'es}%
2428   \def\FancyVerbLineautorefname{sor}%
2429   \def\theoremautorefname{T\'etel}%
2430   \def\pageautorefname{oldal}%
2431 }
2432 \def\HyLang@portuges{%
2433   \def\equationautorefname{Equa\c c\~ao}%
2434   \def\footnoteautorefname{Nota de rodap\'e}%
2435   \def\itemautorefname{Item}%
2436   \def\figureautorefname{Figura}%
2437   \def\tableautorefname{Tabela}%
2438   \def\partautorefname{Parte}%
2439   \def\appendixautorefname{Ap\~endice}%
2440   \def\chapterautorefname{Cap\'itulo}%
2441   \def\sectionautorefname{Se\c c\~ao}%
2442   \def\subsectionautorefname{Subse\c c\~ao}%
2443   \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2444   \def\paragraphautorefname{par\'agrafo}%
2445   \def\subparagraphautorefname{subpar\'agrafo}%
2446   \def\FancyVerbLineautorefname{linha}%
2447   \def\theoremautorefname{Teorema}%
2448   \def\pageautorefname{P\'agina}%
2449 }

```

Next commented section for Russian is provided by Olga Lapko.

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

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

```

2450 \def\HyLang@russian{%

```

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

```

2451   \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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

```

2452 %   \def\equationautorefname{%
2453 %     \cyr\cyrv\cyrery\cyr\cyrzh\cyre\cyrn\cyri\cyre
2454 %   }%

```

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

```
2455 \def\footnoteautorefname{%
2456   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2457 }%
```

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

```
2458 % \def\footnoteautorefname{%
2459 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2460 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2461 % }%
```

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

```
2462 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2463 % \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.

```
2464 \def\itemautorefname{\cyr\cyrp.}%
2465 % \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.

```
2466 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2467 \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.

```
2468 \def\partautorefname{\cyr\cyrch.}%
2469 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2470 \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.

```
2471 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2472 % \def\appendixautorefname{%
2473 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrzh\cyre\cyrn\cyri\cyre
2474 % }%
```

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.

```
2475 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2476 \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.

```
2477 \def\paragraphautorefname{\cyr\cyrp.}%
2478 \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.

```
2479 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2480 % \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.

```
2481 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2482 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
```

```
2483 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2484 % \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 ...

```
2485 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2486 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2487 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2488 \def\pageautorefname{\cyr\cyrs.}%
```

```
2489 }
```

```
2490 \def\HyLang@spanish{%
```

```
2491 \def\equationautorefname{Ecuaci\'}on}%
```

```
2492 \def\footnoteautorefname{Nota a pie de p\'}agina}%
```

```
2493 \def\itemautorefname{Elemento}%
```

```
2494 \def\figureautorefname{Figura}%
```

```
2495 \def\tableautorefname{Tabla}%
```

```
2496 \def\partautorefname{Parte}%
```

```
2497 \def\appendixautorefname{Ap\'}endice}%
```

```
2498 \def\chapterautorefname{Cap\'}itulo}%
```

```
2499 \def\sectionautorefname{Secci\'}on}%
```

```
2500 \def\subsectionautorefname{Subsecci\'}on}%
```

```
2501 \def\subsubsectionautorefname{Subsubsecci\'}on}%
```

```
2502 \def\paragraphautorefname{P\'}arrafo}%
```

```
2503 \def\subparagraphautorefname{Subp\'}arrafo}%
```

```
2504 \def\FancyVerbLineautorefname{L\'}inea}%
```

```
2505 \def\theoremautorefname{Teorema}%
```

```
2506 \def\pageautorefname{P\'}agina}%
```

```
2507 }
```

```
2508 \def\HyLang@vietnamese{%
```

```
2509 \def\equationautorefname{Ph\}uhorn{\}ohorn{\}ng tr\'}inh}%
```

```
2510 \def\footnoteautorefname{Ch\'}u th\'}ich}%
```

```
2511 \def\itemautorefname{m\}d\}u\}c}%
```

```
2512 \def\figureautorefname{H\'}inh}%
```

```
2513 \def\tableautorefname{B\}h\}a\}ng}%
```

```
2514 \def\partautorefname{Ph\'}acircumflex{\}n}%
```

```
2515 \def\appendixautorefname{Ph\}d\}u\} l\}d\}u\}c}%
```

```
2516 \def\chapterautorefname{ch\}uhorn{\}ohorn{\}ng}%
```

```
2517 \def\sectionautorefname{m\}d\}u\}c}%
```

```
2518 \def\subsectionautorefname{m\}d\}u\}c}%
```

```
2519 \def\subsubsectionautorefname{m\}d\}u\}c}%
```

```
2520 \def\paragraphautorefname{\}d\}j\}o\}d\}a\}n}%
```

```

2521 \def\subparagraphautorefname{\dj{ }o{d}{a}{n}}%
2522 \def\FancyVerbLineautorefname{d\'ong}%
2523 \def\theoremautorefname{\DJ{ }\d{i}{nh} 1\'y}%
2524 \def\pageautorefname{Trang}%
2525 }

```

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

```

2526 \def\HyLang@addto#1#2{%
2527   #2%
2528   \@temptokena{#2}%
2529   \ifx#1\relax
2530     \let#1\@empty
2531   \fi
2532   \ifx#1\undefined
2533     \edef#1{\the\@temptokena}%
2534   \else
2535     \toks@\expandafter{#1}%
2536     \edef#1{\the\toks@\the\@temptokena}%
2537   \fi
2538   \@temptokena{}\toks@\@temptokena
2539 }

2540 \def\HyLang@DeclareLang#1#2#3{%
2541   \begingroup
2542     \edef\x##1##2{%
2543       \noexpand\ifx##2\relax
2544         \errmessage{No definitions for language #2' found!}%
2545       \noexpand\fi
2546     \endgroup
2547     \noexpand\define@key{Hyp}{#1}[]{%
2548       \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2549       #3%
2550     }%
2551   }%
2552   \expandafter\x\csname extras#1\expandafter\endcsname
2553     \csname HyLang@#2\endcsname
2554 }

2555 \HyLang@DeclareLang{english}{english}{}
2556 \HyLang@DeclareLang{UKenglish}{english}{}
2557 \HyLang@DeclareLang{british}{english}{}
2558 \HyLang@DeclareLang{USenglish}{english}{}
2559 \HyLang@DeclareLang{american}{english}{}
2560 \HyLang@DeclareLang{german}{german}{}
2561 \HyLang@DeclareLang{austrian}{german}{}
2562 \HyLang@DeclareLang{ngerman}{german}{}
2563 \HyLang@DeclareLang{naustrian}{german}{}
2564 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2565 \HyLang@DeclareLang{brazil}{portuges}{}
2566 \HyLang@DeclareLang{brazilian}{portuges}{}
2567 \HyLang@DeclareLang{portuguese}{portuges}{}
2568 \HyLang@DeclareLang{spanish}{spanish}{}
2569 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2570 \HyLang@DeclareLang{french}{french}{}
2571 \HyLang@DeclareLang{frenchb}{french}{}
2572 \HyLang@DeclareLang{francais}{french}{}
2573 \HyLang@DeclareLang{acadian}{french}{}
2574 \HyLang@DeclareLang{canadien}{french}{}

```

```

2575 \HyLang@DeclareLang{italian}{italian}{%
2576 \HyLang@DeclareLang{magyar}{magyar}{%
2577 \HyLang@DeclareLang{hungarian}{magyar}{%

```

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

```

2578 \define@key{Hyp}{vietnamese}[]{%
2579 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2580 \AtEndOfPackage{%
2581 \ifundefined{T@PU}{%
2582 \input{puvnenc.def}%
2583 }%
2584 }%
2585 }
2586 \define@key{Hyp}{vietnam}[]{%
2587 \HyLang@addto\extravietnam\HyLang@vietnamese
2588 \AtEndOfPackage{%
2589 \ifundefined{T@PU}{%
2590 \input{puvnenc.def}%
2591 }%
2592 }%
2593 }

```

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

```

2594 \define@key{Hyp}{arabic}[]{%
2595 \AtEndOfPackage{%
2596 \ifundefined{T@PU}{%
2597 \input{puarenc.def}%
2598 }%
2599 }%
2600 }

```

13 Options to change appearance of links

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

```

2601 \define@key{Hyp}{colorlinks}[true]{%
2602 \Hy@boolkey{colorlinks}{#1}%
2603 }
2604 \define@key{Hyp}{ocgcolorlinks}[true]{%
2605 \Hy@boolkey{ocgcolorlinks}{#1}%
2606 }
2607 \AtBeginDocument{%
2608 \begingroup
2609 \ifundefined{OBJ@OCG@view}{%
2610 \ifHy@ocgcolorlinks
2611 \Hy@Warning{%
2612 Driver does not support ‘ocgcolorlinks’,\MessageBreak
2613 using ‘colorlinks’ instead%
2614 }%
2615 \fi
2616 }{}%
2617 \endgroup
2618 }
2619 \define@key{Hyp}{frenchlinks}[true]{%
2620 \Hy@boolkey{frenchlinks}{#1}%
2621 }

```


14 Bookmarking

```

2622 \begingroup\expandafter\expandafter\expandafter\endgroup
2623 \expandafter\ifx\csname chapter\endcsname\relax
2624   \def\toclevel@part{0}%
2625 \else
2626   \def\toclevel@part{-1}%
2627 \fi
2628 \def\toclevel@chapter{0}
2629 \def\toclevel@section{1}
2630 \def\toclevel@subsection{2}
2631 \def\toclevel@subsubsection{3}
2632 \def\toclevel@paragraph{4}
2633 \def\toclevel@subparagraph{5}
2634 \def\toclevel@figure{0}
2635 \def\toclevel@table{0}
2636 \@ifpackageloaded{listings}{%
2637   \providecommand*\theHlstlisting{\thelstlisting}%
2638   \providecommand*\toclevel@lstlisting{0}%
2639 }{}
2640 \@ifpackageloaded{listing}{%
2641   \providecommand*\theHlisting{\thelisting}%
2642   \providecommand*\toclevel@listing{0}%
2643 }{}

2644 \define@key{Hyp}{bookmarks}[true]{%
2645   \Hy@boolkey{bookmarks}{#1}%
2646 }

2647 \define@key{Hyp}{bookmarksopen}[true]{%
2648   \Hy@boolkey{bookmarksopen}{#1}%
2649 }

```

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.

```

2650 \let\Hy@bookmarksdepth\c@tocdepth
2651 \define@key{Hyp}{bookmarksdepth}[]{%
2652   \begingroup
2653     \edef\x{#1}%
2654     \ifx\x\empty
2655       \global\let\Hy@bookmarksdepth\c@tocdepth
2656     \else
2657       \@ifundefined{toclevel@\x}{%
2658         \@onelevel@sanitize\x
2659         \edef\y{\expandafter\@car\x\@nil}%
2660         \ifcase 0\expandafter\ifx\y-1\fi
2661           \expandafter\ifnum\expandafter\y>47 %
2662             \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
2663           \Hy@Warning{Unknown document division name (\x)}%
2664         \else
2665           \setbox\z@=\hbox{%

```

```

2666         \count@=\x
2667         \xdef\Hy@bookmarksdepth{\the\count@}%
2668     }%
2669     \fi
2670 }{%
2671     \setbox\z@=\hbox{%
2672         \count@=\csname toclevel@\x\endcsname
2673         \xdef\Hy@bookmarksdepth{\the\count@}%
2674     }%
2675 }%
2676 \fi
2677 \endgroup
2678 }

```

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

```

2679 \define@key{Hyp}{bookmarksopenlevel}{%
2680   \def\@bookmarksopenlevel{#1}%
2681 }
2682 \def\@bookmarksopenlevel{\maxdimen}
2683 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2684 \define@key{Hyp}{bookmarkstype}{%
2685   \def\Hy@bookmarkstype{#1}%
2686 }
2687 \def\Hy@bookmarkstype{toc}

```

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

```

2688 \define@key{Hyp}{bookmarksnumbered}[true]{%
2689   \Hy@boolkey{bookmarksnumbered}{#1}%
2690 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2691 \define@key{Hyp}{CJKbookmarks}[true]{%
2692   \Hy@boolkey{CJKbookmarks}{#1}%
2693 }

2694 \def\Hy@temp#1{%
2695   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2696 }
2697 \def\Hy@@temp#1#2#3{%
2698   \define@key{Hyp}{#2color}{%
2699     \HyColor@HyperrefColor{##1}{#1}%
2700   }%
2701   \def#1{#3}%
2702 }

2703 \Hy@temp{link}{red}
2704 \Hy@temp{anchor}{black}
2705 \Hy@temp{cite}{green}
2706 \Hy@temp{file}{cyan}
2707 \Hy@temp{url}{magenta}
2708 \Hy@temp{menu}{red}
2709 \Hy@temp{run}{\@filecolor}
2710 \define@key{Hyp}{pagecolor}{%
2711   \Hy@WarningPageColor
2712 }
2713 \def\Hy@WarningPageColor{%
2714   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
2715   \global\let\Hy@WarningPageColor\relax
2716 }

```

```

2717 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2718 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2719 \let\@baseurl\@empty
2720 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2721 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2722 \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.

```

2723 \let\@pdfpagetransition\relax
2724 \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.

```

2725 \let\@pdfpageduration\relax
2726 \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.

```

2727 \newif\ifHy@useHidKey
2728 \Hy@useHidKeyfalse
2729 \define@key{Hyp}{pdfpagehidden}[true]{%
2730   \Hy@boolkey{pdfpagehidden}{#1}%
2731   \ifHy@pdfpagehidden
2732     \global\Hy@useHidKeytrue
2733   \fi
2734 }

```

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).

```

2735 \def\Hy@ColorList{cite,file,link,menu,run,url}
2736 \@for\Hy@temp:=\Hy@ColorList\do{%
2737   \edef\Hy@temp{%
2738     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2739       \noexpand\HyColor@HyperrefBorderColor
2740       {##1}%
2741       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2742       {hyperref}%
2743       {\Hy@temp bordercolor}%
2744     }%
2745   }%
2746   \Hy@temp
2747 }
2748 \define@key{Hyp}{pagebordercolor}{%
2749   \Hy@WarningPageBorderColor

```

```

2750 }
2751 \def\Hy@WarningPageBorderColor{%
2752   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2753   \global\let\Hy@WarningPageBorderColor\relax
2754 }

2755 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2756 \Hy@DefNameKey{pdfhighlight}{%
2757   \do{/I}{Invert}%
2758   \do{/N}{None}%
2759   \do{/O}{Outline}%
2760   \do{/P}{Push}%
2761 }

2762 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2763 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2764 \def\Hy@setpdfborder{%
2765   \ifx\@pdfborder\@empty
2766   \else
2767     /Border[\@pdfborder]%
2768   \fi
2769   \ifx\@pdfborderstyle\@empty
2770   \else
2771     /BS<<\@pdfborderstyle>>%
2772   \fi
2773 }

2774 \Hy@DefNameKey{pdfpagemode}{%
2775   \do{UseNone}{}%
2776   \do{UseOutlines}{}%
2777   \do{UseThumbs}{}%
2778   \do{FullScreen}{}%
2779   \do{UseOC}{PDF 1.5}%
2780   \do{UseAttachments}{PDF 1.6}%
2781 }

2782 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2783   \do{UseNone}{}%
2784   \do{UseOutlines}{}%
2785   \do{UseThumbs}{}%
2786   \do{FullScreen}{}%
2787   \do{UseOC}{PDF 1.5}%
2788   \do{UseAttachments}{PDF 1.6}%
2789 }

2790 \Hy@DefNameKey{pdfdirection}{%
2791   \do{L2R}{Left to right}%
2792   \do{R2L}{Right to left}%
2793 }

2794 \Hy@DefNameKey{pdfviewarea}{%
2795   \do{MediaBox}{}%
2796   \do{CropBox}{}%
2797   \do{BleedBox}{}%
2798   \do{TrimBox}{}%
2799   \do{ArtBox}{}%
2800 }

2801 \Hy@DefNameKey{pdfviewclip}{%
2802   \do{MediaBox}{}%
2803   \do{CropBox}{}%
2804   \do{BleedBox}{}%
2805   \do{TrimBox}{}%
2806   \do{ArtBox}{}%

```

```

2807 }
2808 \Hy@DefNameKey{pdfprintarea}{%
2809   \do{MediaBox}{}%
2810   \do{CropBox}{}%
2811   \do{BleedBox}{}%
2812   \do{TrimBox}{}%
2813   \do{ArtBox}{}%
2814 }
2815 \Hy@DefNameKey{pdfprintclip}{%
2816   \do{MediaBox}{}%
2817   \do{CropBox}{}%
2818   \do{BleedBox}{}%
2819   \do{TrimBox}{}%
2820   \do{ArtBox}{}%
2821 }
2822 \Hy@DefNameKey{pdfprintscaling}{%
2823   \do{AppDefault}{}%
2824   \do{None}{}%
2825 }
2826 \Hy@DefNameKey{pdfduplex}{%
2827   \do{Simplex}{}%
2828   \do{DuplexFlipShortEdge}{}%
2829   \do{DuplexFlipLongEdge}{}%
2830 }
2831 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2832   \do{true}{}%
2833   \do{false}{}%
2834 }
2835 \define@key{Hyp}{pdfprintpagerange}{%
2836   \def\@pdfprintpagerange{#1}%
2837 }
2838 \Hy@DefNameKey{pdfnumcopies}{%
2839   \do{2}{two copies}%
2840   \do{3}{three copies}%
2841   \do{4}{four copies}%
2842   \do{5}{five copies}%
2843 }
2844 \define@key{Hyp}{pdfusetitle}[true]{%
2845   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2846 }
2847 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2848 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2849 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2850 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2851 \define@key{Hyp}{pdfcreationdate}{%
2852   \begingroup
2853     \Hy@unicodetofalse
2854     \pdfstringdef\@pdfcreationdate{#1}%
2855   \endgroup
2856 }
2857 \define@key{Hyp}{pdfmoddate}{%
2858   \begingroup
2859     \Hy@unicodetofalse
2860     \pdfstringdef\@pdfmoddate{#1}%
2861   \endgroup
2862 }
2863 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}

```

```

2864 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2865 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2866 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2867 \let\setpdflinkmargin\@gobble
2868 \def\calculate@pdfview#1 #2\{%
2869   \def\@pdfview{#1}%
2870   \ifx\#2\%
2871     \def\@pdfviewparams{ -32768}%
2872   \else
2873     \def\@pdfviewparams{ #2}%
2874   \fi
2875 }
2876 \begingroup\expandafter\expandafter\expandafter\endgroup
2877 \expandafter\ifx\csname numexpr\endcsname\relax
2878   \def\Hy@number#1{%
2879     \expandafter\@firstofone\expandafter{\number#1}%
2880   }%
2881 \else
2882   \def\Hy@number#1{%
2883     \the\numexpr#1\relax
2884   }%
2885 \fi
2886 \define@key{Hyp}{pdfstartpage}{%
2887   \ifx\#1\%
2888     \def\@pdfstartpage{%
2889       \edef\@pdfstartpage{\Hy@number{#1}}%
2890     }%
2891   \fi
2892 }%
2893 \define@key{Hyp}{pdfstartview}{%
2894   \ifx\#1\%
2895     \def\@pdfstartview{%
2896       \hypercalcbpdef\@pdfstartview{ /#1 }%
2897     }%
2898   \fi
2899 }
2900 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2901 \define@key{Hyp}{pdftoolbar}[true]{%
2902   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2903 }
2904 \define@key{Hyp}{pdfmenubar}[true]{%
2905   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2906 }
2907 \define@key{Hyp}{pdfwindowui}[true]{%
2908   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2909 }
2910 \define@key{Hyp}{pdffitwindow}[true]{%
2911   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2912 }
2913 \define@key{Hyp}{pdfcenterwindow}[true]{%
2914   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2915 }
2916 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2917   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2918 }
2919 \define@key{Hyp}{pdfa}[true]{%
2920   \Hy@boolkey[pdfa]{#1}%

```

```

2921 }
2922 \define@key{Hyp}{pdfnewwindow}[true]{%
2923   \def\Hy@temp{#1}%
2924   \ifx\Hy@temp\@empty
2925     \Hy@newwindowsetfalse
2926   \else
2927     \Hy@newwindowsettrue
2928     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2929   \fi
2930 }
2931 \def\Hy@SetNewWindow{%
2932   \ifHy@newwindowset
2933     /NewWindow %
2934     \ifHy@newwindow true\else false\fi
2935   \fi
2936 }
2937 \Hy@DefNameKey{pdfpagelayout}{%
2938   \do{SinglePage}{}%
2939   \do{OneColumn}{}%
2940   \do{TwoColumnLeft}{}%
2941   \do{TwoColumnRight}{}%
2942   \do{TwoPageLeft}{PDF 1.5}%
2943   \do{TwoPageRight}{PDF 1.5}%
2944 }
2945 \define@key{Hyp}{pdflang}{%
2946   \def\@pdflang{#1}%
2947 }
2948 \define@key{Hyp}{pdfpagelabels}[true]{%
2949   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2950 }
2951 \define@key{Hyp}{pdfescapeform}[true]{%
2952   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2953 }

```

Default values:

```

2954 \def\@linkbordercolor{1 0 0}
2955 \def\@urlbordercolor{0 1 1}
2956 \def\@menubordercolor{1 0 0}
2957 \def\@filebordercolor{0 .5 .5}
2958 \def\@runbordercolor{0 .7 .7}
2959 \def\@citebordercolor{0 1 0}
2960 \def\@pdfhighlight{/I}
2961 \def\@pdftitle{}
2962 \def\@pdfauthor{}
2963 \let\@pdfproducer\relax
2964 \def\@pdfcreator{LaTeX with hyperref package}
2965 \def\@pdfcreationdate{}
2966 \def\@pdfmoddate{}
2967 \def\@pdfsubject{}
2968 \def\@pdfkeywords{}
2969 \def\@pdfpagescrop{}
2970 \def\@pdfstartview{ /Fit }
2971 \def\@pdfstartpage{1}
2972 \def\@pdfprintpagerange{}
2973 \def\@pdflang{}
2974 \let\PDF@SetupDoc\@empty
2975 \let\PDF@FinishDoc\@empty
2976 \let\phantomsection\@empty

```

```

2977 \let\special@paper\@empty
2978 \def\HyperDestNameFilter#1{#1}
2979 \@ifundefined{stockwidth}{%
2980   \ifdim\paperwidth>\z@
2981     \ifdim\paperheight>\z@
2982       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2983     \fi
2984   \fi
2985 }{%
2986   \ifdim\stockwidth>\z@
2987     \ifdim\stockheight>\z@
2988       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2989     \fi
2990   \fi
2991 }
2992 \begingroup
2993   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2994   \dimen@=\x\relax
2995   \ifdim\dimen@>\z@
2996   \else
2997     \dimen@=11in\relax
2998     \Hy@WarningNoLine{%
2999       Height of page (\expandafter\string\x) %
3000       is invalid (\the\x),\MessageBreak
3001       using 11in%
3002     }%
3003   \fi
3004   \dimen@=0.99626401\dimen@
3005   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3006 \endgroup
3007 \def\HyInd@EncapChar{||}
3008 \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.

```

3009 \let\hyper@normalise\ExecuteOptions
3010 \let\ExecuteOptions\hypersetup
3011 \Hy@RestoreCatcodes
3012 \InputIfFileExists{hyperref.cfg}{-}{-}
3013 \Hy@SetCatcodes
3014 \let\ExecuteOptions\hyper@normalise
3015 \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`.

```

3016 \RequirePackage{kvoptions}[2006/08/17]

```

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

```

3017 \@ifpackageloaded{tex4ht}{%
3018   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
3019   \PassOptionsToPackage{tex4ht}{hyperref}%
3020 }%
3021 }{-}
3022 \let\ReadBookmarks\relax
3023 \ProcessKeyvalOptions{Hyp}

```


After processing options.

```
3024 \AtBeginDocument{%
3025   \ifHy@draft
3026     \let\hyper@@anchor\@gobble
3027     \gdef\hyper@link#1#2#3{#3}%
3028     \let\hyper@anchorstart\@gobble
3029     \let\hyper@anchorend\@empty
3030     \let\hyper@linkstart\@gobbletwo
3031     \let\hyper@linkend\@empty
3032     \def\hyper@linkurl#1#2{#1}%
3033     \def\hyper@linkfile#1#2#3{#1}%
3034     \def\hyper@link@{#1}#2#3{#1}%
3035     \def\Acrobatmenu#1#2{\leavevmode#2}%
3036     \let\PDF@SetupDoc\@empty
3037     \let\PDF@FinishDoc\@empty
3038     \let\@fifthoffive\@secondoftwo
3039     \let\@secondoffive\@secondoftwo
3040     \let\ReadBookmarks\relax
3041     \let\WriteBookmarks\relax
3042     \Hy@WarningNoLine{ draft mode on}%
3043   \fi
3044   \Hy@DisableOption{draft}%
3045   \Hy@DisableOption{nolinks}%
3046   \Hy@DisableOption{final}%
3047 }
```

15.1 PDF/A

```
3048 \Hy@DisableOption{pdfa}
3049 \ifHy@pdfa
3050   \setkeys{Hyp}{pdfversion=1.4}%
3051   \def\Hy@Acrobatmenu#1#2{%
3052     \leavevmode
3053     \begingroup
3054       \edef\x{#1}%
3055       \@onelevel@sanitize\x
3056       \ifx\x\Hy@NextPage
3057         \let\y=Y%
3058       \else
3059         \ifx\x\Hy@PrevPage
3060           \let\y=Y%
3061         \else
3062           \ifx\x\Hy@FirstPage
3063             \let\y=Y%
3064           \else
3065             \ifx\x\Hy@LastPage
3066               \let\y=Y%
3067             \else
3068               \let\y=N%
3069             \fi
3070           \fi
3071         \fi
3072       \fi
3073     \expandafter\endgroup
3074     \ifx\y Y%
3075     \else
```

```

3076     \PackageError{hyperref}{%
3077         PDF/A: Named action ‘#1’ is not permitted%
3078     }\@ehc
3079     {#2}%
3080     \expandafter\@gobble
3081 \fi
3082 }%
3083 \def\Hy@temp#1{%
3084     \expandafter\def\csname Hy@#1\endcsname{#1}%
3085     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3086 }%
3087 \Hy@temp{NextPage}%
3088 \Hy@temp{PrevPage}%
3089 \Hy@temp{FirstPage}%
3090 \Hy@temp{LastPage}%
3091 \else
3092     \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3093 \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.

```

3094 \Hy@nextfalse
3095 \@ifundefined{spanish@sh@"@sel}{-}{\Hy@nexttrue}
3096 \@ifundefined{galician@sh@"@sel}{-}{\Hy@nexttrue}
3097 \@ifundefined{estonian@sh@"@sel}{-}{\Hy@nexttrue}
3098 \ifHy@next
3099     \let\texttilde\~%
3100 \fi

```

15.3 Patch for babel 3.8j

Babel 2008/03/16 v3.8j adds a patch to disable shorthands for bookmarks. That reduces warnings, but the bookmarks are ugly. Therefore the following patch tries to undo this.

```

3101 \@ifpackageloaded{babel}{%
3102     \ifpackagelater{babel}{2008/03/16}{%
3103         \def\Hy@PatchLanguageShorthands#1{%
3104             \begingroup
3105                 \edef\x{#1}%
3106                 \@onelevel@sanitize\x
3107                 \def\y{system}%
3108                 \@onelevel@sanitize\y
3109             \expandafter\endgroup
3110             \ifx\x\y
3111             \else
3112                 \HyOrg@languageshorthands{#1}%
3113             \fi
3114         }%
3115         \AtBeginDocument{%
3116             \begingroup
3117                 \toks0=\expandafter{\pdfstringdefPreHook}%
3118                 \xdef\pdfstringdefPreHook{%
3119                     \let\noexpand\HyOrg@languageshorthands
3120                     \noexpand\languageshorthands
3121                     \let\noexpand\languageshorthands
3122                     \noexpand\Hy@PatchLanguageShorthands

```

```

3123         \the\toks0 %
3124         \let\noexpand\languageshorthands
3125         \noexpand\HyOrg@languageshorthands
3126     }%
3127 \endgroup
3128 }%
3129 }{}%
3130 }{}

3131 \ifHy@figures
3132   \Hy@Info{Hyper figures ON}%
3133 \else
3134   \Hy@Info{Hyper figures OFF}%
3135 \fi
3136 \ifHy@nesting
3137   \Hy@Info{Link nesting ON}%
3138 \else
3139   \Hy@Info{Link nesting OFF}%
3140 \fi
3141 \ifHy@hyperindex
3142   \Hy@Info{Hyper index ON}%
3143 \else
3144   \Hy@Info{Hyper index OFF}%
3145 \fi
3146 \ifHy@plainpages
3147   \Hy@Info{Plain pages ON}%
3148 \else
3149   \Hy@Info{Plain pages OFF}%
3150 \fi
3151 \ifHy@backref
3152   \Hy@Info{Backreferencing ON}%
3153 \else
3154   \Hy@Info{Backreferencing OFF}%
3155 \fi
3156 \ifHy@typexml
3157   \AtEndOfPackage{%
3158     \RequirePackage{color}%
3159     \RequirePackage{nameref}%
3160   }%
3161 \fi
3162 \Hy@DisableOption{typexml}
3163 \ifHy@implicit
3164   \typeout{Implicit mode ON; LaTeX internals redefined}%
3165 \else
3166   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3167   \def\MaybeStopEarly{%
3168     \typeout{Hyperref stopped early}%
3169     \AfterBeginDocument{%
3170       \PDF@FinishDoc
3171       \gdef\PDF@FinishDoc{}}%
3172   }%
3173   \endinput
3174 }%
3175 \AtBeginDocument{%
3176   \let\autoref\ref
3177   \let\autopageref\pageref
3178   \ifx\@pdfpagemode\@empty
3179     \gdef\@pdfpagemode{UseNone}%

```

```

3180 \fi
3181 \global\Hy@backreffalse
3182 }%
3183 \AtEndOfPackage{%
3184 \global\let\ReadBookmarks\relax
3185 \global\let\WriteBookmarks\relax
3186 }%
3187 \fi
3188 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3189 \AtEndOfPackage{%
3190 \ifpackageloaded{tex4ht}{%
3191 \def\Hy@driver{htex4ht}%
3192 \Hy@texhttrue
3193 }{}%

```

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.

```

3194 \ifx\Hy@driver\@empty
3195 \else
3196 \def\Hy@temp{hpdftex}%
3197 \ifpdf
3198 \ifx\Hy@driver\Hy@temp
3199 \else
3200 \Hy@WarningNoLine{%
3201 Wrong driver '\Hy@driver.def';\MessageBreak
3202 pdfTeX is running in PDF mode.\MessageBreak
3203 Forcing driver '\Hy@temp.def'%
3204 }%
3205 \let\Hy@driver\Hy@temp
3206 \fi
3207 \else
3208 \ifx\Hy@driver\Hy@temp
3209 \Hy@WarningNoLine{%
3210 Wrong driver '\Hy@driver.def';\MessageBreak
3211 pdfTeX is not running in PDF mode.\MessageBreak
3212 Using default driver%
3213 }%
3214 \let\Hy@driver\@empty
3215 \fi
3216 \fi
3217 \fi
3218 \ifx\Hy@driver\@empty
3219 \else
3220 \def\Hy@temp{hdvipdfm}%
3221 \ifxetex
3222 \ifx\Hy@driver\Hy@temp
3223 \else
3224 \Hy@WarningNoLine{%
3225 Wrong driver '\Hy@driver.def';\MessageBreak
3226 XeTeX is running.\MessageBreak
3227 Forcing driver '\Hy@temp.def' for XeTeX%
3228 }%
3229 \let\Hy@driver\Hy@temp
3230 \fi
3231 \fi

```

```

3232 \fi
3233 \ifx\Hy@driver\@empty
3234 \else
3235   \def\Hy@temp{hvtexhtm}%
3236   \ifvtexhtml
3237     \ifx\Hy@driver\Hy@temp
3238     \else
3239       \Hy@WarningNoLine{%
3240         Wrong driver '\Hy@driver.def';\MessageBreak
3241         VTeX is running in HTML mode.\MessageBreak
3242         Forcing driver '\Hy@temp.def'%
3243       }%
3244       \let\Hy@driver\Hy@temp
3245     \fi
3246   \else
3247     \ifx\Hy@driver\Hy@temp
3248     \Hy@WarningNoLine{%
3249       Wrong driver '\Hy@driver.def';\MessageBreak
3250       VTeX is not running in HTML mode.\MessageBreak
3251       Using default driver%
3252     }%
3253     \let\Hy@driver\@empty
3254   \fi
3255 \fi
3256 \fi

```

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

```

3257 \ifx\Hy@driver\@empty
3258   \providecommand*{\Hy@defaultdriver}{hypertex}%
3259   \ifpdf
3260     \def\Hy@driver{hpdfTeX}%
3261   \else
3262     \ifxetex
3263       \def\Hy@driver{hdvipdfm}%
3264     \else
3265       \ifvtexhtml
3266         \def\Hy@driver{hvtexhtm}%
3267         \def\MaybeStopEarly{%
3268           \typeout{Hyperref stopped early}%
3269           \AfterBeginDocument{%
3270             \PDF@FinishDoc
3271             \gdef\PDF@FinishDoc{}}%
3272         }%
3273         \endinput
3274       }%
3275     \else
3276       \ifvtexpdf
3277         \def\Hy@driver{hvtex}%
3278       \else
3279         \ifvtexps
3280           \def\Hy@driver{hvtex}%
3281         \else
3282           \let\Hy@driver\Hy@defaultdriver
3283         \fi
3284       \fi
3285     \fi
3286   \fi
3287 \fi

```

```

3288 \ifx\Hy@driver\Hy@defaultdriver
3289 \def\Hy@temp{hdvwind}%
3290 \ifx\Hy@temp\Hy@driver
3291 \setkeys{Hyp}{colorlinks}%
3292 \PassOptionsToPackage{dviwindo}{color}%
3293 \fi
3294 \fi
3295 \typeout{*hyperref using default driver \Hy@driver*}%
3296 \else
3297 \typeout{*hyperref using driver \Hy@driver*}%
3298 \fi
3299 \input{\Hy@driver.def}%
3300 \let\@unprocessedoptions\relax
3301 \Hy@RestoreCatcodes
3302 }
3303 \newif\ifHy@DvipdfmxOutlineOpen
3304 \begingroup\expandafter\expandafter\expandafter\endgroup
3305 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3306 \else
3307 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3308 \Hy@DvipdfmxOutlineOpentru
3309 \fi
3310 \fi
3311 \Hy@DisableOption{tex4ht}
3312 \Hy@DisableOption{pdftex}
3313 \Hy@DisableOption{nativepdf}
3314 \Hy@DisableOption{dvipdfm}
3315 \Hy@DisableOption{dvipdfmx}
3316 \Hy@DisableOption{dvipdfmx-outline-open}
3317 \Hy@DisableOption{pdfmark}
3318 \Hy@DisableOption{dvips}
3319 \Hy@DisableOption{hypertex}
3320 \Hy@DisableOption{vtex}
3321 \Hy@DisableOption{vtexpdfmark}
3322 \Hy@DisableOption{dviwindo}
3323 \Hy@DisableOption{dvipsone}
3324 \Hy@DisableOption{textures}
3325 \Hy@DisableOption{latex2html}
3326 \Hy@DisableOption{ps2pdf}
3327 \Hy@DisableOption{xetex}
3328 \AtEndOfPackage{%
3329 \Hy@DisableOption{pdfversion}%
3330 }

```

15.3.2 Bookmarks

```

3331 \def\WriteBookmarks{0}
3332 \def\@bookmarkopenstatus#1{%
3333 \ifHy@bookmarksopen

```

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

```

3334 \ifnum#1<\expandafter\@firstofone\expandafter
3335 \{ \number\@bookmarkopenlevel\} % explicit space
3336 \else
3337 -%
3338 \fi
3339 \else
3340 -%

```

```

3341 \fi
3342 }
3343 \ifHy@bookmarks
3344 \Hy@Info{Bookmarks ON}%
3345 \ifx\@pdfpagemode\@empty
3346 \def\@pdfpagemode{UseOutlines}%
3347 \fi
3348 \else
3349 \def\@bookmarkopenstatus#1{%
3350 \Hy@Info{Bookmarks OFF}%
3351 \AtEndOfPackage{%
3352 \global\let\ReadBookmarks\relax
3353 \global\let\WriteBookmarks\relax
3354 }%
3355 \ifx\@pdfpagemode\@empty
3356 \def\@pdfpagemode{UseNone}%
3357 \fi
3358 \fi
3359 \Hy@DisableOption{bookmarks}

```

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

```

3360 \def\Hy@CatcodeWrapper#1{%
3361 \def\Hy@endWrap{%
3362 \def\TMP@EnsureCode##1##2{%
3363 \edef\Hy@endWrap{%
3364 \Hy@endWrap
3365 \catcode##1 \the\catcode##1\relax
3366 }%
3367 \catcode##1 ##2\relax
3368 }%
3369 \TMP@EnsureCode{10}{12}% ^^J
3370 \TMP@EnsureCode{33}{12}% !
3371 \TMP@EnsureCode{34}{12}% "
3372 \TMP@EnsureCode{36}{3}% $ (math)
3373 \TMP@EnsureCode{38}{4}% & (alignment)
3374 \TMP@EnsureCode{39}{12}% '
3375 \TMP@EnsureCode{40}{12}% (
3376 \TMP@EnsureCode{41}{12}% )
3377 \TMP@EnsureCode{42}{12}% *
3378 \TMP@EnsureCode{43}{12}% +
3379 \TMP@EnsureCode{44}{12}% ,
3380 \TMP@EnsureCode{45}{12}% -
3381 \TMP@EnsureCode{46}{12}% .
3382 \TMP@EnsureCode{47}{12}% /
3383 \TMP@EnsureCode{58}{12}% :
3384 \TMP@EnsureCode{59}{12}% ;
3385 \TMP@EnsureCode{60}{12}% <
3386 \TMP@EnsureCode{61}{12}% =
3387 \TMP@EnsureCode{62}{12}% >
3388 \TMP@EnsureCode{63}{12}% ?
3389 \TMP@EnsureCode{91}{12}% [
3390 \TMP@EnsureCode{93}{12}% ]
3391 \TMP@EnsureCode{94}{7}% ^ (superscript)
3392 \TMP@EnsureCode{95}{8}% _ (subscript)
3393 \TMP@EnsureCode{96}{12}% '
3394 \TMP@EnsureCode{124}{12}% |
3395 \TMP@EnsureCode{126}{13}% ~ (active)
3396 #1\relax

```

```

3397 \Hy@endWrap
3398 }

```

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

```

3399 \AtBeginDocument{%
3400   \ifHy@ocgcolorlinks
3401     \setkeys{Hyp}{colorlinks}%
3402     \ifHy@pdfa
3403       \Hy@Warning{%
3404         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3405         using 'colorlinks' instead of 'ocgcolorlinks'%
3406       }%
3407     \Hy@ocgcolorlinksfalse
3408   \fi
3409 \fi
3410 \ifHy@ocgcolorlinks
3411 \else
3412   \Hy@DisableOption{ocgcolorlinks}%
3413 \fi
3414 \ifHy@colorlinks
3415   \def\@pdfborder{0 0 0}%
3416   \let\@pdfborderstyle\@empty
3417   \ifHy@typexml
3418   \else
3419     \Hy@CatcodeWrapper{%
3420       \RequirePackage{color}%
3421     }%
3422   \fi
3423   \def\Hy@colorlink#1{%
3424     \begingroup
3425     \HyColor@UseColor#1%
3426   }%
3427   \def\Hy@endcolorlink{\endgroup}%
3428   \Hy@Info{Link coloring ON}%
3429 \else
3430   \ifHy@frenchlinks
3431     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3432     \def\Hy@endcolorlink{\endgroup}%
3433     \Hy@Info{French linking ON}%
3434   \else

```

for grouping consistency:

```

3435     \def\Hy@colorlink#1{\begingroup}%
3436     \def\Hy@endcolorlink{\endgroup}%
3437     \Hy@Info{Link coloring OFF}%
3438   \fi
3439 \fi
3440 \Hy@DisableOption{colorlinks}%
3441 \Hy@DisableOption{frenchlinks}%
3442 \ifHy@texht
3443   \long\def\@firstoffive#1#2#3#4#5{#1}%
3444   \long\def\@secondoffive#1#2#3#4#5{#2}%
3445   \long\def\@thirdoffive#1#2#3#4#5{#3}%
3446   \long\def\@fourthoffive#1#2#3#4#5{#4}%
3447   \long\def\@fifthoffive#1#2#3#4#5{#5}%
3448   \providecommand*\@safe@activetrue{}%
3449   \providecommand*\@safe@activesfalse{}%
3450   \def\T@ref#1{%

```



```

3451 \Hy@safe@activetrue
3452 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3453 \Hy@safe@activesfalse
3454 }%
3455 \def\T@pageref#1{%
3456 \Hy@safe@activetrue
3457 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3458 \Hy@safe@activesfalse
3459 }%
3460 \else
3461 \ifHy@typexml
3462 \else
3463 \Hy@CatcodeWrapper{%
3464 \RequirePackage{nameref}%
3465 }%
3466 \fi
3467 \fi
3468 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3469 \DeclareRobustCommand\pageref{%
3470 \@ifstar\@pagerefstar\T@pageref
3471 }%
3472 }
3473 \AfterBeginDocument{%
3474 \ifHy@texht
3475 \else
3476 \Hy@CatcodeWrapper{%
3477 \ReadBookmarks
3478 }%
3479 \fi
3480 }
3481 \ifHy@backref
3482 \RequirePackage{backref}%
3483 \else
3484 \let\Hy@backout\@gobble
3485 \fi
3486 \Hy@DisableOption{backref}
3487 \Hy@DisableOption{pagebackref}
3488 \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.

```

3489 \begingroup
3490 \endlinechar=-1 %
3491 \catcode'\^^A=14 %
3492 \catcode'\^^M\active
3493 \catcode'\%\active
3494 \catcode'\#\active
3495 \catcode'\_\active
3496 \catcode'\$\active
3497 \catcode'\&\active

```

```

3498 \gdef\hyper@normalise{^^A
3499 \begingroup
3500 \catcode'\^^M\active
3501 \def^^M{ }^^A
3502 \catcode'\%\active
3503 \let%\@percentchar
3504 \let%\@percentchar
3505 \catcode'\#\active
3506 \def#{\hyper@hash}^^A
3507 \def\#{\hyper@hash}^^A
3508 \@makeother\&^^A
3509 \edef{\string&}^^A
3510 \edef\&{\string&}^^A
3511 \edef\textunderscore{\string_}^^A
3512 \let_\textunderscore
3513 \catcode'\_ \active
3514 \let_\textunderscore
3515 \let~\hyper@tilde
3516 \let~\hyper@tilde
3517 \let\textasciitilde\hyper@tilde
3518 \let\\\@backslashchar
3519 \edef$\string$}^^A
3520 \Hy@safe@activestrue
3521 \hyper@n@rmalise
3522 }^^A
3523 \catcode'\#=6 ^^A
3524 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3525 \gdef\hyper@n@rmalise#1#2{^^A
3526 \def\Hy@tempa{#2}^^A
3527 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3528 \Hy@ReturnAfterElseFi{^^A
3529 \hyper@@normalise{#1}^^A
3530 }^^A
3531 \else
3532 \Hy@ReturnAfterFi{^^A
3533 \hyper@@normalise{#1}{#2}^^A
3534 }^^A
3535 \fi
3536 }^^A
3537 \gdef\hyper@@normalise#1#2{^^A
3538 \edef\Hy@tempa{^^A
3539 \endgroup
3540 \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3541 }^^A
3542 \Hy@tempa
3543 }^^A
3544 \gdef\Hy@RemovePercentCr#1%\^^M#2\@nil{^^A
3545 #1^^A
3546 \ifx\limits#2\limits
3547 \else
3548 \Hy@ReturnAfterFi{^^A
3549 \Hy@RemovePercentCr #2\@nil
3550 }^^A
3551 \fi
3552 }^^A
3553 \endgroup
3554 \providecommand*\hyper@chars{%

```

```

3555 \let\#\hyper@hash
3556 \let%\@percentchar
3557 \Hy@safe@activetrue
3558 }

3559 \def\hyperlink#1#2{%
3560 \hyper@@link{#{1}}{#2}%
3561 }

3562 \DeclareRobustCommand*\href{%
3563 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3564 }
3565 \def\Hy@href#1{%
3566 \hyper@normalise\href@
3567 }
3568 \begingroup
3569 \catcode'\$=6 %
3570 \catcode'\#=12 %
3571 \gdef\href@#1{\expandafter\href@split$1##\}%
3572 \gdef\href@split$1#$2#$3\{\%
3573 \hyper@@link{#1}{#2}%
3574 }%
3575 \endgroup

```

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

```

3576 \RequirePackage{url}
3577 \let\HyOrg@url\url
3578 \def\Hurl{\begingroup \Url}
3579 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3580 \def\nolinkurl@#1{\Hurl{#1}}
3581 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3582 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

3583 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3584 \providecommand\hyper@image[2]{#2}

3585 \def\hypertarget#1#2{%
3586 \ifHy@nesting
3587 \hyper@@anchor{#1}{#2}%
3588 \else
3589 \hyper@@anchor{#1}{\relax}#2%
3590 \fi
3591 }

```

`\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.

```

3592 \DeclareRobustCommand*\hyperref{%
3593 \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3594 }
3595 \def\Hy@babelnormalise#1[#2]{%
3596 \begingroup
3597 \Hy@safe@activetrue
3598 \edef\Hy@tempa{%
3599 \endgroup
3600 \noexpand#1[#2]}%
3601 }%

```

```

3602 \Hy@tempa
3603 }
3604 \def\@hyperref{\hyper@normalise\@hyperref}
3605 \def\@hyperref#1#2#3{%
3606   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
3607   \expandafter\tryhyper@link\ref@one\\{#1}%
3608 }
3609 \def\tryhyper@link#1\\#2{%
3610   \hyper@@link{#2}{#1}%
3611 }

3612 \def\hyperdef{\@ifnextchar[{\label@hyperdef}{\@hyperdef}}
3613 \def\@hyperdef#1#2#3{%, category, name, text
3614   \ifHy@nesting
3615     \hyper@@anchor{#1.#2}{#3}%
3616   \else
3617     \hyper@@anchor{#1.#2}{\relax}#3%
3618   \fi
3619 }

```

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

```

3620 \def\label@hyperref[#1]{%
3621   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
3622 }%
3623 \def\label@@hyperref#1#2#3{%
3624   \ifx#1\relax
3625     \protect\G@refundefinedtrue
3626     \@latex@warning{%
3627       Hyper reference ‘#2’ on page \thepage \space undefined%
3628     }%
3629     \hyper@@link{}{??}{#3}%
3630   \else
3631     \hyper@@link{\expandafter\@fifthoffive#1}%
3632     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3633   \fi
3634 }
3635 \def\label@hyperdef[#1]#2#3#4{ label name, category, name,
3636                               % anchor text
3637   \@bsphack
3638   \if@filesw
3639     \protected@write\@auxout{%
3640       {\string\newlabel{#1}{\{#\}\}\#2.#3}}%
3641   \fi
3642   \@esphack
3643   \ifHy@nesting
3644     \hyper@@anchor{#2.#3}{#4}%
3645   \else
3646     \hyper@@anchor{#2.#3}{\relax}#4%
3647   \fi
3648 }

```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the

second parameter is empty, its an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

3649 \def\hyper@@link{\let\Hy@reserved@a\relax
3650 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3651 }
3652 \def\hyper@link@[#1]#2#3#4{%
3653   \begingroup
3654     \protected@edef\Hy@tempa{#2}%
3655     \Hy@safe@activetrue
3656     \edef\x{#3}%
3657     \ifx\Hy@tempa\@empty
3658       \toks0{\hyper@link{#1}}%
3659     \else
3660       \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3661     \fi
3662     \toks2{%
3663       \Hy@safe@activesfalse
3664       #4%
3665     }%
3666     \edef\Hy@tempa{\the\toks2}%
3667     \edef\x{\endgroup
3668       \ifx\Hy@tempa\@empty
3669         \noexpand\Hy@Warning{Suppressing empty link}%
3670       \else
3671         \the\toks0 \{x\}\the\toks2}%
3672     \fi
3673   }%
3674   \x
3675 }

```

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.

```

3676 \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.

```

3677   \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
3678 }

```

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

```

3679 \def\@pdftempwordfile{file}%
3680 \def\@pdftempwordrun{run}%
3681 \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:

```

3682 \ifx\#6\%
3683 \expandafter\@hyper@linkfile file:#7\#{3}{#2}%
3684 \else
3685 \ifx\#4\%
3686 \expandafter\@hyper@linkfile file:#7\#{3}{#2}%
3687 \else

```

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

```

3688 \def\@pdftempa{#4}%
3689 \ifx\@pdftempa\@pdftempwordfile
3690 \expandafter\@hyper@linkfile#7\#{3}{#2}%
3691 \else

```

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

```

3692 \ifx\@pdftempa\@pdftempwordrun
3693 \ifHy@pdfa
3694 \PackageError{hyperref}{%
3695 PDF/A: Launch action is prohibited%
3696 }\@ehc
3697 \begingroup
3698 \leavevmode
3699 #2%
3700 \endgroup
3701 \else
3702 \expandafter\@hyper@launch#7\#{3}{#2}%
3703 \fi
3704 \else

```

otherwise its a URL

```

3705 \hyper@linkurl{#3}{#7\ifx\#2\% \else\hyper@hash#2\fi}%
3706 \fi
3707 \fi
3708 \fi
3709 \fi
3710 }

```

By default, turn run: into file:

```

3711 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
3712 \hyper@linkurl{#2}{%
3713 \Hy@linkfileprefix
3714 #1%
3715 \ifx\#3\%
3716 \else
3717 \hyper@hash
3718 #3%
3719 \fi
3720 }%
3721 }

```

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

```

3722 \def\@hyper@linkfile file:#1\#2#3{%
3723 %file url,link string, name
3724 \filename@parse{#1}%
3725 \ifx\filename@ext\relax

```

```

3726 \edef\filename@ext{\XR@ext}%
3727 \fi
3728 \def\use@file{\filename@area\filename@base.\filename@ext}%
3729 \ifx\filename@ext\XR@ext
3730 \hyper@linkfile{#2}{\use@file}{#3}%
3731 \else
3732 \ifx\@baseurl\@empty
3733 \hyper@linkurl{#2}{%
3734 \Hy@linkfileprefix\use@file\ifx\\#3\\ \else\hyper@hash#3\fi
3735 }%
3736 \else
3737 \hyper@linkurl{#2}{\use@file\ifx\\#3\\ \else\hyper@hash#3\fi}%
3738 \fi
3739 \fi
3740 }

```

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.

```

3741 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3742 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3743 \ifx\\#1\\%
3744 #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3745 \else
3746 \def\anchor@spot{#2#3}%
3747 \let\put@me@back\@empty
3748 \ifx\relax#2\relax
3749 \else
3750 \ifHy@nesting
3751 \else
3752 \ifcat a\noexpand#2\relax
3753 \else
3754 \ifcat 0\noexpand#2 \relax
3755 \else
3756 % \typeout{Anchor start is not alphanumeric %
3757 % on input line\the\inputlineno%
3758 % }%
3759 \let\anchor@spot\@empty
3760 \def\put@me@back{#2#3}%
3761 \fi
3762 \fi
3763 \fi
3764 \fi
3765 \ifHy@activeanchor
3766 \anchor@spot
3767 \else
3768 \hyper@anchor{#1}%
3769 \fi
3770 \expandafter\put@me@back
3771 \fi
3772 \let\anchor@spot\@empty
3773 }

```

18 Compatibility with the *LT_εX2html* 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.

```
3774 \let\htmladding\hyperimage
3775 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3776 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3777 \def\htmlref#1#2{% anchor text, label
3778   \label@hyperref[{#2}]{#1}%
3779 }
```

This is really too much. The *LT_εX2html* 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.

```
3780 \def\@@latextohtmlX{%
3781   \let\hhyperref\hyperref
3782   \def\hyperref##1##2##3##4{% anchor text for HTML
3783     % text to print before label in print
3784     % label
3785     % post-label text in print
3786     ##2\ref{##4}##3%
3787   }%
3788 }
```

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.

```
3789 \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
3790 \def\HyField@NewFlag#1#2{%
3791   \lowercase{\HyField@NewOption{#2}}%
3792   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3793 }
```


\HyField@NewFlagOnly

```
3794 \def\HyField@NewFlagOnly#1#2{%
3795   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3796 }
```

\HyField@NewOption #1: option name

```
3797 \def\HyField@NewOption#1{%
3798   \expandafter\newif\csname iffld@#1\endcsname
3799   \define@key{Field}{#1}[true]{%
3800     \lowercase{\Field@boolkey{##1}}{#1}%
3801   }%
3802 }
```

\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

```
3803 \def\HyField@NewBitsetFlag#1#2#3#4{%
3804   \begingroup
3805     \count@=#4\relax
3806     \advance\count@\m@ne
3807     \def\x##1{%
3808       \endgroup
3809       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3810       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
3811         \expandafter\edef\csname HyField@#3@##1\endcsname{%
3812           (\number#4) #2%
3813         }%
3814       \else
3815         \expandafter\edef\csname HyField@#3@##1\endcsname{%
3816           \csname HyField@#3@##1\endcsname
3817           /#2%
3818         }%
3819       \fi
3820     }%
3821   \expandafter\x\expandafter{\the\count@}%
3822 }
```

\HyField@UseFlag The bit set is HyField@#1

```
3823 \def\HyField@UseFlag#1#2{%
3824   \lowercase{\HyField@@UseFlag{#2}}{#1}%
3825 }
```

\HyField@@UseFlag

```
3826 \def\HyField@@UseFlag#1#2{%
3827   \bitsetSetValue{HyField@#2}{%
3828     \csname HyField@#2@#1\endcsname
3829   }{%
3830     \csname iffld@#1\endcsname 1\else 0\fi
3831   }%
3832 }
```

\HyField@SetFlag The bit set is HyField@#1

```
3833 \def\HyField@SetFlag#1#2{%
3834   \lowercase{\HyField@@SetFlag{#2}}{#1}%
3835 }
```

\HyField@@SetFlag

```
3836 \def\HyField@@SetFlag#1#2{%
3837   \bitsetSetValue{HyField@#2}{%
3838     \csname HyField@#2@#1\endcsname
3839   }{1}%
3840 }
```

\HyField@PrintFlags

```
3841 \def\HyField@PrintFlags#1#2{%
3842   \ifHy@verbose
3843     \begingroup
3844     \let\Hy@temp\@empty
3845     \let\MessageBreak\relax
3846     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3847     \bitsetGetSetBitList{HyField@#1}\do{%
3848       \edef\Hy@temp{%
3849         \Hy@temp
3850         \csname HyField@#1@\x\endcsname\MessageBreak
3851       }%
3852     }%
3853   \edef\x{\endgroup
3854     \noexpand\Hy@Info{%
3855       Field flags: %
3856       \expandafter\ifx\@car#1\@nil S\else/\fi
3857       #1 %
3858       \bitsetGetDec{HyField@#1} %
3859       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3860       \Hy@temp
3861     for #2%
3862   }%
3863   }\x
3864 \fi
3865 }
```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
3866 \HyField@NewFlag{Ff}{ReadOnly}{1}
3867 \HyField@NewFlag{Ff}{Required}{2}
3868 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
3869 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3870 \HyField@NewFlag{Ff}{Radio}{16}
3871 \HyField@NewFlag{Ff}{Pushbutton}{17}
3872 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
3873 \HyField@NewFlag{Ff}{Multiline}{13}
3874 \HyField@NewFlag{Ff}{Password}{14}
3875 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3876 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3877 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3878 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3879 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
3880 \HyField@NewFlag{Ff}{Combo}{18}
```

```

3881 \HyField@NewFlag{Ff}{Edit}{19}
3882 \HyField@NewFlag{Ff}{Sort}{20}
3883 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3884 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3885 \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.

```

3886 \newif\ifFld@popdown
3887 \define@key{Field}{popdown}[true]{%
3888   \lowercase{\Field@boolkey{#1}}{popdown}%
3889 }

```

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.

```

3890 \HyField@NewFlag{F}{Invisible}{1}
3891 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3892 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3893 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3894 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3895 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3896 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3897 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3898 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

3899 \ifHy@pdfa
3900   \def\HyField@PDFAFflagWarning#1#2{%
3901     \Hy@Warning{%
3902       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3903       be set to ‘#2’%
3904     }%
3905   }%
3906   \Fld@invisiblefalse
3907   \def\Fld@invisibletrue{%
3908     \HyField@PDFAFflagWarning{invisible}{false}%
3909   }%
3910   \Fld@hiddenfalse
3911   \def\Fld@hiddentrue{%
3912     \HyField@PDFAFflagWarning{hidden}{false}%
3913   }%
3914   \Fld@printtrue
3915   \def\Fld@printfalse{%
3916     \HyField@PDFAFflagWarning{print}{true}%
3917   }%
3918   \Fld@nozoomtrue
3919   \def\Fld@nozoomfalse{%
3920     \HyField@PDFAFflagWarning{nozoom}{true}%
3921   }%
3922   \Fld@norotatetrue
3923   \def\Fld@norotatefalse{%
3924     \HyField@PDFAFflagWarning{norotate}{true}%
3925   }%
3926   \Fld@noviewfalse
3927   \def\Fld@noviewtrue{%

```

```

3928 \HyField@PDFAFFlagWarning{noview}{false}%
3929 }%
3930 \fi

```

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

```

3931 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3932 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3933 \HyField@NewFlag{Submit}{GetMethod}{4}
3934 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3935 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3936 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3937 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3938 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3939 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3940 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3941 \HyField@NewFlag{Submit}{ExclFKey}{12}
3942 \HyField@NewFlag{Submit}{EmbedForm}{14}

3943 \define@key{Field}{export}{%
3944   \lowercase{\def\Hy@temp{#1}}%
3945   \@ifundefined{Fld@export@\Hy@temp}{%
3946     \onelevel@sanitize\Hy@temp
3947     \PackageError{hyperref}{%
3948       Unknown export format '\Hy@temp'.\MessageBreak
3949       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
3950     }\@ehc
3951   }{%
3952     \let\Fld@export\Hy@temp
3953   }%
3954 }
3955 \def\Fld@export{fdf}
3956 \@namedef{Fld@export@fdf}{0}%
3957 \@namedef{Fld@export@html}{1}%
3958 \@namedef{Fld@export@xfdf}{2}%
3959 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3960 \def\HyField@FlagsSubmit{%
3961   \bitsetReset{HyField@Submit}%
3962   \ifcase\@nameuse{Fld@export@\Fld@export} %
3963     % FDF
3964     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3965     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3966     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3967     \HyField@UseFlag{Submit}{IncludeAnnotations}%
3968     \HyField@UseFlag{Submit}{CanonicalFormat}%
3969     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3970     \HyField@UseFlag{Submit}{ExclFKey}%
3971     \HyField@UseFlag{Submit}{EmbedForm}%
3972   \or % HTML
3973     \HyField@SetFlag{Submit}{ExportFormat}%
3974     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3975     \HyField@UseFlag{Submit}{GetMethod}%
3976     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3977     \HyField@UseFlag{Submit}{CanonicalFormat}%
3978   \or % XFDF

```

```

3979 \HyField@SetFlag{Submit}{XFDF}%
3980 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3981 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3982 \HyField@UseFlag{Submit}{CanonicalFormat}%
3983 \or % PDF
3984 \HyField@SetFlag{Submit}{SubmitPDF}%
3985 \HyField@UseFlag{Submit}{GetMethod}%
3986 \fi
3987 \HyField@PrintFlags{Submit}{submit button field}%
3988 \bitsetIsEmpty{HyField@Submit}{%
3989 \def\Fld@submitflags{%
3990 }{%
3991 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3992 }%
3993 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

3994 \def\HyField@FlagsAnnot#1{%
3995 \bitsetReset{HyField@F}%
3996 \HyField@UseFlag{F}{Invisible}%
3997 \HyField@UseFlag{F}{Hidden}%
3998 \HyField@UseFlag{F}{Print}%
3999 \HyField@UseFlag{F}{NoZoom}%
4000 \HyField@UseFlag{F}{NoRotate}%
4001 \HyField@UseFlag{F}{NoView}%
4002 \HyField@UseFlag{F}{Locked}%
4003 \HyField@UseFlag{F}{ToggleNoView}%
4004 \HyField@UseFlag{F}{LockedContents}%
4005 \HyField@PrintFlags{F}{#1}%
4006 \bitsetIsEmpty{HyField@F}{%
4007 \def\Fld@annotflags{%
4008 }{%
4009 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4010 }%
4011 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4012 \def\HyField@FlagsPushButton{%
4013 \HyField@FlagsAnnot{push button field}%
4014 \bitsetReset{HyField@Ff}%
4015 \HyField@UseFlag{Ff}{ReadOnly}%
4016 \HyField@UseFlag{Ff}{Required}%
4017 \HyField@UseFlag{Ff}{NoExport}%
4018 \HyField@SetFlag{Ff}{PushButton}%
4019 \HyField@PrintFlags{Ff}{push button field}%
4020 \bitsetIsEmpty{HyField@Ff}{%
4021 \def\Fld@flags{%
4022 }{%
4023 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4024 }%
4025 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
4026 \def\HyField@FlagsCheckBox{%
4027   \HyField@FlagsAnnot{check box field}%
4028   \bitsetReset{HyField@Ff}%
4029   \HyField@UseFlag{Ff}{ReadOnly}%
4030   \HyField@UseFlag{Ff}{Required}%
4031   \HyField@UseFlag{Ff}{NoExport}%
4032   \HyField@PrintFlags{Ff}{check box field}%
4033   \bitsetIsEmpty{HyField@Ff}{%
4034     \def\Fld@flags{%
4035     }{%
4036       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4037     }%
4038 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4039 \def\HyField@FlagsRadioButton{%
4040   \HyField@FlagsAnnot{radio button field}%
4041   \bitsetReset{HyField@Ff}%
4042   \HyField@UseFlag{Ff}{ReadOnly}%
4043   \HyField@UseFlag{Ff}{Required}%
4044   \HyField@UseFlag{Ff}{NoExport}%
4045   \HyField@UseFlag{Ff}{NoToggleToOff}%
4046   \HyField@SetFlag{Ff}{Radio}%
4047   \HyField@UseFlag{Ff}{RadiosInUnison}%
4048   \HyField@PrintFlags{Ff}{radio button field}%
4049   \bitsetIsEmpty{HyField@Ff}{%
4050     \def\Fld@flags{%
4051     }{%
4052       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4053     }%
4054 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4055 \def\HyField@FlagsText{%
4056   \HyField@FlagsAnnot{text field}%
4057   \bitsetReset{HyField@Ff}%
4058   \HyField@UseFlag{Ff}{ReadOnly}%
4059   \HyField@UseFlag{Ff}{Required}%
4060   \HyField@UseFlag{Ff}{NoExport}%
4061   \HyField@UseFlag{Ff}{Multiline}%
4062   \HyField@UseFlag{Ff}{Password}%
4063   \HyField@UseFlag{Ff}{FileSelect}%
4064   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4065   \HyField@UseFlag{Ff}{DoNotScroll}%
4066   \ifFld@comb
4067     \ifcase0\ifFld@multiline
4068       \else\ifFld@password
4069       \else\ifFld@fileselect
4070       \else 1\fi\fi\fi\relax
```

```

4071     \PackageError{hyperref}{%
4072         Field option 'comb' cannot used together with\MessageBreak
4073         'multiline', 'password', or 'fileselect'%
4074     }\@ehc
4075     \else
4076         \HyField@UseFlag{Ff}{Comb}%
4077     \fi
4078 \fi
4079 \HyField@UseFlag{Ff}{RichText}%
4080 \HyField@PrintFlags{Ff}{text field}%
4081 \bitsetIsEmpty{HyField@Ff}{%
4082     \def\Fld@flags{%
4083 }{%
4084     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4085 }%
4086 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4087 \def\HyField@FlagsChoice{%
4088     \HyField@FlagsAnnot{choice field}%
4089     \bitsetReset{HyField@Ff}%
4090     \HyField@UseFlag{Ff}{ReadOnly}%
4091     \HyField@UseFlag{Ff}{Required}%
4092     \HyField@UseFlag{Ff}{NoExport}%
4093     \HyField@UseFlag{Ff}{Combo}%
4094     \ifFld@combo
4095         \HyField@UseFlag{Ff}{Edit}%
4096     \fi
4097     \HyField@UseFlag{Ff}{Sort}%
4098     \HyField@UseFlag{Ff}{MultiSelect}%
4099     \ifFld@combo
4100         \ifFld@edit
4101             \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4102         \fi
4103     \fi
4104     \HyField@UseFlag{Ff}{CommitOnSelChange}%
4105     \HyField@PrintFlags{Ff}{choice field}%
4106     \bitsetIsEmpty{HyField@Ff}{%
4107         \def\Fld@flags{%
4108 }{%
4109         \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4110     }%
4111 }

```

19.2 Choice field

4112 \RequirePackage{kvsetkeys}[2007/09/29]

\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.

```

4113 \def\HyField@PDFChoices#1{%
4114     \begingroup
4115     \gdef\Fld@choices{%
4116         \def\HyTmp@optlist{%

```

```

4117 \let\HyTmp@optitem\relax
4118 \count@=0 %
4119 \kv@parse{#1}{%
4120   \Hy@pdfstringdef\kv@key\kv@key
4121   \ifx\kv@value\relax
4122     \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4123       \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4124     \else
4125       \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4126     \fi
4127   \else
4128     \Hy@pdfstringdef\kv@value\kv@value
4129     \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
4130   \fi
4131 \edef\HyTmp@optlist{%
4132   \HyTmp@optlist
4133   \HyTmp@optitem{\the\count@}{\kv@key}0%
4134 }%
4135 \advance\count@ by 1 %
4136 \@gobbletwo
4137 }%
4138 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4139 \ifFld@multiselect
4140   \HyField@@PDFChoices{DV}\Fld@default
4141   \HyField@@PDFChoices{V}\Fld@value
4142 \else
4143   \ifx\Fld@default\relax
4144   \else
4145     \pdfstringdef\Hy@gtemp\Fld@default
4146     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4147   \fi
4148   \ifx\Fld@value\relax
4149   \else
4150     \pdfstringdef\Hy@gtemp\Fld@value
4151     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4152   \fi
4153 \fi
4154 \endgroup
4155 }

```

\HyField@@PDFChoices

```

4156 \def\HyField@@PDFChoices#1#2{%
4157   \ifx#2\relax
4158   \else
4159     \count@=0 %
4160     \def\HyTmp@optitem##1##2##3{%
4161       \def\HyTmp@key{##2}%
4162       \ifx\HyTmp@key\Hy@gtemp
4163         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4164           \HyTmp@optlist
4165           \HyTmp@optitem{##1}{##2}1%
4166         }%
4167       \let\HyTmp@found=Y%
4168     \else
4169       \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4170         \HyTmp@optlist
4171         \HyTmp@optitem{##1}{##2}##3%

```



```

4172     }%
4173     \fi
4174 }%
4175 \expandafter\comma@parse\expandafter{#2}{%
4176   \pdfstringdef\Hy@gtmp\comma@entry
4177   \let\HyTmp@found=N %
4178   \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4179   \HyTmp@optlist
4180   \ifx\HyTmp@found Y%
4181     \advance\count@ by 1 %
4182   \else
4183     \@onelevel@sanitize\comma@entry
4184     \PackageWarning{hyperref}{%
4185       \string\ChoiceBox: Ignoring value '\comma@entry',%
4186       \MessageBreak
4187       it cannot be found in the choices%
4188     }%
4189   \fi
4190   \@gobble
4191 }%
4192 \def\HyTmp@optitem##1##2##3{%
4193   \ifnum##3=1 %
4194     (##2)%
4195   \fi
4196 }%
4197 \ifcase\count@
4198 \or
4199   \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4200 \else
4201   \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4202   \ifx#1V%
4203     \def\HyTmp@optitem##1##2##3{%
4204       \ifnum##3=1 %
4205         \@firstofone{ ##1}%
4206       \fi
4207     }%
4208     \edef\HyTmp@optlist{\HyTmp@optlist}%
4209     \xdef\Fld@choices{%
4210       \Fld@choices
4211       /I[\expandafter\@firstofone\HyTmp@optlist]%
4212     }%
4213   \fi
4214 \fi
4215 \fi
4216 }

```

19.3 Forms

\HyField@SetKeys

```

4217 \def\HyField@SetKeys{%
4218   \setkeys{Field}%
4219 }

4220 \newif\ifFld@checked
4221 \newif\ifFld@disabled
4222 \Fld@checkedfalse
4223 \Fld@disabledfalse

```

```

4224 \newcount\Fld@menulength
4225 \newdimen\Fld@Width
4226 \newdimen\Fld@charsize
4227 \Fld@charsize=10\p@
4228 \def\Fld@maxlen{0}
4229 \def\Fld@align{0}
4230 \def\Fld@color{0 0 0 rg}
4231 \def\Fld@bcolor{1 1 1}
4232 \def\Fld@bordercolor{1 0 0}
4233 \def\Fld@bordersep{1\p@}
4234 \def\Fld@borderwidth{1}
4235 \def\Fld@borderstyle{S}
4236 \def\Fld@cbsymbol{4}
4237 \def\Fld@rotation{0}
4238 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4239 \def\endForm{\@endForm}
4240 \newif\ifForm@html
4241 \Form@htmlfalse
4242 \def\Form@boolkey#1#2{%
4243   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4244 }
4245 \define@key{Form}{action}{%
4246   \hyper@normalise\Hy@DefFormAction{#1}%
4247 }
4248 \def\Hy@DefFormAction{\def\Form@action}
4249 \def\enc@html{html}
4250 \define@key{Form}{encoding}{%
4251   \def\Hy@tempa{#1}%
4252   \ifx\Hy@tempa\enc@html
4253     \Form@htmltrue
4254     \def\Fld@export{html}%
4255   \else
4256     \typeout{hyperref: form 'encoding' key set to #1 %
4257     -- unknown type%
4258   }%
4259   \Form@htmlfalse
4260 \fi
4261 }
4262 \define@key{Form}{method}{%
4263   \lowercase{\def\Hy@temp{#1}}%
4264   \@ifundefined{Form@method@\Hy@temp}{%
4265     \@onelevel@sanitize\Hy@temp
4266     \PackageError{hyperref}{%
4267       Unknown method '\Hy@temp'.\MessageBreak
4268       Known values are 'post' and 'get'%
4269     }\@ehc
4270   }{%
4271     \let\Form@method\Hy@temp
4272     \ifcase\@nameuse{Form@method@\Hy@temp} %
4273       \Fld@getmethodfalse
4274     \else
4275       \Fld@getmethodtrue
4276     \fi
4277   }%
4278 }
4279 \def\Form@method{}
4280 \@namedef{Form@method@post}{0}

```

```

4281 \@namedef{Form@method@get}{1}
4282 \def\Field@boolkey#1#2{%
4283   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4284 }
4285 \newtoks\Field@toks
4286 \Field@toks={ }%
4287 \def\Field@addtoks#1#2{%
4288   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4289   \@processme
4290 }
4291 \def\Fld@checkequals#1=#2=#3\{%
4292   \def\@currDisplay{#1}%
4293   \ifx\#2\%
4294     \def\@currValue{#1}%
4295   \else
4296     \def\@currValue{#2}%
4297   \fi
4298 }
4299 \define@key{Field}{loc}{%
4300   \def\Fld@loc{#1}%
4301 }
4302 \define@key{Field}{checked}[true]{%
4303   \lowercase{\Field@boolkey{#1}}{checked}%
4304 }
4305 \define@key{Field}{disabled}[true]{%
4306   \lowercase{\Field@boolkey{#1}}{disabled}%
4307 }
4308 \define@key{Field}{accesskey}{%
4309   \Field@addtoks{accesskey}{#1}%
4310 }
4311 \define@key{Field}{tabkey}{%
4312   \Field@addtoks{tabkey}{#1}%
4313 }
4314 \define@key{Field}{name}{%
4315   \def\Fld@name{#1}%
4316 }
4317 \define@key{Field}{width}{%
4318   \def\Fld@width{#1}%
4319   \Field@Width#1\setbox0=\hbox{m}%
4320 }
4321 \define@key{Field}{maxlen}{%
4322   \def\Fld@maxlen{#1}%
4323 }
4324 \define@key{Field}{menulength}{%
4325   \Fld@menulength=#1\relax
4326 }
4327 \define@key{Field}{height}{%
4328   \def\Fld@height{#1}%
4329 }
4330 \define@key{Field}{charsize}{%
4331   \Fld@charsize#1%
4332 }
4333 \define@key{Field}{borderwidth}{%
4334   \def\Fld@borderwidth{#1}%
4335 }
4336 \define@key{Field}{borderstyle}{%
4337   \def\Fld@borderstyle{#1}%

```

```

4338 }
4339 \define@key{Field}{bordersep}{%
4340   \def\Fld@bordersep{#1}%
4341 }
4342 \define@key{Field}{default}{%
4343   \def\Fld@default{#1}%
4344 }
4345 \define@key{Field}{align}{%
4346   \def\Fld@align{#1}%
4347 }
4348 \define@key{Field}{value}{%
4349   \def\Fld@value{#1}%
4350 }
4351 \define@key{Field}{checkboxsymbol}{%
4352   \def\Fld@cbsymbol{#1}%
4353 }
4354 \define@key{Field}{rotation}{%
4355   \def\Fld@rotation{#1}%
4356 }
4357 \define@key{Field}{backgroundcolor}{%
4358   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4359 }
4360 \define@key{Field}{bordercolor}{%
4361   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4362 }
4363 \define@key{Field}{color}{%
4364   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4365 }
4366 \def\Fld@onclick@code{}
4367 \def\Fld@format@code{}
4368 \def\Fld@validate@code{}
4369 \def\Fld@calculate@code{}
4370 \def\Fld@keystroke@code{}
4371 \def\Fld@onfocus@code{}
4372 \def\Fld@onblur@code{}
4373 \def\Fld@onmousedown@code{}
4374 \def\Fld@onmouseup@code{}
4375 \def\Fld@onenter@code{}
4376 \def\Fld@onexit@code{}
4377 \def\Hy@temp#1{%
4378   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4379 }
4380 \def\Hy@@temp#1#2{%
4381   \ifHy@pdfa
4382     \define@key{Field}{#2}{%
4383       \PackageError{hyperref}{%
4384         PDF/A: Additional action ‘#2’ is prohibited%
4385       }\@ehc
4386     }%
4387   \else
4388     \define@key{Field}{#2}{%
4389       \def#1{##1}%
4390     }%
4391   \fi
4392 }
4393 \Hy@temp{keystroke}

```

```

4394 \Hy@temp{format}
4395 \Hy@temp{validate}
4396 \Hy@temp{calculate}
4397 \Hy@temp{onfocus}
4398 \Hy@temp{onblur}
4399 \Hy@temp{onenter}
4400 \Hy@temp{onexit}
4401 \def\Hy@temp#1{%
4402   \define@key{Field}{#1}{%
4403     \Field@addtoks{#1}{##1}%
4404   }%
4405 }
4406 \Hy@temp{onselect}
4407 \Hy@temp{onchange}
4408 \Hy@temp{ondblclick}
4409 \Hy@temp{onmousedown}
4410 \Hy@temp{onmouseup}
4411 \Hy@temp{onmouseover}
4412 \Hy@temp{onmousemove}
4413 \Hy@temp{onmouseout}
4414 \Hy@temp{onkeypress}
4415 \Hy@temp{onkeydown}
4416 \Hy@temp{onkeyup}
4417 \ifHy@pdfa
4418   \define@key{Field}{onclick}{%
4419     \PackageError{hyperref}{%
4420       PDF/A: Action 'onclick' is prohibited%
4421     }\@ehc
4422   }%
4423 \else
4424   \define@key{Field}{onclick}{%
4425     \def\Fld@onclick@code{#1}%
4426     \Field@addtoks{onclick}{#1}%
4427   }%
4428 \fi
4429 \DeclareRobustCommand\TextField{%
4430   \@ifnextchar[{\@TextField}{\@TextField[]}%
4431 }
4432 \DeclareRobustCommand\ChoiceMenu{%
4433   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4434 }
4435 \DeclareRobustCommand\CheckBox{%
4436   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4437 }
4438 \DeclareRobustCommand\PushButton{%
4439   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4440 }
4441 \DeclareRobustCommand\Gauge{%
4442   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4443 }
4444 \DeclareRobustCommand\Submit{%
4445   \@ifnextchar[{\@Submit}{\@Submit[]}%
4446 }
4447 \DeclareRobustCommand\Reset{%
4448   \@ifnextchar[{\@Reset}{\@Reset[]}%
4449 }
4450 \def\LayoutTextField#1#2{% label, field

```

```

4451 #1 #2%
4452 }
4453 \def\LayoutChoiceField#1#2{% label, field
4454 #1 #2%
4455 }
4456 \def\LayoutCheckField#1#2{% label, field
4457 #1 #2%
4458 }
4459 \def\LayoutPushButtonField#1{% button
4460 #1%
4461 }
4462 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4463 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4464 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4465 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4466 \def\MakeButtonField#1{%
4467 \sbox0{%
4468 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4469 }%
4470 \@tempdima\ht0 %
4471 \advance\@tempdima by \Fld@borderwidth bp %
4472 \advance\@tempdima by \Fld@borderwidth bp %
4473 \ht0\@tempdima
4474 \@tempdima\dp0 %
4475 \advance\@tempdima by \Fld@borderwidth bp %
4476 \advance\@tempdima by \Fld@borderwidth bp %
4477 \dp0\@tempdima
4478 \box0\relax
4479 }
4480 \def\DefaultHeightofSubmit{14pt}
4481 \def\DefaultWidthofSubmit{2cm}
4482 \def\DefaultHeightofReset{14pt}
4483 \def\DefaultWidthofReset{2cm}
4484 \def\DefaultHeightofCheckBox{\baselineskip}
4485 \def\DefaultWidthofCheckBox{\baselineskip}
4486 \def\DefaultHeightofChoiceMenu{\baselineskip}
4487 \def\DefaultWidthofChoiceMenu{\baselineskip}
4488 \def\DefaultHeightofText{\baselineskip}
4489 \def\DefaultHeightofTextMultiline{4\baselineskip}
4490 \def\DefaultWidthofText{3cm}
4491 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4492 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4493 \def\DefaultOptionsofPushButton{print}
4494 \def\DefaultOptionsofCheckBox{print}
4495 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4496 \def\DefaultOptionsofListBox{print}
4497 \def\DefaultOptionsofComboBox{print,edit,sort}
4498 \def\DefaultOptionsofPopdownBox{print}
4499 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4500 \ifHy@figures
4501 \Hy@Info{Hyper figures ON}%
4502 \else

```

```

4503 \Hy@Info{Hyper figures OFF}%
4504 \fi
4505 \ifHy@nesting
4506 \Hy@Info{Link nesting ON}%
4507 \else
4508 \Hy@Info{Link nesting OFF}%
4509 \fi
4510 \ifHy@hyperindex
4511 \Hy@Info{Hyper index ON}%
4512 \else
4513 \Hy@Info{Hyper index OFF}%
4514 \fi
4515 \ifHy@backref
4516 \Hy@Info{backreferencing ON}%
4517 \else
4518 \Hy@Info{backreferencing OFF}%
4519 \fi
4520 \ifHy@colorlinks
4521 \Hy@Info{Link coloring ON}%
4522 \else
4523 \Hy@Info{Link coloring OFF}%
4524 \fi
4525 \ifHy@ocgcolorlinks
4526 \Hy@Info{Link coloring with OCG ON}%
4527 \else
4528 \Hy@Info{Link coloring with OCG OFF}%
4529 \fi
4530 \ifHy@pdfa
4531 \Hy@Info{PDF/A mode ON}%
4532 \else
4533 \Hy@Info{PDF/A mode OFF}%
4534 \fi

```

21 Low-level utility macros

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

```

4535 \edef\hyper@hash{\string#}
4536 \edef\hyper@tilde{\string~}
4537 \edef\hyper@quote{\string"}
4538 \let\@currentHref\@empty
4539 \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.

```

4540 \AfterBeginDocument{%
4541 \Hy@pdfstringtrue
4542 \PDF@SetupDoc
4543 \let\PDF@SetupDoc\@empty
4544 \Hy@DisableOption{pdfpagescrop}%
4545 \Hy@DisableOption{pdfpagemode}%
4546 \Hy@DisableOption{pdfnonfullscreenpagemode}%
4547 \Hy@DisableOption{pdfdirection}%
4548 \Hy@DisableOption{pdfviewarea}%
4549 \Hy@DisableOption{pdfviewclip}%
4550 \Hy@DisableOption{pdfprintarea}%
4551 \Hy@DisableOption{pdfprintclip}%
4552 \Hy@DisableOption{pdfprintscaling}%

```

```

4553 \Hy@DisableOption{pdfduplex}%
4554 \Hy@DisableOption{pdfpicktraybypdfsize}%
4555 \Hy@DisableOption{pdfprintpagerange}%
4556 \Hy@DisableOption{pdfnumcopies}%
4557 \Hy@DisableOption{pdfstartview}%
4558 \Hy@DisableOption{pdfstartpage}%
4559 \Hy@DisableOption{pdftoolbar}%
4560 \Hy@DisableOption{pdfmenubar}%
4561 \Hy@DisableOption{pdfwindowui}%
4562 \Hy@DisableOption{pdfitwindow}%
4563 \Hy@DisableOption{pdfcenterwindow}%
4564 \Hy@DisableOption{pdfdisplaydoctitle}%
4565 \Hy@DisableOption{pdfpagelayout}%
4566 \Hy@DisableOption{pdflang}%
4567 \Hy@DisableOption{baseurl}%
4568 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4569 \Hy@pdfstringfalse
4570 }

```

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.

```

4571 \def\NoHyper{%
4572   \def\hyper@link@{##1}##2##3##4{##4}%
4573   \def\hyper@@anchor##1{%
4574     \global\let\hyper@livelink\hyper@link
4575     \gdef\hyper@link##1##2##3{##3}%
4576     \def\hyper@anchorstart##1{%
4577       \let\hyper@anchorend\@empty
4578       \def\hyper@linkstart##1##2{%
4579         \let\hyper@linkend\@empty
4580         \def\hyper@linkurl##1##2{##1}%
4581         \def\hyper@linkfile##1##2##3{##1}%
4582         \def\hyper@link@{##1}##2##3{%
4583           \let\Hy@backout\@gobble
4584         }
4585       \def\stop@hyper{%
4586         \def\hyper@link@{##1}##2##3##4{##4}%
4587         \let\Hy@backout\@gobble
4588         \def\hyper@@anchor##1{%
4589           \def\hyper@link##1##2##3{##3}%
4590           \def\hyper@anchorstart##1{%
4591             \let\hyper@anchorend\@empty
4592             \def\hyper@linkstart##1##2{%
4593               \let\hyper@linkend\@empty
4594               \def\hyper@linkurl##1##2{##1}%
4595               \def\hyper@linkfile##1##2##3{##1}%
4596               \def\hyper@link@{##1}##2##3{%
4597                 \def\endNoHyper{%
4598                   \global\let\hyper@link\hyper@livelink
4599                 }
4600               }
4601             }

```


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:

```
4602 \let\hyper@anchor\@gobble
4603 \def\hyper@link#1#2#3{#3}%
4604 \let\hyper@anchorstart\@gobble
4605 \let\hyper@anchorend\@empty
4606 \let\hyper@linkstart\@gobbletwo
4607 \let\hyper@linkend\@empty
4608 \def\hyper@linkurl#1#2{#1}%
4609 \def\hyper@linkfile#1#2#3{#1}%
4610 \def\hyper@link@{#1}#2#3{#1}%
4611 \let\PDF@SetupDoc\@empty
4612 \let\PDF@FinishDoc\@empty
4613 \def\nohyperpage#1{#1}
```

Some top-level commands:

```
4615 \def\Acrobatmenu#1#2{\leavevmode#2}
4616 \let\pdfstringdefDisableCommands\@gobbletwo
4617 \let\texorpdfstring\@firstoftwo
4618 \let\pdfbookmark\@undefined
4619 \newcommand\pdfbookmark[3][]{\{ }
4620 \let\phantomsection\@empty
4621 \let\hypersetup\@gobble
4622 \let\hyperbaseurl\@gobble
4623 \let\href\@gobble
4624 \let\hyperdef\@gobbletwo
4625 \let\hyperlink\@gobble
4626 \let\hypertarget\@gobble
4627 \def\hyperref{%
4628   \ifnextchar\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4629 }
4630 \long\def\@gobbleopt[#1]{\{ }
4631 \let\hyperpage\@empty
4632 \end{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}`

```
4633 \package
4634 \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.

```
4635 \if@filesw
4636   \ifHy@typexml
4637     \immediate\closeout\mainaux
```

```

4638     \immediate\openout\@mainaux\jobname.aux\relax
4639     \immediate\write\@auxout{<relaxxml>\relax}%
4640 \fi
4641 \immediate\write\@auxout{%
4642     \string\ifx\string\hyper@anchor\string\@undefined^^J%
4643     \global\let\string\oldcontentsline\string\contentsline^^J%
4644     \gdef\string\contentsline%
4645         \string#1\string#2\string#3\string#4{%
4646         \string\oldcontentsline%
4647         {\string#1}{\string#2}{\string#3}}^^J%
4648     \global\let\string\oldnewlabel\string\newlabel^^J%
4649     \gdef\string\newlabel\string#1\string#2{%
4650         \string\newlabelxx{\string#1}\string#2^^J%
4651     \gdef\string\newlabelxx%
4652         \string#1\string#2\string#3\string#4\string#5\string#6{%
4653         \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.

```

4654     \string\AtEndDocument{%
4655         \let\string\contentsline\string\oldcontentsline^^J%
4656         \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.

```

4657     \string\else^^J%
4658     \global\let\string\hyper@last\relax^^J%
4659     \string\fi^^J%
4660 }%
4661 \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.

```

4662 \ifx\hyper@last\@undefined
4663 \def\@starttoc#1{%
4664     \begingroup
4665     \makeatletter
4666     \IfFileExists{\jobname.#1}{%
4667         \Hy@WarningNoLine{%
4668             old #1 file detected, not used; run LaTeX again%
4669         }%
4670     }{%
4671         \if@filesw
4672             \expandafter\newwrite\csname tf@#1\endcsname
4673             \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4674         \fi
4675         \@nobreakfalse
4676     \endgroup
4677 }%
4678 \def\newlabel#1#2{\@newlabel r{#1}{#2}{-}{-}{-}}%
4679 \fi
4680 }

```

25 Title strings

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

```

4681 \ifHy@usetitle
4682   \let\HyOrg@title\title
4683   \let\HyOrg@author\author
4684   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4685   \def\Hy@scanopttitle[#1]{%
4686     \gdef\Hy@title{#1}%
4687     \HyOrg@title[{#1}]%
4688   }%
4689   \def\Hy@scantitle#1{%
4690     \gdef\Hy@title{#1}%
4691     \HyOrg@title{#1}%
4692   }%
4693   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
4694   \def\Hy@scanoptauthor[#1]{%
4695     \gdef\Hy@author{#1}%
4696     \HyOrg@author[{#1}]%
4697   }%
4698   \def\Hy@scanauthor#1{%
4699     \gdef\Hy@author{#1}%
4700     \HyOrg@author{#1}%
4701   }%

```

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.

```

4702 \begingroup
4703   \def\process@me#1\@nil#2{%
4704     \expandafter\let\expandafter\x\csname @#2\endcsname
4705     \edef\y{\expandafter\strip@prefix\meaning\x}%
4706     \def\c##1##2\@nil{%
4707       \ifx\\##1\\%
4708       \else
4709         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4710           \expandafter{\x}%
4711       \fi
4712     }%
4713     \expandafter\c\y\relax#1\@nil
4714   }%
4715   \expandafter\process@me\string\@latex@\@nil{title}%
4716   \expandafter\process@me\string\@latex@\@nil{author}%
4717 \endgroup
4718 \fi
4719 \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.

```

4720 \def\Hy@UseMaketitleString#1{%

```

```

4721 \@ifundefined{Hy@#1}{\{%
4722   \begingroup
4723     \let\Hy@saved@hook\pdfstringdefPreHook
4724     \pdfstringdefDisableCommands{%
4725       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4726       \let\newline\\%
4727     }%
4728     \expandafter\ifx\csname @pdf#1\endcsname\@empty
4729       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4730         \csname Hy@#1\endcsname\@empty
4731       }%
4732     \fi
4733     \global\let\pdfstringdefPreHook\Hy@saved@hook
4734   \endgroup
4735 }%
4736 }
4737 \def\Hy@newline@title#1{ #1}
4738 \def\Hy@newline@author#1{, #1}
4739 \def\Hy@UseMaketitleInfos{%
4740   \Hy@UseMaketitleString{title}%
4741   \Hy@UseMaketitleString{author}%
4742 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

4743 \RequirePackage{atbegshi}[2007/09/09]
4744 \def\Hy@EveryPageHook{}
4745 \def\Hy@EveryPageBoxHook{}
4746 \def\Hy@FirstPageHook{}
4747 \AtBeginShipout{%
4748   \Hy@EveryPageHook
4749   \ifx\Hy@EveryPageBoxHook\@empty
4750   \else
4751     \setbox\AtBeginShipoutBox=\vbox{%
4752       \offinterlineskip
4753       \Hy@EveryPageBoxHook
4754       \box\AtBeginShipoutBox
4755     }%
4756   \fi
4757 }
4758 \AtBeginShipoutFirst{%
4759   \Hy@FirstPageHook
4760 }
4761 \g@addto@macro\Hy@FirstPageHook{%
4762   \PDF@FinishDoc
4763   \gdef\PDF@FinishDoc{}%
4764 }

```

27.1 PDF /PageLabels

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

```

4765 \ifHy@pagelabels
4766   \begingroup\expandafter\expandafter\expandafter\endgroup
4767   \expandafter\ifx\csname thepage\endcsname\relax
4768     \Hy@pagelabelsfalse
4769     \Hy@WarningNoLine{%
4770       Option 'pdfpagelabels' is turned off\MessageBreak
4771       because \string\thepage\space is undefined%
4772     }%
4773     \csname fi\endcsname
4774     \csname iffalse\expandafter\endcsname
4775   \fi

```

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

```

4776 \def\thispdfpagelabel#1{%
4777   \gdef\HyPL@thisLabel{#1}%
4778 }%
4779 \global\let\HyPL@thisLabel\relax

```

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

```

4780 \def\HyPL@Labels{%

```

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

```

4781 \newcount\Hy@abspage
4782 \Hy@abspage=0 %

```

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

```

4783 \def\HyPL@LastType{init}%
4784 \def\HyPL@LastNumber{0}%
4785 \def\HyPL@LastPrefix{}%

```

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

```

4786 \def\HyPL@arabic{D}%
4787 \def\HyPL@Roman{R}%
4788 \def\HyPL@roman{r}%
4789 \def\HyPL@Alph{A}%
4790 \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.

```

4791 \def\HyPL@EveryPage{%
4792   \begingroup
4793   \ifx\HyPL@thisLabel\relax
4794     \let\HyPL@page\thepage
4795   \else
4796     \let\HyPL@page\HyPL@thisLabel
4797     \global\let\HyPL@thisLabel\relax
4798   \fi
4799   \let\HyPL@Type\relax
4800   \ifnum\the\c@page>0 %
4801     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4802   \fi
4803   \let\Hy@temp Y%
4804   \ifx\HyPL@Type\HyPL@LastType
4805   \else
4806     \let\Hy@temp N%
4807   \fi

```

```

4808 \ifx\HyPL@Type\relax
4809 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4810 \else
4811 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4812 \fi
4813 \ifx\HyPL@Prefix\HyPL@LastPrefix
4814 \else
4815 \let\Hy@temp N%
4816 \fi
4817 \if Y\Hy@temp
4818 \advance\c@page by -1 %
4819 \ifnum\HyPL@LastNumber=\the\c@page\relax
4820 \else
4821 \let\Hy@temp N%
4822 \fi
4823 \Hy@StepCount\c@page
4824 \fi
4825 \if N\Hy@temp
4826 \ifx\HyPL@Type\relax
4827 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4828 \else
4829 \HyPL@StorePageLabel{%
4830 \ifx\HyPL@Prefix\@empty
4831 \else
4832 /P(\HyPL@Prefix)%
4833 \fi
4834 /S/\csname HyPL\HyPL@Type\endcsname
4835 \ifnum\the\c@page=1 %
4836 \else
4837 \space/St \the\c@page
4838 \fi
4839 }%
4840 \fi
4841 \fi
4842 \xdef\HyPL@LastNumber{\the\c@page}%
4843 \global\let\HyPL@LastType\HyPL@Type
4844 \global\let\HyPL@LastPrefix\HyPL@Prefix
4845 \endgroup
4846 \Hy@GlobalStepCount\Hy@abspage
4847 }%

```

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

```

4848 \def\HyPL@CheckThePage#1\@nil{%
4849 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
4850 }%

```

`\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 implemenation 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`.

```

4851 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4852 \def\Hy@tempa{#4}%
4853 \def\Hy@tempb{\csname\endcsname\c@page}%
4854 \ifx\Hy@tempa\Hy@tempb
4855 \expandafter\ifx\csname HyPL#3\endcsname\relax
4856 \else
4857 \def\HyPL@Type{#3}%

```

```

4858     \def\HyPL@Prefix{#2}%
4859     \fi
4860     \else
4861     \begingroup
4862     \let\Hy@next\endgroup
4863     \let\HyPL@found\@undefined
4864     \def\arabic{\HyPL@Format{arabic}}%
4865     \def\Roman{\HyPL@Format{Roman}}%
4866     \def\roman{\HyPL@Format{roman}}%
4867     \def\Alph{\HyPL@Format{Alph}}%
4868     \def\alph{\HyPL@Format{alph}}%
4869     \protected@edef\Hy@temp{#1}%
4870     \ifx\HyPL@found\relax
4871     \toks@{\expandafter{\Hy@temp}}%
4872     \edef\Hy@next{\endgroup
4873     \noexpand\HyPL@@@CheckThePage\the\toks@
4874     \noexpand\HyPL@found\relax\noexpand\@nil
4875     }%
4876     \fi
4877     \Hy@next
4878     \fi
4879     }%

```

\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`.

```

4880     \def\HyPL@Format#1#2{%
4881     \ifx\HyPL@found\@undefined
4882     \expandafter\ifx\csname c@#2\endcsname\c@page
4883     \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4884     \else
4885     \expandafter\noexpand\csname#1\endcsname{#2}%
4886     \fi
4887     \else
4888     \expandafter\noexpand\csname#1\endcsname{#2}%
4889     \fi
4890     }%

```

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

```

4891     \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4892     \def\Hy@tempa{#3}%
4893     \def\Hy@tempb{\HyPL@found\relax}%
4894     \ifx\Hy@tempa\Hy@tempb
4895     \def\HyPL@Type{#2}%
4896     \def\HyPL@Prefix{#1}%
4897     \fi
4898     }%

```

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

```

4899     \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`.

```

4900     \def\HyPL@Useless{0<</S/D>>}%
4901     \@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.

```

4902 \def\HyPL@SetPageLabels{%
4903   \@onelevel@sanitize\HyPL@Labels
4904   \ifx\HyPL@Labels\@empty
4905   \else
4906     \ifx\HyPL@Labels\HyPL@Useless
4907     \else
4908       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4909     \fi
4910   \fi
4911 }%

4912 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4913 \fi

Option ‘pdfpagelabels’ has been used and is now disabled.
4914 \Hy@DisableOption{pdfpagelabels}
4915 </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`

```

4916 <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.

```

4917 <*vTeX>
4918 \providecommand*{\XR@ext}{pdf}
4919 \edef\Hy@VTeXversion{%
4920   \ifx\VTeXversion\@undefined
4921     \z@
4922   \else
4923     \ifx\VTeXversion\relax
4924     \z@
4925   \else
4926     \VTeXversion
4927   \fi
4928 \fi
4929 }
4930 \begingroup
4931 \ifnum\Hy@VTeXversion<660 %
4932   \gdef\Hy@PutCatalog#1{%
4933     \Hy@WarningNoLine{%
4934       VTeX 6.59g or above required for pdfpagelabels%
4935     }%
4936   }%
4937 \else
4938   \gdef\Hy@PutCatalog#1{%
4939     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4940   }%
4941   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%

```



```

4942     \ifx\#2\%
4943     \else
4944         \immediate\special{!pdfpagelabels #2}%
4945     \fi
4946 }%
4947 \fi
4948 \endgroup
4949 \</vtx>

4950 \<pdfTeX | vtx>

```

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

```

4951 \ifHy@pagelabels
4952   \def\HyPL@StorePageLabel#1{%
4953     \toks@ \expandafter{\HyPL@Labels}%
4954     \xdef\HyPL@Labels{%
4955       \the\toks@
4956       \the\Hy@abspage<<#1>>%
4957     }%
4958 }%

```

At the end of the document, `\clearpage` tries to make sure, that no further pages will follow. Then the PDF catalog entry for `\PageLabels` is set.

```

4959 \@ifclassloaded{revtex4}{%
4960   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
4961 }{%
4962   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
4963 }%

4964 \fi
4965 \</pdfTeX | vtx>

```

27.1.2 pdfmarkbase, dvipdfm

```

4966 \<pdfmarkbase>
4967 \begingroup
4968   \toks@ \expandafter{\Hy@FirstPageHook}%
4969   \xdef\Hy@FirstPageHook{%
4970     \noexpand\headerps@out{%
4971       systemdict /pdfmark known%
4972       {%
4973         userdict /?pdfmark systemdict /exec get put%
4974       }{%
4975         userdict /?pdfmark systemdict /pop get put %
4976         userdict /pdfmark systemdict /cleartomark get put%
4977       }%
4978     }%
4979   }%
4980   \the\toks@
4981 }%
4982 \endgroup
4983 \</pdfmarkbase>

```

`\Hy@PutCatalog`

```

4984 \<dvipdfm>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
4985 \<pdfmarkbase>
4986 \def\Hy@PutCatalog#1{%
4987   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%

```

```

4988 }
4989 </pdfmarkbase>

4990 <*pdfmarkbase | dvipdfm>
4991 \ifHy@pagelabels

\HyPL@StorePageLabel This macro writes a string to the .aux file.
4992 \def\HyPL@StorePageLabel#1{%
4993   \if@filesw
4994     \begingroup
4995       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
4996       \immediate\write\@mainaux{%
4997         \string\HyPL@Entry{\Hy@tempa}%
4998       }%
4999     \endgroup
5000   \fi
5001 }%

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.
5002 \AfterBeginDocument{%
5003   \if@filesw
5004     \immediate\write\@mainaux{%
5005       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5006     }%
5007   \fi
5008   \ifx\HyPL@Labels\@empty
5009     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5010   \else
5011     \HyPL@SetPageLabels
5012   \fi
5013   \let\HyPL@Entry\@gobble
5014 }%

\HyPL@Entry
5015 \def\HyPL@Entry#1{%
5016   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5017     \HyPL@Labels
5018     #1%
5019   }%
5020 }%

5021 \fi
5022 </pdfmarkbase | dvipdfm>

5023 <*package>
5024 \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

```

5025 \def\Hy@CounterExists#1{%
5026   \begingroup\expandafter\expandafter\expandafter\endgroup
5027   \expandafter\ifx\csname c@#1\endcsname\relax
5028     \expandafter\@gobble
5029   \else
5030     \begingroup\expandafter\expandafter\expandafter\endgroup
5031     \expandafter\ifx\csname the#1\endcsname\relax
5032       \expandafter\expandafter\expandafter\@gobble
5033     \else
5034       \expandafter\expandafter\expandafter\@firstofone
5035     \fi
5036   \fi
5037 }
5038 \Hy@CounterExists{section}{%
5039   \newcommand\theHequation{\theHsection.\arabic{equation}}%
5040 }
5041 \Hy@CounterExists{part}{%
5042   \newcommand\theHpart{\arabic{part}}%
5043 }
5044 \@ifundefined{thechapter}{%
5045   \newcommand\theHsection    {\arabic{section}}%
5046   \newcommand\theHfigure     {\arabic{figure}}%
5047   \newcommand\theHtable      {\arabic{table}}%
5048 }{%
5049   \newcommand\theHchapter    {\arabic{chapter}}%
5050   \newcommand\theHfigure     {\theHchapter.\arabic{figure}}%
5051   \newcommand\theHtable      {\theHchapter.\arabic{table}}%
5052   \newcommand\theHsection    {\theHchapter.\arabic{section}}%
5053 }
5054 \newcommand\theHsubsection   {\theHsection.\arabic{subsection}}
5055 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5056 \newcommand\theHparagraph    {\theHsubsubsection.\arabic{paragraph}}
5057 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5058 \newcommand\theHtheorem      {\theHsection.\arabic{theorem}}
5059 \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.

```

5060 \let\H@item\item
5061 \newcounter{Item}
5062 \def\theHItem{\arabic{Item}}
5063 \def\item{%
5064   \@hyper@itemfalse
5065   \if@nmbrlist\@hyper@itemtrue\fi
5066   \H@item

```

```

5067 }
5068 \newcommand\theHenumi {\theHItem}
5069 \newcommand\theHenumii {\theHItem}
5070 \newcommand\theHenumiii {\theHItem}
5071 \newcommand\theHenumiv {\theHItem}
5072 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5073 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5074 \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.

```

5075 \let\H@refstepcounter\refstepcounter
5076 \edef\name@of@eq{equation}%
5077 \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.

```

5078 \newif\if@hyper@item
5079 \newif\if@skiphyperref
5080 \@hyper@itemfalse
5081 \@skiphyperreffalse
5082 \def\refstepcounter#1{%
5083   \ifHy@pdfstring
5084   \else
5085     \H@refstepcounter{#1}%
5086     \edef\This@name{#1}%
5087     \ifx\This@name\name@of@slide
5088     \else
5089       \if@skiphyperref
5090       \else
5091         \if@hyper@item
5092         \stepcounter{Item}%
5093         \hyper@refstepcounter{Item}%
5094         \@hyper@itemfalse
5095       \else
5096         \hyper@refstepcounter{#1}%
5097       \fi
5098     \fi
5099   \fi
5100 \fi
5101 }

```

AMST_{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.

```

5102 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5103 \def\hyper@refstepcounter#1{%
5104   \edef\This@name{#1}%
5105   \ifx\This@name\name@of@eq
5106     \@ifundefined{theHequation}{%
5107       \make@stripped@name{\theequation}%
5108       \let\theHequation\newname
5109     }{}%

```

```

5110 \fi
5111 \@ifundefined{theH#1}{%
5112   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5113 }{}%
5114 \hyper@makecurrent{#1}%
5115 \ifmeasuring@
5116 \else
5117   \Hy@raisedlink{%
5118     \hyper@anchorstart{\@currentHref}\hyper@anchorend
5119   }%
5120 \fi
5121 }

```

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.

```

5122 \begingroup\expandafter\expandafter\expandafter\endgroup
5123 \expandafter\ifx\csname chapter\endcsname\relax
5124   \def\Hy@chapterstring{section}%
5125 \else
5126   \def\Hy@chapterstring{chapter}%
5127 \fi
5128 \def\Hy@appendixstring{appendix}
5129 \def\Hy@chapapp{\Hy@chapterstring}
5130 \let\HyOrg@appendix\appendix
5131 \def\appendix{%
5132   \@ifundefined{chapter}%
5133     {\gdef\theHsection{\Alph{section}}}%
5134     {\gdef\theHchapter{\Alph{chapter}}}%
5135   \xdef\Hy@chapapp{\Hy@appendixstring}%
5136   \HyOrg@appendix
5137 }

```

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

```

5138 \def\hyper@makecurrent#1{%
5139   \begingroup
5140     \edef\Hy@param{#1}%
5141     \ifx\Hy@param\Hy@chapterstring
5142       \let\Hy@param\Hy@chapapp
5143     \fi
5144     \ifHy@hypertextnames
5145       \let\@number\@firstofone
5146       \@ifundefined{latin@Alph}{-}{%
5147         \ifx\@Alph\greek@Alph
5148           \def\@Alph{Alph\@arabic}%
5149         \fi
5150       }%
5151       \ifx\@Alph\@Alph@bul
5152         \def\@Alph{Alph\@arabic}%
5153       \fi
5154       \ifx\@alph\@alph@bul
5155         \def\@alph{alph\@arabic}%
5156       \fi

```

```

5157 \ifHy@naturalnames
5158 \let\textlatin\@firstofone
5159 \xdef\@currentHlabel{\csname the#1\endcsname}%
5160 \else
5161 \xdef\@currentHlabel{%
5162 \csname
5163 the%
5164 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5165 #1%
5166 \endcsname
5167 }%
5168 \fi
5169 \xdef\@currentHref{%
5170 \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5171 }%
5172 \else
5173 \Hy@GlobalStepCount\Hy@linkcounter
5174 \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5175 \fi
5176 \endgroup
5177 }

5178 \@ifpackageloaded{fancyvrb}{%
5179 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
5180 \def\FV@StepLineNo{%
5181 \FV@SetLineNo
5182 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5183 \FV@StepLineNo
5184 }%
5185 }%
5186 }{}

```

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 hypertexnames 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`

```

5187 \AtBeginDocument{%
5188 \@ifclassloaded{revtex4}{%
5189 \namedef{ver@lastpage.sty}{1994/06/25}%
5190 }{}%
5191 \@ifpackageloaded{lastpage}{%
5192 \ifHy@pageanchor
5193 \else
5194 \Hy@WarningNoLine{%
5195 The \string\pageref{LastPage} link doesn't work\MessageBreak
5196 with disabled option 'pageanchor'%
5197 }%
5198 \fi
5199 \def\lastpage@putlabel{%
5200 \addtocounter{page}{-1}%

```

```

5201 \if@filesw
5202 \begingroup
5203 \let\@number\@firstofone
5204 \ifHy@pageanchor
5205 \ifHy@hypertextnames
5206 \ifHy@plainpages
5207 \def\Hy@temp{\arabic{page}}%
5208 \else
5209 \Hy@unicodedefalse
5210 \pdfstringdef\Hy@temp{\thepage}%
5211 \fi
5212 \else
5213 \def\Hy@temp{\the\Hy@pagecounter}%
5214 \fi
5215 \fi
5216 \immediate\write\@auxout{%
5217 \string\newlabel
5218 {LastPage}{\the\thepage}{\thepage}}%
5219 \ifHy@pageanchor page.\Hy@temp\fi}}}%
5220 }%
5221 \endgroup
5222 \fi
5223 \addtocounter{page}{1}%
5224 }%
5225 \@ifclassloaded{revtex4}{%
5226 \begingroup
5227 \toks@{\expandafter{\lastpage@putlabel}}%
5228 \edef\x{\endgroup
5229 \def\noexpand\lastpage@putlabel{%
5230 \noexpand\stepcounter{page}%
5231 \the\toks@
5232 \noexpand\addtocounter{page}\noexpand\m@ne
5233 }%
5234 }%
5235 \x
5236 }{}%
5237 }{}%
5238 }
5239 </package>
5240 <*check>
5241 \checkpackage{lastpage}[1994/06/25]
5242 \checkcommand\def\lastpage@putlabel{%
5243 \addtocounter{page}{-1}%
5244 \immediate\write\@auxout{%
5245 \string\newlabel{LastPage}{\the\thepage}}%
5246 }%
5247 \addtocounter{page}{1}%
5248 }
5249 </check>
5250 <*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.

```

5251 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
5252 \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:

```

5253 \@ifpackageloaded{titlesec}{%
5254   \def\ttl@Hy@steplink#1{%
5255     \Hy@GlobalStepCount\Hy@linkcounter
5256     \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5257     \def\ttl@Hy@saveanchor{%
5258       \Hy@raisedlink{%
5259         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5260       }%
5261     }%
5262   }%
5263   \def\ttl@Hy@refstepcounter#1{%
5264     \let\ttl@b\Hy@raisedlink
5265     \def\Hy@raisedlink##1{%
5266       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5267     }%
5268     \refstepcounter{#1}%
5269     \let\Hy@raisedlink\ttl@b
5270   }%
5271 }{}

```

Package titletoc support:

```

5272 \@ifpackageloaded{titletoc}{%
5273   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5274 }{}

```

32 Package varioref support

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

```

5275 \def\Hy@varioref@undefined{??}{?}{?}{?}{?}
5276 \@ifpackageloaded{varioref}{%
5277   \def\vref@pagenum#1#2{%
5278     \@ifundefined{r@#2}{%
5279       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5280     }{}%
5281     \edef#1{\getpagerefnumber{#2}}%
5282   }%
5283 }{}

```

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


```

5284 \@ifpackageloaded{longtable}{%
5285   \begin{group
5286     \def\y{\LT@array}%
5287     \@ifundefined{scr@LT@array}{\def\y{\scr@LT@array}}%
5288     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5289       \expandafter\endgroup
5290       \expandafter\def\y[#1]##2{%
5291         \H@refstepcounter{#1}%
5292         \hyper@makecurrent{table}%
5293         \let\Hy@LT@currentHlabel\@currentHlabel
5294         \let\Hy@LT@currentHref\@currentHref
5295         #2\@sharp####4%
5296       }%
5297     }%
5298   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

5299   \begin{group
5300     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5301       \endgroup
5302       \def\LT@start{%
5303         #1%
5304         \let\@currentHlabel\Hy@LT@currentHlabel
5305         \let\@currentHref\Hy@LT@currentHref
5306         \Hy@raisedlink{%
5307           \hyper@anchorstart{\@currentHref}\hyper@anchorend
5308         }%
5309         \ifvoid\LT@firsthead\copy
5310         #2%
5311       }%
5312     }%
5313   \expandafter\x\LT@start\@nil
5314 }{}

```

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.

```

5315 \let\new@refstepcounter\refstepcounter
5316 \let\H@equation\equation
5317 \let\H@endequation\endequation
5318 \@ifpackageloaded{amsmath}{%
5319   \long\def\Hy@temp{%
5320     \incr@eqnum
5321     \mathdisplay@push
5322     \st@rredfalse \global\@eqnswtrue
5323     \mathdisplay{equation}%
5324   }%
5325   \ifx\Hy@temp\equation
5326     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5327       \csname iftrue\endcsname
5328   \else
5329     \long\def\equation{%

```

```

5330      \mathdisplay@push
5331      \st@rredfalse \global\@eqnswtrue
5332      \mathdisplay{equation}%
5333      \incr@eqnum
5334  }%
5335  \fi
5336  \fi
5337 }{%
5338 \def\equation{%
5339   \let\refstepcounter\H@refstepcounter
5340   \H@equation
5341   \@ifundefined{theHequation}{%
5342     \make@stripped@name{\theequation}%
5343     \let\theHequation\newname
5344   }{%
5345     \hyper@makecurrent{equation}%
5346     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5347     \let\refstepcounter\new@refstepcounter
5348   }%
5349   \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5350 }

```

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.

```

5351 \newif\if@eqnstar
5352 \@eqnstarfalse
5353 \let\H@eqnarray\eqnarray
5354 \let\H@endeqnarray\endeqnarray
5355 \def\eqnarray{%
5356   \let\Hy@reserved@a\relax
5357   \def\@currentHref{}%
5358   \H@eqnarray
5359   \if@eqnstar
5360   \else
5361     \ifx\\\@currentHref\\%
5362     \else
5363       \@ifundefined{theHequation}{%
5364         \make@stripped@name{\theequation}%
5365         \let\theHequation\newname
5366       }{%
5367         \hyper@makecurrent{equation}%
5368         \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5369       \fi
5370     \fi
5371 }
5372 \def\endeqnarray{%
5373   \H@endeqnarray
5374 }

```

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.

```

5375 \@namedef{eqnarray*}{%
5376   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
5377 }
5378 \@namedef{endeqnarray*}{%

```

```

5379 \nonumber\endeqnarray\@eqnstarfalse
5380 }

```

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

```

5381 \@ifundefined{subeqnarray}{}{%
5382   \let\H@subeqnarray\subeqnarray
5383   \let\H@endsubeqnarray\endsubeqnarray
5384   \def\subeqnarray{%
5385     \let\Hy@reserved@a\relax
5386     \H@subeqnarray
5387     \@ifundefined{theHequation}{%
5388       \make@stripped@name{\theequation}%
5389       \let\theHequation\newname
5390     }{}%
5391     \hyper@makecurrent{equation}%
5392     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5393   }%
5394   \def\endsubeqnarray{%
5395     \H@endsubeqnarray
5396   }%
5397   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5398 }

```

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

```

5399 \def\make@stripped@name#1{%
5400   \begingroup
5401     \escapechar\m@ne
5402     \global\let\newname\@empty
5403     \protected@edef\Hy@tempa{#1}%
5404     \edef\@tempb{%
5405       \noexpand\@tfor\noexpand\Hy@tempa:=%
5406       \expandafter\strip@prefix\meaning\Hy@tempa
5407     }%
5408     \@tempb\do{%
5409       \if\Hy@tempa\else
5410         \if\Hy@tempa\else
5411           \xdef\newname{\newname\Hy@tempa}%
5412         \fi
5413       \fi
5414     }%
5415   \endgroup
5416 }

```

Support for amsmath's subequations:

```

5417 \begingroup\expandafter\expandafter\expandafter\endgroup
5418 \expandafter\ifx\csname subequations\endcsname\relax
5419 \else
5420   \let\HyOrg@subequations\subequations
5421   \def\subequations{%
5422     \stepcounter{equation}%
5423     \protected@edef\theHparentequation{%
5424       \@ifundefined{theHequation}\theequation\theHequation
5425     }%
5426     \addtocounter{equation}{-1}%
5427     \HyOrg@subequations
5428     \def\theHequation{\theHparentequation\alph{equation}}%
5429     \ignorespaces
5430   }%

```

```

5431 \fi

Support for package amsthm (Daniel Müllner):

5432 \@ifpackageloaded{amsthm}{%
5433   \def\@thm#1#2#3{%
5434     \ifhmode
5435       \unskip\unskip\par
5436       \fi
5437       \normalfont
5438       \trivlist
5439       \let\thmheadnl\relax
5440       \let\thm@swap\@gobble
5441       \thm@notefont{\fontseries\mddefault\upshape}%
5442       \thm@headpunct{.}% add period after heading
5443       \thm@headsep 5\p@ plus\p@ minus\p@\relax
5444       \thm@space@setup
5445       #1% style overrides
5446       \@topsep \thm@preskip           % used by thm head
5447       \@topsepadd \thm@postskip      % used by \@endparenv
5448       \def\dth@counter{#2}%
5449       \ifx\@empty\dth@counter
5450         \def\@tempa{%
5451           \@oparg{\@begintheorem{#3}{}} []%
5452         }%
5453       \else
5454         \H@refstepcounter{#2}%
5455         \hyper@makecurrent{#2}%
5456         \def\@tempa{%
5457           \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}} []%
5458         }%
5459       \fi
5460       \@tempa
5461     }%
5462   \dth@everypar={%
5463     \@minipagefalse
5464     \global\@newlistfalse
5465     \@nparitemfalse
5466     \if@inlabel
5467       \global\@inlabelfalse
5468       \begingroup
5469         \setbox\z@\lastbox
5470         \ifvoid\z@
5471           \kern-\itemindent
5472         \fi
5473       \endgroup
5474       \ifx\@empty\dth@counter
5475       \else
5476         \Hy@raisedlink{%
5477           \hyper@anchorstart{\@currentHref}\hyper@anchorend
5478         }%
5479       \fi
5480       \unhbox\@labels
5481     \fi
5482     \if@nobreak
5483       \@nobreakfalse \clubpenalty\@M
5484     \else
5485       \clubpenalty\@clubpenalty \everypar{%
5486     \fi

```

```

5487 }%
5488 }{}

```

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.

```

5489 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5490 \ifHy@hyperfootnotes
5491   \newcounter{Hfootnote}%
5492   \let\H@@footnotetext\@footnotetext
5493   \let\H@@footnotemark\@footnotemark
5494   \def\@xfootnotenext[#1]{%
5495     \begingroup
5496       \csname c@\@mpfn\endcsname #1\relax
5497       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5498     \endgroup
5499     \ifx\@footnotetext\@mpfootnotetext
5500       \expandafter\H@@mpfootnotetext
5501     \else
5502       \expandafter\H@@footnotetext
5503     \fi
5504   }%
5505   \def\@xfootnotemark[#1]{%
5506     \begingroup
5507       \c@footnote #1\relax
5508       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5509     \endgroup
5510     \H@@footnotemark
5511   }%
5512   \let\H@@mpfootnotetext\@mpfootnotetext
5513   \long\def\@mpfootnotetext#1{%
5514     \H@@mpfootnotetext{%
5515       \ifHy@nesting
5516         \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5517       \else
5518         \Hy@raisedlink{%
5519           \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5520         }#1%
5521       \fi
5522     }%
5523   }%
5524   \long\def\@footnotetext#1{%
5525     \H@@footnotetext{%
5526       \ifHy@nesting
5527         \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5528       \else
5529         \Hy@raisedlink{%
5530           \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5531         }%
5532       \let\@currentHlabel\Hy@footnote@currentHlabel
5533       \let\@currentHref\Hy@footnote@currentHref
5534       \let\@currentlabelname\@empty

```

```

5535      #1%
5536      \fi
5537    }%
5538  }%

```

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.

```

5539  \def\@footnotemark{%
5540    \leavevmode
5541    \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5542    \stepcounter{Hfootnote}%
5543    \global\let\Hy@saved@currentHlabel\@currentHlabel
5544    \global\let\Hy@saved@currentHref\@currentHref
5545    \hyper@makecurrent{Hfootnote}%
5546    \global\let\Hy@footnote@currentHlabel\@currentHlabel
5547    \global\let\Hy@footnote@currentHref\@currentHref
5548    \global\let\@currentHlabel\Hy@saved@currentHlabel
5549    \global\let\@currentHref\Hy@saved@currentHref
5550    \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5551    \@makefnmark
5552    \hyper@linkend
5553    \ifhmode\spacefactor\x@sf\fi
5554    \relax
5555  }%

```

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

```

5556  \@ifpackageloaded{longtable}{%
5557    \CheckCommand*{\LT@p@ftntext}[1]{%
5558      \edef\@tempa{%
5559        \the\LT@p@ftn
5560        \noexpand\footnotetext[\the\c@footnote]%
5561      }%
5562      \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5563    }%
5564    \long\def\LT@p@ftntext#1{%
5565      \edef\@tempa{%
5566        \the\LT@p@ftn
5567        \begingroup
5568          \noexpand\c@footnote=\the\c@footnote\relax
5569          \noexpand\protected@xdef
5570            \noexpand\@thefnmark{\noexpand\thempfn}%
5571          \noexpand\protected@xdef\noexpand\@thefnmark{%
5572            \noexpand\thempfn
5573          }%
5574          \expandafter\expandafter\expandafter\noexpand
5575          \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5576          \expandafter\expandafter\expandafter{%
5577            \expandafter\Hy@footnote@currentHref\expandafter
5578            }\expandafter{\Hy@footnote@currentHlabel}%
5579        }%
5580        \global\LT@p@ftn\expandafter{%
5581          \@tempa{#1}%
5582        \endgroup

```

```

5583     }%
5584   }%
5585   \long\def\Hy@LT@footnotetext#1#2#3{%
5586     \H@@footnotetext{%
5587       \ifHy@nesting
5588         \hyper@@anchor{#1}{#3}%
5589       \else
5590         \Hy@raisedlink{%
5591           \hyper@@anchor{#1}{\relax}%
5592         }%
5593         \def\@currentHlabel{#2}%
5594         \def\@currentHref{#1}%
5595         \let\@currentlabelname\@empty
5596         #3%
5597       \fi
5598     }%
5599   }%
5600 }{}%

```

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

```

5601 \ifpackageloaded{fancyvrb}{%
5602   \def\V@@footnotetext{%
5603     \insert\footins\bgroup
5604     \csname reset@font\endcsname
5605     \footnotesize
5606     \interlinepenalty\interfootnotelinepenalty
5607     \splittopskip\footnotesep
5608     \splitmaxdepth\dp\strutbox
5609     \floatingpenalty \MM
5610     \hsize\columnwidth
5611     \@parboxrestore
5612     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5613     \@makefnmark{}%
5614     \rule{\z@}{\footnotesep}%
5615     \bgroup
5616     \aftergroup\V@@@footnotetext
5617     \Hy@raisedlink{%
5618       \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5619     }%
5620     \let\@currentHlabel\Hy@footnote@currentHlabel
5621     \let\@currentHref\Hy@footnote@currentHref
5622     \let\@currentlabelname\@empty
5623     \ignorespaces
5624   }%
5625 }{}%

```

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.

```

5626 \let\HyOrg@maketitle\maketitle
5627 \def\maketitle{%
5628   \let\Hy@saved@footnotemark\@footnotemark
5629   \let\Hy@saved@footnotetext\@footnotetext
5630   \let\@footnotemark\H@@footnotemark
5631   \let\@footnotetext\H@@footnotetext
5632   \ifnextchar[\Hy@maketitle@optarg{% ]
5633     \HyOrg@maketitle
5634     \Hy@maketitle@end
5635   }%

```

```

5636 }%
5637 \def\Hy@maketitle@optarg[#1]{%
5638   \HyOrg@maketitle[{{#1}}]%
5639   \Hy@maketitle@end
5640 }%
5641 \def\Hy@maketitle@end{%
5642   \ifx\@footnotemark\H@@footnotemark
5643     \let\@footnotemark\Hy@saved@footnotemark
5644   \fi
5645   \ifx\@footnotetext\H@@footnotetext
5646     \let\@footnotetext\Hy@saved@footnotetext
5647   \fi
5648 }%

```

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

```

5649 \def\realfootnote{%
5650   \@ifnextchar[\@xfootnote{%
5651     \stepcounter{\@mpfn}%
5652     \protected@xdef\@thefnmark{\thempfn}%
5653     \H@@footnotemark\H@@footnotetext
5654   }%
5655 }%

5656 \fi
5657 \Hy@DisableOption{hyperfootnotes}

5658 \</package>
5659 \< *check>
5660 \checklatex
5661 \checkcommand\def\@xfootnotenext[#1]{%
5662   \begingroup
5663     \csname c@\@mpfn\endcsname #1\relax
5664     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5665   \endgroup
5666   \@footnotetext
5667 }
5668 \checkcommand\def\@xfootnotemark[#1]{%
5669   \begingroup
5670     \c@footnote #1\relax
5671     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5672   \endgroup
5673   \@footnotemark
5674 }
5675 \checkcommand\def\@footnotemark{%
5676   \leavevmode
5677   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
5678   \@makefnmark
5679   \ifhmode\spacefactor\@x@sf\fi
5680   \relax
5681 }
5682 \</check>
5683 \< *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.


```

5684 \def\caption{%
5685   \ifx\@captype\@undefined
5686     \@latex@error{\noexpand\caption outside float}\@ehd
5687     \expandafter\@gobble
5688   \else
5689     \H@refstepcounter\@captype
5690     \let\Hy@tempa\@caption
5691     \@ifundefined{float@caption}{%
5692       {%
5693         \expandafter\ifx\csname @float@c@\@captype\endcsname
5694           \float@caption
5695         \let\Hy@tempa\Hy@float@caption
5696       \fi
5697     }%
5698     \expandafter\@firstofone
5699   \fi
5700   {\@dblarg{\Hy@tempa\@captype}}}%
5701 }
5702 \long\def\@caption#1[#2]#3{%
5703   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5704     \csname iftrue\endcsname
5705     \global\let\@currentHref\hc@currentHref
5706   \else
5707     \hyper@makecurrent{\@captype}%
5708   \fi
5709   \def\@currentlabelname{#2}%
5710   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5711     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5712   }%
5713   \begingroup
5714     \@parboxrestore
5715     \if@minipage
5716       \setminipage
5717     \fi
5718     \normalsize
5719     \expandafter\ifx\csname if@capstart\expandafter\endcsname
5720       \csname iftrue\endcsname
5721       \global\@capstartfalse
5722       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5723     \else
5724       \@makecaption{\csname fnum@#1\endcsname}{%
5725         \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5726     \ifHy@nesting
5727       \hyper@@anchor{\@currentHref}{#3}%
5728     \else
5729       \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5730     \fi
5731   }%
5732   \fi
5733   \par
5734 \endgroup
5735 }

```

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.

```

5736 \let\Hy@float@caption\@caption

```

```

5737 \@ifpackageloaded{float}{%
5738   \def\Hy@float@caption{%
5739     \ifx\Hy@float@currentHref\@undefined
5740       \hyper@makecurrent{\@capytype}%
5741       \global\let\Hy@float@currentHref\@currentHref
5742     \else
5743       \let\@currentHref\Hy@float@currentHref
5744     \fi
5745     \float@caption
5746   }%
5747   \let\HyOrg@float@makebox\float@makebox
5748   \renewcommand{\float@makebox}[1]{%
5749     \HyOrg@float@makebox{%
5750       #1\relax
5751       \ifx\Hy@float@currentHref\@undefined
5752       \else
5753         \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5754         \global\let\Hy@float@currentHref\@undefined
5755       \fi
5756     }%
5757   }%
5758 }{}

5759 \</package>
5760 \< *check>
5761 \checklatex[1999/06/01 - 2000/06/01]
5762 \checkcommand\def\caption{%
5763   \ifx\@capytype\@undefined
5764     \@latex@error{\noexpand\caption outside float}\@ehd
5765     \expandafter\@gobble
5766   \else
5767     \refstepcounter{\@capytype}
5768     \expandafter\@firstofone
5769   \fi
5770   {\@dblarg{\@caption\@capytype}}%
5771 }
5772 \checkcommand\long\def\@caption#1[#2]#3{%
5773   \par
5774   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5775     {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5776   \begingroup
5777     \@parboxrestore
5778     \if@minipage
5779       \setminipage
5780     \fi
5781     \normalsize
5782     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5783   \endgroup
5784 }
5785 \</check>
5786 \< *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 *drficite* 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.

```

5787 \def\hyper@natlinkstart#1{%
5788   \Hy@backout{#1}%
5789   \hyper@linkstart{cite}{cite.#1}%
5790   \def\hyper@nat@current{#1}%
5791 }
5792 \def\hyper@natlinkend{%
5793   \hyper@linkend
5794 }
5795 \def\hyper@natlinkbreak#1#2{%
5796   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5797 }
5798 \def\hyper@natanchorstart#1{%
5799   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5800 }
5801 \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.

```

5802 \@ifundefined{NAT@parse}{%
5803   \providecommand*\extra@binfo{}%
5804   \providecommand*\extra@b@citeb{}%
5805   \def\bibcite#1#2{%
5806     \@newl@bel{b}{#1\extra@binfo}{%
5807       \hyper@link{cite}{cite.#1\extra@b@citeb}{#2}%
5808     }%
5809   }%
5810   \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.”.

```

5811 \let\Hy@bibcite\bibcite
5812 \begingroup
5813   \@ifundefined{bbl@cite@choice}{-%
5814     \g@addto@macro\bbl@cite@choice{%
5815       \let\bibcite\Hy@bibcite
5816     }%
5817   }%
5818 \endgroup

```

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

```

5819 \providecommand*\@BIBLABEL{\@biblabel}%
5820 \def\@lbibitem[#1]#2{%
5821   \@skiphyperreftrue
5822   \H@item[%
5823     \ifx\Hy@raisedlink\@empty
5824       \hyper@anchorstart{cite.#2\extra@b@citeb}%
5825       \@BIBLABEL{#1}%
5826       \hyper@anchorend
5827     \else
5828       \Hy@raisedlink{%
5829         \hyper@anchorstart{cite.#2\extra@b@citeb}\hyper@anchorend

```

```

5830     }%
5831     \@BIBLABEL{#1}%
5832     \fi
5833     \hfill
5834   ]%
5835   \@skiphyperreffalse
5836   \if@filesw
5837     \begingroup
5838       \let\protect\noexpand
5839       \immediate\write\@auxout{%
5840         \string\bibcite{#2}{#1}%
5841       }%
5842     \endgroup
5843   \fi
5844   \ignorespaces
5845 }%

```

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

```

5846 \def\@bibitem#1{%
5847   \@skiphyperreftrue\H@item\@skiphyperreffalse
5848   \Hy@raisedlink{%
5849     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5850   }%
5851   \if@filesw
5852     \begingroup
5853       \let\protect\noexpand
5854       \immediate\write\@auxout{%
5855         \string\bibcite{#1}{\the\value{\@listctr}}%
5856       }%
5857     \endgroup
5858   \fi
5859   \ignorespaces
5860 }%
5861 }{}

5862 \</package>
5863 \<*check>
5864 \checklatex
5865 \checkcommand\def\@lbibitem[#1]#2{%
5866   \item[\@biblabel{#1}\hfill]%
5867   \if@filesw
5868     {%
5869       \let\protect\noexpand
5870       \immediate\write\@auxout{%
5871         \string\bibcite{#2}{#1}%
5872       }%
5873     }%
5874   \fi
5875   \ignorespaces
5876 }
5877 \checkcommand\def\@bibitem#1{%
5878   \item
5879   \if@filesw
5880     \immediate\write\@auxout{%
5881       \string\bibcite{#1}{\the\value{\@listctr}}%
5882     }%
5883   \fi

```

```

5884 \ignorespaces
5885 }
5886 </check>
5887 <*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.

```

5888 \@ifclassloaded{revtex}{%
5889   \Hy@Info{*** compatibility with revtex **** }%
5890   \def\revtex@checking#1#2{%
5891     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5892     \expandafter\def\csname b@#1\endcsname{#2}%
5893     \@SetMaxRnhefLabel{#1}%
5894     \expandafter\let\csname b@#1\endcsname\T@temp
5895   }%

```

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

```

5896 \@ifundefined{CITE}{\def\CITE{\@cite}}{%
5897   \providecommand*\@extra@b@citeb{}%
5898   \def\CITEX[#1]#2{%
5899     \let\@citea\@empty
5900     \leavevmode
5901     \unskip
5902     $^{}%
5903     \scriptstyle
5904     \CITE{%
5905       \@for\@citeb:=#2\do{%
5906         \@citea
5907         \def\@citea{\penalty\@m\ }%
5908         \edef\@citeb{\expandafter\@firstofone\@citeb}%
5909         \if@filesw
5910           \immediate\write\@auxout{\string\citation{\@citeb}}%
5911         \fi
5912         \@ifundefined{b@\@citeb\extra@b@citeb}{%
5913           \mbox{\reset@font\bfseries ?}%
5914           \G@refundefinedtrue
5915           \@latex@warning{%
5916             Citation ‘\@citeb’ on page \thepage \space undefined%
5917           }%
5918         }{%
5919           {\csname b@\@citeb\extra@b@citeb\endcsname}%
5920         }%
5921       }%
5922     }{#1}%
5923   }$%
5924 }%

```

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.

```

5925 \def\citex[#1]#2{%
5926   \let\@citea\@empty
5927   \@cite{%
5928     \@for\@citeb:=#2\do{%
5929       \@citea
5930       \def\@citea{\penalty\@m\ }%
5931       \edef\@citeb{\expandafter\@firstofone\@citeb}%

```

```

5932     \if@filesw
5933         \immediate\write\@auxout{\string\citation{\@citeb}}}%
5934     \fi
5935     \ifundefined{b@\@citeb\@extra@b@citeb}{%
5936         \mbox{\reset@font\bfseries ?}%
5937         \G@refundefinedtrue
5938         \@latex@warning{%
5939             Citation ‘\@citeb’ on page \thepage \space undefined%
5940         }%
5941     }{%
5942         \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
5943     }%
5944 }%
5945 }{#1}%
5946 }%
5947 }{}

```

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.

```

5948 \ifpackageloaded{harvard}{%
5949     \AtBeginDocument{%
5950         \Hy@Info{*** compatibility with harvard *** }%
5951         \Hy@raiselinksfalse
5952         \def\harvardcite#1#2#3#4{%
5953             \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{}{cite.#1}{#2}}%
5954             \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{}{cite.#1}{#3}}%
5955             \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{}{cite.#1}{#4}}%
5956             \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5957         }%
5958         \def\HAR@citetoaux#1{%
5959             \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5960             \ifHy@backref
5961                 \ifx\@empty\@currentlabel
5962                 \else
5963                     \@bsphack
5964                     \if@filesw
5965                         \protected@write\@auxout{}{%
5966                             \string\writefile{brf}{%
5967                                 \string\backcite{#1}{%
5968                                     {\thepage}{\@currentlabel}{\@currentHref}%
5969                                 }%
5970                             }%
5971                     \fi
5972                 \fi
5973                 \@esphack
5974             \fi
5975         }%
5976     }%
5977     \def\harvarditem{%
5978         \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%

```

```

5979 }%
5980 \def\@harvarditem[#1]#2#3#4#5\par{%
5981   \item[]%
5982   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
5983   \if@filesw
5984     \begingroup
5985     \def\protect##1{\string ##1\space}%
5986     \ifthenelse{\equal{#1}{\null}}%
5987       {\def\next{{#4}{#2}{#2}{#3}}}%
5988       {\def\next{{#4}{#2}{#1}{#3}}}%
5989     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
5990   \endgroup
5991   \fi
5992   \protect\hspace*{-\labelwidth}%
5993   \protect\hspace*{-\labelsep}%
5994   \ignorespaces
5995   #5%
5996   \ifHy@backref
5997     \newblock
5998     \backref{\csname br@#4\endcsname}%
5999   \fi
6000   \par
6001 }%

```

\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:

```

6002 \long\def\HAR@checkcitations#1#2#3#4{%
6003   \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
6004   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6005     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
6006     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6007       \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
6008       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6009         \else
6010           \@tempswatrue
6011         \fi
6012       \else
6013         \@tempswatrue
6014       \fi
6015     \else
6016       \@tempswatrue
6017     \fi
6018   }%
6019 }%

6020 {}

```

37.2 Package chicago

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

```

6021 \ifpackageloaded{chicago}{%

```

\citeN

```

6022   \def\citeN{%
6023     \def\@citeseppen{-1000}%

```

```

6024 \def\cite##1##2{##1}%
6025 \def\citeauthoryear##1##2##3{##1 (##3\cite@opt)}%
6026 \@citedata@opt
6027 }%

\shortciteN

6028 \def\shortciteN{%
6029 \def\@citesep{--1000}%
6030 \def\cite##1##2{##1}%
6031 \def\citeauthoryear##1##2##3{##2 (##3\cite@opt)}%
6032 \@citedata@opt
6033 }%

\@citedata@opt

6034 \def\@citedata@opt{%
6035 \let\cite@opt\@empty
6036 \ifnextchar [{%
6037 \@tempswattrue
6038 \@citedatax@opt
6039 }{%
6040 \@tempswafalse
6041 \@citedatax[]%
6042 }%
6043 }%

\@citedatax@opt

6044 \def\@citedatax@opt[#1]{%
6045 \def\cite@opt{, #1}%
6046 \@citedatax[#1]}%
6047 }%

6048 }{}

```

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.

```

6049 \def\Hy@EveryPageAnchor{%
6050 \Hy@DistillerDestFix
6051 \ifHy@pageanchor
6052 \ifHy@hypertextnames
6053 \ifHy@plainpages
6054 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6055 \else
6056 \begingroup
6057 \let\@number\@firstofone
6058 \Hy@unicodetrue
6059 \pdfstringdef\@theH@page{\theH@page}%
6060 \endgroup
6061 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\theH@page}}%
6062 \fi

```



```

6063 \else
6064 \Hy@GlobalStepCount\Hy@pagecounter
6065 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}}%
6066 \fi
6067 \vbox to 0pt{%
6068 \kern\voffset
6069 \kern\topmargin
6070 \kern-1bp\relax
6071 \hbox to 0pt{%
6072 \kern\hoffset
6073 \kern\ifodd\value{page}%
6074 \oddsidemargin
6075 \else
6076 \evensidemargin
6077 \fi
6078 \kern-1bp\relax
6079 \Hy@TempPageAnchor
6080 \hss
6081 }%
6082 \vss
6083 }%
6084 \fi
6085 }
6086 \g@addto@macro\Hy@EveryPageBoxHook{%
6087 \Hy@EveryPageAnchor
6088 }

```

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.

```

6089 \def\addcontentsline#1#2#3{% toc extension, type, tag
6090 \begingroup
6091 \let\label\@gobble
6092 \ifx\@currentHref\@empty
6093 \Hy@Warning{%
6094 No destination for bookmark of \string\addcontentsline,%
6095 \MessageBreak destination is added%
6096 }%
6097 \phantomsection
6098 \fi
6099 \expandafter\ifx\csname toplevel@#2\endcsname\relax
6100 \begingroup
6101 \def\Hy@tempa{#1}%
6102 \ifx\Hy@tempa\Hy@bookmarkstype
6103 \Hy@WarningNoLine{%
6104 bookmark level for unknown #2 defaults to 0%
6105 }%
6106 \else
6107 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6108 \fi
6109 \endgroup
6110 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6111 \fi
6112 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%

```

```

6113 \Hy@writebookmark{\csname the#2\endcsname}%
6114 {#3}%
6115 {\@currentHref}%
6116 {\Hy@toclevel}%
6117 {#1}%
6118 \ifHy@verbose
6119 \def\Hy@tempa{#3}%
6120 \onelevel@sanitize\Hy@tempa
6121 \typeout{pdftex: bookmark at \the\inputlineno: %
6122 {\csname the#2\endcsname}%
6123 {\Hy@tempa}%
6124 {\@currentHref}%
6125 {\Hy@toclevel}%
6126 {#1}%
6127 }%
6128 \fi
6129 \addtocontents{#1}{%
6130 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6131 }%
6132 \endgroup
6133 }
6134 \def\contentsline#1#2#3#4{%
6135 \ifx\#4\%
6136 \csname l@#1\endcsname{#2}{#3}%
6137 \else
6138 \ifcase\Hy@linktoc % none
6139 \csname l@#1\endcsname{#2}{#3}%
6140 \or % section
6141 \csname l@#1\endcsname{%
6142 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6143 }{#3}%
6144 \or % page
6145 \csname l@#1\endcsname{#2}{%
6146 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6147 }%
6148 \else % all
6149 \csname l@#1\endcsname{%
6150 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6151 }{%
6152 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6153 }%
6154 \fi
6155 \fi
6156 }
6157 </package>
6158 <*check>
6159 \checklatex
6160 \checkcommand\def\addcontentsline#1#2#3{%
6161 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6162 }
6163 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6164 </check>
6165 <*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.

```
6166 \let\H@definecounter\@definecounter
6167 \def\@definecounter#1{%
6168   \H@definecounter{#1}%
6169   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6170 }
```

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.

```
6171 \let\H@newctr\@newctr
6172 \def\@newctr#1[#2]{%
6173   \H@newctr#1[#2]%
6174   \expandafter\def\csname theH#1\endcsname{%
6175     \csname the\@ifundefined{theH#2}-{H}#2\endcsname.\arabic{#1}%
6176   }%
6177 }
```

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.

```
6178 \ifpackageloaded{amsmath}{%
6179   \def\Hy@make@anchor{%
6180     \Hy@GlobalStepCount\Hy@linkcounter
6181     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6182     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6183   }%
6184   \def\Hy@make@df@tag@@#1{%
6185     \gdef\df@tag{%
6186       \maketag@@@{\Hy@make@anchor#1}%
6187       \def\@currentlabel{#1}%
6188     }%
6189   }%
6190   \def\Hy@make@df@tag@@@#1{%
6191     \gdef\df@tag{%
6192       \tagform@{\Hy@make@anchor#1}%
6193       \toks@{\p@equation{#1}}%
6194       \edef\@currentlabel{\the\toks@}%
6195     }%
6196   }%
6197   \let\HyOrg@make@df@tag@@\make@df@tag@@
6198   \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
6199   \let\make@df@tag@@\Hy@make@df@tag@@
6200   \let\make@df@tag@@@ \Hy@make@df@tag@@@
6201 }{}
```

Only play with `\seteqlebal` if we are using pdf \TeX . Other drivers cause problems; requested by Michael Downes (AMS).

```
6202 \ifpackagewith{hyperref}{pdf $\TeX$ }{%
```

```

6203 \let\H@seteqlabel\@seteqlabel
6204 \def\@seteqlabel#1{%
6205   \H@seteqlabel{#1}%
6206   \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6207   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6208 }%
6209 }{}

```

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.

```

6210 \let\HyOrg@addtoreset\@addtoreset
6211 \def\@addtoreset#1#2{%
6212   \HyOrg@addtoreset{#1}{#2}%
6213   \expandafter\xdef\csname theH#1\endcsname{%
6214     \expandafter\noexpand
6215     \csname the\@ifundefined{theH#2}{}H#2\endcsname
6216     .\noexpand\the\noexpand\value{#1}%
6217   }%
6218 }

```

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

```

6219 </package>
6220 <*check>
6221 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6222 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6223   \@ifundefined{c#2}{\@nocounterr{#2}}{%
6224     \@ifundefined{c#3}{\@nocnterr{#3}}{%
6225       \@addtoreset{#2}{#3}%
6226       \@xp\xdef\csname the#2\endcsname{%
6227         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6228       }%
6229     }%
6230   }%
6231 }%
6232 </check>
6233 <*package>
6234 \@ifpackageloaded{amsmath}{%
6235   \@ifpackagelater{amsmath}{1999/12/14}{%
6236     \renewcommand*\numberwithin[3][\arabic]{%
6237       \@ifundefined{c#2}{\@nocounterr{#2}}{%
6238         \@ifundefined{c#3}{\@nocnterr{#3}}{%
6239           \HyOrg@addtoreset{#2}{#3}%
6240           \@xp\xdef\csname the#2\endcsname{%

```

```

6241      \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6242      }%
6243      \exp\xdef\csname theH#2\endcsname{%
6244      \exp\@nx
6245      \csname the\@ifundefined{theH#3}{H#3\endcsname
6246      .\@nx#1{#2}%
6247      }%
6248      }%
6249      }%
6250      }%
6251      }{%
6252      \Hy@WarningNoLine{%
6253      \string\numberwithin\space of package ‘amsmath’ %
6254      only fixed\MessageBreak
6255      for version 2000/06/06 v2.12 or newer%
6256      }%
6257      }%
6258      }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6259 \ifHy@figures
6260   \let\Hy@Gin@setfile\Gin@setfile
6261   \def\Gin@setfile#1#2#3{%
6262     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6263     }%
6264 \fi
6265 \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.

```

6266 \ifHy@hyperindex
6267   \def\HyInd@ParenLeft{(%}
6268   \def\HyInd@ParenRight{)%}
6269   \Hy@nextfalse
6270   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6271   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6272   \begingroup
6273     \lccode‘\|=\expandafter‘\HyInd@EncapChar\relax
6274     \lowercase{\endgroup
6275       \ifHy@next
6276         \let\HyInd@org@wrindex\@wrindex
6277         \def\@wrindex#1#2{\HyInd@wrindex{#1}#2||\}%
6278         \def\HyInd@wrindex#1#2|#3|#4\{\%

```

```

6279     \ifx\\#3\\%
6280         \HyInd@org@wrindex{#1}{#2|hyperpage}%
6281     \else
6282         \def\Hy@temp@A{#3}%
6283         \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6284             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6285             \relax
6286         \HyInd@org@wrindex{#1}{#2|#3}%
6287     \else
6288         \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6289     \fi
6290 \fi
6291 }%
6292 \else
6293     \def\@wrindex#1{\@wrindex#1||\}%
6294     \def\@wrindex#1|#2|#3\\{\%
6295     \if@filesw
6296         \ifx\\#2\\%
6297             \protected@write\@indexfile{}\{%
6298                 \string\indexentry{#1|hyperpage}{\thepage}%
6299             }%
6300         \else
6301             \def\Hy@temp@A{#2}%
6302             \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6303                 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6304                 \relax
6305             \protected@write\@indexfile{}\{%
6306                 \string\indexentry{#1|#2}{\thepage}%
6307             }%
6308         \else
6309             \protected@write\@indexfile{}\{%
6310                 \string\indexentry{#1|#2hyperpage}{\thepage}%
6311             }%
6312         \fi
6313     \fi
6314 \fi
6315 \endgroup
6316 \@esphack
6317 }%
6318 \fi
6319 }%
6320 \fi
6321 \Hy@DisableOption{hyperindex}
6322 \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.

```
6323 \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.

```

6324 \def\hyperpage#1{\%
6325     \HyInd@hyperpage#1\nohyperpage{}\@nil
6326 }
6327 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{\%
6328     \HyInd@@hyperpage{#1}%
6329     #2%

```

```

6330 \def\Hy@temp{#3}%
6331 \ifx\Hy@temp\@empty
6332 \else
6333   \Hy@ReturnAfterFi{%
6334     \HyInd@hyperpage#3\@nil
6335   }%
6336 \fi
6337 }
6338 \def\HyInd@hyperpage#1{\@hyperpage#1----\}
6339 \def\@hyperpage#1--#2--#3\{\%
6340 \ifx\#2\%
6341   \@commahyperpage{#1}%
6342 \else
6343   \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6344 \fi
6345 }
6346 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6347 \def\@commahyperpage#1, #2,#3\{\%
6348 \ifx\#2\%
6349   \HyInd@pagelink{#1}%
6350 \else
6351   \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6352 \fi
6353 }

```

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

```

6354 \def\HyInd@pagelink#1{%
6355   \begingroup
6356   \toks@={}%
6357   \HyInd@removespaces#1 \@nil
6358 \endgroup
6359 }
6360 \def\HyInd@removespaces#1 #2\@nil{%
6361   \toks@=\expandafter{\the\toks@#1}%
6362   \ifx\#2\%
6363     \edef\x{\the\toks@}%
6364     \ifx\x\@empty
6365     \else
6366       \hyperlink{page.\the\toks@}{\the\toks@}%
6367     \fi
6368   \else
6369     \Hy@ReturnAfterFi{%
6370       \HyInd@removespaces#2\@nil
6371     }%
6372   \fi
6373 }

```

44 Compatibility with foiltex

```

6374 \@ifclassloaded{foils}{%
6375   \providecommand*\ext@table{lot}%
6376   \providecommand*\ext@figure{lof}%
6377 }{}

```

45 Compatibility with seminar slide package

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

```
6378 \@ifclassloaded{seminar}{%
6379   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
6380 }{%
6381   \Hy@seminarslidesfalse
6382 }
6383 \@ifpackageloaded{slidesec}{%
6384   \newcommand\theHslidesection {\arabic{slidesection}}%
6385   \newcommand\theHslidesubsection{%
6386     \theHslidesection.\arabic{slidesubsection}}%
6387 }%
6388 \def\slide@heading[#1]#2{%
6389   \H@refstepcounter{slidesection}%
6390   \@addtoreset{slidesubsection}{slidesection}%
6391   \addtocontents{los}{%
6392     \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6393     {\@SCTR}{\slideheading.\theslidesection}}%
6394 }%
6395 \def\Hy@tempa{#2}%
6396 \ifx\Hy@tempa\@empty
6397   \else
6398     {%
6399       \edef\@currentlabel{%
6400         \csname p@slidesection\endcsname\theslidesection
6401       }%
6402       \makeslideheading{#2}%
6403     }%
6404   \fi
6405   \gdef\theslideheading{#1}%
6406   \gdef\theslidesubheading{}%
6407   \ifHy@bookmarksnumbered
6408     \def\Hy@slidetitle{\theslidesection\space #1}%
6409   \else
6410     \def\Hy@slidetitle{#1}%
6411   \fi
6412   \ifHy@hypertextnames
6413     \ifHy@naturalnames
6414       \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6415       \Hy@writebookmark
6416         {\theslidesection}%
6417         {\Hy@slidetitle}%
6418         {slideheading.\theslidesection}%
6419         {1}%
6420         {toc}%
6421     \else
6422       \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6423       \Hy@writebookmark
6424         {\theslidesection}%
6425         {\Hy@slidetitle}%
6426         {slideheading.\theHslidesection}%
6427         {1}%
6428         {toc}%
6429     \fi
6430   \else
```



```

6431 \Hy@GlobalStepCount\Hy@linkcounter
6432 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6433 \Hy@writebookmark
6434 {\theslidesubsection}%
6435 {\Hy@slidetitle}%
6436 {slideheading.\the\Hy@linkcounter}%
6437 {1}%
6438 {toc}%
6439 \fi
6440 }%
6441 \def\slide@subheading[#1]#2{%
6442 \H@refstepcounter{slidesubsection}%
6443 \addtocontents{los}{%
6444 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6445 {\SCTR}{slideheading.\theslidesubsection}%
6446 }%
6447 \def\Hy@tempa{#2}%
6448 \ifx\Hy@tempa\@empty
6449 \else
6450 {%
6451 \edef\@currentlabel{%
6452 \csname p@slidesubsection\endcsname\theslidesubsection
6453 }%
6454 \makeslidesubheading{#2}%
6455 }%
6456 \fi
6457 \gdef\theslidesubheading{#1}%
6458 \ifHy@bookmarksnumbered
6459 \def\Hy@slidetitle{\theslidesubsection\space #1}%
6460 \else
6461 \def\Hy@slidetitle{#1}%
6462 \fi
6463 \ifHy@hypertextnames
6464 \ifHy@naturalnames
6465 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6466 \Hy@writebookmark
6467 {\theslidesubsection}%
6468 {\Hy@slidetitle}%
6469 {slideheading.\theslidesubsection}%
6470 {2}%
6471 {toc}%
6472 \else
6473 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6474 \Hy@writebookmark
6475 {\theslidesubsection}%
6476 {\Hy@slidetitle}%
6477 {slideheading.\theHslidesubsection}%
6478 {2}%
6479 {toc}%
6480 \fi
6481 \else
6482 \Hy@GlobalStepCount\Hy@linkcounter
6483 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6484 \Hy@writebookmark
6485 {\theslidesubsection}%
6486 {\Hy@slidetitle}%
6487 {slideheading.\the\Hy@linkcounter}%

```

```

6488         {1}%
6489         {toc}%
6490     \fi
6491 }%
6492 \providecommand*{\listslidenam}{List of Slides}%
6493 \def\listofslides{%
6494     \section*{%
6495         \listslidenam
6496         \@mkboth{%
6497             \expandafter\MakeUppercase\listslidenam
6498         }{%
6499             \expandafter\MakeUppercase\listslidenam
6500         }%
6501     }%
6502     \def\l@slide##1##2##3##4{%
6503         \slide@undottedcline{%
6504             \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
6505         }{}%
6506     }%
6507     \let\l@subslide\l@slide
6508     \@startlos
6509 }%
6510 \def\slide@contents{%
6511     \def\l@slide##1##2##3##4{%
6512         \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6513     }%
6514     \let\l@subslide\@gobblefour
6515     \@startlos
6516 }%
6517 \def\Slide@contents{%
6518     \def\l@slide##1##2##3##4{%
6519         \ifcase\lslide@flag
6520             \message{##1 ** \the\c@slidesection}%
6521             \ifnum##1>\c@slidesection
6522                 \def\lslide@flag{1}%
6523                 {%
6524                     \large
6525                     \slide@ccline{%
6526                         \slidenumberline{$\rightarrow\bullet$}%
6527                         {\hyperlink{##4}{##2}}}%
6528                     }{##3}%
6529                 }%
6530             \else
6531                 {%
6532                     \large
6533                     \slide@ccline{%
6534                         \slidenumberline{$\surdl\bullet$}%
6535                         {\hyperlink{##4}{##2}}}%
6536                     }{##3}%
6537                 }%
6538             \fi
6539         \or
6540             \def\lslide@flag{2}%
6541             {%
6542                 \large
6543                 \slide@ccline{%
6544                     \slidenumberline{$\bullet$}%

```

```

6545         {\hyperlink{##4}{##2}}%
6546     }{##3}%
6547 }%
6548 \or
6549 {%
6550     \large
6551     \slide@cline{%
6552         \slidenumberline{$\bullet$}%
6553         {\hyperlink{##4}{##2}}%
6554     }{##3}%
6555 }%
6556 \fi
6557 }%
6558 \def\l@subslide##1##2##3##4{%
6559     \ifnum\lslide@flag=1 %
6560         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6561     \fi
6562 }%
6563 \def\lslide@flag{0}%
6564 \@startlos
6565 }%
6566 }{}

```

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.)

```

6567 \ifHy@texht
6568     \expandafter\endinput
6569 \fi
6570 \let\real@setref\@setref
6571 \def\@setref#1#2#3{% csname, extract group, refname
6572     \ifx#1\relax
6573         \protect\G@refundefinedtrue
6574         \nfss@text{\reset@font\bfseries ??}%
6575         \@latex@warning{%
6576             Reference ‘#3’ on page \thepage \space undefined%
6577         }%
6578     \else
6579         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6580     \fi
6581 }

```

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

```

6582 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6583     \begingroup
6584         \toks0={\hyper@@link{#5}{#4}}%
6585         \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6586         \edef\x{\endgroup
6587             \the\toks0 {\the\toks1 }%
6588         }%
6589     \x
6590 }
6591 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6592     \ifx#1\relax
6593         \protect\G@refundefinedtrue
6594         \nfss@text{\reset@font\bfseries ??}%
6595         \@latex@warning{%

```

```

6596      Reference ‘#3’ on page \thepage \space undefined%
6597    }%
6598  \else
6599    \protect\hyper@@link
6600      {\expandafter\@fifthoffive#1}%
6601      {page.\expandafter\@secondoffive#1}%
6602      {\expandafter\@secondoffive#1}%
6603  \fi
6604 }

6605 </package>
6606 <*check>
6607 \checklatex
6608 \checkcommand\def\@setref#1#2#3{%
6609   \ifx#1\relax
6610     \protect\G@refundefinedtrue
6611     \nfss@text{\reset@font\bfseries ??}%
6612     \@latex@warning{%
6613       Reference ‘#3’ on page \thepage\space undefined%
6614     }%
6615   \else
6616     \expandafter#2#1\relax
6617   \fi
6618 }
6619 </check>
6620 <*package>

```

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

```

6621 \def\HyRef@StarSetRef#1{%
6622   \begingroup
6623     \Hy@safe@activestrue
6624     \edef\x{#1}%
6625     \@onelevel@sanitize\x
6626     \edef\x{\endgroup
6627       \noexpand\HyRef@@StarSetRef
6628       \expandafter\noexpand\csname r@\x\endcsname{\x}%
6629     }%
6630   \x
6631 }
6632 \def\HyRef@@StarSetRef#1#2#3{%
6633   \ifx#1\@undefined
6634     \let#1\relax
6635   \fi
6636   \real@setref#1#3{#2}%
6637 }
6638 \def\@refstar#1{%
6639   \HyRef@StarSetRef{#1}\@firstoffive
6640 }
6641 \def\@pagerefstar#1{%
6642   \HyRef@StarSetRef{#1}\@secondoffive
6643 }
6644 \AtBeginDocument{%
6645   \@ifpackageloaded{varioref}{%
6646     \def\@Refstar#1{%
6647       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6648     }%
6649     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%

```

```

6650     \MakeUppercase#1%
6651   }%
6652   \DeclareRobustCommand*{\Ref}{%
6653     \@ifstar\@Refstar\HyRef@Ref
6654   }%
6655   \def\HyRef@Ref#1{%
6656     \hyperref[#{1}]{\Ref*{#1}}%
6657   }%
6658   \def\Vr@f#1{%
6659     \leavevmode\unskip\vref@space
6660     \hyperref[#{1}]{%
6661       \Ref*{#1}%
6662       \let\vref@space\nobreakspace
6663       \@vpageref[\unskip]{#1}%
6664     }%
6665   }%
6666   \def\vr@f#1{%
6667     \leavevmode\unskip\vref@space
6668     \begingroup
6669       \let\T@pageref\@pagerefstar
6670       \hyperref[#{1}]{%
6671         \ref*{#1}%
6672         \vpageref[\unskip]{#1}%
6673       }%
6674     \endgroup
6675   }%
6676 }{}%
6677 }
6678 \DeclareRobustCommand*{\autopageref}{%
6679   \@ifstar{%
6680     \HyRef@autopagerefname\pageref*%
6681   }\HyRef@autopageref
6682 }
6683 \def\HyRef@autopageref#1{%
6684   \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#1}}%
6685 }
6686 \def\HyRef@autopagerefname{%
6687   \@ifundefined{pageautorefname}{%
6688     \@ifundefined{pagename}{%
6689       \Hy@Warning{No autoref name for ‘page’}%
6690     }{%
6691       \pagename\nobreakspace
6692     }%
6693   }{%
6694     \pageautorefname\nobreakspace
6695   }%
6696 }
6697 \DeclareRobustCommand*{\autoref}{%
6698   \@ifstar{\HyRef@autoref\@gobbletwo}{\HyRef@autoref\hyper@link}%
6699 }
6700 \def\HyRef@autoref#1#2{%
6701   \begingroup
6702     \Hy@safe@activetrue
6703     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
6704   \endgroup
6705 }
6706 \def\HyRef@autosetref#1#2#3{% link command, csname, refname

```

```

6707 \HyRef@ShowKeysRef{#2}%
6708 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6709 \edef\HyRef@thisref{%
6710 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6711 }%
6712 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6713 \Hy@safe@activesfalse
6714 #3{%
6715 \expandafter\@fifthoffive#1\@empty\@empty\@empty
6716 }{%
6717 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6718 }{%
6719 \HyRef@currentHtag
6720 \expandafter\@firstoffive#1\@empty\@empty\@empty
6721 \null
6722 }%
6723 \else
6724 \protect\G@refundefinedtrue
6725 \nfss@text{\reset@font\bfseries ??}%
6726 \@latex@warning{%
6727 Reference ‘#2’ on page \thepage\space undefined%
6728 }%
6729 \fi
6730 }
6731 \def\HyRef@testreftype#1.#2\{%
6732 \@ifundefined{#1autorefname}{%
6733 \@ifundefined{#1name}{%
6734 \HyRef@StripStar#1\*\@nil{#1}%
6735 \@ifundefined{\HyRef@name autorefname}{%
6736 \@ifundefined{\HyRef@name name}{%
6737 \def\HyRef@currentHtag{%
6738 \Hy@Warning{No autoref name for ‘#1’}%
6739 }{%
6740 \edef\HyRef@currentHtag{%
6741 \expandafter\noexpand\csname\HyRef@name name\endcsname
6742 \noexpand~%
6743 }%
6744 }%
6745 }{%
6746 \edef\HyRef@currentHtag{%
6747 \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6748 \noexpand~%
6749 }%
6750 }%
6751 }{%
6752 \edef\HyRef@currentHtag{%
6753 \expandafter\noexpand\csname#1name\endcsname
6754 \noexpand~%
6755 }%
6756 }%
6757 }{%
6758 \edef\HyRef@currentHtag{%
6759 \expandafter\noexpand\csname#1autorefname\endcsname
6760 \noexpand~%
6761 }%
6762 }%
6763 }

```

```

6764 \def\HyRef@StripStar#1*\#2\@nil#3{%
6765   \def\HyRef@name{#2}%
6766   \ifx\HyRef@name\HyRef@CaseStar
6767     \def\HyRef@name{#1}%
6768   \else
6769     \def\HyRef@name{#3}%
6770   \fi
6771 }
6772 \def\HyRef@CaseStar{*\\}
6773 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

6774 \let\HyRef@ShowKeysRef\@gobble
6775 \def\HyRef@ShowKeysInit{%
6776   \begingroup\expandafter\expandafter\expandafter\endgroup
6777   \expandafter\ifx\csname SK@@label\endcsname\relax
6778   \else
6779     \ifx\SK@ref\@empty
6780     \else
6781       \def\HyRef@ShowKeysRef{%
6782         \SK@\SK@@ref
6783       }%
6784     \fi
6785   \fi
6786 }
6787 \@ifpackageloaded{showkeys}{%
6788   \HyRef@ShowKeysInit
6789 }{%
6790   \AtBeginDocument{%
6791     \@ifpackageloaded{showkeys}{%
6792       \HyRef@ShowKeysInit
6793     }{%
6794     }%
6795 }

```

Defaults for the names that \autoref uses.

```

6796 \providecommand*{\AMSautorefname}{\equationautorefname}
6797 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
6798 \providecommand*{\Itemautorefname}{\itemautorefname}
6799 \providecommand*{\itemautorefname}{item}
6800 \providecommand*{\equationautorefname}{Equation}
6801 \providecommand*{\footnoteautorefname}{footnote}
6802 \providecommand*{\itemautorefname}{item}
6803 \providecommand*{\figureautorefname}{Figure}
6804 \providecommand*{\tableautorefname}{Table}
6805 \providecommand*{\partautorefname}{Part}
6806 \providecommand*{\appendixautorefname}{Appendix}
6807 \providecommand*{\chapterautorefname}{chapter}
6808 \providecommand*{\sectionautorefname}{section}
6809 \providecommand*{\subsectionautorefname}{subsection}
6810 \providecommand*{\subsubsectionautorefname}{subsubsection}
6811 \providecommand*{\paragraphautorefname}{paragraph}
6812 \providecommand*{\subparagraphautorefname}{subparagraph}
6813 \providecommand*{\FancyVerbLineautorefname}{line}
6814 \providecommand*{\theoremautorefname}{Theorem}
6815 \providecommand*{\pageautorefname}{page}

```

6816 `</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_TE_X offers `\pdfescapestring`.

```
6817 <*pdfTex | dvipdfm | vtex | pdfmarkbase | dviwindo>
6818 \RequirePackage{pdfTexcmds}[2007/11/11]
6819 \begingroup\expandafter\expandafter\expandafter\endgroup
6820 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6821   \begingroup
6822     \catcode'\|=0 %
6823     \@makeother\| %
6824     \@firstofone{\endgroup
6825       |def|Hy@pstringdef#1#2{%
6826         |begingroup
6827           |edef~{|string~}%
6828           |xdef|Hy@gtemp{#2}%
6829         |endgroup
6830         |let#1|Hy@gtemp
6831         |@onelevel@sanitize#1%
6832         |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
6833         |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6834         |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
6835       }%
6836       |def|Hy@ExchangeBackslash#1\#2|@nil{%
6837         #1%
6838         |ifx|\#2\| %
6839         |else
6840           \| %
6841           |Hy@ReturnAfterFi{%
6842             |Hy@ExchangeBackslash#2|@nil
6843           }%
6844         |fi
6845       }%
6846     }%
6847   \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6848     #1%
6849     \ifx\#2\| %
6850     \else
6851       \@backslashchar(%
6852       \Hy@ReturnAfterFi{%
6853         \Hy@ExchangeLeftParenthesis#2\@nil
6854       }%
6855     \fi
6856   }%
6857   \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6858     #1%
6859     \ifx\#2\| %
```



```

6860 \else
6861 \backslashchar)%
6862 \Hy@ReturnAfterFi{%
6863 \Hy@ExchangeRightParenthesis#2\@nil
6864 }%
6865 \fi
6866 }%
6867 \else
6868 \def\Hy@pstringdef#1#2{%
6869 \begingroup
6870 \edef~{\string~}%
6871 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6872 \endgroup
6873 \let#1\Hy@gtemp
6874 }%
6875 \fi
6876 </pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

6877 <*pdfTeX>
6878 \providecommand*{\XR@ext}{pdf}
6879 \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`

```

6880 \let\Hy@pdfminorversion\relax
6881 \begingroup\expandafter\expandafter\expandafter\endgroup
6882 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6883 \begingroup\expandafter\expandafter\expandafter\endgroup
6884 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6885 \else
6886 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6887 \fi
6888 \else
6889 \def\Hy@pdfminorversion{\pdfminorversion}%
6890 \fi
6891 \@ifundefined{Hy@pdfminorversion}{%
6892 \PackageInfo{hyperref}{%
6893 PDF version is not set, because pdfTeX is too old (<1.10a)%
6894 }%
6895 }{%
6896 \ifHy@ocgcolorlinks
6897 \ifnum\Hy@pdfminorversion<5 %
6898 \setkeys{Hyp}{pdfversion=1.5}%
6899 \fi
6900 \fi
6901 \ifHy@setpdfversion
6902 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
6903 \else
6904 \Hy@pdfminorversion=\Hy@pdfversion\relax
6905 \fi

```

```

6906     \PackageInfo{hyperref}{%
6907         \expandafter\string\Hy@pdfminorversion
6908         :=\number\Hy@pdfversion\space
6909     }%
6910 \fi
6911 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6912 }
6913 \Hy@DisableOption{pdfversion}%

6914 \ifHy@ocgcolorlinks
6915     \immediate\pdfobj{%
6916         <<%
6917             /Type/OCG%
6918             /Name(View)%
6919             /Usage<<%
6920                 /Print<<%
6921                     /PrintState/OFF%
6922                 >>%
6923             /View<<%
6924                 /ViewState/ON%
6925             >>%
6926         >>%
6927     }%
6928 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6929 \immediate\pdfobj{%
6930     <<%
6931         /Type/OCG%
6932         /Name(Print)%
6933         /Usage<<%
6934             /Print<<%
6935                 /PrintState/ON%
6936             >>%
6937         /View<<%
6938             /ViewState/OFF%
6939         >>%
6940     >>%
6941 }%
6942 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6943 \immediate\pdfobj{%
6944     [%
6945         \OBJ@OCG@view\space\OBJ@OCG@print
6946     ]%
6947 }%
6948 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6949 \pdfcatalog{%
6950     /OCProperties<<%
6951         /OCGs \OBJ@OCGs
6952         /D<<%
6953             /OFF[\OBJ@OCG@print]%
6954             /AS[%
6955                 <<%
6956                     /Event/View%
6957                     /OCGs \OBJ@OCGs
6958                     /Category[/View]%
6959                 >>%
6960             <<%

```

```

6963         /Event/Print%
6964         /OCGs \OBJ@OCGs
6965         /Category[/Print]%
6966     >>%
6967     <<%
6968         /Event/Export%
6969         /OCGs \OBJ@OCGs
6970         /Category[/Print]%
6971     >>%
6972     ]%
6973     >>%
6974     >>%
6975 }%
6976 \begingroup
6977   \edef\x{\endgroup
6978     \pdfpageresources{%
6979       /Properties<<%
6980       /OCView \OBJ@OCG@view
6981       /OCPrint \OBJ@OCG@print
6982     >>%
6983   }%
6984 }%
6985 \x
6986 \AtBeginDocument{%
6987   \def\Hy@colorlink#1{%
6988     \begingroup
6989     \ifHy@ocgcolorlinks
6990       \def\Hy@ocgcolor{#1}%
6991       \setbox0=\color@hbox
6992     \else
6993       \HyColor@UseColor#1%
6994     \fi
6995   }%
6996   \def\Hy@endcolorlink{%
6997     \ifHy@ocgcolorlinks
6998       \color@endbox
6999     \mbox{%
7000       \pdfliteral page{/OC/OCPrint BDC}%
7001       \rlap{\copy0}%
7002       \pdfliteral page{EMC/OC/OCView BDC}%
7003     \begingroup
7004       \expandafter\HyColor@UseColor\Hy@ocgcolor
7005     \box0 %
7006   \endgroup
7007   \pdfliteral page{EMC}%
7008   }%
7009   \fi
7010 \endgroup
7011 }%
7012 }%
7013 \else
7014   \Hy@DisableOption{ocgcolorlinks}%
7015 \fi

```

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

```

7016 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7017 \ifx\pdfstartlink\undefined% less than version 14
7018   \let\pdfstartlink\pdfannotlink

```

```

7019 \let\pdflinkmargin\@tempdima
7020 \let\pdfxform\pdfform
7021 \let\pdflastxform\pdfastform
7022 \let\pdfrefxform\pdfreform
7023 \else
7024 \pdflinkmargin1pt %
7025 \fi

```

First set up the default linking

```
7026 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7027 \def\new@pdflink#1{%
7028   \ifHy@verbose
7029     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7030   \fi
7031   \Hy@SaveLastskip
7032   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7033   \Hy@DestName\Hy@pstringDest\@pdfview
7034   \Hy@RestoreLastskip
7035 }
7036 \let\pdf@endanchor\@empty

```

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

```

7037 \def\Hy@DestName#1#2{%
7038   \pdfdest name{#1}#2\relax
7039 }

```

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.

```

7040 \providecommand*\@pdfborder{0 0 1}
7041 \providecommand*\@pdfborderstyle{}
7042 \def\Hy@undefinedname{UNDEFINED}
7043 \def\find@pdflink#1#2{%
7044   \leavevmode
7045   \protected@edef\Hy@testname{#2}%
7046   \ifx\Hy@testname\@empty
7047     \Hy@Warning{%
7048       Empty destination name,\MessageBreak
7049       using '\Hy@undefinedname'%
7050     }%
7051     \let\Hy@testname\Hy@undefinedname
7052   \else
7053     \Hy@pstringdef\Hy@testname{%
7054       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7055     }%
7056   \fi
7057   \Hy@StartlinkName{%
7058     \ifHy@pdfa /F 4\fi
7059     \Hy@setpdfborder
7060     \ifx\@pdfhighlight\@empty
7061       \else
7062         /H\@pdfhighlight
7063       \fi
7064     \ifx\CurrentBorderColor\relax

```

```

7065     \else
7066         /C[\CurrentBorderColor]%
7067     \fi
7068 } \Hy@testname
7069 \expandafter \Hy@colorlink \csname @#1color \endcsname
7070 }
7071 \def \Hy@StartlinkName#1#2{%
7072     \pdfstartlink attr{#1} goto name{#2} \relax
7073 }
7074 \def \close@pdflink{\Hy@endcolorlink \pdfendlink}
7075 \def \hyper@anchor#1{\new@pdflink{#1} \anchor@spot \pdf@endanchor}
7076 \def \hyper@anchorstart#1{\new@pdflink{#1} \Hy@activeanchortrue}
7077 \def \hyper@anchorend{\pdf@endanchor \Hy@activeanchorfalse}
7078 \def \hyper@linkstart#1#2{%
7079     \ifundefined{@#1bordercolor}{%
7080         \let \CurrentBorderColor \relax
7081     }{%
7082         \edef \CurrentBorderColor{\csname @#1bordercolor \endcsname}%
7083     }%
7084     \find@pdflink{#1}{#2}%
7085 }
7086 \def \hyper@linkend{\close@pdflink}
7087 \def \hyper@link#1#2#3{%
7088     \ifundefined{@#1bordercolor}{%
7089         \let \CurrentBorderColor \relax
7090     }{%
7091         \edef \CurrentBorderColor{\csname @#1bordercolor \endcsname}%
7092     }%
7093     \find@pdflink{#1}{#2}#3%
7094     \close@pdflink
7095 }
7096 \let \CurrentBorderColor \@linkbordercolor
7097 \def \hyper@linkurl#1#2{%
7098     \begingroup
7099     \Hy@pstringdef \Hy@pstringURI{#2}%
7100     \hyper@chars
7101     \leavevmode
7102     \pdfstartlink
7103     attr{%
7104         \Hy@setpdfborder
7105         \ifx \pdfhighlight \empty
7106         \else
7107             /H \pdfhighlight
7108         \fi
7109         \ifx \@urlbordercolor \relax
7110         \else
7111             /C [\@urlbordercolor]%
7112         \fi
7113     }%
7114     user{%
7115         /Subtype /Link%
7116         \ifHy@pdfa /F 4 \fi
7117         /A <<%
7118             /Type /Action%
7119             /S /URI%
7120             /URI (\Hy@pstringURI)%
7121         >>%

```

```

7122     }%
7123     \relax
7124     \Hy@colorlink\@urlcolor#1%
7125     \close@pdflink
7126 \endgroup
7127 }
7128 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7129 \begingroup
7130   \Hy@pstringdef\Hy@pstringF{#2}%
7131   \Hy@pstringdef\Hy@pstringD{#3}%
7132   \leavevmode
7133   \pdfstartlink
7134   attr{%
7135     \Hy@setpdfborder
7136     \ifx\@pdfhighlight\@empty
7137     \else
7138       /H\@pdfhighlight
7139     \fi
7140     \ifx\@filebordercolor\relax
7141     \else
7142       /C[\@filebordercolor]%
7143     \fi
7144   }%
7145   user {%
7146     /Subtype/Link%
7147     \ifHy@pdfa /F 4\fi
7148     /A<<%
7149     /F(\Hy@pstringF)%
7150     /S/GoToR%
7151     \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}

```

```

7152     \ifx\#3\%
7153     /D[0 \@pdfstartview]%
7154     \else
7155     /D(\Hy@pstringD)%
7156     \fi
7157     >>%
7158   }%
7159   \relax
7160   \Hy@colorlink\@filecolor#1%
7161   \close@pdflink
7162 \endgroup
7163 }
7164 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7165 \begingroup
7166   \Hy@pstringdef\Hy@pstringF{#1}%
7167   \Hy@pstringdef\Hy@pstringP{#3}%

```

```

7168 \leavevmode
7169 \pdfstartlink
7170 attr{%
7171   \Hy@setpdfborder
7172   \ifx\@pdfhighlight\@empty
7173   \else
7174     /H\@pdfhighlight
7175   \fi
7176   \ifx\@runbordercolor\relax
7177   \else
7178     /C[\@runbordercolor]%
7179   \fi
7180 }%
7181 user {%
7182   /Subtype/Link%
7183   \ifHy@pdfa /F 4\fi
7184   /A<<%
7185     /F(\Hy@pstringF)%
7186     /S/Launch%
7187     \Hy@SetNewWindow
7188     \ifx\#3\%
7189     \else
7190       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7191     \fi
7192   >>%
7193 }%
7194 \relax
7195 \Hy@colorlink\@runcolor#2%
7196 \close@pdflink
7197 \endgroup
7198 }

```

\@pdfproducer

```

7199 \ifx\@pdfproducer\relax
7200 \begin{group}\expandafter\expandafter\expandafter\endgroup
7201 \expandafter\ifx\csname luatexversion\endcsname\relax
7202   \def\@pdfproducer{pdfTeX}%
7203   \ifx\@eTeXversion\@undefined
7204   \else
7205     \ifx\@eTeXversion\relax
7206     \else
7207       \ifnum\@eTeXversion>0 %
7208       \def\@pdfproducer{pdfTeX}%
7209     \fi
7210   \fi
7211 \fi
7212 \ifx\pdftexversion\@undefined
7213 \else
7214   \ifnum\pdftexversion<100 %
7215   \edef\@pdfproducer{%
7216     \@pdfproducer
7217     \the\pdftexversion.\pdftexrevision
7218   }%
7219 \else
7220   \ifnum\pdftexversion<130 %
7221   \edef\@pdfproducer{%
7222     \@pdfproducer-

```

```

7223         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7224         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7225         \pdfTeXrevision
7226     }%
7227 \else
7228     \ifnum\pdfTeXversion<140 %
7229     \else
7230         \def\@pdfproducer{pdfTeX}%
7231     \fi
7232     \edef\@pdfproducer{%
7233         \@pdfproducer-%
7234         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7235         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7236         \pdfTeXrevision
7237     }%
7238 \fi
7239 \fi
7240 \fi
7241 \else
7242     \begingroup
7243         \count@=\luatexversion
7244         \divide\count@ by 100 %
7245         \edef\x{\the\count@}%
7246         \count@=-\x\relax
7247         \multiply\count@ by 100 %
7248         \advance\count@ by \luatexversion
7249         \edef\x{\endgroup
7250             \def\noexpand\@pdfproducer{%
7251                 LuaTeX-\x.\the\count@.\luatexrevision
7252             }%
7253         }%
7254     \x
7255 \fi
7256 \fi

```

\PDF@SetupDox

```

7257 \def\PDF@SetupDoc{%
7258     \ifx\@pdfpagescrop\@empty
7259     \else
7260         \edef\process@me{%
7261             \pdfpagesattr={%
7262                 /CropBox[\@pdfpagescrop]%
7263                 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
7264                 \else
7265                     ^^J\the\pdfpagesattr
7266                 \fi
7267             }%
7268         }%
7269         \process@me
7270     \fi
7271     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7272     \pdfcatalog{%
7273         /PageMode/\@pdfpagemode
7274         \ifx\@baseurl\@empty
7275         \else
7276             /URI<</Base(\Hy@pstringB)>>%
7277         \fi

```



```

7278 }%
7279 \ifx\@pdfstartpage\@empty
7280 \else
7281   \ifx\@pdfstartview\@empty
7282   \else
7283     openaction goto page\@pdfstartpage{\@pdfstartview}%
7284   \fi
7285 \fi
7286 \edef\Hy@temp{%
7287   \ifHy@toolbar\else /HideToolbar true\fi
7288   \ifHy@menubar\else /HideMenubar true\fi
7289   \ifHy>windowui\else /HideWindowUI true\fi
7290   \ifHy@fitwindow /FitWindow true\fi
7291   \ifHy@centerwindow /CenterWindow true\fi
7292   \ifHy@displaydoctitle /DisplayDocTitle true\fi
7293   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7294   \Hy@UseNameKey{Direction}\@pdfdirection
7295   \Hy@UseNameKey{ViewArea}\@pdfviewarea
7296   \Hy@UseNameKey{ViewClip}\@pdfviewclip
7297   \Hy@UseNameKey{PrintArea}\@pdfprintarea
7298   \Hy@UseNameKey{PrintClip}\@pdfprintclip
7299   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7300   \Hy@UseNameKey{Duplex}\@pdfduplex
7301   \ifx\@pdfpicktraybypdfsize\@empty
7302   \else
7303     /PickTrayByPDFSize \@pdfpicktraybypdfsize
7304   \fi
7305   \ifx\@pdfprintpagerange\@empty
7306   \else
7307     /PrintPageRange[\@pdfprintpagerange]%
7308   \fi
7309   \ifx\@pdfnumcopies\@empty
7310   \else
7311     /NumCopies \@pdfnumcopies
7312   \fi
7313 }%
7314 \pdfcatalog{%
7315   \ifx\Hy@temp\@empty
7316   \else
7317     /ViewerPreferences<<\Hy@temp>>%
7318   \fi
7319   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7320   \ifx\@pdflang\@empty
7321   \else
7322     /Lang(\@pdflang)%
7323   \fi
7324 }%
7325 }

```

\PDF@FinishDoc

```

7326 \def\PDF@FinishDoc{%
7327   \Hy@UseMaketitleInfos
7328   \pdfinfo{%
7329     /Author(\@pdfauthor)%
7330     /Title(\@pdftitle)%
7331     /Subject(\@pdfsubject)%
7332     /Creator(\@pdfcreator)%

```

```

7333 \ifx\@pdfcreationdate\@empty
7334 \else
7335 /CreationDate(\@pdfcreationdate)%
7336 \fi
7337 \ifx\@pdfmoddate\@empty
7338 \else
7339 /ModDate(\@pdfmoddate)%
7340 \fi
7341 \ifx\@pdfproducer\relax
7342 \else
7343 /Producer(\@pdfproducer)%
7344 \fi
7345 /Keywords(\@pdfkeywords)%
7346 }%
7347 \Hy@DisableOption{pdfauthor}%
7348 \Hy@DisableOption{pdftitle}%
7349 \Hy@DisableOption{pdfsubject}%
7350 \Hy@DisableOption{pdfcreator}%
7351 \Hy@DisableOption{pdfcreationdate}%
7352 \Hy@DisableOption{pdfmoddate}%
7353 \Hy@DisableOption{pdfproducer}%
7354 \Hy@DisableOption{pdfkeywords}%
7355 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpage-transition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

7356 \def\hyper@pagetransition{%
7357 \ifx\@pdfpagetransition\relax
7358 \else
7359 \expandafter\Hy@RemoveTransPageAttr
7360 \the\pdfpageattr^^J/Trans{>>\END
7361 \ifx\@pdfpagetransition\@empty
7362 \else
7363 \edef\@processme{%
7364 \global\pdfpageattr{%
7365 \the\pdfpageattr
7366 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7367 }%
7368 }%
7369 \@processme
7370 \fi
7371 \fi
7372 }

```

`\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.

```

7373 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7374 \ifx\#2\%
7375 \global\pdfpageattr{#1}%
7376 \else
7377 \Hy@RemoveTransPageAttr#1#4\END
7378 \fi
7379 }

```

`\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`.

```

7380 \def\hyper@pageduration{%
7381   \ifx\@pdfpageduration\relax
7382   \else
7383     \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
7384     \ifx\@pdfpageduration\@empty
7385     \else
7386       \edef\@processme{%
7387         \global\pdfpageattr{%
7388           \the\pdfpageattr
7389           ^^J/Dur \@pdfpageduration\space
7390         }%
7391       }%
7392       \@processme
7393     \fi
7394   \fi
7395 }

```

`\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.

```

7396 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7397   \ifx\#2\%
7398     \global\pdfpageattr{#1}%
7399   \else
7400     \Hy@RemoveDurPageAttr#1#4\END
7401   \fi
7402 }

```

`\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).

```

7403 \def\hyper@pagehidden{%
7404   \ifHy@useHidKey
7405     \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7406     \ifHy@pdfpagehidden
7407     \edef\@processme{%
7408       \global\pdfpageattr{%
7409         \the\pdfpageattr
7410         ^^J/Hid true % SPACE
7411       }%
7412     }%
7413     \@processme
7414   \fi
7415 \fi
7416 }

```

`\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.

```

7417 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7418   \ifx\#2\%

```

```

7419 \global\pdfpageattr{#1}%
7420 \else
7421 \Hy@RemoveHidPageAttr#1#4\END
7422 \fi
7423 }

7424 \g@addto@macro\Hy@EveryPageHook{%
7425 \hyper@pagetransition
7426 \hyper@pageduration
7427 \hyper@pagehidden
7428 }

7429 \AtBeginDocument{%
7430 \ifHy@setpagesize
7431 \expandafter\@firstofone
7432 \else
7433 \expandafter\@gobble
7434 \fi
7435 {%
7436 \@ifclassloaded{seminar}{%
7437 \setlength{\pdfhorigin}{1truein}%
7438 \setlength{\pdfvorigin}{1truein}%
7439 \ifportrait
7440 \ifdim\paperwidth=\z@
7441 \else
7442 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7443 \fi
7444 \ifdim\paperheight=\z@
7445 \else
7446 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7447 \fi
7448 \else
7449 \ifdim\paperheight=\z@
7450 \else
7451 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7452 \fi
7453 \ifdim\paperwidth=\z@
7454 \else
7455 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7456 \fi
7457 \fi
7458 }{%
7459 \@ifundefined{stockwidth}{%
7460 \ifdim\paperwidth=\z@
7461 \else
7462 \setlength{\pdfpagewidth}{\paperwidth}%
7463 \fi
7464 \ifdim\paperheight=\z@
7465 \else
7466 \setlength{\pdfpageheight}{\paperheight}%
7467 \fi
7468 }{%
7469 \ifdim\stockwidth=\z@
7470 \else
7471 \setlength{\pdfpagewidth}{\stockwidth}%
7472 \fi
7473 \ifdim\stockheight=\z@
7474 \else
7475 \setlength{\pdfpageheight}{\stockheight}%

```

```

7476         \fi
7477     }%
7478 }%
7479 }%
7480 \Hy@DisableOption{setpagesize}%
7481 }
7482 \def\Acrobatmenu#1#2{%
7483     \Hy@Acrobatmenu{#1}{#2}{%
7484         \pdfstartlink
7485         attr{%
7486             \Hy@setpdfborder
7487             \ifx\@pdfhighlight\@empty
7488             \else
7489                 /H\@pdfhighlight
7490             \fi
7491             \ifx\@menubordercolor\relax
7492             \else
7493                 /C[\@menubordercolor]%
7494             \fi
7495         }%
7496         user{%
7497             /Subtype/Link%
7498             \ifHy@pdfa /F 4\fi
7499             /A<{%
7500                 /S/Named/N/#1%
7501             >>%
7502         }%
7503         \relax
7504         \Hy@colorlink\@menucolor#2%
7505         \close@pdflink
7506     }%
7507 }

```

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`.

```

7508 \def\Hy@FixNotFirstPage{%
7509     \gdef\Hy@FixNotFirstPage{%
7510         \setbox\AtBeginShipoutBox=\hbox{%
7511             \copy\AtBeginShipoutBox
7512         }%
7513     }%
7514 }
7515 \AtBeginShipout{\Hy@FixNotFirstPage}
7516 </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` com-

mands:

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 T_EX file — the T_EX 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.

```
7517 \*hypertex>
7518 \providecommand*\XR@ext}{dvi}
7519 \def\PDF@FinishDoc{}
7520 \def\PDF@SetupDoc{%
7521   \ifx\@baseurl\@empty
7522   \else
7523     \special{html:<base href="\@baseurl">}%
7524   \fi
7525 }
7526 \def\hyper@anchor#1{%
7527   \Hy@SaveLastskip
7528   \begingroup
7529     \let\protect=\string
7530     \hyper@chars
7531     \special{html:<a name=%
7532       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7533   \endgroup
7534   \Hy@activeanchortrue
7535   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7536   \special{html:</a>}%
7537   \Hy@activeanchorfalse
7538   \Hy@RestoreLastskip
7539 }
7540 \def\hyper@anchorstart#1{%
7541   \Hy@SaveLastskip
7542   \begingroup
7543     \hyper@chars
7544     \special{html:<a name=%
```

```

7545     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7546   \endgroup
7547   \Hy@activeanchortrue
7548 }
7549 \def\hyper@anchorend{%
7550   \special{html:</a>}}%
7551   \Hy@activeanchorfalse
7552   \Hy@RestoreLastskip
7553 }
7554 \def\@urltype{url}
7555 \def\hyper@linkstart#1#2{%
7556   \expandafter\Hy@colorlink\csname @#1color\endcsname
7557   \def\Hy@tempa{#1}%
7558   \ifx\Hy@tempa\@urltype
7559     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7560   \else
7561     \begingroup
7562     \hyper@chars
7563     \special{html:<a href=%
7564       \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}}%
7565     \endgroup
7566   \fi
7567 }
7568 \def\hyper@linkend{%
7569   \special{html:</a>}}%
7570   \Hy@endcolorlink
7571 }
7572 \def\hyper@linkfile#1#2#3{%
7573   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
7574 }
7575 \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.

```

7576   \leavevmode
7577   \ifHy@raiselinks
7578     \setbox\@tempboxa=\color@hbox #1\color@endbox
7579     \@linkdim\dp\@tempboxa
7580     \lower\@linkdim\hbox{%
7581       \hyper@chars
7582       \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7583     }%
7584     \Hy@colorlink\@urlcolor#1%
7585     \@linkdim\ht\@tempboxa

```

Because of the interaction with the dvihps processor, we have to subtract a little from the height. This is not clean, or checked. Check with Mark Doyle about what gives here. It may not be needed with the new dvips (Jan 1997).

```

7586     \advance\@linkdim by -6.5\p@
7587     \raise\@linkdim\hbox{\special{html:</a>}}%
7588     \Hy@endcolorlink
7589   \else
7590     \begingroup
7591     \hyper@chars
7592     \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7593     \Hy@colorlink\@urlcolor#1%
7594     \special{html:</a>}}%

```

```

7595      \Hy@endcolorlink
7596      \endgroup
7597      \fi
7598 }

```

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

```

7599 \def\hyper@link#1#2#3{%
7600   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
7601 }

7602 \def\hyper@image#1#2{%
7603   \begingroup
7604     \hyper@chars
7605     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
7606   \endgroup
7607 }
7608 </hypertex>
7609 <*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.

```

7610 \providecommand*\XR@ext}{dvi}
7611 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7612 \def\hyper@anchor#1{%
7613   \Hy@SaveLastskip
7614   \begingroup
7615     \let\protect=\string
7616     \special{mark: #1}%
7617   \endgroup
7618   \Hy@activeanchortrue
7619   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7620   \Hy@activeanchorfalse
7621   \Hy@RestoreLastskip
7622 }
7623 \def\hyper@anchorstart#1{%
7624   \Hy@SaveLastskip
7625   \special{mark: #1}%
7626   \Hy@activeanchortrue
7627 }
7628 \def\hyper@anchorend{%
7629   \Hy@activeanchorfalse
7630   \Hy@RestoreLastskip
7631 }
7632 \def\hyper@linkstart#1#2{%
7633   \expandafter\Hy@colorlink\csname @#1color\endcsname
7634   \special{button: %
7635     10000000 %

```



```

7636 \number\baselineskip\space
7637 #2%
7638 }%
7639 }
7640 \def\hyper@linkend{%
7641 \Hy@endcolorlink
7642 }
7643 \def\hyper@link#1#2#3{%
7644 \setbox\@tempboxa=\color@hbox #3\color@endbox
7645 \leavevmode
7646 \ifHy@raiselinks
7647 \@linkdim\dp\@tempboxa
7648 \lower\@linkdim\hbox{%
7649 \special{button: %
7650 \number\wd\@tempboxa\space
7651 \number\ht\@tempboxa\space
7652 #2%
7653 }%
7654 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7655 \Hy@endcolorlink
7656 }%
7657 \@linkdim\ht\@tempboxa
7658 \advance\@linkdim by -6.5\p@
7659 \raise\@linkdim\hbox{}%
7660 \else
7661 \special{button: %
7662 \number\wd\@tempboxa\space
7663 \number\ht\@tempboxa\space
7664 #2%
7665 }%
7666 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7667 \Hy@endcolorlink
7668 \fi
7669 }
7670 \def\hyper@linkurl#1#2{%
7671 \begingroup
7672 \hyper@chars
7673 \leavevmode
7674 \setbox\@tempboxa=\color@hbox #1\color@endbox
7675 \ifHy@raiselinks
7676 \@linkdim\dp\@tempboxa
7677 \lower\@linkdim\hbox{%
7678 \special{button: %
7679 \number\wd\@tempboxa\space
7680 \number\ht\@tempboxa\space
7681 launch: \wwwbrowser\space
7682 #2%
7683 }%
7684 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7685 }%
7686 \@linkdim\ht\@tempboxa
7687 \advance\@linkdim by -6.5\p@
7688 \raise\@linkdim\hbox{}%
7689 \else
7690 \special{button: %
7691 \number\wd\@tempboxa\space
7692 \number\ht\@tempboxa\space

```

```

7693      launch: \wwwbrowser\space
7694      #2%
7695  }%
7696  \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7697  \fi
7698  \endgroup
7699 }
7700 \def\hyper@linkfile#1#2#3{%
7701  \begingroup
7702  \hyper@chars
7703  \leavevmode
7704  \setbox\@tempboxa=\color@hbox #1\color@endbox
7705  \ifHy@raiselinks
7706    \@linkdim\dp\@tempboxa
7707    \lower\@linkdim\hbox{%
7708      \special{button: %
7709        \number\wd\@tempboxa\space
7710        \number\ht\@tempboxa\space
7711        #3,%
7712        file: #2%
7713      }%
7714      \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7715    }%
7716    \@linkdim\ht\@tempboxa
7717    \advance\@linkdim by -6.5\p@
7718    \raise\@linkdim\hbox{}}%
7719  \else
7720    \special{button: %
7721      \number\wd\@tempboxa\space
7722      \number\ht\@tempboxa\space
7723      #3,%
7724      file: #2%
7725    }%
7726    \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7727  \fi
7728  \endgroup
7729 }
7730 \ifx\@pdfproducer\relax
7731  \def\@pdfproducer{dviwindo + Distiller}%
7732 \fi
7733 \def\PDF@FinishDoc{%
7734  \Hy@UseMaketitleInfos
7735  \special{PDF: Keywords \@pdfkeywords}%
7736  \special{PDF: Title \@pdftitle}%
7737  \special{PDF: Creator \@pdfcreator}%
7738  \ifx\@pdfcreationdate\@empty
7739  \else
7740    \special{PDF: CreationDate \@pdfcreationdate}%
7741  \fi
7742  \ifx\@pdfmoddate\@empty
7743  \else
7744    \special{PDF: ModDate \@pdfmoddate}%
7745  \fi
7746  \special{PDF: Author \@pdfauthor}%
7747  \ifx\@pdfproducer\relax
7748  \else
7749    \special{PDF: Producer \@pdfproducer}%

```

```

7750 \fi
7751 \special{PDF: Subject \@pdfsubject}%
7752 \Hy@DisableOption{pdfauthor}%
7753 \Hy@DisableOption{pdftitle}%
7754 \Hy@DisableOption{pdfsubject}%
7755 \Hy@DisableOption{pdfcreator}%
7756 \Hy@DisableOption{pdfcreationdate}%
7757 \Hy@DisableOption{pdfmoddate}%
7758 \Hy@DisableOption{pdfproducer}%
7759 \Hy@DisableOption{pdfkeywords}%
7760 }
7761 \def\PDF@SetupDoc{%
7762 \ifx\@baseurl\@empty
7763 \else
7764 \special{PDF: Base \@baseurl}%
7765 \fi
7766 \ifx\@pdfpagescrop\@empty\else
7767 \special{PDF: BBox \@pdfpagescrop}%
7768 \fi
7769 \def\Hy@temp{%
7770 \ifx\@pdfstartpage\@empty
7771 \else
7772 \ifx\@pdfstartview\@empty
7773 \else
7774 \edef\Hy@temp{%
7775 ,Page=\@pdfstartpage
7776 ,View=\@pdfstartview
7777 }%
7778 \fi
7779 \fi
7780 \edef\Hy@temp{%
7781 \noexpand\pdfmark{%
7782 pdfmark=/DOCVIEW,%
7783 PageMode=/\@pdfpagemode
7784 \Hy@temp
7785 }%
7786 }%
7787 \Hy@temp
7788 \ifx\@pdfpagescrop\@empty
7789 \else
7790 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7791 \fi
7792 \edef\Hy@temp{%
7793 \ifHy@toolbar\else /HideToolbar true\fi
7794 \ifHy@menubar\else /HideMenubar true\fi
7795 \ifHy>windowui\else /HideWindowUI true\fi
7796 \ifHy@fitwindow /FitWindow true\fi
7797 \ifHy@centerwindow /CenterWindow true\fi
7798 \ifHy@displaydoctitle /DisplayDocTitle true\fi
7799 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7800 \Hy@UseNameKey{Direction}\@pdfdirection
7801 \Hy@UseNameKey{ViewArea}\@pdfviewarea
7802 \Hy@UseNameKey{ViewClip}\@pdfviewclip
7803 \Hy@UseNameKey{PrintArea}\@pdfprintarea
7804 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7805 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7806 \Hy@UseNameKey{Duplex}\@pdfduplex

```

```

7807 \ifx\@pdfpicktraybypdfsize\@empty
7808 \else
7809 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7810 \fi
7811 \ifx\@pdfprintpagerange\@empty
7812 \else
7813 /PrintPageRange[\@pdfprintpagerange]%
7814 \fi
7815 \ifx\@pdfnumcopies\@empty
7816 \else
7817 /NumCopies \@pdfnumcopies
7818 \fi
7819 }%
7820 \pdfmark{pdfmark=/PUT,%
7821 Raw={%
7822 \string{Catalog\string}<<%
7823 \ifx\Hy@temp\@empty
7824 \else
7825 /ViewerPreferences<<\Hy@temp>>%
7826 \fi
7827 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7828 \ifx\@pdflang\@empty
7829 \else
7830 /Lang(\@pdflang)%
7831 \fi
7832 >>%
7833 }%
7834 }%
7835 }
7836 </dviwindo>
7837 <*dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7838 \providecommand*{\XR@ext}{pdf}
7839 \Hy@setbreaklinks{true}
7840 \newsavebox{\pdfm@box}
7841 \def\@pdfm@mark#1{\special{pdf:#1}}
7842 \def\@pdfm@dest#1{%
7843 \Hy@SaveLastskip
7844 \begingroup
7845 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7846 \def\x{XYZ}%
7847 \ifx\x\@pdfview
7848 \def\x{XYZ @xpos @ypos null}%
7849 \else
7850 \def\x{FitH}%
7851 \ifx\x\@pdfview
7852 \def\x{FitH @ypos}%
7853 \else
7854 \def\x{FitBH}%
7855 \ifx\x\@pdfview
7856 \def\x{FitBH @ypos}%
7857 \else
7858 \def\x{FitV}%
7859 \ifx\x\@pdfview

```

```

7860         \def\x{FitV @xpos}%
7861     \else
7862         \def\x{FitBV}%
7863         \ifx\x\@pdfview
7864             \def\x{FitBV @xpos}%
7865         \else
7866             \def\x{Fit}%
7867             \ifx\x\@pdfview
7868                 \let\x\@pdfview
7869             \else
7870                 \def\x{FitB}%
7871                 \ifx\x\@pdfview
7872                     \let\x\@pdfview
7873             \else
7874                 \def\x{FitR}%
7875                 \ifx\x\@pdfview
7876                     \Hy@Warning{'pdfview=FitR' is not supported}%
7877                     \def\x{XYZ @xpos @ypos null}%
7878                 \else
7879                     \@onelevel@sanitize\@pdfview
7880                     \Hy@Warning{Unknown value '@pdfview' for pdfview}%
7881                     \def\x{XYZ @xpos @ypos null}%
7882                 \fi
7883             \fi
7884         \fi
7885     \fi
7886 \fi
7887 \fi
7888 \fi
7889 \fi
7890 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
7891 \endgroup
7892 \Hy@RestoreLastskip
7893 }
7894 \providecommand*\@pdfview{XYZ}
7895 \providecommand*\@pdfborder{0 0 1}
7896 \providecommand*\@pdfborderstyle{}
7897 \def\hyper@anchor#1{%
7898     \@pdfm@dest{#1}%
7899 }
7900 \def\hyper@anchorstart#1{%
7901     \Hy@activeanchortrue
7902     \@pdfm@dest{#1}%
7903 }
7904 \def\hyper@anchorend{%
7905     \Hy@activeanchorfalse
7906 }
7907 \newcounter{Hy@AnnotLevel}
7908 \ifHy@ocgcolorlinks
7909     \def\OBJ@OCG@view{@OCG@view}%
7910     \@pdfm@mark{%
7911         obj \OBJ@OCG@view <<%
7912             /Type/OCG%
7913             /Name(View)%
7914             /Usage<<%
7915             /Print<<%
7916             /PrintState/OFF%

```

```

7917         >>%
7918         /View<<%
7919         /ViewState/ON%
7920         >>%
7921     >>%
7922 >>%
7923 }%
7924 \@pdfm@mark{close \OBJ@OCG@view}%
7925 \def\OBJ@OCG@print{@OCG@print}%
7926 \@pdfm@mark{%
7927     obj \OBJ@OCG@print <<%
7928     /Type/OCG%
7929     /Name(Print)%
7930     /Usage<<%
7931     /Print<<%
7932     /PrintState/ON%
7933     >>%
7934     /View<<%
7935     /ViewState/OFF%
7936     >>%
7937 >>%
7938 >>%
7939 }%
7940 \@pdfm@mark{close \OBJ@OCG@print}%
7941 \def\OBJ@OCGs{@OCGs}%
7942 \@pdfm@mark{%
7943     obj \OBJ@OCGs [%
7944         \OBJ@OCG@view\space\OBJ@OCG@print
7945     ]%
7946 }%
7947 \@pdfm@mark{close \OBJ@OCGs}%
7948 \@pdfm@mark{%
7949     put @catalog <<%
7950     /OCProperties<<%
7951     /OCGs \OBJ@OCGs
7952     /D<<%
7953     /OFF[\OBJ@OCG@print]%
7954     /AS[%
7955         <<%
7956         /Event/View%
7957         /OCGs \OBJ@OCGs
7958         /Category[/View]%
7959         >>%
7960         <<%
7961         /Event/Print%
7962         /OCGs \OBJ@OCGs
7963         /Category[/Print]%
7964         >>%
7965         <<%
7966         /Event/Export%
7967         /OCGs \OBJ@OCGs
7968         /Category[/Print]%
7969         >>%
7970     ]%
7971     >>%
7972 >>%
7973 >>%

```

```

7974 }%
7975 \AtBeginShipout{%
7976   \setbox\AtBeginShipoutBox=\hbox{%
7977     \copy\AtBeginShipoutBox
7978     \@pdfm@mark{%
7979       put @resources <<%
7980       /Properties<<%
7981       /OCView \OBJ@OCG@view
7982       /OCPrint \OBJ@OCG@print
7983       >>%
7984     >>%
7985   }%
7986 }%
7987 }%
7988 \AtBeginDocument{%
7989   \def\Hy@colorlink#1{%
7990     \begingroup
7991     \ifHy@ocgcolorlinks
7992       \def\Hy@ocgcolor{#1}%
7993       \setbox0=\color@hbox
7994     \else
7995       \HyColor@UseColor#1%
7996     \fi
7997   }%
7998   \def\Hy@endcolorlink{%
7999     \ifHy@ocgcolorlinks
8000       \color@endbox
8001       \mbox{%
8002         \@pdfm@mark{content /OC/OCPrint BDC}%
8003         \rlap{\copy0}%
8004         \@pdfm@mark{content EMC/OC/OCView BDC}%
8005         \begingroup
8006           \expandafter\HyColor@UseColor\Hy@ocgcolor
8007           \box0 %
8008         \endgroup
8009         \@pdfm@mark{content EMC}%
8010       }%
8011     \fi
8012   \endgroup
8013 }%
8014 }%
8015 \else
8016   \Hy@DisableOption{ocgcolorlinks}%
8017 \fi
8018 \def\Hy@BeginAnnot#1{%
8019   \stepcounter{Hy@AnnotLevel}%
8020   \ifnum\value{Hy@AnnotLevel}=\@ne
8021     #1%
8022   \fi
8023 }
8024 \def\Hy@endAnnot{%
8025   \ifnum\value{Hy@AnnotLevel}=\@ne
8026     \Hy@endcolorlink
8027     \@pdfm@mark{eann}%
8028   \fi
8029   \addtocounter{Hy@AnnotLevel}\m@ne
8030 }

```

```

8031 \def\Hy@undefinedname{UNDEFINED}
8032 \def\hyper@linkstart#1#2{%
8033   \Hy@BeginAnnot{%
8034     \protected@edef\Hy@testname{#2}%
8035     \ifx\Hy@testname\@empty
8036       \Hy@Warning{%
8037         Empty destination name,\MessageBreak
8038         using '\Hy@undefinedname'%
8039       }%
8040     \let\Hy@testname\Hy@undefinedname
8041   \else
8042     \Hy@pstringdef\Hy@testname{%
8043       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8044     }%
8045   \fi
8046   \@pdfm@mark{%
8047     bann<<%
8048     /Type/Annot%
8049     /Subtype/Link%
8050     \ifHy@pdfa /F 4\fi
8051     \Hy@setpdfborder
8052     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8053     \else
8054       /C[\csname @#1bordercolor\endcsname]%
8055     \fi
8056     /A<<%
8057     /S/GoTo%
8058     /D(\Hy@testname)%
8059     >>%
8060   >>%
8061   }%
8062   \expandafter\Hy@colorlink\csname @#1color\endcsname
8063 }%
8064 }
8065 \def\hyper@linkend{\Hy@EndAnnot}%
8066 \def\hyper@link#1#2#3{%
8067   \hyper@linkstart{#1}{#2}#3\hyper@linkend
8068 }
8069 \def\hyper@linkfile#1#2#3{%
8070   \leavevmode
8071   \Hy@BeginAnnot{%
8072     \Hy@pstringdef\Hy@pstringF{#2}%
8073     \Hy@pstringdef\Hy@pstringD{#3}%
8074     \@pdfm@mark{%
8075       bann<<%
8076       /Type/Annot%
8077       /Subtype/Link%
8078       \ifHy@pdfa /F 4\fi
8079       \Hy@setpdfborder
8080       \ifx\@filebordercolor\relax
8081       \else
8082         /C[\@filebordercolor]%
8083       \fi
8084       /A<<%
8085       /S/GoToR%
8086       /F(\Hy@pstringF)%
8087       /D\ifx\@#3\@0 \@pdfstartview\else(\Hy@pstringD)\fi

```



```

8088         \Hy@SetNewWindow
8089         >>%
8090     >>%
8091 }%
8092 \Hy@colorlink\@filecolor
8093 }%
8094 #1%
8095 \Hy@EndAnnot
8096 }
8097 \def\hyper@linkurl#1#2{%
8098 \leavevmode
8099 \Hy@BeginAnnot{%
8100     \Hy@pstringdef\Hy@pstringURI{#2}%
8101     \@pdfm@mark{%
8102         bann<<%
8103         /Type/Annot%
8104         /Subtype/Link%
8105         \ifHy@pdfa /F 4\fi
8106         \Hy@setpdfborder
8107         \ifx\@urlbordercolor\relax
8108         \else
8109             /C[\@urlbordercolor]%
8110         \fi
8111         /A<<%
8112         /S/URI%
8113         /URI(\Hy@pstringURI)%
8114         >>%
8115     >>%
8116 }%
8117 \Hy@colorlink\@urlcolor
8118 }%
8119 #1%
8120 \Hy@EndAnnot
8121 }
8122 \def\Acrobatmenu#1#2{%
8123 \Hy@Acrobatmenu{#1}{#2}{%
8124     \Hy@BeginAnnot{%
8125         \@pdfm@mark{%
8126             bann<<%
8127             /Type/Annot%
8128             /Subtype/Link%
8129             \ifHy@pdfa /F 4\fi
8130             /A<<%
8131             /S/Named%
8132             /N/#1%
8133             >>%
8134             \Hy@setpdfborder
8135             \ifx\@menubordercolor\relax
8136             \relax
8137             /C[\@menubordercolor]%
8138         \fi
8139         >>%
8140     }%
8141     \Hy@colorlink\@menucolor
8142 }%
8143 #2%
8144 \Hy@EndAnnot

```

```

8145 }%
8146 }
8147 \ifx\@pdfproducer\relax
8148 \def\@pdfproducer{dvipdfm}%

```

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

```

8149 \begingroup\expandafter\expandafter\expandafter\endgroup
8150 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8151 \else
8152 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8153 \fi
8154 \fi
8155 \def\PDF@FinishDoc{%
8156 \Hy@UseMaketitleInfos
8157 \@pdfm@mark{%
8158 docinfo<<%
8159 /Title(\@pdftitle)%
8160 /Subject(\@pdfsubject)%
8161 /Creator(\@pdfcreator)%
8162 \ifx\@pdfcreationdate\@empty
8163 \else
8164 /CreationDate(\@pdfcreationdate)%
8165 \fi
8166 \ifx\@pdfmoddate\@empty
8167 \else
8168 /ModDate(\@pdfmoddate)%
8169 \fi
8170 /Author(\@pdfauthor)%
8171 \ifx\@pdfproducer\relax
8172 \else
8173 /Producer(\@pdfproducer)%
8174 \fi
8175 /Keywords(\@pdfkeywords)%
8176 >>%
8177 }%
8178 \Hy@DisableOption{pdfauthor}%
8179 \Hy@DisableOption{pdftitle}%
8180 \Hy@DisableOption{pdfsubject}%
8181 \Hy@DisableOption{pdfcreator}%
8182 \Hy@DisableOption{pdfcreationdate}%
8183 \Hy@DisableOption{pdfmoddate}%
8184 \Hy@DisableOption{pdfproducer}%
8185 \Hy@DisableOption{pdfkeywords}%
8186 }
8187 \def\PDF@SetupDoc{%
8188 \edef\Hy@temp{%
8189 \ifHy@toolbar\else /HideToolbar true\fi
8190 \ifHy@menubar\else /HideMenubar true\fi
8191 \ifHy>windowui\else /HideWindowUI true\fi
8192 \ifHy@fitwindow /FitWindow true\fi
8193 \ifHy@centerwindow /CenterWindow true\fi
8194 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8195 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8196 \Hy@UseNameKey{Direction}\@pdfdirection
8197 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8198 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8199 \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

8200 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8201 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8202 \Hy@UseNameKey{Duplex}\@pdfduplex
8203 \ifx\@pdfpicktraybypdfsize\@empty
8204 \else
8205 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8206 \fi
8207 \ifx\@pdfprintpagerange\@empty
8208 \else
8209 /PrintPageRange[\@pdfprintpagerange]%
8210 \fi
8211 \ifx\@pdfnumcopies\@empty
8212 \else
8213 /NumCopies \@pdfnumcopies
8214 \fi
8215 }%
8216 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8217 \@pdfm@mark{%
8218 docview<<%
8219 \ifx\@pdfstartpage\@empty
8220 \else
8221 \ifx\@pdfstartview\@empty
8222 \else
8223 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8224 \fi
8225 \fi
8226 \ifx\@baseurl\@empty
8227 \else
8228 /URI<</Base(\Hy@pstringB)>>%
8229 \fi
8230 /PageMode/\@pdfpagemode
8231 \ifx\Hy@temp\@empty
8232 \else
8233 /ViewerPreferences<<\Hy@temp>>%
8234 \fi
8235 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8236 \ifx\@pdflang\@empty
8237 \else
8238 /Lang(\@pdflang)%
8239 \fi
8240 >>%
8241 }%
8242 \ifx\@pdfpagescrop\@empty
8243 \else
8244 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8245 \fi
8246 }

8247 \AtBeginShipoutFirst{%
8248 \ifx\special@paper\@empty
8249 \else
8250 \ifHy@setpagesize
8251 \special{papersize=\special@paper}%
8252 \fi
8253 \fi
8254 \Hy@DisableOption{setpagesize}%
8255 }
8256 </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.

```
8257 \providecommand*{\XR@ext}{htm}
8258 \RequirePackage{vtexhtml}
8259 \newif\if@Localurl
8260 \def\PDF@FinishDoc{}
8261 \def\PDF@SetupDoc{%
8262   \ifx\@baseurl\@empty
8263   \else
8264     \special{!direct <base href="\@baseurl">}%
8265   \fi
8266 }
8267 \def\@urltype{url}
8268 \def\hyper@link#1#2#3{%
8269   \leavevmode
8270   \special{!direct <a href=%
8271     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8272   #3%
8273   \special{!direct </a>}%
8274 }
8275 \def\hyper@linkurl#1#2{%
8276   \begingroup
8277   \hyper@chars
8278   \leavevmode
8279   \MathBSuppress=1\relax
8280   \special{!direct <a href=%
8281     \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8282   #1%
8283   \MathBSuppress=0\relax
8284   \special{!direct </a>}%
8285 }
8286 \endgroup
8287 \def\hyper@linkfile#1#2#3{%
8288   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
8289 }
8290 \def\hyper@linkstart#1#2{%
8291   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8292     \@Localurltrue
8293     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8294   \else
8295     \@Localurlfalse
8296     \begingroup
8297     \hyper@chars
8298     \special{!aref \HyperDestNameFilter{#2}}%
8299   \endgroup
8300   \fi
8301 }
8302 \def\hyper@linkend{%
8303   \if@Localurl
8304     \special{!endaref}%
8305   \else
8306     \special{!direct </a>}%
8307   \fi
8308 }
8309 }
```

```

8310 \def\hyper@anchorstart#1{%
8311   \Hy@SaveLastskip
8312   \begingroup
8313     \hyper@chars
8314     \special{!aname #1}%
8315     \special{!direct <a name=%
8316       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8317   \endgroup
8318   \Hy@activeanchortrue
8319 }
8320 \def\hyper@anchorend{%
8321   \special{!direct </a>}%
8322   \Hy@activeanchorfalse
8323   \Hy@RestoreLastskip
8324 }
8325 \def\hyper@anchor#1{%
8326   \Hy@SaveLastskip
8327   \begingroup
8328     \let\protect=\string
8329     \hyper@chars
8330     \leavevmode
8331     \special{!aname #1}%
8332     \special{!direct <a name=%
8333       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8334   \endgroup
8335   \Hy@activeanchortrue
8336   \bgroup\anchor@spot\egroup
8337   \special{!direct </a>}%
8338   \Hy@activeanchorfalse
8339   \Hy@RestoreLastskip
8340 }
8341 \def\@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8342 \def\@endForm{}
8343 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8344   \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8345 }
8346 \def\@TextField[#1]#2{% parameters, label
8347   \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8348 }
8349 \def\@CheckBox[#1]#2{% parameters, label
8350   \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8351 }
8352 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8353   \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8354 }
8355 \def\@PushButton[#1]#2{% parameters, label
8356   \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8357 }
8358 \def\@Reset[#1]#2{%
8359   \typeout{Sorry, TeXpider does not yet support FORMs}%
8360 }
8361 \def\@Submit[#1]#2{%
8362   \typeout{Sorry, TeXpider does not yet support FORMs}%
8363 }
8364 \end{vtexhtml}
8365 \end{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.

```

8366 \ifx\mediaheight\@undefined
8367 \else
8368   \ifx\mediaheight\relax
8369   \else
8370     \ifHy@setpagesize
8371       \providecommand*\VTexInitMediaSize{%
8372         \@ifundefined{stockwidth}{%
8373           \ifdim\paperheight>0pt %
8374             \setlength\mediaheight\paperheight
8375           \fi
8376           \ifdim\paperheight>0pt %
8377             \setlength\mediawidth\paperwidth
8378           \fi
8379         }{%
8380           \ifdim\stockheight>0pt %
8381             \setlength\mediaheight\stockheight
8382           \fi
8383           \ifdim\stockwidth>0pt %
8384             \setlength\mediawidth\stockwidth
8385           \fi
8386         }%
8387       }%
8388     \AtBeginDocument{\VTexInitMediaSize}%
8389   \fi
8390   \Hy@DisableOption{setpagesize}%
8391 \fi
8392 \fi

```

Older versions of VTeX require xyz in lower case.

```

8393 \providecommand*\@pdfview{xyz}
8394 \providecommand*\@pdfborder{0 0 1}
8395 \providecommand*\@pdfborderstyle{}
8396 \let\CurrentBorderColor\@linkbordercolor
8397 \def\hyper@anchor#1{%
8398   \Hy@SaveLastskip
8399   \begingroup
8400     \let\protect=\string
8401     \hyper@chars
8402     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8403   \endgroup
8404   \Hy@activeanchortrue
8405   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8406   \Hy@activeanchorfalse
8407   \Hy@RestoreLastskip
8408 }
8409 \def\hyper@anchorstart#1{%
8410   \Hy@SaveLastskip
8411   \begingroup
8412     \hyper@chars
8413     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8414   \endgroup
8415   \Hy@activeanchortrue
8416 }
8417 \def\hyper@anchorend{%
8418   \Hy@activeanchorfalse

```

```

8419 \Hy@RestoreLastskip
8420 }
8421 \def\@urltype{url}
8422 \def\Hy@undefinedname{UNDEFINED}
8423 \def\hyper@linkstart#1#2{%
8424 \Hy@pstringdef\Hy@pstringURI{#2}%
8425 \expandafter\Hy@colorlink\csname @#1color\endcsname
8426 \@ifundefined{#@#1bordercolor}{%
8427 \let\CurrentBorderColor\relax
8428 }{%
8429 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8430 }%
8431 \def\Hy@tempa{#1}%
8432 \ifx\Hy@tempa\@urltype
8433 \special{!%
8434 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8435 a=<%
8436 \ifHy@pdfa /F 4\fi
8437 \Hy@setpdfborder
8438 \ifx\CurrentBorderColor\relax
8439 \else
8440 /C [\CurrentBorderColor]%
8441 \fi
8442 >%
8443 }%
8444 \else
8445 \protected@edef\Hy@testname{#2}%
8446 \ifx\Hy@testname\@empty
8447 \Hy@Warning{%
8448 Empty destination name,\MessageBreak
8449 using ‘\Hy@undefinedname’%
8450 }%
8451 \let\Hy@testname\Hy@undefinedname
8452 \fi
8453 \special{!%
8454 aref \expandafter\HyperDestNameFilter
8455 \expandafter{\Hy@testname};%
8456 a=<%
8457 \ifHy@pdfa /F 4\fi
8458 \Hy@setpdfborder
8459 \ifx\CurrentBorderColor\relax
8460 \else
8461 /C [\CurrentBorderColor]%
8462 \fi
8463 >%
8464 }%
8465 \fi
8466 }
8467 \def\hyper@linkend{%
8468 \special{!endaref}%
8469 \Hy@endcolorlink
8470 }
8471 \def\hyper@linkfile#1#2#3{%
8472 \leavevmode
8473 \special{!%
8474 aref <%
8475 \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi

```

```

8476     f=#2>#3;%
8477     a=<%
8478         \ifHy@pdfa /F 4\fi
8479         \Hy@setpdfborder
8480         \ifx\@filebordercolor\relax
8481         \else
8482             /C [\@filebordercolor]%
8483         \fi
8484     >%
8485 }%
8486 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8487 \special{!endaref}%
8488 }
8489 \def\hyper@linkurl#1#2{%
8490     \begingroup
8491         \Hy@pstringdef\Hy@pstringURI{#2}%
8492         \hyper@chars
8493         \leavevmode
8494         \special{!%
8495             aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8496             a=<%
8497                 \ifHy@pdfa /F 4\fi
8498                 \Hy@setpdfborder
8499                 \ifx\@urlbordercolor\relax
8500                 \else
8501                     /C [\@urlbordercolor]%
8502                 \fi
8503             >%
8504             }%
8505             \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8506             \special{!endaref}%
8507         \endgroup
8508 }
8509 \def\hyper@link#1#2#3{%
8510     \@ifundefined{@#1bordercolor}{%
8511         \let\CurrentBorderColor\relax
8512     }{%
8513         \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8514     }%
8515     \leavevmode
8516     \protected@edef\Hy@testname{#2}%
8517     \ifx\Hy@testname\@empty
8518         \Hy@Warning{%
8519             Empty destination name,\MessageBreak
8520             using '\Hy@undefinedname'%
8521         }%
8522         \let\Hy@testname\Hy@undefinedname
8523     \fi
8524     \special{!%
8525         aref \expandafter\HyperDestNameFilter
8526             \expandafter{\Hy@testname};%
8527         a=<%
8528             \ifHy@pdfa /F 4\fi
8529             \Hy@setpdfborder
8530             \ifx\CurrentBorderColor\relax
8531             \else
8532                 /C [\CurrentBorderColor]%

```



```

8533     \fi
8534     >%
8535   }%
8536   \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8537   \special{!endaref}%
8538 }
8539 \def\hyper@image#1#2{%
8540   \hyper@linkurl{#2}{#1}%
8541 }
8542 \def\@hyper@launch run:#1\#2#3{%
8543   \Hy@pstringdef\Hy@pstringF{#1}%
8544   \Hy@pstringdef\Hy@pstringP{#3}%
8545   \leavevmode
8546   \special{!aref %
8547     <u=%
8548     /Type/Action%
8549     /S/Launch%
8550     /F(\Hy@pstringF)%
8551     \Hy@SetNewWindow
8552     \ifx\#3\else /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8553   >;%
8554   a=<%
8555     \ifHy@pdfa /F 4\fi
8556     \Hy@setpdfborder
8557     \ifx\@runbordercolor\relax
8558     \else
8559       /C[\@runbordercolor]%
8560     \fi
8561   >%
8562 }%
8563 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
8564 \special{!endaref}%
8565 }
8566 \def\Acrobatmenu#1#2{%
8567   \Hy@Acrobatmenu{#1}{#2}{%
8568     \special{!%
8569       aref <u=/S /Named /N /#1>;%
8570       a=<%
8571         \ifHy@pdfa /F 4\fi
8572         \Hy@setpdfborder
8573         \ifx\@menubordercolor\relax
8574         \else
8575           /C[\@menubordercolor]%
8576         \fi
8577       >%
8578     }%
8579     \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8580     \special{!endaref}%
8581   }%
8582 }

```

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

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

Please never use `\@ifundefined{VTeXversion}{...}{...}` globally.

```

8583 \ifnum\Hy@VTeXversion<702 %
8584 \else
8585   \def\hyper@pagetransition{%
8586     \ifx\@pdfpagetransition\relax

```

```

8587 \else
8588 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

8589 \else
8590 \hvtex@parse@trans\@pdfpagetransition
8591 \fi
8592 \fi
8593 }%

```

I have to write an “honest” parser to convert raw PDF code into VT_EX \special.
(AVK)

Syntax of VT_EX \special{!trans <transition_effect>}:

```

<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                        <Dissolve_effect> | <Glitter_effect> |
                        <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>

```

Transition codes:

```

8594 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8595 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8596 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8597 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8598 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8599 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8600 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

8601 \def\hvtex@par@dimension{/Dm}%
8602 \def\hvtex@par@direction{/Di}%
8603 \def\hvtex@par@duration{/D}%
8604 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

8605 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%

```

Notice that tokens in the input buffer must be space delimited.

```

8606 \def\hvtex@gettoken#1 #2\@nil{%
8607 \edef\hvtex@token{#1}%
8608 \edef\hvtex@buffer{#2}%
8609 }%
8610 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

8611 \let\hvtex@trans@code\@empty
8612 \let\hvtex@param@dimension\@empty
8613 \let\hvtex@param@direction\@empty

```

```

8614 \let\hvtex@param@duration\@empty
8615 \let\hvtex@param@motion\@empty
8616 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

8617 \hvtex@gettoken
8618 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

8619 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

8620 \else
8621 \hvtex@gettoken
8622 \fi
8623 \fi
8624 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

8625 \hvtex@trans@params
8626 }%

```

Reentrant macro to parse optional parameters.

```

8627 \def\hvtex@trans@params{%
8628 \ifx\hvtex@buffer\@empty
8629 \else
8630 \hvtex@gettoken
8631 \let\hvtex@trans@par\hvtex@token
8632 \ifx\hvtex@buffer\@empty
8633 \else
8634 \hvtex@gettoken
8635 \ifx\hvtex@trans@par\hvtex@par@duration

```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```

8636 \let\hvtex@param@duration\hvtex@token
8637 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

8638 \expandafter\edef\expandafter\hvtex@param@motion
8639 \expandafter{\expandafter\@gobble\hvtex@token}%
8640 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

8641 \expandafter\edef\expandafter\hvtex@param@dimension
8642 \expandafter{\expandafter\@gobble\hvtex@token}%
8643 \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).

```

8644 \let\hvtex@param@direction\hvtex@token
8645 \fi\fi\fi\fi
8646 \fi
8647 \fi
8648 \ifx\hvtex@buffer\@empty
8649 \let\next\hvtex@produce@trans
8650 \else
8651 \let\next\hvtex@trans@params
8652 \fi
8653 \next
8654 }%

```

Merge <transition_effect> and issue the special when possible. Too lazy to validate optional parameters.

```

8655 \def\hvtex@produce@trans{%
8656   \let\vtex@trans@special\@empty
8657   \if S\hvtex@trans@code
8658     \edef\vtex@trans@special{\hvtex@trans@code
8659       \hvtex@param@dimension\hvtex@param@motion}%
8660   \else\if B\hvtex@trans@code
8661     \edef\vtex@trans@special{%
8662       \hvtex@trans@code\hvtex@param@dimension
8663     }%
8664   \else\if X\hvtex@trans@code
8665     \edef\vtex@trans@special{%
8666       \hvtex@trans@code\hvtex@param@motion
8667     }%
8668   \else\if W\hvtex@trans@code
8669     \edef\vtex@trans@special{%
8670       \hvtex@trans@code\hvtex@param@direction
8671     }%
8672   \else\if D\hvtex@trans@code
8673     \let\vtex@trans@special\hvtex@trans@code
8674   \else\if R\hvtex@trans@code
8675     \let\vtex@trans@special\hvtex@trans@code
8676   \else\if G\hvtex@trans@code
8677     \edef\vtex@trans@special{%
8678       \hvtex@trans@code\hvtex@param@direction
8679     }%
8680   \fi\fi\fi\fi\fi\fi
8681   \ifx\vtex@trans@special\@empty
8682   \else
8683     \ifx\hvtex@param@duration\@empty
8684     \else
8685       \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

8686     \multiply\dimen@\@m
8687     \edef\vtex@trans@special{%
8688       \vtex@trans@special,\strip@pt\dimen@
8689     }%
8690   \fi

```

And all the mess is just for this.

```

8691   \special{!trans \vtex@trans@special}%
8692   \fi
8693 }%
8694 \def\hyper@pageduration{%
8695   \ifx\@pdfpageduration\relax
8696   \else
8697     \ifx\@pdfpageduration\@empty
8698     \special{!duration-}%
8699   \else
8700     \special{!duration \@pdfpageduration}%
8701   \fi
8702   \fi
8703 }%
8704 \def\hyper@pagehidden{%
8705   \ifHy@useHidKey

```

```

8706     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8707     \fi
8708 }%
8709 \g@addto@macro\Hy@EveryPageBoxHook{%
8710     \hyper@pagetransition
8711     \hyper@pageduration
8712     \hyper@pagehidden
8713 }%
8714 \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

```

8715 \ifx\@pdfproducer\relax
8716   \def\@pdfproducer{VTeX}%
8717   \ifnum\Hy@VTeXversion>\z@
8718     \count@\VTeXversion
8719     \divide\count@ 100 %
8720     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8721     \multiply\count@ -100 %
8722     \advance\count@\VTeXversion
8723     \edef\@pdfproducer{%
8724       \@pdfproducer
8725       .\ifnum\count@<10 0\fi\the\count@
8726       \ifx\VTeXOS\@undefined\else
8727         \ifnum\VTeXOS>0 %
8728           \ifnum\VTeXOS<6 %
8729             \space(%
8730             \ifcase\VTeXOS
8731               \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8732             \fi
8733             )%
8734           \fi
8735         \fi
8736       \fi
8737       ,\space
8738       \ifnum\OpMode=\@ne PDF\else PS\fi
8739       \space backend%
8740       \ifx\gexmode\@undefined\else
8741         \ifnum\gexmode>\z@\space with GeX\fi
8742       \fi
8743     }%
8744   \fi
8745 \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).

```

8746 \def\PDF@SetupDoc{%
8747   \ifx\@pdfpagescrop\@empty
8748   \else
8749     \special{!pdfinfo b=<\@pdfpagescrop>}%
8750   \fi
8751   \ifx\@pdfstartpage\@empty
8752   \else
8753     \ifx\@pdfstartview\@empty
8754     \else
8755       \special{!onopen Page\@pdfstartpage}%
8756     \fi
8757   \fi
8758   \special{!pdfinfo p=</\@pdfpagemode>}%
8759   \ifx\@baseurl\@empty
8760   \else
8761     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
8762   \fi
8763   \special{!pdfinfo v=<<<%
8764     \ifHy@toolbar\else /HideToolbar true\fi
8765     \ifHy@menubar\else /HideMenubar true\fi
8766     \ifHy@windowui\else /HideWindowUI true\fi
8767     \ifHy@fitwindow /FitWindow true\fi
8768     \ifHy@centerwindow /CenterWindow true\fi
8769     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8770     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8771     \Hy@UseNameKey{Direction}\@pdfdirection
8772     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8773     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8774     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8775     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8776     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8777     \Hy@UseNameKey{Duplex}\@pdfduplex
8778     \ifx\@pdfpicktraybypdfsize\@empty
8779     \else
8780       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8781     \fi
8782     \ifx\@pdfprintpagerange\@empty
8783     \else
8784       /PrintPageRange[\@pdfprintpagerange]%
8785     \fi
8786     \ifx\@pdfnumcopies\@empty
8787     \else
8788       /NumCopies \@pdfnumcopies

```

```

8789 \fi
8790 >>>}%
8791 \ifx\@pdfpagelayout\@empty
8792 \else
8793 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
8794 \fi
8795 }%
8796 \def\PDF@FinishDoc{%
8797 \Hy@UseMaketitleInfos
8798 \special{!pdfinfo a=<\@pdfauthor>}%
8799 \special{!pdfinfo t=<\@pdftitle>}%
8800 \special{!pdfinfo s=<\@pdfsubject>}%
8801 \special{!pdfinfo c=<\@pdfcreator>}%
8802 \ifx\@pdfproducer\relax
8803 \else
8804 \special{!pdfinfo r=<\@pdfproducer>}%
8805 \fi
8806 \special{!pdfinfo k=<\@pdfkeywords>}%
8807 \Hy@DisableOption{pdfauthor}%
8808 \Hy@DisableOption{pdftitle}%
8809 \Hy@DisableOption{pdfsubject}%
8810 \Hy@DisableOption{pdfcreator}%
8811 \Hy@DisableOption{pdfcreationdate}%
8812 \Hy@DisableOption{pdfmoddate}%
8813 \Hy@DisableOption{pdfproducer}%
8814 \Hy@DisableOption{pdfkeywords}%
8815 }
8816 </vtx>

```

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.

```

8817 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8818 <package>\providecommand*\Hy@DistillerDestFix{}
8819 <*pdfmark | dviwindo>
8820 \def\Hy@DistillerDestFix{%
8821 \beginpgroup
8822 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

8823 \ifnum \@ifundefined{OpMode}{0}{}%
8824 \@ifundefined{gexmode}{0}{%
8825 \ifnum\gexmode>0 \OpMode\else 0\fi
8826 }}>1 %
8827 \def\x##1{%
8828 \immediate\special{!=##1}%
8829 }%
8830 \fi

```

```

8831 \x{%
8832 /product where{%
8833   pop %
8834   product(Distiller)search{%
8835     pop pop pop %
8836     version(.)search{%
8837       exch pop exch pop%
8838       (3011)eq{%
8839         gsave %
8840         newpath 0 0 moveto closepath clip%
8841         /Courier findfont 10 scalefont setfont %
8842         72 72 moveto(.)show %
8843         grestore%
8844       }if%
8845     }{pop}ifelse%
8846   }{pop}ifelse%
8847 }if%
8848 }%
8849 \endgroup
8850 }
8851 </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

```

```

8852 <*pdfmark>
8853 \Hy@breaklinks@unsupported
8854 \def\hyper@anchor#1{%
8855   \Hy@SaveLastskip
8856   \begingroup
8857     \pdfmark[\anchor@spot]{%
8858       pdfmark=/DEST,%
8859       linktype=anchor,%
8860       View=/\@pdfview \@pdfviewparams,%
8861       DestAnchor={#1}%
8862     }%
8863   \endgroup
8864   \Hy@RestoreLastskip
8865 }
8866 \@ifundefined{hyper@anchorstart}{-}{\endinput}
8867 \def\hyper@anchorstart#1{%
8868   \Hy@SaveLastskip
8869   \literalps@out{H.S}%
8870   \xdef\hyper@currentanchor{#1}%
8871   \Hy@activeanchortrue

```



```

8872 }
8873 \def\hyper@anchorend{%
8874   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8875   \pdfmark{%
8876     pdfmark=/DEST,%
8877     linktype=anchor,%
8878     View=/\@pdfview \@pdfviewparams,%
8879     DestAnchor=\hyper@currentanchor,%
8880   }%
8881   \Hy@activeanchorfalse
8882   \Hy@RestoreLastskip
8883 }
8884 \def\hyper@linkstart#1#2{%
8885   \ifHy@breaklinks
8886   \else
8887     \leavevmode\hbox\bgroup
8888     \fi
8889     \expandafter\Hy@colorlink\csname @#1color\endcsname
8890     \literalps@out{H.S}%
8891     \xdef\hyper@currentanchor{#2}%
8892     \gdef\hyper@currentlinktype{#1}%
8893 }
8894 \def\hyper@linkend{%
8895   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8896   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8897     \let\Hy@tempcolor\relax
8898   }{%
8899     \edef\Hy@tempcolor{%
8900       \csname @\hyper@currentlinktype bordercolor\endcsname
8901     }%
8902   }%
8903   \pdfmark{%
8904     pdfmark=/ANN,%
8905     linktype=link,%
8906     Subtype=/Link,%
8907     PDFAFlags=4,%
8908     Dest=\hyper@currentanchor,%
8909     AcroHighlight=\@pdfhighlight,%
8910     Border=\@pdfborder,%
8911     BorderStyle=\@pdfborderstyle,%
8912     Color=\Hy@tempcolor,%
8913     Raw=H.B%
8914   }%
8915   \Hy@endcolorlink
8916   \ifHy@breaklinks
8917   \else
8918     \egroup
8919   \fi
8920 }

```

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.

```

8921 \begingroup
8922 \catcode'P=12 %
8923 \catcode'T=12 %
8924 \lowercase{\endgroup
8925 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%

```

```

8926 }
8927 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8928 \def\hyper@pagetransition{%
8929   \ifx\@pdfpagetransition\relax
8930   \else
8931     \ifx\@pdfpagetransition\@empty
8932       % 1. Does an old entry have to be deleted?
8933       % 2. If 1=yes, how to delete?
8934     \else
8935       \pdfmark{%
8936         pdfmark=/PUT,%
8937         Raw={%
8938           \string{ThisPage\string}%
8939           <</Trans << /S /\@pdfpagetransition\space >> >>%
8940         }%
8941       }%
8942     \fi
8943   \fi
8944 }

```

\hyper@pageduration

```

8945 \def\hyper@pageduration{%
8946   \ifx\@pdfpageduration\relax
8947   \else
8948     \ifx\@pdfpageduration\@empty
8949       % 1. Does an old entry have to be deleted?
8950       % 2. If 1=yes, how to delete?
8951     \else
8952       \pdfmark{%
8953         pdfmark=/PUT,%
8954         Raw={%
8955           \string{ThisPage\string}%
8956           <</Dur \@pdfpageduration>>%
8957         }%
8958       }%
8959     \fi
8960   \fi
8961 }

```

\hyper@pagehidden

```

8962 \def\hyper@pagehidden{%
8963   \ifHy@useHidKey
8964     \pdfmark{%
8965       pdfmark=/PUT,%
8966       Raw={%
8967         \string{ThisPage\string}%
8968         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
8969       }%
8970     }%
8971   \fi
8972 }

8973 \g@addto@macro\Hy@EveryPageBoxHook{%
8974   \hyper@pagetransition
8975   \hyper@pageduration

```

```

8976 \hyper@pagehidden
8977 }

8978 \def\hyper@image#1#2{%
8979 \hyper@linkurl{#2}{#1}%
8980 }

8981 \def\Hy@undefinedname{UNDEFINED}
8982 \def\hyper@link#1#2#3{%
8983 \@ifundefined{@#1bordercolor}{%
8984 \let\Hy@tempcolor\relax
8985 }{%
8986 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
8987 }%
8988 \begingroup
8989 \protected@edef\Hy@testname{#2}%
8990 \ifx\Hy@testname\@empty
8991 \Hy@Warning{%
8992 Empty destination name,\MessageBreak
8993 using '\Hy@undefinedname'%
8994 }%
8995 \let\Hy@testname\Hy@undefinedname
8996 \fi
8997 \pdfmark[{#3}]{%
8998 Color=\Hy@tempcolor,%
8999 linktype={#1},%
9000 AcroHighlight=\@pdfhighlight,%
9001 Border=\@pdfborder,%
9002 BorderStyle=\@pdfborderstyle,%
9003 pdfmark=/ANN,%
9004 Subtype=/Link,%
9005 PDFAFlags=4,%
9006 Dest=\Hy@testname
9007 }%
9008 \endgroup
9009 }

9010 \newtoks\pdf@docset
9011 \def\PDF@FinishDoc{%
9012 \Hy@UseMaketitleInfos
9013 \let\Hy@temp\@empty
9014 \ifx\@pdfcreationdate\@empty
9015 \else
9016 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9017 \fi
9018 \ifx\@pdfmoddate\@empty
9019 \else
9020 \expandafter\def\expandafter\Hy@temp\expandafter{%
9021 \Hy@temp
9022 ModDate=\@pdfmoddate,%
9023 }%
9024 \fi
9025 \ifx\@pdfproducer\relax
9026 \else
9027 \expandafter\def\expandafter\Hy@temp\expandafter{%
9028 \Hy@temp
9029 Producer=\@pdfproducer,%
9030 }%
9031 \fi
9032 \expandafter

```

```

9033 \pdfmark\expandafter{%
9034   \Hy@temp
9035   pdfmark=/DOCINFO,%
9036   Title=\@pdftitle,%
9037   Subject=\@pdfsubject,%
9038   Creator=\@pdfcreator,%
9039   Author=\@pdfauthor,%
9040   Keywords=\@pdfkeywords
9041 }%
9042 \Hy@DisableOption{pdfauthor}%
9043 \Hy@DisableOption{pdftitle}%
9044 \Hy@DisableOption{pdfsubject}%
9045 \Hy@DisableOption{pdfcreator}%
9046 \Hy@DisableOption{pdfcreationdate}%
9047 \Hy@DisableOption{pdfmoddate}%
9048 \Hy@DisableOption{pdfproducer}%
9049 \Hy@DisableOption{pdfkeywords}%
9050 }
9051 \def\PDF@SetupDoc{%
9052   \def\Hy@temp{%
9053     \ifx\@pdfstartpage\@empty
9054     \else
9055       \ifx\@pdfstartview\@empty
9056       \else
9057         \edef\Hy@temp{%
9058           ,Page=\@pdfstartpage
9059           ,View=\@pdfstartview
9060         }%
9061       \fi
9062     \fi
9063     \edef\Hy@temp{%
9064       \noexpand\pdfmark{%
9065         pdfmark=/DOCVIEW,%
9066         PageMode=/\@pdfpagemode
9067       }\Hy@temp
9068     }%
9069   }%
9070   \Hy@temp
9071   \ifx\@pdfpagescrop\@empty
9072   \else
9073     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9074   \fi
9075   \edef\Hy@temp{%
9076     \ifHy@toolbar\else /HideToolbar true\fi
9077     \ifHy@menubar\else /HideMenubar true\fi
9078     \ifHy>windowui\else /HideWindowUI true\fi
9079     \ifHy@fitwindow /FitWindow true\fi
9080     \ifHy@centerwindow /CenterWindow true\fi
9081     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9082     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9083     \Hy@UseNameKey{Direction}\@pdfdirection
9084     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9085     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9086     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9087     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9088     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9089     \Hy@UseNameKey{Duplex}\@pdfduplex

```

```

9090 \ifx\@pdfpicktraybypdfsize\@empty
9091 \else
9092 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9093 \fi
9094 \ifx\@pdfprintpagerange\@empty
9095 \else
9096 /PrintPageRange[\@pdfprintpagerange]%
9097 \fi
9098 \ifx\@pdfnumcopies\@empty
9099 \else
9100 /NumCopies \@pdfnumcopies
9101 \fi
9102 }%
9103 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9104 \pdfmark{%
9105 pdfmark=/PUT,%
9106 Raw={%
9107 \string{Catalog\string}<<%
9108 \ifx\Hy@temp\@empty
9109 \else
9110 /ViewerPreferences<<\Hy@temp>>%
9111 \fi
9112 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9113 \ifx\@pdflang\@empty
9114 \else
9115 /Lang(\@pdflang)%
9116 \fi
9117 \ifx\@baseurl\@empty
9118 \else
9119 /URI<</Base(\Hy@pstringB)>>%
9120 \fi
9121 >>%
9122 }%
9123 }%
9124 }
9125 </pdfmark>
9126 <*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.

```

9127 \newif\ifHy@pdfmarkerror
9128 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
9129 \def\pdfmark@[#1]#2{%
9130 \Hy@pdfmarkerrorfalse
9131 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9132 \@processme
9133 \let\pdf@type\relax
9134 \setkeys{PDF}{#2}%
9135 \ifHy@pdfmarkerror
9136 \else
9137 \ifx\pdf@type\relax
9138 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9139 \ifx\#1\%
9140 \else

```

```

9141         \pdf@rect{#1}%
9142     \fi
9143 \else
9144     \ifx\#1\%
9145         \literalps@out{%
9146             [\the\pdf@toks\space\pdf@type\space pdfmark%
9147             ]%
9148     \else
9149         \@ifundefined{@\pdf@linktype color}{%
9150             \Hy@colorlink\@linkcolor
9151         }{%
9152             \expandafter\Hy@colorlink
9153                 \csname @\pdf@linktype color\endcsname
9154         }%
9155         \pdf@rect{#1}%
9156         \literalps@out{%
9157             [\the\pdf@toks\space\pdf@type\space pdfmark%
9158             ]%
9159         \Hy@endcolorlink
9160     \fi
9161 \fi
9162 \fi
9163 }

```

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}

```

```

9164 \newsavebox{\pdf@box}
9165 \providecommand*{\Hy@setouterhbox}{\sbox}
9166 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9167 \def\Hy@DEST{/DEST}
9168 \def\pdf@rect#1{%
9169     \leavevmode
9170     \ifHy@breaklinks
9171         \Hy@setouterhbox\pdf@box{#1}%
9172     \else
9173         \sbox\pdf@box{#1}%
9174     \fi
9175     \dimen@ht\pdf@box
9176     \ifdim\dp\pdf@box=\z@
9177         \literalps@out{H.S}%
9178     \else
9179         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9180     \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...).

```

9181     \ifHy@breaklinks
9182         \expandafter\Hy@breaklinksunhbox
9183     \else

```

```

9184 \expandafter\box
9185 \fi
9186 \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

9187 \ifdim\dimen@=\z@
9188 \literalps@out{H.R}%
9189 \else
9190 \raise\dimen@ \hbox{\literalps@out{H.R}}%
9191 \fi
9192 \ifx\pdf@type\Hy@DEST
9193 \else
9194 \pdf@addtoksx{H.B}%
9195 \fi
9196 }

```

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.

```

9197 \newtoks\pdf@toks
9198 \newtoks\pdf@defaulttoks
9199 \pdf@defaulttoks={}
9200 \def\pdf@addtoks#1#2{%
9201 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9202 \@processme
9203 }
9204 \def\pdf@addtoksx#1{%
9205 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9206 \@processme
9207 }
9208 \def\PDFdefaults#1{%
9209 \pdf@defaulttoks={#1}%
9210 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

9211 % what is the type of pdfmark?
9212 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9213 % what is the link type?
9214 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9215 \def\pdf@linktype{link}
9216 % parameter is a stream of PDF
9217 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9218 % parameter is a name
9219 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9220 % parameter is a array
9221 \define@key{PDF}{Border}{%
9222 \edef\Hy@temp{#1}%
9223 \ifx\Hy@temp\@empty
9224 \else
9225 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9226 \fi
9227 }
9228 \let\Hy@BorderArrayPatch\@empty
9229 % parameter is a dictionary
9230 \define@key{PDF}{BorderStyle}{%

```

```

9231 \edef\Hy@temp{#1}%
9232 \ifx\Hy@temp\@empty
9233 \else
9234 \pdf@addtoks{<<#1>>}{BS}%
9235 \fi
9236 }
9237 % parameter is a array
9238 \define@key{PDF}{Color}{%
9239 \ifx\relax#1\relax
9240 \else
9241 \pdf@addtoks{[#1]}{Color}% hash-ok
9242 \fi
9243 }
9244 % parameter is a string
9245 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9246 % parameter is a integer
9247 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9248 % parameter is a array
9249 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9250 % parameter is a string
9251 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9252 % parameter is a string or file
9253 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9254 % parameter is a destination
9255 \define@key{PDF}{Dest}{%
9256 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9257 \ifx\Hy@pstringDest\@empty
9258 \Hy@pdfmarkerrortrue
9259 \Hy@Warning{Destination with empty name ignored}%
9260 \else
9261 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9262 \fi
9263 }
9264 \define@key{PDF}{DestAnchor}{%
9265 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9266 \ifx\Hy@pstringDest\@empty
9267 \Hy@pdfmarkerrortrue
9268 \Hy@Warning{Destination with empty name ignored}%
9269 \else
9270 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9271 \fi
9272 }
9273 % parameter is a string
9274 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9275 % parameter is a string
9276 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9277 % parameter is a int
9278 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9279 \define@key{PDF}{PDFAFlags}{%
9280 \ifHy@pdfa
9281 \pdf@addtoks{#1}{F}%
9282 \fi
9283 }
9284 % parameter is a name
9285 \define@key{PDF}{AcroHighlight}{%
9286 \begingroup
9287 \edef\x{#1}%

```



```

9288 \expandafter\endgroup\ifx\x\@empty
9289 \else
9290 \pdf@addtoks{#1}{H}%
9291 \fi
9292 }
9293 % parameter is a string
9294 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9295 % parameter is a string
9296 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9297 % parameter is a string
9298 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9299 % parameter is a string
9300 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9301 % parameter is a Boolean
9302 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9303 % parameter is a integer or name
9304 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9305 % parameter is a name
9306 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9307 % parameter is a string
9308 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9309 % parameter is a array
9310 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9311 % parameter is a integer
9312 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9313 % parameter is a name
9314 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9315 % parameter is a string
9316 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9317 % parameter is a string
9318 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9319 % parameter is a string
9320 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9321 % parameter is an array
9322 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9323 % parameter is a string
9324 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9325 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9326 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9327 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9328 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9329 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9330 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9331 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9332 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9333 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9334 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9335 </pdfmarkbase>
9336 <*pdfmark>
9337 \def\Acrobatmenu#1#2{%
9338 \Hy@Acrobatmenu{#1}{#2}{%
9339 \pdfmark[{#2}]{%
9340 linktype=menu,%
9341 pdfmark=/ANN,%
9342 AcroHighlight=\@pdfhighlight,%
9343 Border=\@pdfborder,%

```

```

9344     BorderStyle=\@pdfborderstyle,%
9345     Action={<< /Subtype /Named /N /#1 >>},%
9346     Subtype=/Link,%
9347     PDFAFlags=4%
9348   }%
9349 }%
9350 }

```

And now for some useful examples:

```

9351 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9352 \def\PDFNextPage@[#1]#2{%
9353   \pdfmark[{#2}] {%
9354     #1,%
9355     Border=\@pdfborder,%
9356     BorderStyle=\@pdfborderstyle,%
9357     Color=.2 .1 .5,%
9358     pdfmark=/ANN,%
9359     Subtype=/Link,%
9360     PDFAFlags=4,%
9361     Page=/Next%
9362   }%
9363 }
9364 \def\PDFPreviousPage{%
9365   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}]%
9366 }
9367 \def\PDFPreviousPage@[#1]#2{%
9368   \pdfmark[{#2}] {%
9369     #1,%
9370     Border=\@pdfborder,%
9371     BorderStyle=\@pdfborderstyle,%
9372     Color=.4 .4 .1,%
9373     pdfmark=/ANN,%
9374     Subtype=/Link,%
9375     PDFAFlags=4,%
9376     Page=/Prev%
9377   }%
9378 }
9379 \def\PDFOpen#1{%
9380   \pdfmark{#1,pdfmark=/DOCVIEW}%
9381 }

```

This will only work if you use Distiller 2.1 or higher.

```

9382 \def\hyper@linkurl#1#2{%
9383   \begingroup
9384     \Hy@pstringdef\Hy@pstringURI{#2}%
9385     \hyper@chars
9386     \leavevmode
9387     \pdfmark[{#1}] {%
9388       pdfmark=/ANN,%
9389       linktype=url,%
9390       AcroHighlight=\@pdfhighlight,%
9391       Border=\@pdfborder,%
9392       BorderStyle=\@pdfborderstyle,%
9393       Color=\@urlbordercolor,%
9394       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9395       Subtype=/Link,%
9396       PDFAFlags=4%
9397     }%

```

```

9398 \endgroup
9399 }
9400 \def\hyper@linkfile#1#2#3{%
9401 \beginingroup
9402 \Hy@pstringdef\Hy@pstringF{#2}%
9403 \Hy@pstringdef\Hy@pstringD{#3}%
9404 \leavevmode
9405 \pdfmark[{#1}]{%
9406 pdfmark=/ANN,%
9407 Subtype=/Link,%
9408 PDFAFlags=4,%
9409 AcroHighlight=\@pdfhighlight,%
9410 Border=\@pdfborder,%
9411 BorderStyle=\@pdfborderstyle,%
9412 linktype=file,%
9413 Color=\@filebordercolor,%
9414 Action={%
9415 <<%
9416 /S/GoToR%
9417 \Hy@SetNewWindow
9418 /F(\Hy@pstringF)%
9419 /D\ifx\#3\@pdfstartview\else(\Hy@pstringD)cvn\fi
9420 >>%
9421 }%
9422 }%
9423 \endgroup
9424 }
9425 \def\hyper@launch run:#1\#2#3{%
9426 \beginingroup
9427 \Hy@pstringdef\Hy@pstringF{#1}%
9428 \Hy@pstringdef\Hy@pstringP{#3}%
9429 \leavevmode
9430 \pdfmark[{#2}]{%
9431 pdfmark=/ANN,%
9432 Subtype=/Link,%
9433 PDFAFlags=4,%
9434 AcroHighlight=\@pdfhighlight,%
9435 Border=\@pdfborder,%
9436 BorderStyle=\@pdfborderstyle,%
9437 linktype=run,%
9438 Color=\@runbordercolor,%
9439 Action={%
9440 <<%
9441 /S/Launch%
9442 \Hy@SetNewWindow
9443 /F(\Hy@pstringF)%
9444 \ifx\#3\%
9445 \else
9446 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9447 \fi
9448 >>%
9449 }%
9450 }%
9451 \endgroup
9452 }
9453 </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.

```

9454 <*dvips>
9455 \providecommand*{\XR@ext}{pdf}
9456 \def\Hy@raisedlink{}
9457 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9458 \def\headerps@out#1{\special{! #1}}%
9459 \input{pdfmark.def}%
9460 \ifx\@pdfproducer\relax
9461   \def\@pdfproducer{dvips + Distiller}%
9462 \fi
9463 \providecommand*\@pdfborder{0 0 1}
9464 \providecommand*\@pdfborderstyle{}
9465 \providecommand*\@pdfview{XYZ}
9466 \providecommand*\@pdfviewparams{ H.V}
9467 \def\Hy@BorderArrayPatch{BorderArrayPatch}
9468 \g@addto@macro\Hy@FirstPageHook{%
9469   \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.

```

9470   /DvipsToPDF{72.27 mul Resolution div} def%
9471   /PDFToDvips{72.27 div Resolution mul} def%
9472   /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.

```

9473   /BorderArrayPatch{%
9474     [exch{%
9475       dup dup type/integertype eq exch type/realtype eq or%
9476       {BPToDvips}if%
9477     }forall]%
9478   }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.

```

9479   /HyperBorder {1 PDFToDvips} def%
9480   /H.V {pdf@hoff pdf@voff null} def%
9481   /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

```

9482   /H.S {%
9483       currentpoint %
9484       HyperBorder add /pdf@lly exch def %
9485       dup DvipsToPDF 72 add /pdf@hoff exch def %
9486       HyperBorder sub /pdf@llx exch def%
9487   } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The x and y coordinates of the current point, minus the `baselineskip`

```

9488   /H.L {%
9489       2 sub dup%
9490       /HyperBasePt exch def %
9491       PDFToDvips /HyperBaseDvips exch def %
9492       currentpoint %
9493       HyperBaseDvips sub /pdf@ury exch def%
9494       /pdf@urx exch def%
9495   } def%
9496   /H.A {%
9497       H.L %
9498   % | /pdf@voff| = the distance from the top of the page to a point
9499   % | \baselineskip| above the current point in PDF coordinates
9500       currentpoint exch pop %
9501       vsize 72 sub exch DvipsToPDF %
9502       HyperBasePt sub % baseline skip
9503       sub /pdf@voff exch def%
9504   } def%
9505   /H.R {%
9506       currentpoint %
9507       HyperBorder sub /pdf@ury exch def %
9508       HyperBorder add /pdf@urx exch def %
9509   % | /pdf@voff| = the distance from the top of the page to the current point, in
9510   % PDF coordinates
9511       currentpoint exch pop vsize 72 sub %
9512       exch DvipsToPDF sub /pdf@voff exch def%
9513   } def%
9514 }%
9515 }
9516 \AfterBeginDocument{%
9517   \ifx\special@paper\@empty\else
9518     \ifHy@setpagesize
9519       \special{papersize=\special@paper}%
9520     \fi
9521   \fi
9522   \Hy@DisableOption{setpagesize}%
9523 }
9524 </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.

```

9525 <*vtxpdfmark>
9526 \providecommand*\XR@ext}{pdf}
9527 \def\Hy@raisedlink{}
9528 \def\literalps@out#1{\special{pS:#1}}%
9529 \def\headerps@out#1{\immediate\special{pS:#1}}%
9530 \input{pdfmark.def}%
9531 \ifx\@pdfproducer\relax
9532   \ifnum\OpMode=\@ne
9533     \def\@pdfproducer{VTeX}%
9534   \else
9535     \def\@pdfproducer{VTeX + Distiller}%
9536   \fi
9537 \fi
9538 \providecommand*\@pdfborder{0 0 1}
9539 \providecommand*\@pdfborderstyle{}
9540 \providecommand*\@pdfview{XYZ}
9541 \providecommand*\@pdfviewparams{ H.V}
9542 \g@addto@macro\Hy@FirstPageHook{%
9543   \headerps@out{%
9544     /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.

```

9545   /HyperBorder {1} def%
9546   /H.V {pdf@hoff pdf@voff null} def%
9547   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9548   /H.S {%
9549     currentpoint %
9550     HyperBorder sub%
9551     /pdf@lly exch def %
9552     dup 72 add /pdf@hoff exch def %
9553     HyperBorder sub%
9554     /pdf@llx exch def%
9555   } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9556   /H.L {%
9557     2 sub%
9558     /HyperBasePt exch def %
9559     currentpoint %
9560     HyperBasePt add HyperBorder add%
9561     /pdf@ury exch def %
9562     HyperBorder add%
9563     /pdf@urx exch def%
9564   } def%
9565   /H.A {%
9566     H.L %
9567     currentpoint exch pop %
9568     vsize 72 sub exch %

```

```

9569      HyperBasePt add add%
9570      /pdf@voff exch def%
9571    } def%
pdf@ury =  $Y_c + \text{HyperBorder}$ , pdf@urx =  $X_c + \text{HyperBorder}$ 
9572    /H.R {%
9573      currentpoint %
9574      HyperBorder add%
9575      /pdf@ury exch def %
9576      HyperBorder add%
9577      /pdf@urx exch def %
9578      currentpoint exch pop vsize 72 sub add%
9579      /pdf@voff exch def%
9580    } def%
9581  }%
9582 }
9583 </vtexpdfmark>

```

46.11 Textures

```

9584 <*textures>
9585 \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.

```

9586 \begingroup
9587   \obeylines %
9588   \gdef\Hy@ps@CR{\noexpand
9589   }%
9590 \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`.

```

9591 \def\literalps@out#1{%
9592   \special{postscript 0 0 transform}%
9593   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9594 }%
9595 %

```

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.

```

9596 \def\headerps@out#1{%
9597   \special{%

```

```

9598     prepostscript TeXdict begin\Hy@ps@CR
9599         #1\Hy@ps@CR
9600     end%
9601 }%
9602 }%
9603 %

```

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.

```

9604 \g@addto@macro\Hy@FirstPageHook{%
9605     \headerps@out{%
9606         /betterpdfmark {%
9607             systemdict begin %
9608                 dup /BP eq%
9609                 {cleartomark gsave nulldevice []%
9610                 {dup /EP eq%
9611                     {cleartomark cleartomark grestore}%
9612                     {cleartomark}%
9613                     ifelse%
9614                 }ifelse %
9615             end%
9616         }def\Hy@ps@CR
9617     __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9618 }% end of \headerps@out
9619 }% end of \AtBeginShipoutFirst
9620 %
9621 \input{pdfmark.def}%
9622 %
9623 \ifx\@pdfproducer\relax
9624     \def\@pdfproducer{Textures + Distiller}%
9625 \fi
9626 \providecommand*\@pdfborder{0 0 1}
9627 \providecommand*\@pdfborderstyle{}
9628 \providecommand*\@pdfview{XYZ}
9629 \providecommand*\@pdfviewparams{ H.V}
9630 %

```

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.

```

9631 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

9632 /vsize {\Hy@pageheight} def%
9633 /DvipsToPDF {} def%
9634 /PDFToDvips {} def%
9635 /BPTToDvips {} def%
9636 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9637 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9638 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9639 /H.S {%
9640     currentpoint %
9641     HyperBorder add /pdf@lly exch def %
9642     dup DvipsToPDF 72 add /pdf@hoff exch def %
9643     HyperBorder sub /pdf@llx exch def%

```



```

9644 } def\Hy@ps@CR
9645 /H.L {%
9646   2 sub %
9647   PDFToDvips /HyperBase exch def %
9648   currentpoint %
9649   HyperBase sub /pdf@ury exch def%
9650   /pdf@urx exch def%
9651 } def\Hy@ps@CR
9652 /H.A {%
9653   H.L %
9654   currentpoint exch pop %
9655   vsize 72 sub exch DvipsToPDF %
9656   HyperBase sub % baseline skip
9657   sub /pdf@voff exch def%
9658 } def\Hy@ps@CR
9659 /H.R {%
9660   currentpoint %
9661   HyperBorder sub /pdf@ury exch def %
9662   HyperBorder add /pdf@urx exch def %
9663   currentpoint exch pop vsize 72 sub %
9664   exch DvipsToPDF sub /pdf@voff exch def%
9665 } def\Hy@ps@CR
9666 }

9667 \AfterBeginDocument{%
9668   \ifHy@colorlinks
9669     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9670   \fi
9671 }

```

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.

```

9672 \expandafter\let\expandafter\keepPDF@SetupDoc
9673 \csname PDF@SetupDoc\endcsname
9674 \def\PDF@SetupDoc{%
9675   \ifx\@baseurl\@empty
9676   \else
9677     \special{html:<base href="\@baseurl">}%
9678   \fi
9679   \keepPDF@SetupDoc
9680 }
9681 \def\hyper@anchor#1{%
9682   \Hy@SaveLastskip
9683   \begingroup
9684     \let\protect=\string
9685     \special{html:<a name=%
9686       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9687   \endgroup
9688   \Hy@activeanchortrue
9689   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9690   \special{html:</a>}%
9691   \Hy@activeanchorfalse
9692   \Hy@RestoreLastskip
9693 }
9694 \def\hyper@anchorstart#1{%
9695   \Hy@SaveLastskip
9696   \begingroup
9697     \hyper@chars

```

```

9698 \special{html:<a name=%
9699 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9700 \endgroup
9701 \Hy@activeanchortrue
9702 }
9703 \def\hyper@anchorend{%
9704 \special{html:</a>}%
9705 \Hy@activeanchorfalse
9706 \Hy@RestoreLastskip
9707 }
9708 \def\@urlltype{url}
9709 \def\hyper@linkstart#1#2{%
9710 \expandafter\Hy@colorlink\csname @#1color\endcsname
9711 \def\Hy@tempa{#1}%
9712 \ifx\Hy@tempa\@urlltype
9713 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9714 \else
9715 \begingroup
9716 \hyper@chars
9717 \special{html:<a href=%
9718 \hyper@quote#\HyperDestNameFilter{#2}\hyper@quote>}%
9719 \endgroup
9720 \fi
9721 }
9722 \def\hyper@linkend{%
9723 \special{html:</a>}%
9724 \Hy@endcolorlink
9725 }
9726 \def\hyper@linkfile#1#2#3{%
9727 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
9728 }
9729 \def\hyper@linkurl#1#2{%
9730 \leavevmode
9731 \ifHy@raiselinks
9732 \setbox\@tempboxa=\color@hbox #1\color@endbox
9733 \@linkdim\dp\@tempboxa
9734 \lower\@linkdim\hbox{%
9735 \hyper@chars
9736 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9737 }%
9738 \Hy@colorlink\@urlcolor#1%
9739 \@linkdim\ht\@tempboxa
9740 \advance\@linkdim by -6.5\p@
9741 \raise\@linkdim\hbox{\special{html:</a>}}%
9742 \Hy@endcolorlink
9743 \else
9744 \begingroup
9745 \hyper@chars
9746 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9747 \Hy@colorlink\@urlcolor#1%
9748 \special{html:</a>}%
9749 \Hy@endcolorlink
9750 \endgroup
9751 \fi
9752 }

```

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

```

9753 \def\hyper@link#1#2#3{%

```

```

9754 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
9755 }
9756 \def\hyper@image#1#2{%
9757   \begin{group}
9758     \hyper@chars
9759     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9760   \endgroup
9761 }
9762 </textures>

```

46.12 dvipsone

```

9763 % \subsection{dvipsone driver}
9764 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
9765 % |\special| commands.
9766 (*dvipsone)
9767 \providecommand*\XR@ext}{pdf}
9768 \def\Hy@raisedlink{}
9769 \providecommand*\@pdfborder{0 0 1}
9770 \providecommand*\@pdfborderstyle{}
9771 \def\literalps@out#1{\special{ps:#1}}%
9772 \def\headerps@out#1{\special{headertext=#1}}%
9773 \input{pdfmark.def}%
9774 \ifx\@pdfproducer\relax
9775   \def\@pdfproducer{dvipsone + Distiller}%
9776 \fi
9777 \def\PDF@FinishDoc{%
9778   \Hy@UseMaketitleInfos
9779   \special{PDF: Keywords \@pdfkeywords}%
9780   \special{PDF: Title \@pdftitle}%
9781   \special{PDF: Creator \@pdfcreator}%
9782   \ifx\@pdfcreationdate\@empty
9783   \else
9784     \special{PDF: CreationDate \@pdfcreationdate}%
9785   \fi
9786   \ifx\@pdfmoddate\@empty
9787   \else
9788     \special{PDF: ModDate \@pdfmoddate}%
9789   \fi
9790   \special{PDF: Author \@pdfauthor}%
9791   \ifx\@pdfproducer\relax
9792   \else
9793     \special{PDF: Producer \@pdfproducer}%
9794   \fi
9795   \special{PDF: Subject \@pdfsubject}%
9796   \Hy@DisableOption{pdfauthor}%
9797   \Hy@DisableOption{pdftitle}%
9798   \Hy@DisableOption{pdfsubject}%
9799   \Hy@DisableOption{pdfcreator}%
9800   \Hy@DisableOption{pdfcreationdate}%
9801   \Hy@DisableOption{pdfmoddate}%
9802   \Hy@DisableOption{pdfproducer}%
9803   \Hy@DisableOption{pdfkeywords}%
9804 }
9805 \def\PDF@SetupDoc{%
9806   \def\Hy@temp{}%
9807   \ifx\@pdfstartpage\@empty

```

```

9808 \else
9809 \ifx\@pdfstartview\@empty
9810 \else
9811 \edef\Hy@temp{%
9812 ,Page=\@pdfstartpage
9813 ,View=\@pdfstartview
9814 }%
9815 \fi
9816 \fi
9817 \edef\Hy@temp{%
9818 \noexpand\pdfmark{%
9819 pdfmark=/DOCVIEW,%
9820 PageMode=/\@pdfpagemode
9821 \Hy@temp
9822 }%
9823 }%
9824 \Hy@temp
9825 \ifx\@pdfpagescrop\@empty
9826 \else
9827 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9828 \fi
9829 \edef\Hy@temp{%
9830 \ifHy@toolbar\else /HideToolbar true\fi
9831 \ifHy@menubar\else /HideMenubar true\fi
9832 \ifHy@windowui\else /HideWindowUI true\fi
9833 \ifHy@fitwindow /FitWindow true\fi
9834 \ifHy@centerwindow /CenterWindow true\fi
9835 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9836 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9837 \Hy@UseNameKey{Direction}\@pdfdirection
9838 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9839 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9840 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9841 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9842 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9843 \Hy@UseNameKey{Duplex}\@pdfduplex
9844 \ifx\@pdfpicktraybypdfsize\@empty
9845 \else
9846 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9847 \fi
9848 \ifx\@pdfprintpagerange\@empty
9849 \else
9850 /PrintPageRange[\@pdfprintpagerange]%
9851 \fi
9852 \ifx\@pdfnumcopies\@empty
9853 \else
9854 /NumCopies \@pdfnumcopies
9855 \fi
9856 }%
9857 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9858 \pdfmark{%
9859 pdfmark=/PUT,%
9860 Raw={%
9861 \string{Catalog\string}<<%
9862 \ifx\Hy@temp\@empty
9863 \else
9864 /ViewerPreferences<<\Hy@temp>>%

```

```

9865      \fi
9866      \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9867      \ifx\@pdflang\@empty
9868      \else
9869        /Lang(\@pdflang)%
9870      \fi
9871      \ifx\@baseurl\@empty
9872      \else
9873        /URI<</Base(\Hy@pstringB)>>%
9874      \fi
9875    >>%
9876  }%
9877 }%
9878 }
9879 \providecommand*\@pdfview{XYZ}
9880 \providecommand*\@pdfviewparams{ %
9881   gsave revscl currentpoint grestore %
9882   72 add exch pop null exch null%
9883 }
9884 \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 T_EX.

```

9885 \g@addto@macro\Hy@FirstPageHook{%
9886   \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

9887   /DvipsToPDF { 65781 div } def%
9888   /PDFToDvips { 65781 mul } def%
9889   /BPToDvips{65781 mul}def%
9890   /HyperBorder { 1 PDFToDvips } def%
9891   /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.

```

9892   /BorderArrayPatch{%
9893     [exch{%
9894       dup dup type/integertype eq exch type/realtype eq or%
9895       {BPToDvips}if%
9896     }forall]%
9897   }def%
9898   /H.S {%
9899     currentpoint %
9900     HyperBorder add /pdf@lly exch def %
9901     dup DvipsToPDF 72 add /pdf@hoff exch def %
9902     HyperBorder sub /pdf@llx exch def%
9903   } def%
9904   /H.L {%
9905     2 sub %
9906     PDFToDvips /HyperBase exch def %
9907     currentpoint %
9908     HyperBase sub /pdf@ury exch def%
9909     /pdf@urx exch def%
9910   } def%
9911   /H.A {%

```

```

9912      H.L %
9913      currentpoint exch pop %
9914      HyperBase sub % baseline skip
9915      DvipsToPDF /pdf@voff exch def%
9916    } def%
9917    /H.R {%
9918      currentpoint %
9919      HyperBorder sub /pdf@ury exch def %
9920      HyperBorder add /pdf@urx exch def %
9921      currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9922    } def%
9923  }%
9924 }
9925 </dvipsone>

```

46.13 TeX4ht

```

9926 <*tex4ht>
9927 \providecommand*{\XR@ext}{html}
9928 \def\Hy@raisedlink{}
9929 \@ifpackageloaded{tex4ht}{%
9930   \typeout{hyperref tex4ht: tex4ht already loaded}%
9931 }{%
9932   \RequirePackage[htex4ht]{tex4ht}%
9933 }
9934 \hyperlinkfileprefix{}
9935 \def\PDF@FinishDoc{}
9936 \def\PDF@SetupDoc{%
9937   \ifx\@baseurl\@empty
9938     \else
9939       \special{t4ht=<base href="\@baseurl">}%
9940     \fi
9941 }
9942 \def\hyper@anchor#1{%
9943   \Hy@SaveLastskip
9944   \begingroup
9945     \let\protect=\string
9946     \special{t4ht=<a name=%
9947       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9948   \endgroup
9949   \Hy@activeanchortrue
9950   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9951   \special{t4ht=</a>}%
9952   \Hy@activeanchorfalse
9953   \Hy@RestoreLastskip
9954 }
9955 \def\hyper@anchorstart#1{%
9956   \Hy@SaveLastskip
9957   \begingroup
9958     \hyper@chars\special{t4ht=<a name=%
9959       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9960   \endgroup
9961   \Hy@activeanchortrue
9962 }
9963 \def\hyper@anchorend{%
9964   \special{t4ht=</a>}%
9965   \Hy@activeanchorfalse
9966   \Hy@RestoreLastskip

```

```

9967 }
9968 \def\@urltype{url}
9969 \def\hyper@linkstart#1#2{%
9970   \expandafter\Hy@colorlink\csname @#1color\endcsname
9971   \def\Hy@tempa{#1}%
9972   \ifx\Hy@tempa\@urltype
9973     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9974   \else
9975     \begingroup
9976     \hyper@chars
9977     \special{t4ht=<a href=
9978       \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9979     \endgroup
9980   \fi
9981 }
9982 \def\hyper@linkend{%
9983   \special{t4ht=</a>}%
9984   \Hy@endcolorlink
9985 }
9986 \def\hyper@linkfile#1#2#3{%
9987   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9988 }
9989 \def\hyper@linkurl#1#2{%
9990   \leavevmode
9991   \ifHy@raiselinks
9992     \setbox\@tempboxa=\color@hbox #1\color@endbox
9993     \@linkdim\dp\@tempboxa
9994     \lower\@linkdim\hbox{%
9995       \begingroup
9996       \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9997     \endgroup
9998   }%
9999   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10000   \@linkdim\ht\@tempboxa
10001   \advance\@linkdim by -6.5\p@
10002   \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10003 \else
10004   \begingroup
10005   \hyper@chars
10006   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10007   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10008   \special{t4ht=</a>}%
10009   \endgroup
10010 \fi
10011 }

```

Poor implementation of \hyper@link without considering #1.

```

10012 \def\hyper@link#1#2#3{%
10013   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10014 }
10015 \def\hyper@image#1#2{%
10016   \begingroup
10017   \hyper@chars
10018   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10019   \endgroup
10020 }
10021 \let\autoref\ref
10022 \ifx \rEfLiNK \UnDef

```

```

10023 \def\rEfLiNK #1#2{#2}%
10024 \fi
10025 \def\backref#1{}
10026 </tex4ht>
10027 <*tex4htcfg>
10028 \IfFileExists{\jobname.cfg}{\endinput}{}
10029 \Preamble{html}
10030 \begin{document}%
10031 \EndPreamble
10032 \def\TeX{TeX}
10033 \def\OMEGA{\Omega}
10034 \def\LaTeX{LaTeX}
10035 \def\LaTeXe{\LaTeX2e}
10036 \def\eTeX{e-TeX}
10037 \def\MF{Metafont}
10038 \def\MP{MetaPost}
10039 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

10040 <*pdfmark>
10041 \long\def\@Form[#1]{%
10042 \g@addto@macro\Hy@FirstPageHook{%
10043 \headerps@out{%
10044 [%
10045 /_objdef{pdfDocEncoding}%
10046 /type/dict%
10047 /OBJ pdfmark%
10048 [%
10049 {pdfDocEncoding}%
10050 <<%
10051 /Type/Encoding%
10052 /Differences[%
10053 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10054 /tilde %
10055 39/quotesingle %
10056 96/grave %
10057 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10058 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10059 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10060 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10061 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10062 164/currency %
10063 166/brokenbar %
10064 168/dieresis/copyright/ordfeminine %
10065 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10066 /twosuperior/threesuperior/acute/mu %
10067 183/periodcentered/cedilla/onesuperior/ordmasculine %
10068 188/onequarter/onehalf/threequarters %
10069 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10070 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10071 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10072 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10073 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10074 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10075 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%

```



```

10076      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10077      /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10078      /ucircumflex/udieresis/yacute/thorn/ydieresis%
10079      ]%
10080      >>%
10081 /PUT pdfmark%
10082 [%
10083      /_objdef{ZaDb}%
10084      /type/dict%
10085 /OBJ pdfmark%
10086 [%
10087      {ZaDb}%
10088      <<%
10089      /Type/Font%
10090      /Subtype/Type1%
10091      /Name/ZaDb%
10092      /BaseFont/ZapfDingbats%
10093      >>%
10094 /PUT pdfmark%
10095 [%
10096      /_objdef{Helv}%
10097      /type/dict%
10098 /OBJ pdfmark%
10099 [%
10100      {Helv}%
10101      <<%
10102      /Type/Font%
10103      /Subtype/Type1%
10104      /Name/Helv%
10105      /BaseFont/Helvetica%
10106      /Encoding{pdfDocEncoding}%
10107      >>%
10108 /PUT pdfmark%
10109 [%
10110      /_objdef{aform}%
10111      /type/dict%
10112 /OBJ pdfmark%
10113 [%
10114      /_objdef{afields}%
10115      /type/array%
10116 /OBJ pdfmark%
10117 {%
10118      [%
10119      /BBox[0 0 100 100]%
10120      /_objdef{Check}%
10121 /BP pdfmark %
10122      1 0 0 setrgbcolor%
10123 /ZapfDingbats 80 selectfont %
10124      20 20 moveto%
10125      (4)show%
10126 [/EP pdfmark%
10127 [%
10128      /BBox[0 0 100 100]%
10129      /_objdef{Cross}%
10130 /BP pdfmark %
10131      1 0 0 setrgbcolor%
10132 /ZapfDingbats 80 selectfont %

```

```

10133 20 20 moveto%
10134 (8)show%
10135 [/EP pdfmark%
10136 [%
10137   /BBox[0 0 250 100]%
10138   /_objdef{Submit}%
10139 /BP pdfmark %
10140 0.6 setgray %
10141 0 0 250 100 rectfill %
10142 1 setgray %
10143 2 2 moveto %
10144 2 98 lineto %
10145 248 98 lineto %
10146 246 96 lineto %
10147 4 96 lineto %
10148 4 4 lineto %
10149 fill %
10150 0.34 setgray %
10151 248 98 moveto %
10152 248 2 lineto %
10153 2 2 lineto %
10154 4 4 lineto %
10155 246 4 lineto %
10156 246 96 lineto %
10157 fill%
10158 /Helvetica 76 selectfont %
10159 0 setgray %
10160 8 22.5 moveto%
10161 (Submit)show%
10162 [/EP pdfmark%
10163 [%
10164   /BBox[0 0 250 100]%
10165   /_objdef{SubmitP}%
10166 /BP pdfmark %
10167 0.6 setgray %
10168 0 0 250 100 rectfill %
10169 0.34 setgray %
10170 2 2 moveto %
10171 2 98 lineto %
10172 248 98 lineto %
10173 246 96 lineto %
10174 4 96 lineto %
10175 4 4 lineto %
10176 fill %
10177 1 setgray %
10178 248 98 moveto %
10179 248 2 lineto %
10180 2 2 lineto %
10181 4 4 lineto %
10182 246 4 lineto %
10183 246 96 lineto %
10184 fill%
10185 /Helvetica 76 selectfont %
10186 0 setgray %
10187 10 20.5 moveto%
10188 (Submit)show%
10189 [/EP pdfmark%

```

```

10190 } ?pdfmark%
10191 [%
10192   {aform}%
10193   <<%
10194     /Fields{afields}%
10195     /DR<<%
10196       /Font<<%
10197         /ZaDb{ZaDb}%
10198         /Helv{Helv}%
10199       >>%
10200     >>%
10201     /DA(/Helv 10 Tf 0 g)%
10202     /CO{corder}%
10203     \ifHy@pdfa
10204     \else
10205       /NeedAppearances true%
10206     \fi
10207   >>%
10208 /PUT pdfmark%
10209 [%
10210   {Catalog}%
10211   <<%
10212     /AcroForm{aform}%
10213   >>%
10214 /PUT pdfmark%
10215 [%
10216   /_objdef{corder}%
10217   /type/array%
10218 /OBJ pdfmark% dps
10219 }}%
10220 \setkeys{Form}{#1}%
10221 }
10222 \def\@endForm{}
10223 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10224 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10225 }
10226 \def\@TextField[#1]#2{% parameters, label
10227   \def\Fld@name{#2}%
10228   \def\Fld@default{}%
10229   \let\Fld@value\@empty
10230   \def\Fld@width{\DefaultWidthofText}%
10231   \def\Fld@height{%
10232     \ifFld@multiline
10233       \DefaultHeightofTextMultiline
10234     \else
10235       \DefaultHeightofText
10236     \fi
10237   }%
10238   \begingroup
10239     \Field@toks={ }%
10240     \expandafter\HyField@SetKeys\expandafter{%
10241       \DefaultOptionsofText,#1%
10242     }%
10243     \HyField@FlagsText
10244     \ifFld@hidden\def\Fld@width{1sp}\fi
10245     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10246     \LayoutTextField{#2}{%

```

```

10247 \Hy@escapeform\PDFForm@Text
10248 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10249 pdfmark=/ANN,Raw={\PDFForm@Text}%
10250 }%
10251 }%
10252 \endgroup
10253 }
10254 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10255 \def\Fld@name{#2}%
10256 \let\Fld@default\relax
10257 \let\Fld@value\relax
10258 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10259 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10260 \begingroup
10261 \Fld@menulength=0 %
10262 \@tempdima\z@
10263 \@for\@curropt:=#3\do{%
10264 \expandafter\Fld@checkequals\@curropt==\%
10265 \Hy@StepCount\Fld@menulength
10266 \settowidth{\@tempdimb}{\@currDisplay}%
10267 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10268 }%
10269 \advance\@tempdima by 15\p@
10270 \Field@toks={ }%
10271 \begingroup
10272 \HyField@SetKeys{#1}%
10273 \edef\x{\endgroup
10274 \noexpand\expandafter
10275 \noexpand\HyField@SetKeys
10276 \noexpand\expandafter{%
10277 \expandafter\noexpand\cname DefaultOptionsof%
10278 \ifFld@radio
10279 Radio%
10280 \else
10281 \ifFld@combo
10282 \ifFld@popdown
10283 PopdownBox%
10284 \else
10285 ComboBox%
10286 \fi
10287 \else
10288 ListBox%
10289 \fi
10290 \fi
10291 \endcname
10292 }%
10293 }\x
10294 \HyField@SetKeys{#1}%
10295 \ifFld@hidden\def\Fld@width{1sp}\fi
10296 \ifx\Fld@value\relax
10297 \let\Fld@value\Fld@default
10298 \fi
10299 \LayoutChoiceField{#2}{%
10300 \ifFld@radio
10301 \HyField@FlagsRadioButton
10302 \@Radio{#3}%
10303 \else

```

```

10304     \begingroup
10305     \HyField@FlagsChoice
10306     \ifdim\Fld@width<\@tempdima
10307     \ifdim\@tempdima<1cm\@tempdima1cm\fi
10308     \edef\Fld@width{\the\@tempdima}%
10309     \fi
10310     \ifFld@combo
10311     \else
10312     \@tempdima=\the\Fld@menulength\Fld@charsize
10313     \advance\@tempdima by \Fld@borderwidth bp %
10314     \advance\@tempdima by \Fld@borderwidth bp %
10315     \edef\Fld@height{\the\@tempdima}%
10316     \fi
10317     \@@ListBox{#3}%
10318     \endgroup
10319   \fi
10320 }%
10321 \endgroup
10322 }
10323 \def\@@Radio#1{%
10324   \Fld@listcount=0 %
10325   \@for\@curropt:=#1\do{%
10326     \expandafter\Fld@checkequals\@curropt==\%
10327     \Hy@StepCount\Fld@listcount
10328     \@currDisplay\space
10329     \Hy@escapeform\PDFForm@Radio
10330     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10331       pdfmark=/ANN,%
10332       Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10333     } % deliberate space between radio buttons
10334   }%
10335 }
10336 \newcount\Fld@listcount
10337 \def\@@ListBox#1{%
10338   \HyField@PDFChoices{#1}%
10339   \Hy@escapeform\PDFForm@List
10340   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10341     pdfmark=/ANN,Raw={\PDFForm@List}%
10342   }%
10343 }
10344 \def\@PushButton[#1]#2{% parameters, label
10345   \def\Fld@name{#2}%
10346   \begingroup
10347     \Fld@toks={ }%
10348     \expandafter\HyField@SetKeys\expandafter{%
10349       \DefaultOptionsofPushButton,#1%
10350     }%
10351     \ifHy@pdfa
10352       \PackageError{hyperref}{%
10353         PDF/A: Push button with JavaScript is prohibited%
10354       }\@ehc
10355       \LayoutPushButtonField{%
10356         \leavevmode
10357         \MakeButtonField{#2}%
10358       }%
10359     \else
10360       \HyField@FlagsPushButton

```

```

10361     \ifFld@hidden\def\Fld@width{1sp}\fi
10362     \LayoutPushButtonField{%
10363         \leavevmode
10364         \Hy@escapeform\PDFForm@Push
10365         \pdfmark[\MakeButtonField{#2}]{%
10366             pdfmark=/ANN,Raw={\PDFForm@Push}%
10367         }%
10368     }%
10369     \fi
10370 \endgroup
10371 }
10372 \def\@Submit[#1]#2{%
10373     \Field@toks={ }%
10374     \def\Fld@width{\DefaultWidthofSubmit}%
10375     \def\Fld@height{\DefaultHeightofSubmit}%
10376     \begingroup
10377         \expandafter\HyField@SetKeys\expandafter{%
10378             \DefaultOptionsofSubmit,#1%
10379         }%
10380         \HyField@FlagsPushButton
10381         \HyField@FlagsSubmit
10382         \ifFld@hidden\def\Fld@width{1sp}\fi
10383         \Hy@escapeform\PDFForm@Submit
10384         \pdfmark[\MakeButtonField{#2}]{%
10385             pdfmark=/ANN,%
10386             Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10387         }%
10388     \endgroup
10389 }
10390 \def\@Reset[#1]#2{%
10391     \Field@toks={ }%
10392     \def\Fld@width{\DefaultWidthofReset}%
10393     \def\Fld@height{\DefaultHeightofReset}%
10394     \begingroup
10395         \expandafter\HyField@SetKeys\expandafter{%
10396             \DefaultOptionsofReset,#1%
10397         }%
10398         \leavevmode
10399         \ifHy@pdfa
10400             \PackageError{hyperref}{%
10401                 PDF/A: Reset action is prohibited%
10402             }\@ehc
10403             \MakeButtonField{#2}%
10404         \else
10405             \HyField@FlagsPushButton
10406             \ifFld@hidden\def\Fld@width{1sp}\fi
10407             \Hy@escapeform\PDFForm@Reset
10408             \pdfmark[\MakeButtonField{#2}]{%
10409                 pdfmark=/ANN,Raw={\PDFForm@Reset}%
10410             }%
10411         \fi
10412     \endgroup
10413 }%
10414 \def\@CheckBox[#1]#2{% parameters, label
10415     \def\Fld@name{#2}%
10416     \def\Fld@default{0}%
10417     \begingroup

```

```

10418 \def\Fld@width{\DefaultWidthofCheckBox}%
10419 \def\Fld@height{\DefaultHeightofCheckBox}%
10420 \Field@toks={ }%
10421 \expandafter\HyField@SetKeys\expandafter{%
10422 \DefaultOptionsofCheckBox,#1%
10423 }%
10424 \HyField@FlagsCheckBox
10425 \ifFld@hidden\def\Fld@width{1sp}\fi
10426 \LayoutCheckField{#2}{%
10427 \Hy@escapeform\PDFForm@Check
10428 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10429 pdfmark=/ANN,Raw={\PDFForm@Check}%
10430 }%
10431 }%
10432 \endgroup
10433 }
10434 \pdfmark>

```

47.2 HyperTeX

```

10435 <*hypertex>
10436 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10437 \def\@endForm{}
10438 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10439 \typeout{Sorry, HyperTeX does not support FORM gauges}%
10440 }
10441 \def\@TextField[#1]#2{% parameters, label
10442 \typeout{Sorry, HyperTeX does not support FORM text fields}%
10443 }
10444 \def\@CheckBox[#1]#2{% parameters, label
10445 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10446 }
10447 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10448 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10449 }
10450 \def\@PushButton[#1]#2{% parameters, label
10451 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10452 }
10453 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10454 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10455 </hypertex>

```

47.3 TeX4ht

```

10456 <*tex4ht>
10457 \def\@Form[#1]{%
10458 \setkeys{Form}{#1}%
10459 \HCode{<form action="\Form@action" method="\Form@method">}%
10460 }
10461 \def\@endForm{\HCode{</form>}}
10462 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10463 \typeout{Sorry, TeX4ht does not support gauges}%
10464 }
10465 \def\@TextField[#1]#2{% parameters, label
10466 \let\Hy@reserved@a\@empty
10467 \def\Fld@name{#2}%
10468 \def\Fld@default{}%
10469 \bgroup
10470 \Field@toks={ }%

```

```

10471 \setkeys{Field}{#1}%
10472 \HCode{<label for="\Fld@name">#2</label>}%
10473 \ifFld@password
10474 \@@PasswordField
10475 \else
10476 \@@TextField
10477 \fi
10478 \egroup
10479 }
10480 \def\@@PasswordField{%
10481 \HCode{%
10482 <input type="password" %
10483 id="\Fld@name" %
10484 name="\Fld@name" %
10485 \ifFld@hidden type="hidden" \fi
10486 value="\Fld@default" %
10487 \the\Field@toks
10488 >%
10489 }%
10490 }
10491 \def\@@TextField{%
10492 \ifFld@multiline
10493 \HCode{<textarea %
10494 \ifFld@readonly readonly \fi
10495 id="\Fld@name" %
10496 name="\Fld@name" %
10497 \ifFld@hidden type="hidden" \fi
10498 \the\Field@toks>%
10499 }%
10500 \Fld@default
10501 \HCode{</textarea>}%
10502 \else
10503 \HCode{<input type="text" %
10504 \ifFld@readonly readonly \fi
10505 id="\Fld@name" %
10506 name="\Fld@name" %
10507 \ifFld@hidden type="hidden" \fi
10508 value="\Fld@default" %
10509 \the\Field@toks>%
10510 }%
10511 \fi
10512 }
10513 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10514 \def\Fld@name{#2}%
10515 \def\Fld@default{}%
10516 \let\Hy@reserved@a\relax
10517 \begin{group}
10518 \expandafter\Fld@findlength#3\\%
10519 \Field@toks={ }%
10520 \setkeys{Field}{#1}%
10521 #2%
10522 \ifFld@radio
10523 \expandafter\@@Radio#3\\%
10524 \else
10525 \expandafter\@@Menu#3\\%
10526 \fi
10527 \end{group}

```



```

10528 }
10529 \def\Fld@findlength#1\{%
10530   \Fld@menulength=0 %
10531   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10532 }
10533 \def\@@Menu#1\{%
10534   \HCode{<select size="\the\Fld@menulength" %
10535     name="\Fld@name" %
10536     \the\Field@toks>%
10537   }%
10538   \@for\@curropt:=#1\do{%
10539     \expandafter\Fld@checkequals\@curropt==\\%
10540     \HCode{<option %
10541       \ifx\@curropt\Fld@default selected \fi
10542       value="\@currValue">\@currDisplay</option>%
10543     }%
10544   }%
10545   \HCode{</select>}%
10546 }
10547 \def\@@Radio#1\{%
10548   \@for\@curropt:=#1\do{%
10549     \expandafter\Fld@checkequals\@curropt==\\%
10550     \HCode{<input type="radio" %
10551       \ifx\@curropt\Fld@default checked \fi
10552       name="\Fld@name" %
10553       value="\@currValue" %
10554       \the\Field@toks>%
10555     }%
10556     \@currDisplay
10557   }%
10558 }
10559 \def\@PushButton[#1]#2{% parameters, label
10560   \def\Fld@name{#2}%
10561   \bgroup
10562     \Field@toks={ }%
10563     \setkeys{Field}{#1}%
10564     \HCode{<input type="button" %
10565       name="\Fld@name" %
10566       value="#2" %
10567       \the\Field@toks>%
10568     }%
10569     \HCode{</button>}%
10570   \egroup
10571 }
10572 \def\@Submit[#1]#2{%
10573   \HCode{<button type="submit">#2</button>}%
10574 }
10575 \def\@Reset[#1]#2{%
10576   \HCode{<button type="reset">#2</button>}%
10577 }
10578 \def\@CheckBox[#1]#2{% parameters, label
10579   \let\Hy@reserved@a\@empty
10580   \def\Fld@name{#2}%
10581   \def\Fld@default{0}%
10582   \bgroup
10583     \Field@toks={ }%
10584     \setkeys{Field}{#1}%

```

```

10585 \HCode{<input type="checkbox" %
10586 \ifFld@checked checked \fi
10587 \ifFld@disabled disabled \fi
10588 \ifFld@readonly readonly \fi
10589 name="\Fld@name" %
10590 \ifFld@hidden type="hidden" \fi
10591 value="\Fld@default" %
10592 \the\Field@toks>%
10593 #2%
10594 }%
10595 \egroup
10596 }
10597 </tex4ht>

```

47.4 pdfTeX

```

10598 <*pdftex>
10599 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10600 \typeout{Sorry, pdftex does not support FORM gauges}%
10601 }
10602 \def\MakeFieldObject#1#2{\sbox0{#1}%
10603 \immediate\pdfxform0 %
10604 \expandafter\edef\csname #2object\endcsname{%
10605 \the\pdflastxform\space 0 R%
10606 }%
10607 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10608 }%
10609 \def\HyField@afields{}
10610 \begingroup\expandafter\expandafter\expandafter\endgroup
10611 \expandafter\ifx\csname pdfastlink\endcsname\relax
10612 \let\HyField@AddToFields\relax
10613 \PackageInfo{hyperref}{%
10614 You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10615 Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10616 but other PDF viewers might complain%
10617 }%
10618 \else
10619 \def\HyField@AddToFields{%
10620 \xdef\HyField@afields{%
10621 \ifx\HyField@afields\@empty
10622 \else
10623 \HyField@afields
10624 \space
10625 \fi
10626 \the\pdfastlink\space 0 R%
10627 }%
10628 }%
10629 \fi
10630 \def\@Form[#1]{%
10631 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
10632 \setkeys{Form}{#1}%
10633 \ifnum\pdftexversion>13 %
10634 \pdfrefobj\OBJ@pdfdocencoding
10635 \pdfrefobj\OBJ@ZaDb
10636 \pdfrefobj\OBJ@Helv
10637 \fi
10638 \AtEndDocument{%
10639 \immediate\pdfobj{%

```

```

10640 <<%
10641   /Fields[\HyField@afields]%
10642   /DR<<%
10643     /Font<<%
10644       /ZaDb \OBJ@ZaDb\space 0 R%
10645       /Helv \OBJ@Helv\space 0 R%
10646     >>%
10647   >>%
10648   /DA(/Helv 10 Tf 0 g)%
10649   \ifHy@pdfa
10650   \else
10651     /NeedAppearances true%
10652   \fi
10653 >>%
10654 }%
10655 \edef\OBJ@acroform{\the\pdflastobj}%
10656 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10657 }%
10658 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

10659   \begingroup
10660     \fontfamily{pzd}%
10661     \fontencoding{U}%
10662     \fontseries{m}%
10663     \fontshape{n}%
10664     \selectfont
10665     \char123 %
10666   \endgroup
10667 }{Ding}%
10668 \MakeFieldObject{%
10669   \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10670 }{Submit}%
10671 \MakeFieldObject{%
10672   \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10673 }{SubmitP}%
10674 }
10675 \def\@endForm{}
10676 \def\@TextField[#1]#2{% parameters, label
10677   \def\Fld@name{#2}%
10678   \def\Fld@default{}%
10679   \let\Fld@value\@empty
10680   \def\Fld@width{\DefaultWidthofText}%
10681   \def\Fld@height{%
10682     \ifFld@multiline
10683       \DefaultHeightofTextMultiline
10684     \else
10685       \DefaultHeightofText
10686     \fi
10687   }%
10688   \begingroup
10689     \Field@toks={ }%
10690     \expandafter\HyField@SetKeys\expandafter{%
10691       \DefaultOptionsofText,#1%
10692     }%
10693     \PDFForm@Name
10694     \HyField@FlagsText
10695     \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

10696 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
10697 \LayoutTextField{#2}{%
10698 \Hy@escapeform\PDFForm@Text
10699 \pdfstartlink user {\PDFForm@Text}\relax
10700 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10701 \HyField@AddToFields
10702 }%
10703 \endgroup
10704 }
10705 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10706 \def\Fld@name{#2}%
10707 \let\Fld@default\relax
10708 \let\Fld@value\relax
10709 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10710 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10711 \beginingroup
10712 \Fld@menulength=0 %
10713 \@tempdima\z@
10714 \@for\@curropt:=#3\do{%
10715 \expandafter\Fld@checkequals\@curropt==\%
10716 \Hy@StepCount\Fld@menulength
10717 \settowidth{\@tempdimb}{\@currDisplay}%
10718 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10719 }%
10720 \advance\@tempdima by 15\p@
10721 \Field@toks={ }%
10722 \beginingroup
10723 \HyField@SetKeys{#1}%
10724 \edef\x{\endgroup
10725 \noexpand\expandafter
10726 \noexpand\HyField@SetKeys
10727 \noexpand\expandafter{%
10728 \expandafter\noexpand\cename DefaultOptionsof%
10729 \ifFld@radio
10730 Radio%
10731 \else
10732 \ifFld@combo
10733 \ifFld@popdown
10734 PopdownBox%
10735 \else
10736 ComboBox%
10737 \fi
10738 \else
10739 ListBox%
10740 \fi
10741 \fi
10742 \endcsname
10743 }%
10744 }\x
10745 \HyField@SetKeys{#1}%
10746 \PDFForm@Name
10747 \ifFld@hidden\def\Fld@width{1sp}\fi
10748 \ifx\Fld@value\relax
10749 \let\Fld@value\Fld@default
10750 \fi
10751 \LayoutChoiceField{#2}{%
10752 \ifFld@radio

```

```

10753      \HyField@FlagsRadioButton
10754      \@@Radio{#3}%
10755      \else
10756      \begingroup
10757      \HyField@FlagsChoice
10758      \ifdim\Fld@width<\@tempdima
10759      \ifdim\@tempdima<1cm\@tempdima1cm\fi
10760      \edef\Fld@width{\the\@tempdima}%
10761      \fi
10762      \ifFld@combo
10763      \else
10764      \@tempdima=\the\Fld@menulength\Fld@charsize
10765      \advance\@tempdima by \Fld@borderwidth bp %
10766      \advance\@tempdima by \Fld@borderwidth bp %
10767      \edef\Fld@height{\the\@tempdima}%
10768      \fi
10769      \@@ListBox{#3}%
10770      \endgroup
10771      \fi
10772      }%
10773      \endgroup
10774  }
10775  \def\@@Radio#1{%
10776      \Fld@listcount=0 %
10777      \@for\@curropt:=#1\do{%
10778          \expandafter\Fld@checkequals\@curropt==\%
10779          \Hy@StepCount\Fld@listcount
10780          \@currDisplay\space
10781          \leavevmode
10782          \Hy@escapeform\PDFForm@Radio
10783          \pdfstartlink user {%
10784              \PDFForm@Radio
10785              /AP<<%
10786              /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.

```

10787          /\@currValue\space \DingObject
10788          >>%
10789          >>%
10790          }%
10791          \relax
10792          \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10793          \ifnum\Fld@listcount=1 %
10794              \HyField@AddToFields
10795          \fi
10796          \space % deliberate space between radio buttons
10797      }%
10798  }
10799  \newcount\Fld@listcount
10800  \def\@@ListBox#1{%
10801      \HyField@PDFChoices{#1}%
10802      \leavevmode
10803      \Hy@escapeform\PDFForm@List
10804      \pdfstartlink user {\PDFForm@List}\relax
10805      \MakeChoiceField{\Fld@width}{\Fld@height}%
10806      \pdfendlink

```

```

10807 \HyField@AddToFields
10808 }
10809 \def\@PushButton[#1]#2{% parameters, label
10810 \def\Fld@name{#2}%
10811 \begingroup
10812 \Field@toks={ }%
10813 \expandafter\HyField@SetKeys\expandafter{%
10814 \DefaultOptionsofPushButton,#1%
10815 }%
10816 \PDFForm@Name
10817 \ifHy@pdfa
10818 \PackageError{hyperref}{%
10819 PDF/A: Push button with JavaScript is prohibited%
10820 }{@ehc
10821 \LayoutPushButtonField{%
10822 \leavevmode
10823 \MakeButtonField{#2}%
10824 }%
10825 \else
10826 \HyField@FlagsPushButton
10827 \ifFld@hidden\def\Fld@width{1sp}\fi
10828 \LayoutPushButtonField{%
10829 \leavevmode
10830 \Hy@escapeform\PDFForm@Push
10831 \pdfstartlink user {\PDFForm@Push}\relax
10832 \MakeButtonField{#2}%
10833 \pdfendlink
10834 \HyField@AddToFields
10835 }%
10836 \fi
10837 \endgroup
10838 }
10839 \def\@Submit[#1]#2{%
10840 \Field@toks={ }%
10841 \def\Fld@width{\DefaultWidthofSubmit}%
10842 \def\Fld@height{\DefaultHeightofSubmit}%
10843 \begingroup
10844 \expandafter\HyField@SetKeys\expandafter{%
10845 \DefaultOptionsofSubmit,#1%
10846 }%
10847 \HyField@FlagsPushButton
10848 \HyField@FlagsSubmit
10849 \ifFld@hidden\def\Fld@width{1sp}\fi
10850 \leavevmode
10851 \Hy@escapeform\PDFForm@Submit
10852 \pdfstartlink user {%
10853 \PDFForm@Submit
10854 /AP<</N \SubmitObject/D \SubmitPObj>>%
10855 }%
10856 \relax
10857 \MakeButtonField{#2}%
10858 \pdfendlink
10859 \HyField@AddToFields
10860 \endgroup
10861 }
10862 \def\@Reset[#1]#2{%
10863 \Field@toks={ }%

```

```

10864 \def\Fld@width{\DefaultWidthofReset}%
10865 \def\Fld@height{\DefaultHeightofReset}%
10866 \begingroup
10867   \expandafter\HyField@SetKeys\expandafter{%
10868     \DefaultOptionsofReset,#1%
10869   }%
10870   \leavevmode
10871   \ifHy@pdfa
10872     \PackageError{hyperref}{%
10873       PDF/A: Reset action is prohibited%
10874     }{@ehc}
10875     \MakeButtonField{#2}%
10876   \else
10877     \HyField@FlagsPushButton
10878     \ifFld@hidden\def\Fld@width{1sp}\fi
10879     \Hy@escapeform\PDFForm@Reset
10880     \pdfstartlink user {\PDFForm@Reset}\relax
10881     \MakeButtonField{#2}%
10882     \pdfendlink
10883     \HyField@AddToFields
10884   \fi
10885 \endgroup
10886 }
10887 \def\@CheckBox[#1]#2{% parameters, label
10888   \def\Fld@name{#2}%
10889   \def\Fld@default{0}%
10890   \begingroup
10891     \def\Fld@width{\DefaultWidthofCheckBox}%
10892     \def\Fld@height{\DefaultHeightofCheckBox}%
10893     \Field@toks={ }%
10894     \expandafter\HyField@SetKeys\expandafter{%
10895       \DefaultOptionsofCheckBox,#1%
10896     }%
10897     \PDFForm@Name
10898     \HyField@FlagsCheckBox
10899     \ifFld@hidden\def\Fld@width{1sp}\fi
10900     \LayoutCheckField{#2}{%
10901       \Hy@escapeform\PDFForm@Check
10902       \pdfstartlink user {\PDFForm@Check}\relax
10903       \MakeCheckField{\Fld@width}{\Fld@height}%
10904       \pdfendlink
10905       \HyField@AddToFields
10906     }%
10907   \endgroup
10908 }
10909 \pdfobj {%
10910   <<%
10911     /Type/Encoding%
10912     /Differences[%
10913       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10914       /ring/tilde %
10915       39/quotesingle %
10916       96/grave %
10917       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10918       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10919       /quotedblbase/quotedblleft/quotedblright/quoteleft%
10920       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%

```

```

10921      /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10922      164/currency %
10923      166/brokenbar %
10924      168/dieresis/copyright/ordfeminine %
10925      172/logicalnot/.notdef/registered/macron/degree/plusminus%
10926      /twosuperior/threesuperior/acute/mu %
10927      183/periodcentered/cedilla/onesuperior/ordmasculine %
10928      188/onequarter/onehalf/threequarters %
10929      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10930      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10931      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10932      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10933      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10934      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10935      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10936      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10937      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10938      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10939      ]%
10940      >>%
10941      }
10942      \edef\OBJ@pdfdocencoding{\the\pdflastobj}
10943      \pdfobj{%
10944      <<%
10945      /Type/Font%
10946      /Subtype/Type1%
10947      /Name/ZaDb%
10948      /BaseFont/ZapfDingbats%
10949      >>%
10950      }
10951      \edef\OBJ@ZaDb{\the\pdflastobj}
10952      \pdfobj{%
10953      <<%
10954      /Type/Font%
10955      /Subtype/Type1%
10956      /Name/Helv%
10957      /BaseFont/Helvetica%
10958      /Encoding \OBJ@pdfdocencoding\space 0 R%
10959      >>%
10960      }
10961      \edef\OBJ@Helv{\the\pdflastobj}
10962      \pdfTeX

```

47.5 dvipdfm

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

10963 <*dvipdfm>

```

\@Gauge

```

10964 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10965   \typeout{Sorry, dvipdfm does not support FORM gauges}%
10966 }

```

\@Form

```

10967 \def\@Form[#1]{%
10968   \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%

```



```

10969 \setkeys{Form}{#1}%
10970 \@pdfm@mark{obj @afields []}%
10971 \@pdfm@mark{obj @corder []}%
10972 \@pdfm@mark{%
10973     obj @aform <<%
10974         /Fields @afields%
10975         /DR<<%
10976         /Font<<%
10977         /ZaDb @OBJZaDb%
10978         /Helv @OBJHelv%
10979         >>%
10980     >>%
10981     /DA(/Helv 10 Tf 0 g)%
10982     /CO @corder%
10983     \ifHy@pdfa
10984     \else
10985         /NeedAppearances true%
10986     \fi
10987     >>%
10988 }%
10989 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
10990 }

\@endForm

10991 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
10992 \def\dvipdfm@setdim{%
10993     height \the\ht\pdfm@box\space
10994     width \the\wd\pdfm@box\space
10995     depth \the\dp\pdfm@box\space
10996 }

\HyField@AnnotCount
10997 \newcount\HyField@AnnotCount
10998 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
10999 \def\HyField@AdvanceAnnotCount{%
11000     \global\advance\HyField@AnnotCount\@ne
11001 }

\HyField@TheAnnotCount
11002 \def\HyField@TheAnnotCount{%
11003     \the\HyField@AnnotCount
11004 }

\@TextField
11005 \def\@TextField[#1]#2{% parameters, label
11006     \def\Fld@name{#2}%
11007     \def\Fld@default{}%
11008     \let\Fld@value\empty
11009     \def\Fld@width{\DefaultWidthofText}%
11010     \def\Fld@height{%
11011         \ifFld@multiline
11012             \DefaultHeightofTextMultiline

```

```

11013 \else
11014 \DefaultHeightofText
11015 \fi
11016 }%
11017 \beginngroup
11018 \Field@toks={ }%
11019 \expandafter\HyField@SetKeys\expandafter{%
11020 \DefaultOptionsofText,#1%
11021 }%
11022 \PDFForm@Name
11023 \HyField@FlagsText
11024 \ifFld@hidden\def\Fld@width{1sp}\fi
11025 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
11026 \setbox\pdfm@box=\hbox{%
11027 \MakeTextField{\Fld@width}{\Fld@height}%
11028 }%
11029 \HyField@AdvanceAnnotCount
11030 \LayoutTextField{#2}{%
11031 \Hy@escapeform\PDFForm@Text
11032 \@pdfm@mark{%
11033 ann @text\HyField@TheAnnotCount\space
11034 \dvipdfm@setdim << \PDFForm@Text >>%
11035 }%
11036 }%
11037 \unhbox\pdfm@box
11038 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11039 % record in @afields array
11040 \endgroup
11041 }

```

\@ChoiceMenu

```

11042 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11043 \def\Fld@name{#2}%
11044 \let\Fld@default\relax
11045 \let\Fld@value\relax
11046 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11047 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11048 \beginngroup
11049 \Fld@menulength=0 %
11050 \@tempdima\z@
11051 \@for\@curropt:=#3\do{%
11052 \expandafter\Fld@checkequals\@curropt==\%
11053 \Hy@StepCount\Fld@menulength
11054 \settowidth{\@tempdimb}{\@currDisplay}%
11055 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11056 }%
11057 \advance\@tempdima by 15\p@
11058 \Field@toks={ }%
11059 \beginngroup
11060 \HyField@SetKeys{#1}%
11061 \edef\x{\endgroup
11062 \noexpand\expandafter
11063 \noexpand\HyField@SetKeys
11064 \noexpand\expandafter{%
11065 \expandafter\noexpand\cname DefaultOptionsof%
11066 \ifFld@radio
11067 Radio%

```

```

11068         \else
11069             \ifFld@combo
11070                 \ifFld@popdown
11071                     PopdownBox%
11072                 \else
11073                     ComboBox%
11074                 \fi
11075             \else
11076                 ListBox%
11077             \fi
11078         \fi
11079     \endcsname
11080 }%
11081 } \x
11082 \HyField@SetKeys{#1}%
11083 \PDFForm@Name
11084 \ifFld@hidden\def\Fld@width{1sp}\fi
11085 \ifx\Fld@value\relax
11086     \let\Fld@value\Fld@default
11087 \fi
11088 \LayoutChoiceField{#2}{%
11089     \ifFld@radio
11090         \HyField@FlagsRadioButton
11091         \@@Radio{#3}%
11092     \else
11093         \beginngroup
11094             \HyField@FlagsChoice
11095             \ifdim\Fld@width<\@tempdima
11096                 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11097                 \edef\Fld@width{\the\@tempdima}%
11098             \fi
11099             \ifFld@combo
11100             \else
11101                 \@tempdima=\the\Fld@menulength\Fld@charsize
11102                 \advance\@tempdima by \Fld@borderwidth bp %
11103                 \advance\@tempdima by \Fld@borderwidth bp %
11104                 \edef\Fld@height{\the\@tempdima}%
11105             \fi
11106             \@@ListBox{#3}%
11107         \endgroup
11108     \fi
11109 }%
11110 \endgroup
11111 }

```

\@@Radio

```

11112 \def\@@Radio#1{%
11113     \Fld@listcount=0 %
11114     \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11115     \@for\@curropt:=#1\do{%
11116         \expandafter\Fld@checkequals\@curropt==\%
11117         \Hy@StepCount\Fld@listcount
11118         \@currDisplay\space
11119         \leavevmode
11120         \Hy@escapeform\PDFForm@Radio
11121         \ifnum\Fld@listcount=1 %
11122             \HyField@AdvanceAnnotCount

```

```

11123 \fi
11124 \@pdfm@mark{%
11125   ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
11126   \dvipdfm@setdim
11127   <<%
11128     \PDFForm@Radio
11129     /AP<</N<</\@currValue /null>>>>%
11130   >>%
11131 }%
11132 \unhcopy\pdfm@box\space% deliberate space between radio buttons
11133 \ifnum\Fld@listcount=1 %
11134   \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11135 \fi
11136 }%
11137 }

\Fld@listcount

11138 \newcount\Fld@listcount

@@@Listbox

11139 \def\@@Listbox#1{%
11140   \HyField@PDFChoices{#1}%
11141   \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
11142   \leavevmode
11143   \Hy@escapeform\PDFForm@List
11144   \HyField@AdvanceAnnotCount
11145   \@pdfm@mark{%
11146     ann @list\HyField@TheAnnotCount\space
11147     \dvipdfm@setdim
11148     <<\PDFForm@List>>%
11149   }%
11150   \unhbox\pdfm@box
11151   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11152 }

@@@PushButton

11153 \def\@PushButton[#1]#2{% parameters, label
11154   \def\Fld@name{#2}%
11155   \begingroup
11156     \Field@toks={}%
11157     \expandafter\HyField@SetKeys\expandafter{%
11158       \DefaultOptionsofPushButton,#1%
11159     }%
11160     \PDFForm@Name
11161     \ifHy@pdfa
11162       \PackageError{hyperref}{%
11163         PDF/A: Push button with JavaScript is prohibited%
11164       }\@ehc
11165       \LayoutPushButtonField{%
11166         \leavevmode
11167         \MakeButtonField{#2}%
11168       }%
11169     \else
11170       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11171       \HyField@FlagsPushButton
11172       \ifFld@hidden\def\Fld@width{1sp}\fi
11173       \HyField@AdvanceAnnotCount

```

```

11174 \LayoutPushButtonField{%
11175 \leavevmode
11176 \Hy@escapeform\PDFForm@Push
11177 \@pdfm@mark{%
11178 ann @push\HyField@TheAnnotCount\space
11179 \dvipdfm@setdim
11180 <<\PDFForm@Push>>%
11181 }%
11182 }%
11183 \unhbox\pdfm@box
11184 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11185 \fi
11186 \endgroup
11187 }

\@Submit
11188 \def\@Submit[#1]#2{%
11189 \Field@toks={ }%
11190 \def\Fld@width{\DefaultWidthofSubmit}%
11191 \def\Fld@height{\DefaultHeightofSubmit}%
11192 \begingroup
11193 \expandafter\HyField@SetKeys\expandafter{%
11194 \DefaultOptionsofSubmit,#1%
11195 }%
11196 \HyField@FlagsPushButton
11197 \HyField@FlagsSubmit
11198 \ifFld@hidden\def\Fld@width{1sp}\fi
11199 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11200 \leavevmode
11201 \Hy@escapeform\PDFForm@Submit
11202 \HyField@AdvanceAnnotCount
11203 \@pdfm@mark{%
11204 ann @submit\HyField@TheAnnotCount\space
11205 \dvipdfm@setdim
11206 <<\PDFForm@Submit>>%
11207 }%
11208 \unhbox\pdfm@box%
11209 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11210 \endgroup
11211 }

\@Reset
11212 \def\@Reset[#1]#2{%
11213 \Field@toks={ }%
11214 \def\Fld@width{\DefaultWidthofReset}%
11215 \def\Fld@height{\DefaultHeightofReset}%
11216 \begingroup
11217 \expandafter\HyField@SetKeys\expandafter{%
11218 \DefaultOptionsofReset,#1%
11219 }%
11220 \leavevmode
11221 \ifHy@pdfa
11222 \PackageError{hyperref}{%
11223 PDF/A: Reset action is prohibited%
11224 }{\@ehc}
11225 \MakeButtonField{#2}%
11226 \else

```

```

11227 \HyField@FlagsPushButton
11228 \ifFld@hidden\def\Fld@width{1sp}\fi
11229 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11230 \Hy@escapeform\PDFForm@Reset
11231 \HyField@AdvanceAnnotCount
11232 \@pdfm@mark{%
11233     ann @reset\HyField@TheAnnotCount\space
11234     \dvipdfm@setdim
11235     <<\PDFForm@Reset>>%
11236 }%
11237 \unhbox\pdfm@box
11238 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11239 \fi
11240 \endgroup
11241 }

```

\@CheckBox

```

11242 \def\@CheckBox[#1]#2{% parameters, label
11243 \def\Fld@name{#2}%
11244 \def\Fld@default{0}%
11245 \begingroup
11246 \def\Fld@width{\DefaultWidthofCheckBox}%
11247 \def\Fld@height{\DefaultHeightofCheckBox}%
11248 \Field@toks={ }%
11249 \expandafter\HyField@SetKeys\expandafter{%
11250 \DefaultOptionsofCheckBox,#1%
11251 }%
11252 \PDFForm@Name
11253 \HyField@FlagsCheckBox
11254 \ifFld@hidden\def\Fld@width{1sp}\fi
11255 \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11256 \HyField@AdvanceAnnotCount
11257 \LayoutCheckField{#2}%
11258 \Hy@escapeform\PDFForm@Check
11259 \@pdfm@mark{%
11260     ann @check\HyField@TheAnnotCount\space
11261     \dvipdfm@setdim
11262     <<\PDFForm@Check>>%
11263 }%
11264 \unhbox\pdfm@box
11265 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11266 }%
11267 \endgroup
11268 }

11269 \@pdfm@mark{obj @OBJpdfdocencoding%
11270 <<%
11271 /Type/Encoding%
11272 /Differences[%
11273     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11274     39/quotesingle %
11275     96/grave %
11276     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11277     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11278     /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11279     /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11280     /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11281     164/currency %

```

```

11282      166/brokenbar %
11283      168/dieresis/copyright/ordfeminine %
11284      172/logicalnot/.notdef/registered/macron/degree/plusminus%
11285      /twosuperior/threesuperior/acute/mu %
11286      183/periodcentered/cedilla/onesuperior/ordmasculine %
11287      188/onequarter/onehalf/threequarters %
11288      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11289      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11290      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11291      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11292      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11293      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11294      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11295      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
11296      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11297      /thorn/ydieresis%
11298      ]%
11299      >>%
11300 }
11301 \pdfmark{obj @OBJZaDb%
11302   <<%
11303     /Type/Font%
11304     /Subtype/Type1%
11305     /Name/ZaDb%
11306     /BaseFont/ZapfDingbats%
11307   >>%
11308 }
11309 \pdfmark{obj @OBJHelv%
11310   <<%
11311     /Type/Font%
11312     /Subtype/Type1%
11313     /Name/Helv%
11314     /BaseFont/Helvetica%
11315     /Encoding @OBJpdfdocencoding%
11316   >>%
11317 }
11318 </dvipdfm>

```

47.6 Common forms part

```
11319 <*pdfform>
```

\Hy@escapestring

```

11320 \begingroup\expandafter\expandafter\expandafter\endgroup
11321 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11322   \let\Hy@escapestring\@firstofone
11323   \def\Hy@escapeform#1{%
11324     \ifHy@escapeform
11325       \def\Hy@escapestring##1{%
11326         \noexpand\Hy@escapestring{\noexpand##1}%
11327       }%
11328     \edef\Hy@temp{#1}%
11329     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11330     \def\Hy@escapestring##1{%
11331       \@ifundefined{Hy@esc@\string##1}{%
11332         ##1%
11333       }\ThisShouldNotHappen

```

```

11334      }{
11335      \csname Hy@esc@\string##1\endcsname
11336      }%
11337      }%
11338      \else
11339      \let\Hy@escapestring\@firstofone
11340      \fi
11341      }%
11342      \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11343      \ifx\#3\%
11344      \else
11345      \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11346      \Hy@ReturnAfterFi{%
11347      \Hy@@escapeform#3\@nil
11348      }%
11349      \fi
11350      }%
11351      \else
11352      \def\Hy@escapeform#1{%
11353      \ifHy@escapeform
11354      \let\Hy@escapestring\pdfescapestring
11355      \else
11356      \let\Hy@escapestring\@firstofone
11357      \fi
11358      }%
11359      \Hy@escapeform{}%
11360      \fi

```

\PDFForm@Name

```

11361 \def\PDFForm@Name{%
11362   \begingroup
11363     \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11364     \ifHy@unicode
11365       \Hy@unicodedefalse
11366     \fi
11367     \fi
11368     \pdfstringdef\Hy@gtemp\Fld@name
11369   \endgroup
11370   \let\Fld@name\Hy@gtemp
11371 }

```

\PDFForm@Check

```

11372 \def\PDFForm@Check{%
11373   /Subtype/Widget%
11374   \Fld@annotflags
11375   /T(\Fld@name)%
11376   /FT/Btn%
11377   \Fld@flags
11378   /Q \Fld@align
11379   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11380   /MK<<%
11381     \ifnum\Fld@rotation=\z@
11382     \else
11383       /R \Fld@rotation
11384     \fi
11385     \ifx\Fld@bordercolor\relax
11386     \else

```



```

11387      /BC[\Fld@bordercolor]%
11388      \fi
11389      \ifx\Fld@bcolor\relax
11390      \else
11391      /BG[\Fld@bcolor]%
11392      \fi
11393      /CA(\Hy@escapestring{\Fld@cbsymbol})%
11394  >>%
11395  /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11396      \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11397  /H/P%
11398  \ifFld@checked /V/Yes\else /V/Off\fi
11399 }

```

\PDFForm@Push

```

11400 \ifHy@pdfa
11401 \else
11402   \def\PDFForm@Push{%
11403     /Subtype/Widget%
11404     \Fld@annotflags
11405     /T(\Fld@name)%
11406     /FT/Btn%
11407     \Fld@flags
11408     /H/P%
11409     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11410     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11411       \ifx\Fld@bordercolor\relax\else 1\fi
11412       \space
11413     \else
11414       /MK<<%
11415         \ifnum\Fld@rotation=\z@
11416         \else
11417           /R \Fld@rotation
11418         \fi
11419         \ifx\Fld@bordercolor\relax
11420         \else
11421           /BC[\Fld@bordercolor]%
11422         \fi
11423       >>%
11424     \fi
11425     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
11426   }%
11427 \fi

```

\Fld@additionalactions

```

11428 \def\Fld@@additionalactions{%
K input (keystroke) format
11429   \ifx\Fld@keystroke@code\@empty
11430   \else
11431     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11432   \fi
F display format
11433   \ifx\Fld@format@code\@empty
11434   \else
11435     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11436   \fi

```

V validation

```
11437 \ifx\Fld@validate@code\@empty
11438 \else
11439 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11440 \fi
```

C calculation

```
11441 \ifx\Fld@calculate@code\@empty
11442 \else
11443 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11444 \fi
```

Fo receiving the input focus

```
11445 \ifx\Fld@onfocus@code\@empty
11446 \else
11447 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11448 \fi
```

Bl loosing the input focus (blurred)

```
11449 \ifx\Fld@onblur@code\@empty
11450 \else
11451 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11452 \fi
```

D pressing the mouse button (down)

```
11453 \ifx\Fld@onmousedown@code\@empty
11454 \else
11455 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11456 \fi
```

U releasing the mouse button (up)

```
11457 \ifx\Fld@onmouseup@code\@empty
11458 \else
11459 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11460 \fi
```

E cursor enters the annotation's active area.

```
11461 \ifx\Fld@onenter@code\@empty
11462 \else
11463 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11464 \fi
```

X cursor exits the annotation's active area.

```
11465 \ifx\Fld@onexit@code\@empty
11466 \else
11467 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11468 \fi
11469 }
```

```
11470 \def\Fld@additionalactions{%
11471 \if-\Fld@@additionalactions-%
11472 \else
11473 \ifHy@pdfa
11474 \else
11475 /AA<<\Fld@@additionalactions>>%
11476 \fi
11477 \fi
11478 }
```

\PDFForm@List

```
11479 \def\PDFForm@List{%
```

```

11480 /Subtype/Widget%
11481 \Fld@annotflags
11482 /T(\Fld@name)%
11483 /FT/Ch%
11484 \Fld@flags
11485 /Q \Fld@align
11486 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11487 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11488 \ifx\Fld@bordercolor\relax\else 1\fi
11489 \ifx\Fld@bcolor\relax \else 1\fi
11490 \space
11491 \else
11492 /MK<<%
11493 \ifnum\Fld@rotation=\z@
11494 \else
11495 /R \Fld@rotation
11496 \fi
11497 \ifx\Fld@bordercolor\relax
11498 \else
11499 /BC[\Fld@bordercolor]%
11500 \fi
11501 \ifx\Fld@bcolor\relax
11502 \else
11503 /BG[\Fld@bcolor]%
11504 \fi
11505 >>%
11506 \fi
11507 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11508 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11509 \Fld@choices
11510 \Fld@additionalactions
11511 }

```

\PDFForm@Radio

```

11512 \def\PDFForm@Radio{%
11513 /Subtype/Widget%
11514 \Fld@annotflags
11515 /T(\Fld@name)%
11516 /FT/Btn%
11517 \Fld@flags
11518 /H/P%
11519 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11520 /MK<<%
11521 \ifnum\Fld@rotation=\z@
11522 \else
11523 /R \Fld@rotation
11524 \fi
11525 \ifx\Fld@bordercolor\relax
11526 \else
11527 /BC[\Fld@bordercolor]%
11528 \fi
11529 \ifx\Fld@bcolor\relax
11530 \else
11531 /BG[\Fld@bcolor]%
11532 \fi
11533 /CA(H)%
11534 >>%

```

```

11535 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11536 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11537 \ifx\@currValue\Fld@default
11538 /V/\Fld@default
11539 \else
11540 /V/Off%
11541 \fi
11542 \Fld@additionalactions
11543 }

```

\PDFForm@Text

```

11544 \def\PDFForm@Text{%
11545 /Subtype/Widget%
11546 \Fld@annotflags
11547 /T(\Fld@name)%
11548 /FT/Tx%
11549 \Fld@flags
11550 /Q \Fld@align
11551 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11552 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11553 \ifx\Fld@bordercolor\relax\else 1\fi
11554 \ifx\Fld@bcolor\relax \else 1\fi
11555 \space
11556 \else
11557 /MK<<%
11558 \ifnum\Fld@rotation=\z@
11559 \else
11560 /R \Fld@rotation
11561 \fi
11562 \ifx\Fld@bordercolor\relax
11563 \else
11564 /BC[\Fld@bordercolor]%
11565 \fi
11566 \ifx\Fld@bcolor\relax
11567 \else
11568 /BG[\Fld@bcolor]%
11569 \fi
11570 >>%
11571 \fi
11572 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11573 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11574 /DV(\Hy@escapestring{\Fld@default})%
11575 /V(\Hy@escapestring{\Fld@value})%
11576 \Fld@additionalactions
11577 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11578 }

```

\PDFForm@Submit

```

11579 \def\PDFForm@Submit{%
11580 /Subtype/Widget%
11581 \Fld@annotflags
11582 /T(\Fld@name)%
11583 /FT/Btn%
11584 \Fld@flags
11585 /H/P%
11586 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11587 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```

```

11588         \ifx\Fld@bordercolor\relax\else 1\fi
11589         \space
11590     \else
11591         /MK<<%
11592         \ifnum\Fld@rotation=\z@
11593         \else
11594             /R \Fld@rotation
11595         \fi
11596         \ifx\Fld@bordercolor\relax
11597         \else
11598             /BC[\Fld@bordercolor]%
11599         \fi
11600         >>%
11601     \fi
11602 /A<<%
11603 /S/SubmitForm%
11604 /F<<%
11605 /FS/URL%
11606 /F(\Hy@escapestring{\Form@action})%
11607 >>%
11608 \Fld@submitflags
11609 >>%
11610 }

```

\PDFForm@Reset

```

11611 \ifHy@pdfa
11612 \else
11613     \def\PDFForm@Reset{%
11614         /Subtype/Widget%
11615         \Fld@annotflags
11616         /T(\Fld@name)%
11617         /FT/Btn%
11618         \Fld@flags
11619         /H/P%
11620         /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11621         \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11622             \ifx\Fld@bordercolor\relax\else 1\fi
11623             \space
11624         \else
11625             /MK<<%
11626             \ifnum\Fld@rotation=\z@
11627             \else
11628                 /R \Fld@rotation
11629             \fi
11630             \ifx\Fld@bordercolor\relax
11631             \else
11632                 /BC[\Fld@bordercolor]%
11633             \fi
11634 %         /CA (Clear)
11635 %         /AC (Done)
11636         >>%
11637     \fi
11638     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11639     /A<</S/ResetForm>>%
11640 }%
11641 \fi
11642 \pdfform>

```

11643 \langle *package \rangle

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `reperer.sty`); it needed the `reperer` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```
11644 \def\phantomsection{%
11645   \Hy@GlobalStepCount\Hy@linkcounter
11646   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11647   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11648 }
11649  $\langle$ /package $\rangle$ 
```

48.1 Bookmarks

11650 \langle *outlines \rangle

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`.

```
11651 \def\Hy@writebookmark#1#2#3#4#5{%
11652   % section number, text, label, level, file
11653   \ifx\WriteBookmarks\relax%
11654   \else
11655     \ifnum#4>\Hy@bookmarksdepth\relax
11656     \else
11657       \@writetorep{#1}{#2}{#3}{#4}{#5}%
11658     \fi
11659   \fi
11660 }
11661 \def\Hy@currentbookmarklevel{0}
11662 \def\Hy@numberline#1{#1 }
11663 \def\@writetorep#1#2#3#4#5{%
11664   \begingroup
11665     \edef\Hy@tempa{#5}%
11666     \ifx\Hy@tempa\Hy@bookmarkstype
11667       \edef\Hy@level{#4}%
11668       \ifx\Hy@levelcheck Y%
11669         \@tempcnta\Hy@level\relax
11670         \advance\@tempcnta by -1 %
11671         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11672           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11673           \advance\@tempcnta by 1 %
11674           \Hy@Warning{%
11675             Difference (\the\@tempcnta) between bookmark levels is %
11676             greater \MessageBreak than one, level fixed%
11677           }%

```

```

11678         \@tempcnta\Hy@currentbookmarklevel
11679         \advance\@tempcnta by 1 %
11680         \edef\Hy@level{\the\@tempcnta}%
11681     \fi
11682 \else
11683     \global\let\Hy@levelcheck Y%
11684 \fi
11685 \global\let\Hy@currentbookmarklevel\Hy@level
11686 \@tempcnta\Hy@level\relax
11687 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11688 \advance\@tempcnta by -1 %
11689 \edef\Hy@tempa{#3}%
11690 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11691 \ifx\Hy@tempa\Hy@tempb
11692     \Hy@Warning{%
11693         The anchor of a bookmark and its parent's must not%
11694         \MessageBreak be the same. Added a new anchor%
11695     }%
11696     \phantomsection
11697 \fi
11698 \ifHy@bookmarksnumbered
11699     \let\numberline\Hy@numberline
11700     \let\partnumberline\Hy@numberline
11701     \let\chapternumberline\Hy@numberline
11702 \else
11703     \let\numberline\@gobble
11704     \let\partnumberline\@gobble
11705     \let\chapternumberline\@gobble
11706 \fi
11707 \pdfstringdef\Hy@tempa{#2}%
11708 \if@filesw
11709     \protected@write\@outlinefile{}{%
11710         \protect\BOOKMARK
11711         [\Hy@level] [\@bookmarkopenstatus{\Hy@level}] {#3}%
11712         {\Hy@tempa}{\Hy@tempb}%
11713     }%
11714 \fi
11715 \fi
11716 \endgroup
11717 }

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

11718 \newcommand{\currentpdfbookmark}{%
11719     \pdfbookmark[\Hy@currentbookmarklevel]%
11720 }
11721 \newcommand{\subpdfbookmark}{%
11722     \@tempcnta\Hy@currentbookmarklevel
11723     \Hy@StepCount\@tempcnta
11724     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11725 }
11726 \newcommand{\belowpdfbookmark}[2]{%
11727     \@tempcnta\Hy@currentbookmarklevel
11728     \Hy@StepCount\@tempcnta
11729     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11730     \advance\@tempcnta by -1 %
11731     \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11732 }

```

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.

```

11733 \renewcommand\pdfbookmark[3][0]{%
11734   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11735   \hyper@anchorstart{#3.#1}\hyper@anchorend
11736 }
11737 \def\BOOKMARK{\ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}}
11738 \def\@BOOKMARK[#1]{\ifnextchar[\@BOOKMARK[#1]]{\@@BOOKMARK[#1][-]}}
```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

The VTEX section was written originally by VTEX, but then amended by Denis Girou (`denis.girou@idris.fr`), then by Taco Hoekwater (`taco.hoekwater@wkap.nl`). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

11739 <*vtx>
11740 \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.

```

11741 \begingroup
11742   \catcode'\'=12 %
11743   \ifnum\Hy@VTeXversion<650 %
11744     \catcode'\'=12 %
11745     \gdef\hv@pdf@char#1#2#3{%
11746       \char
11747       \ifcase'#1#2#3 %
11748         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
11749         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
11750         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
11751         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
11752         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
11753         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
11754         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
11755         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
11756         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
11757         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
11758         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
11759         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
11760         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
11761         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
11762         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
11763         \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
11764         \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
11765         \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
11766         \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
11767         \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
11768         \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
11769         \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
11770         \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
11771         \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
11772         \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
11773         \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
11774         \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
11775         \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
```



```

11776 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
11777 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
11778 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
11779 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
11780 \fi
11781 }%
11782 \else
11783 \gdef\hv@pdf@char{\char'}%
11784 \fi
11785 \endgroup

```

\@@BOOKMARK

```

11786 \def\@@BOOKMARK[#1][#2]#3#4#5{%
11787 \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%
11788 \edef\@mycount{\the\@serial@counter}%
11789 \Hy@StepCount\@serial@counter
11790 \edef\@parcount{%
11791 \expandafter\ifx\csname @count@#5\endcsname\relax
11792 0%
11793 \else
11794 \csname @count@#5\endcsname
11795 \fi
11796 }%
11797 \immediate\special{%
11798 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11799 s=\ifx#2-c\else o\fi,t=#4%
11800 }%
11801 }%

```

\ReadBookmarks

```

11802 \def\ReadBookmarks{%
11803 \begingroup
11804 \def\O{\hv@pdf@char 0}%
11805 \def\1{\hv@pdf@char 1}%
11806 \def\2{\hv@pdf@char 2}%
11807 \def\3{\hv@pdf@char 3}%
11808 \def\({}%
11809 \def\)}%
11810 \def\do##1{%
11811 \ifnum\the\catcode'##1=\active
11812 \makeother##1%
11813 \fi
11814 }%
11815 \dospecials
11816 \InputIfFileExists{\jobname.out}{-}{-}%
11817 \endgroup
11818 \ifx\WriteBookmarks\relax
11819 \else
11820 \if@files
11821 \newwrite\@outlinefile
11822 \immediate\openout\@outlinefile=\jobname.out\relax
11823 \ifHy@typexml
11824 \immediate\write\@outlinefile{<relaxxml>\relax}%
11825 \fi
11826 \fi
11827 \fi
11828 }

```

```

11829 </vtex>
11830 <!*vtex>
11831 \def\ReadBookmarks{%
11832   \begingroup
11833     \escapechar='\\%
11834     \let\escapechar\@gobble %
11835     \def\@@BOOKMARK[##1][##2]###4##5{\calc@bm@number{##5}}%
11836     \InputIfFileExists{\jobname.out}{-}{-}%
11837     \ifx\WriteBookmarks\relax
11838       \global\let\WriteBookmarks\relax
11839     \fi
11840     \def\@@BOOKMARK[##1][##2]###4##5{%
11841       \def\Hy@temp{##4}%
11842 <*pdfTex>
11843     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11844     \Hy@OutlineName{}\Hy@pstringName{%
11845       ##2\check@bm@number{##3}%
11846     }{%
11847       \expandafter\strip@prefix\meaning\Hy@temp
11848     }%
11849 </pdfTex>
11850 <*pdfmark>
11851   \pdfmark{%
11852     pdfmark=/OUT,%
11853     Count={##2\check@bm@number{##3}},%
11854     Dest={##3},%
11855     Title=\expandafter\strip@prefix\meaning\Hy@temp
11856   }%
11857 </pdfmark>
11858 <*dvipdfm>
11859   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11860   \@pdfm@mark{%
11861     outline \ifHy@DvipdfmxOutlineOpen
11862       [%
11863       \ifnum##21>\z@
11864       \else
11865       -%
11866       \fi
11867     ] %
11868     \fi
11869     ##1<<%
11870     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11871     /A<<%
11872     /S/GoTo%
11873     /D(\Hy@pstringName)%
11874     >>%
11875     >>%
11876   }%
11877 </dvipdfm>
11878   }%
11879   {%
11880     \def\WriteBookmarks{0}%
11881     \InputIfFileExists{\jobname.out}{-}{-}%
11882   }%
11883   {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
11884   \ifx\WriteBookmarks\relax
11885   \else

```

```

11886 \if@filesw
11887 \newwrite\@outlinefile
11888 \immediate\openout\@outlinefile=jobname.out\relax
11889 \ifHy@typexml
11890 \immediate\write\@outlinefile{<relaxxml>\relax}%
11891 \fi
11892 \fi
11893 \fi
11894 \endgroup
11895 }
11896 <*pdfTex>
11897 \def\Hy@OutlineName#1#2#3#4{%
11898 \pdfoutline goto name{#2}count#3{#4}%
11899 }
11900 </pdfTex>
11901 \def\check@bm@number#1{%
11902 \expandafter\ifx\csname B_#1\endcsname\relax
11903 0%
11904 \else
11905 \csname B_#1\endcsname
11906 \fi
11907 }
11908 \def\calc@bm@number#1{%
11909 \@tempcnta=\check@bm@number{#1}\relax
11910 \advance\@tempcnta by 1 %
11911 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11912 }
11913 </!vtex>
11914 \ifHy@implicit
11915 \else
11916 \expandafter\endinput
11917 \fi
11918 </outlines>
11919 <*outlines | hypertex>
11920 \let\H@old@ssect\@ssect
11921 \def\@ssect#1#2#3#4#5{%
11922 \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11923 \phantomsection
11924 }
11925 \let\H@old@schapter\@schapter
11926 \def\@schapter#1{%
11927 \H@old@schapter{#1}%
11928 \begingroup
11929 \let\@mkboth\@gobbletwo
11930 \Hy@GlobalStepCount\Hy@linkcounter
11931 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11932 \Hy@raisedlink{%
11933 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11934 }%
11935 \endgroup
11936 }

```

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:

```

11937 \@ifundefined{@chapter}{-}{%

```

```

11938 \let\Hy@org@chapter\@chapter
11939 \def\@chapter{%
11940   \def\Hy@next{%
11941     \Hy@GlobalStepCount\Hy@linkcounter
11942     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11943     \Hy@raisedlink{%
11944       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11945     }%
11946   }%
11947   \ifnum\c@secnumdepth>\m@ne
11948     \@ifundefined{if@mainmatter}%
11949     \iftrue{\csname if@mainmatter\endcsname}%
11950     \let\Hy@next\relax
11951   \fi
11952 \fi
11953 \Hy@next
11954 \Hy@org@chapter
11955 }%
11956 }

11957 \let\H@old@part\@part
11958 \begingroup\expandafter\expandafter\expandafter\endgroup
11959 \expandafter\ifx\csname chapter\endcsname\relax
11960   \let\Hy@secnum@part\z@
11961 \else
11962   \let\Hy@secnum@part\m@ne
11963 \fi
11964 \def\@part{%
11965   \ifnum\Hy@secnum@part>\c@secnumdepth
11966     \phantomsection
11967   \fi
11968 \H@old@part
11969 }

11970 \let\H@old@spart\@spart
11971 \def\@spart#1{%
11972   \H@old@spart{#1}%
11973   \Hy@GlobalStepCount\Hy@linkcounter
11974   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
11975   \Hy@raisedlink{%
11976     \hyper@anchorstart{\@currentHref}\hyper@anchorend
11977   }%
11978 }

11979 \let\H@old@sect\@sect
11980 \def\@sect#1#2#3#4#5#6[#7]#8{%
11981   \ifnum #2>\c@secnumdepth
11982     \Hy@GlobalStepCount\Hy@linkcounter
11983     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11984   \fi
11985   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
11986   \ifnum #2>\c@secnumdepth
11987     \Hy@raisedlink{%
11988       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11989     }%
11990   \fi
11991 }

11992 </outlines | hypertex>
11993 <*outlines>

```

```

11994 \expandafter\def\csname Parent-4\endcsname{}
11995 \expandafter\def\csname Parent-3\endcsname{}
11996 \expandafter\def\csname Parent-2\endcsname{}
11997 \expandafter\def\csname Parent-1\endcsname{}
11998 \expandafter\def\csname Parent0\endcsname{}
11999 \expandafter\def\csname Parent1\endcsname{}
12000 \expandafter\def\csname Parent2\endcsname{}
12001 \expandafter\def\csname Parent3\endcsname{}
12002 \expandafter\def\csname Parent4\endcsname{}
12003 </outlines>

```

49 Compatibility with koma-script classes

```
12004 < *outlines | hypertex>
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for 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.

```

12005 \def\Hy@tempa{%
12006   \def\@addchap[##1]##2{%
12007     \typeout{##2}%
12008     \if@twoside
12009       \@mkboth{##1}{}%
12010     \else
12011       \@mkboth{}{##1}%
12012     \fi
12013     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12014     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12015     \Hy@GlobalStepCount\Hy@linkcounter
12016     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12017     \Hy@raisedlink{%
12018       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12019     }%
12020     \if@twocolumn
12021       \@topnewpage[\@makeschapterhead{##2}]%
12022     \else
12023       \@makeschapterhead{##2}%
12024       \@afterheading
12025     \fi
12026     \addcontentsline{toc}{chapter}{##1}%
12027   }%
12028 }
12029 \@ifclassloaded{scrbook}{%
12030   \@ifclasslater{scrbook}{2001/01/01}{%
12031     \let\Hy@tempa\@empty
12032   }{}%
12033 }{%
12034   \@ifclassloaded{scrreprt}{%
12035     \@ifclasslater{scrreprt}{2001/01/01}{%
12036       \let\Hy@tempa\@empty
12037     }{}%
12038   }{%
12039     \let\Hy@tempa\@empty
12040   }%
12041 }%
12042 \Hy@tempa

```

12043 `</outlines | hypertext>`

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek `oberdiek@ruf.uni-freiburg.de`

50.1 PD1 encoding

12044 `<*pd1enc>`

12045 `\DeclareFontEncoding{PD1}{-}{-}`

Accents

12046 `\DeclareTextAccent{\'}{PD1}{\textasciigrave}`

12047 `\DeclareTextAccent{\'}{PD1}{\textacute}`

12048 `\DeclareTextAccent{\`}{PD1}{\textasciicircum}`

12049 `\DeclareTextAccent{\~}{PD1}{\texttilde}`

12050 `\DeclareTextAccent{\"}{PD1}{\textasciidieresis}`

12051 `\DeclareTextAccent{\r}{PD1}{\textring}`

12052 `\DeclareTextAccent{\v}{PD1}{\textasciicaron}`

12053 `\DeclareTextAccent{\.}{PD1}{\textdotaccent}`

12054 `\DeclareTextAccent{\c}{PD1}{\textcedilla}`

12055 `\DeclareTextAccent{\=}{PD1}{\textasciimacron}`

12056 `\DeclareTextAccent{\b}{PD1}{\textmacronbelow}`

12057 `\DeclareTextAccent{\d}{PD1}{\textdotbelow}`

12058 `\DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textasciigrave}`

12059 `\DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}`

12060 `\DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciicircum}`

12061 `\DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}`

12062 `\DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}`

12063 `\DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}`

12064 `\DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}`

12065 `\DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}`

12066 `\DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}`

12067 `\DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}`

12068 `\DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}`

12069 `\DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}`

12070 `\DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}`

12071 `\DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}`

12072 `\DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciicircum}`

12073 `\DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}`

12074 `\DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}`

12075 `\DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}`

12076 `\DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}`

12077 `\DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}`

12078 `\DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}`

12079 `\DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}`

12080 `\DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}`

12081 `\DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}`

12082 `\DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}`

12083 `\DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}`

12084 `\DeclareTextCommand{\newtie}{PD1}[1]{\TextSymbolUnavailable{\newtie{#1}}#1}`

Special white space escape characters not for use in bookmarks but for other PDF strings.

12085 `% U+0009 (CHARACTER TABULATION)`

12086 `\DeclareTextCommand{\textHT}{PD1}{\011}% U+0009`

12087 `% U+000A (LINE FEED)`

12088 `\DeclareTextCommand{\textLF}{PD1}{\012}% U+000A`

12089 `% U+000D (CARRIAGE RETURN)`

12090 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

Accent glyph names

12091 % U+02D8 BREVE; breve

12092 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8

12093 % U+02C7 CARON; caron

12094 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7

12095 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex

12096 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6

12097 % U+02D9 DOT ABOVE; dotaccent

12098 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9

12099 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut

12100 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD

12101 % U+02DB OGONEK; ogonek

12102 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB

12103 % U+02DA RING ABOVE; ring

12104 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA

12105 % U+02DC SMALL TILDE; ilde, *tilde

12106 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

12107 % U+0022 QUOTATION MARK; quotedbl

12108 \DeclareTextCommand{\textquotedbl}{PD1}{\string"%} \042 U+0022

12109 % U+0023 NUMBER SIGN; numbersign

12110 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

12111 % U+0024 DOLLAR SIGN; dollar

12112 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024

12113 % U+0025 PERCENT SIGN; percent

12114 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025

12115 % U+0026 AMPERSAND; ampersand

12116 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

12117 % U+0028 LEFT PARENTHESIS; parenleft

12118 \DeclareTextCommand{\textparenleft}{PD1}{\string\(%} \050 U+0028

12119 % U+0029 RIGHT PARENTHESIS; parenright

12120 \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

12121 % U+002E FULL STOP; period

12122 \DeclareTextCommand{\textdotbelow}{PD1}{\string\.\below} \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

12123 % U+003C LESS-THAN SIGN; less

12124 \DeclareTextCommand{\textless}{PD1}{\string\<} \074 U+003C

\075: U+003D EQUALS SIGN; equal

12125 % U+003E GREATER-THAN SIGN; greater

12126 \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
 12127 % U+005C REVERSE SOLIDUS; backslash
 12128 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12129 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12130 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12131 % U+005F LOW LINE; underscore
 12132 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 12133 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 12134 % U+0060 GRAVE ACCENT; grave
 12135 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 12136 % U+0069 LATIN SMALL LETTER I; i
 12137 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 12138 % U+007B LEFT CURLY BRACKET; braceleft
 12139 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 12140 % U+007C VERTICAL LINE; *bar, verticalbar
 12141 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 12142 % U+007D RIGHT CURLY BRACKET; braceright
 12143 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 12144 % U+007E TILDE; asciitilde
 12145 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 12146 % U+2022 BULLET; bullet
 12147 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 12148 % U+2020 DAGGER; dagger
 12149 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 12150 % U+2021 DOUBLE DAGGER; daggerdbl
 12151 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 12152 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 12153 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 12154 % U+2014 EM DASH; emdash
 12155 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 12156 % U+2013 EN DASH; endash
 12157 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 12158 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12159 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 12160 % U+2044 FRACTION SLASH; fraction
 12161 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 12162 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 12163 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 12164 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 12165 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 12166 % U+2212 MINUS SIGN; minus
 12167 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212

12168 % U+2030 PER MILLE SIGN; perthousand
12169 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
12170 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12171 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12172 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12173 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12174 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12175 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12176 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12177 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12178 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12179 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12180 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12181 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
12182 % U+2122 TRADE MARK SIGN; trademark
12183 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
12184 % U+FB01 LATIN SMALL LIGATURE FI; fi
12185 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
12186 % U+FB02 LATIN SMALL LIGATURE FL; fl
12187 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
12188 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12189 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
12190 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12191 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
12192 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12193 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
12194 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
12195 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
12196 \DeclareTextCommand{\IJ}{PD1}{\230}
12197 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
12198 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
12199 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12200 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
12201 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12202 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
12203 % U+0153 LATIN SMALL LIGATURE OE; oe
12204 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
12205 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12206 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
12207 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
12208 \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.
12209 % U+20AC EURO SIGN; *Euro, euro
12210 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
12211 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12212 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
12213 % U+00A2 CENT SIGN; cent
12214 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
12215 % U+00A3 POUND SIGN; sterling
12216 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
12217 % U+00A4 CURRENCY SIGN; currency
12218 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
12219 % U+00A5 YEN SIGN; yen
12220 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
12221 % U+00A6 BROKEN BAR; brokenbar
12222 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6

12223 % U+00A7 SECTION SIGN; section
12224 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
12225 % U+00A8 DIAERESIS; dieresis
12226 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
12227 % U+00A9 COPYRIGHT SIGN; copyright
12228 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
12229 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
12230 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
12231 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
12232 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
12233 % U+00AC NOT SIGN; logicalnot
12234 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
12235 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.
12236 % U+00AE REGISTERED SIGN; registered
12237 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
12238 % U+00AF MACRON; *macron, overscore
12239 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
12240 % U+00B0 DEGREE SIGN; degree
12241 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
12242 % U+00B1 PLUS-MINUS SIGN; plusminus
12243 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
12244 % U+00B2 SUPERSCRIFT TWO; twosuperior
12245 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
12246 % U+00B3 SUPERSCRIFT THREE; threesuperior
12247 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
12248 % U+00B4 ACUTE ACCENT; acute
12249 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
12250 % U+00B5 MICRO SIGN; mu, mu1
12251 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
12252 % U+00B6 PILCROW SIGN; paragraph
12253 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
12254 % U+00B7 MIDDLE DOT; middot, *periodcentered
12255 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
12256 % U+00B8 CEDILLA; cedilla
12257 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
12258 % U+00B9 SUPERSCRIFT ONE; onesuperior
12259 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
12260 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12261 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
12262 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12263 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
12264 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12265 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
12266 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12267 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
12268 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12269 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
12270 % U+00BF INVERTED QUESTION MARK; questiondown
12271 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
12272 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12273 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
12274 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12275 \DeclareTextCompositeCommand{\`}{PD1}{A}{\301}% U+00C1
12276 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12277 \DeclareTextCompositeCommand{\`}{PD1}{A}{\302}% U+00C2
12278 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde

12279 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
12280 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12281 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
12282 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12283 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
12284 % U+00C6 LATIN CAPITAL LETTER AE; AE
12285 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
12286 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12287 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
12288 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12289 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
12290 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12291 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
12292 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12293 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
12294 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12295 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12296 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12297 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
12298 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12299 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12300 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12301 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12302 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12303 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
12304 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12305 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12306 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12307 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12308 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12309 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12310 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
12311 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12312 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
12313 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12314 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
12315 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12316 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
12317 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12318 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
12319 % U+00D7 MULTIPLICATION SIGN; multiply
12320 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12321 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12322 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12323 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12324 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
12325 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12326 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
12327 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12328 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
12329 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12330 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
12331 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12332 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
12333 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12334 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12335 % U+00DF LATIN SMALL LETTER SHARP S; germandbls

12336 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12337 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12338 \DeclareTextCompositeCommand{\'}{PD1}{a}{\340}% U+00E0
12339 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12340 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12341 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12342 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12343 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12344 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12345 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12346 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12347 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12348 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12349 % U+00E6 LATIN SMALL LETTER AE; ae
12350 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12351 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12352 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12353 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12354 \DeclareTextCompositeCommand{\'}{PD1}{e}{\350}% U+00E8
12355 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12356 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12357 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12358 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12359 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12360 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
12361 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12362 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12363 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12364 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12365 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12366 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12367 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12368 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12369 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12370 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12371 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12372 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12373 % U+00F0 LATIN SMALL LETTER ETH; eth
12374 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12375 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12376 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12377 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12378 \DeclareTextCompositeCommand{\'}{PD1}{o}{\362}% U+00F2
12379 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12380 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
12381 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12382 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
12383 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12384 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
12385 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12386 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
12387 % U+00F7 DIVISION SIGN; divide
12388 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
12389 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12390 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
12391 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12392 \DeclareTextCompositeCommand{\'}{PD1}{u}{\371}% U+00F9

```

12393 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12394 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
12395 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
12396 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
12397 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
12398 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
12399 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
12400 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
12401 % U+00FE LATIN SMALL LETTER THORN; thorn
12402 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
12403 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
12404 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
12405 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

12406 \DeclareTextCommand{\SS}{PD1}{SS}
12407 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

12408 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
12409 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
12410 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
12411 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
12412 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
12413 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
12414 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
12415 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

12416 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12417 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12418 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12419 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12420 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12421 \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;

```

12422 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12423 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
12424 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12425 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
12426 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
12427 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
12428 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
12429 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12430 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
12431 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12432 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
12433 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
12434 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
12435 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

12436 \end{pdllenc}

```

50.2 PU encoding

```

12437 \langle *puenc \rangle
12438 \DeclareFontEncoding{PU}{}{}

```

50.2.1 NFSS2 accents

```

12439 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
12440 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
12441 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecmb
12442 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
12443 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12444 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
12445 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
12446 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
12447 % U+0304 COMBINING MACRON; macroncmb
12448 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
12449 % U+0306 COMBINING BREVE; brevecmb
12450 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
12451 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
12452 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
12453 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12454 % U+0308 COMBINING DIAERESIS; dieresiscmb
12455 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12456 % U+030A COMBINING RING ABOVE; ringcmb
12457 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12458 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12459 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12460 % U+030C COMBINING CARON; caroncmb
12461 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12462 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
12463 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12464 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
12465 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12466 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12467 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
12468 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12469 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12470 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12471 % U+0327 COMBINING CEDILLA; cedillacmb
12472 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12473 % U+0328 COMBINING OGONEK; ogonekcmb
12474 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12475 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12476 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12477 % U+20DD COMBINING ENCLOSING CIRCLE
12478 \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.

```

12479 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
12480 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12481 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
12482 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12483 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12484 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12485 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12486 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12487 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12488 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12489 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12490 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12491 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12492 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12493 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}

```

```

12494 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12495 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12496 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12497 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

12498 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
12499 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12500 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
12501 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12502 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12503 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12504 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12505 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12506 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12507 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
12508 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12509 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12510 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12511 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12512 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12513 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12514 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12515 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12516 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12517 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
12518 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12519 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
12520 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12521 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12522 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12523 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\">{#1}}
12524 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12525 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12526 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12527 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12528 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12529 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}
12530 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12531 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12532 % U+0009 (CHARACTER TABULATION)
12533 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12534 % U+000A (LINE FEED)
12535 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12536 % U+000D (CARRIAGE RETURN)
12537 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

12538 % U+0022 QUOTATION MARK; quotedbl
12539 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
12540 % U+0023 NUMBER SIGN; numbersign
12541 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12542 % U+0024 DOLLAR SIGN; dollar
12543 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024

```

12544 % U+0025 PERCENT SIGN; percent
 12545 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 12546 % U+0026 AMPERSAND; ampersand
 12547 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 12548 % U+0027 APOSTROPHE; quotesingle
 12549 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 12550 % U+0028 LEFT PARENTHESIS; parenleft
 12551 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 12552 % U+0029 RIGHT PARENTHESIS; parenright
 12553 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 12554 % U+002A ASTERISK; asterisk
 12555 \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
 12556 % U+003C LESS-THAN SIGN; less
 12557 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 12558 % U+003E GREATER-THAN SIGN; greater
 12559 \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
 12560 % U+005C REVERSE SOLIDUS; backslash
 12561 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12562 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12563 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12564 % U+005F LOW LINE; underscore
 12565 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12566 % U+0060 GRAVE ACCENT; grave
 12567 \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
 12568 % U+0069 LATIN SMALL LETTER I; i
 12569 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 12570 \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
 12571 % U+007B LEFT CURLY BRACKET; braceleft

12572 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12573 % U+007C VERTICAL LINE; *bar, verticalbar
 12574 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12575 % U+007D RIGHT CURLY BRACKET; braceright
 12576 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12577 % U+007E TILDE; asciitilde
 12578 \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
 12579 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12580 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12581 % U+00A2 CENT SIGN; cent
 12582 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 12583 % U+00A3 POUND SIGN; sterling
 12584 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 12585 % U+00A4 CURRENCY SIGN; currency
 12586 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 12587 % U+00A5 YEN SIGN; yen
 12588 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 12589 % U+00A6 BROKEN BAR; brokenbar
 12590 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 12591 % U+00A7 SECTION SIGN; section
 12592 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 12593 % U+00A8 DIAERESIS; diaeresis
 12594 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 12595 % U+00A9 COPYRIGHT SIGN; copyright
 12596 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 12597 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12598 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 12599 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12600 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 12601 % U+00AC NOT SIGN; logicalnot
 12602 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 12603 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 12604 % U+00AE REGISTERED SIGN; registered
 12605 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 12606 % U+00AF MACRON; *macron, overscore
 12607 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 12608 % U+00B0 DEGREE SIGN; degree
 12609 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 12610 % U+00B1 PLUS-MINUS SIGN; plusminus
 12611 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 12612 % U+00B2 SUPERSCRIFT TWO; twosuperior
 12613 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 12614 % U+00B3 SUPERSCRIFT THREE; threesuperior
 12615 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 12616 % U+00B4 ACUTE ACCENT; acute
 12617 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 12618 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 12619 % U+00B5 MICRO SIGN; mu, mu1
 12620 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 12621 % U+00B6 PILCROW SIGN; paragraph
 12622 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 12623 % U+00B7 MIDDLE DOT; middot, *periodcentered

12624 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
12625 % U+00B8 CEDILLA; cedilla
12626 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
12627 % U+00B9 SUPERSCRIPT ONE; onesuperior
12628 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
12629 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12630 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
12631 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12632 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
12633 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12634 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
12635 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12636 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
12637 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12638 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
12639 % U+00BF INVERTED QUESTION MARK; questiondown
12640 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
12641 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12642 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
12643 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12644 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
12645 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12646 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
12647 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12648 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
12649 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12650 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
12651 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12652 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
12653 % U+00C6 LATIN CAPITAL LETTER AE; AE
12654 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12655 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12656 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
12657 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12658 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
12659 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12660 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
12661 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12662 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
12663 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12664 \DeclareTextCompositeCommand{\\"}{PU}{E}{\80\313}% U+00CB
12665 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12666 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
12667 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12668 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
12669 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12670 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
12671 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12672 \DeclareTextCompositeCommand{\\"}{PU}{I}{\80\317}% U+00CF
12673 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12674 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12675 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12676 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
12677 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12678 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
12679 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12680 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3

12681 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12682 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\324}% U+00D4
12683 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12684 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
12685 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12686 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
12687 % U+00D7 MULTIPLICATION SIGN; multiply
12688 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12689 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12690 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12691 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12692 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
12693 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12694 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
12695 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12696 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12697 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12698 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
12699 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12700 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12701 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12702 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12703 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12704 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12705 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12706 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
12707 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12708 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12709 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12710 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12711 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12712 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12713 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12714 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
12715 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12716 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12717 % U+00E6 LATIN SMALL LETTER AE; ae
12718 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12719 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12720 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12721 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12722 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12723 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12724 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12725 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12726 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12727 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12728 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
12729 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12730 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12731 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
12732 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12733 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12734 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12735 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12736 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12737 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE

12738 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 12739 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 12740 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 12741 % U+00F0 LATIN SMALL LETTER ETH; eth
 12742 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 12743 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 12744 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
 12745 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 12746 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
 12747 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 12748 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
 12749 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 12750 \DeclareTextCompositeCommand{^}{PU}{o}{\80\364}% U+00F4
 12751 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 12752 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
 12753 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12754 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
 12755 % U+00F7 DIVISION SIGN; divide
 12756 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 12757 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12758 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 12759 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12760 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
 12761 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12762 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
 12763 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12764 \DeclareTextCompositeCommand{^}{PU}{u}{\80\373}% U+00FB
 12765 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12766 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
 12767 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12768 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
 12769 % U+00FE LATIN SMALL LETTER THORN; thorn
 12770 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12771 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12772 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12773 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12774 \DeclareTextCompositeCommand{=}{PU}{A}{\81\000}% U+0100
 12775 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12776 \DeclareTextCompositeCommand{=}{PU}{a}{\81\001}% U+0101
 12777 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12778 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12779 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12780 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12781 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12782 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12783 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12784 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12785 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12786 \DeclareTextCompositeCommand{'}{PU}{C}{\81\006}% U+0106
 12787 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12788 \DeclareTextCompositeCommand{'}{PU}{c}{\81\007}% U+0107
 12789 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12790 \DeclareTextCompositeCommand{^}{PU}{C}{\81\010}% U+0108
 12791 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex

12792 \DeclareTextCompositeCommand{\~}{PU}{c}{\81\011}% U+0109
12793 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
12794 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
12795 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
12796 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
12797 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
12798 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
12799 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
12800 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
12801 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
12802 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
12803 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
12804 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
12805 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
12806 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
12807 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
12808 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
12809 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
12810 \DeclareTextCompositeCommand{=} {PU}{E}{\81\022}% U+0112
12811 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
12812 \DeclareTextCompositeCommand{=} {PU}{e}{\81\023}% U+0113
12813 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
12814 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
12815 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
12816 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
12817 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
12818 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12819 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12820 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12821 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12822 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12823 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12824 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12825 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12826 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12827 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12828 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12829 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12830 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12831 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12832 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12833 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12834 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12835 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12836 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12837 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12838 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12839 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12840 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
12841 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
12842 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
12843 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
12844 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
12845 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
12846 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
12847 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
12848 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125

12849 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
 12850 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
 12851 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
 12852 \DeclareTextCommand{\textthslash}{PU}{\81\047}% U+0127
 12853 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
 12854 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 12855 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
 12856 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 12857 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 12858 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
 12859 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
 12860 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
 12861 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 12862 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 12863 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 12864 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 12865 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 12866 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 12867 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 12868 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 12869 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 12870 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 12871 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 12872 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 12873 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 12874 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 12875 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 12876 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 12877 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 12878 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 12879 % U+0133 LATIN SMALL LIGATURE IJ; ij
 12880 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 12881 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 12882 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 12883 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 12884 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 12885 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 12886 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 12887 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 12888 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 12889 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be `\textkgreenlandic`, following the glyph naming convention. However `latex/base/inputenc.dtx` has chosen `\textkra`.

12890 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 12891 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 12892 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 12893 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 12894 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 12895 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 12896 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 12897 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 12898 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 12899 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 12900 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 12901 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 12902 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron

12903 \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.

12904 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent

12905 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F

12906 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent

12907 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140

12908 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash

12909 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141

12910 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash

12911 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142

12912 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute

12913 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143

12914 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute

12915 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144

12916 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent

12917 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145

12918 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent

12919 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146

12920 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron

12921 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147

12922 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron

12923 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148

12924 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn

12925 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149

12926 % U+014A LATIN CAPITAL LETTER ENG; Eng

12927 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A

12928 % U+014B LATIN SMALL LETTER ENG; eng

12929 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B

12930 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron

12931 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C

12932 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron

12933 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D

12934 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve

12935 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E

12936 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve

12937 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F

12938 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut

12939 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150

12940 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, hungarumlaut

12941 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151

12942 % U+0152 LATIN CAPITAL LIGATURE OE; OE

12943 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152

12944 % U+0153 LATIN SMALL LIGATURE OE; oe

12945 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153

12946 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute

12947 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154

12948 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute

12949 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155

12950 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent

12951 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156

12952 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent

12953 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157

12954 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron

12955 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158

12956 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron

12957 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159

12958 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 12959 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 12960 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 12961 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 12962 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 12963 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 12964 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 12965 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 12966 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 12967 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 12968 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 12969 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 12970 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 12971 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 12972 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 12973 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 12974 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 12975 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 12976 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 12977 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 12978 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 12979 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 12980 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 12981 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 12982 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 12983 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 12984 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 12985 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 12986 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 12987 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 12988 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 12989 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 12990 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 12991 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 12992 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 12993 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 12994 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 12995 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 12996 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 12997 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 12998 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 12999 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 13000 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 13001 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 13002 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 13003 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 13004 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 13005 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 13006 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 13007 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 13008 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 13009 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 13010 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 13011 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 13012 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 13013 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 13014 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex

13015 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 13016 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 13017 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 13018 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13019 \DeclareTextCompositeCommand{"}{PU}{Y}{\81\170}% U+0178
 13020 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 13021 \DeclareTextCompositeCommand{'}{PU}{Z}{\81\171}% U+0179
 13022 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 13023 \DeclareTextCompositeCommand{'}{PU}{z}{\81\172}% U+017A
 13024 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 13025 \DeclareTextCompositeCommand{.}{PU}{Z}{\81\173}% U+017B
 13026 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 13027 \DeclareTextCompositeCommand{.}{PU}{z}{\81\174}% U+017C
 13028 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13029 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13030 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13031 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13032 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13033 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

13034 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13035 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 13036 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 13037 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 13038 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 13039 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 13040 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 13041 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 13042 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 13043 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13044 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13045 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 13046 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 13047 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 13048 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 13049 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 13050 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 13051 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 13052 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 13053 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 13054 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 13055 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 13056 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 13057 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 13058 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 13059 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 13060 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 13061 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 13062 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 13063 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 13064 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 13065 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 13066 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 13067 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 13068 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 13069 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron

13070 \DeclareTextCompositeCommand{\v}{PU}{\j}{\81\360}% U+01F0
13071 \DeclareTextCompositeCommand{\v}{PU}{\j}{\81\360}% U+01F0
13072 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
13073 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
13074 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
13075 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
13076 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
13077 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
13078 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
13079 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
13080 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
13081 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
13082 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
13083 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
13084 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
13085 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
13086 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
13087 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
13088 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13089 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13090 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13091 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13092 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13093 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13094 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13095 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13096 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13097 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13098 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13099 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13100 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13101 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13102 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13103 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13104 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13105 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13106 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13107 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13108 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13109 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13110 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13111 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13112 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13113 % U+021E LATIN CAPITAL LETTER H WITH CARON
13114 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13115 % U+021F LATIN SMALL LETTER H WITH CARON
13116 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13117 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13118 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
13119 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
13120 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
13121 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
13122 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
13123 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
13124 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
13125 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
13126 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E

13127 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 13128 \DeclareTextCompositeCommand{\.}{PU}{\o}{\82\057}% U+022F
 13129 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 13130 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 13131 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 13132 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 13133 % U+0237 LATIN SMALL LETTER DOTLESS J
 13134 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13135 % U+02C7 CARON; caron
 13136 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 13137 % U+02D8 BREVE; breve
 13138 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13139 % U+02D9 DOT ABOVE; dotaccent
 13140 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13141 % U+02DA RING ABOVE; ring
 13142 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13143 % U+02DB OGONEK; ogonek
 13144 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13145 % U+02DC SMALL TILDE; ilde, *tilde
 13146 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13147 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13148 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13149 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13150 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13151 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13152 % U+02F7 MODIFIER LETTER LOW TILDE
 13153 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13154 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13155 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13156 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13157 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13158 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 13159 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13160 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13161 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13162 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13163 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13164 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13165 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13166 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13167 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13168 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 13169 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13170 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13171 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13172 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13173 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13174 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13175 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13176 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 13177 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C

13178 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
13179 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
13180 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
13181 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
13182 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
13183 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
13184 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
13185 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
13186 % U+0392 GREEK CAPITAL LETTER BETA; Beta
13187 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
13188 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
13189 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
13190 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
13191 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13192 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13193 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13194 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13195 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
13196 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13197 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13198 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13199 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13200 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13201 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13202 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13203 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13204 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13205 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13206 % U+039C GREEK CAPITAL LETTER MU; Mu
13207 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13208 % U+039D GREEK CAPITAL LETTER NU; Nu
13209 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13210 % U+039E GREEK CAPITAL LETTER XI; Xi
13211 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13212 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13213 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13214 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13215 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13216 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13217 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13218 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13219 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13220 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13221 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13222 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13223 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13224 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13225 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13226 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13227 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13228 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13229 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13230 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13231 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13232 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13233 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13234 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\252}% U+03AA

13235 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13236 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13237 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13238 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13239 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
13240 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13241 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
13242 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13243 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
13244 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13245 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13246 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
13247 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
13248 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13249 % U+03B2 GREEK SMALL LETTER BETA; beta
13250 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13251 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13252 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13253 % U+03B4 GREEK SMALL LETTER DELTA; delta
13254 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13255 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13256 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13257 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13258 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13259 % U+03B7 GREEK SMALL LETTER ETA; eta
13260 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13261 % U+03B8 GREEK SMALL LETTER THETA; theta
13262 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13263 % U+03B9 GREEK SMALL LETTER IOTA; iota
13264 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13265 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13266 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13267 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13268 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13269 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13270 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13271 % U+03BD GREEK SMALL LETTER NU; nu
13272 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13273 % U+03BE GREEK SMALL LETTER XI; xi
13274 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13275 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13276 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13277 % U+03C0 GREEK SMALL LETTER PI; pi
13278 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13279 % U+03C1 GREEK SMALL LETTER RHO; rho
13280 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13281 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13282 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13283 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13284 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13285 % U+03C4 GREEK SMALL LETTER TAU; tau
13286 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13287 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13288 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13289 % U+03C6 GREEK SMALL LETTER PHI; phi
13290 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13291 % U+03C7 GREEK SMALL LETTER CHI; chi

```

13292 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13293 % U+03C8 GREEK SMALL LETTER PSI; psi
13294 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13295 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13296 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13297 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13298 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13299 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13300 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13301 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
13302 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13303 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13304 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
13305 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
13306 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13307 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
13308 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13309 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13310 % U+03DB GREEK SMALL LETTER STIGMA
13311 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13312 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13313 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13314 % U+03DD GREEK SMALL LETTER DIGAMMA
13315 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13316 % U+03DE GREEK LETTER KOPPA; Koppagreek
13317 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13318 % U+03DF GREEK SMALL LETTER KOPPA
13319 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13320 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13321 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
13322 % U+03E1 GREEK SMALL LETTER SAMPI
13323 \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.

```

13324 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13325 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
13326 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
13327 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13328 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
13329 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13330 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13331 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13332 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
13333 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
13334 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13335 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13336 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
13337 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
13338 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13339 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
13340 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13341 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
13342 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13343 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13344 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058

```

13345 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
13346 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13347 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13348 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13349 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13350 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13351 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13352 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13353 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
13354 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
13355 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13356 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13357 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
13358 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13359 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13360 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13361 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13362 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13363 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13364 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13365 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13366 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13367 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13368 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13369 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
13370 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13371 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13372 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13373 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13374 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13375 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13376 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13377 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13378 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13379 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13380 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13381 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13382 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13383 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13384 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13385 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13386 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13387 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13388 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13389 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13390 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13391 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13392 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13393 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13394 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13395 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13396 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13397 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13398 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13399 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13400 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13401 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424

13402 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afiii10039
13403 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13404 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afiii10040
13405 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13406 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afiii10041
13407 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13408 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afiii10042
13409 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13410 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afiii10043
13411 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13412 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afiii10044
13413 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13414 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afiii10045
13415 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13416 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afiii10046
13417 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13418 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afiii10047
13419 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13420 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afiii10048
13421 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13422 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afiii10049
13423 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13424 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afiii10065
13425 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13426 % U+0431 CYRILLIC SMALL LETTER BE; *afiii10066, becyrillic
13427 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13428 % U+0432 CYRILLIC SMALL LETTER VE; *afiii10067, vecyrillic
13429 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13430 % U+0433 CYRILLIC SMALL LETTER GHE; *afiii10068, gecyrillic
13431 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13432 % U+0434 CYRILLIC SMALL LETTER DE; *afiii10069, decyrillic
13433 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13434 % U+0435 CYRILLIC SMALL LETTER IE; *afiii10070, iecyrillic
13435 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13436 % U+0436 CYRILLIC SMALL LETTER ZHE; *afiii10072, zhecyrillic
13437 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13438 % U+0437 CYRILLIC SMALL LETTER ZE; *afiii10073, zecyrillic
13439 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13440 % U+0438 CYRILLIC SMALL LETTER I; *afiii10074, icyrillic
13441 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13442 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afiii10075, iishortcyrillic
13443 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13444 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13445 % U+043A CYRILLIC SMALL LETTER KA; *afiii10076, kacyrillic
13446 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13447 % U+043B CYRILLIC SMALL LETTER EL; *afiii10077, elcyrillic
13448 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
13449 % U+043C CYRILLIC SMALL LETTER EM; *afiii10078, emcyrillic
13450 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
13451 % U+043D CYRILLIC SMALL LETTER EN; *afiii10079, encyrillic
13452 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13453 % U+043E CYRILLIC SMALL LETTER O; *afiii10080, ocyrillic
13454 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13455 % U+043F CYRILLIC SMALL LETTER PE; *afiii10081, pecyrillic
13456 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13457 % U+0440 CYRILLIC SMALL LETTER ER; *afiii10082, ercyrillic
13458 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440

13459 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13460 \DeclareTextCommand{\cysr}{PU}{\84\101}% U+0441
13461 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13462 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13463 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13464 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13465 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13466 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13467 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13468 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13469 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13470 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13471 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
13472 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13473 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13474 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13475 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13476 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13477 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13478 \DeclareTextCommand{\cyrhdsn}{PU}{\84\112}% U+044A
13479 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13480 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
13481 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13482 \DeclareTextCommand{\cysfts}{PU}{\84\114}% U+044C
13483 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
13484 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13485 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13486 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
13487 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13488 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
13489 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13490 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13491 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13492 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
13493 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13494 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13495 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13496 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13497 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13498 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13499 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13500 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13501 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13502 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13503 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
13504 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13505 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
13506 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
13507 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13508 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13509 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13510 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
13511 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13512 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13513 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13514 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13515 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic

13516 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13517 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13518 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13519 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13520 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13521 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13522 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13523 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13524 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13525 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13526 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13527 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13528 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
13529 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13530 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13531 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
13532 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13533 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13534 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13535 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13536 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13537 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13538 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13539 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13540 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleiotifiedcyrillic
13541 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13542 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
13543 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13544 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13545 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13546 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13547 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13548 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13549 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13550 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13551 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13552 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13553 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13554 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13555 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13556 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13557 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13558 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13559 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13560 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13561 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13562 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13563 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13564 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
13565 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
13566 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
13567 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
13568 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
13569 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
13570 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
13571 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
13572 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic

13573 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
13574 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
13575 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
13576 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
13577 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
13578 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
13579 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
13580 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
13581 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
13582 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
13583 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
13584 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
13585 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
13586 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
13587 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
13588 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
13589 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
13590 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
13591 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
13592 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
13593 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
\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
13594 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
13595 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
13596 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
13597 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
13598 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
13599 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
13600 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
13601 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
13602 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
13603 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
13604 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
13605 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
13606 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
13607 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
13608 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
13609 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
13610 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
13611 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
13612 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
13613 \DeclareTextCommand{\cyrgghcrs}{PU}{\84\223}% U+0493
13614 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
13615 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
13616 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
13617 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
13618 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic

13619 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
13620 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
13621 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
13622 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
13623 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
13624 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
13625 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
13626 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
13627 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
13628 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
13629 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
13630 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
13631 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
13632 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kavertikalstrokecyrillic
13633 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
13634 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kavertikalstrokecyrillic
13635 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
13636 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
13637 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
13638 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
13639 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
13640 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
13641 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
13642 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
13643 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
13644 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
13645 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
13646 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
13647 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
13648 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
13649 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
13650 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
13651 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
13652 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
13653 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
13654 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
13655 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
13656 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
13657 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
13658 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
13659 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
13660 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
13661 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
13662 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
13663 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
13664 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
13665 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
13666 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
13667 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
13668 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
13669 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
13670 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
13671 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
13672 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
13673 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
13674 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
13675 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0

13676 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
13677 \DeclareTextCommand{\cyrhcrs}{PU}{\84\261}% U+04B1
13678 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesccendercyrillic
13679 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
13680 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
13681 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
13682 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
13683 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
13684 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
13685 \DeclareTextCommand{\cyrтетse}{PU}{\84\265}% U+04B5
13686 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
13687 \DeclareTextCommand{\CYRCHDSC}{PU}{\84\266}% U+04B6
13688 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
13689 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13690 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13691 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13692 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13693 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13694 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13695 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13696 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13697 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13698 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13699 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13700 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13701 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
13702 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13703 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
13704 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13705 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13706 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13707 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13708 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13709 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13710 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13711 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13712 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13713 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13714 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13715 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13716 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13717 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13718 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13719 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13720 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13721 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
13722 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13723 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13724 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
13725 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
13726 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
13727 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
13728 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
13729 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
13730 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
13731 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
13732 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL

13733 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 13734 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevacyrillic
 13735 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 13736 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevacyrillic
 13737 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 13738 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 13739 \DeclareTextCompositeCommand{\"}{PU}{\CYRA}{\84\322}% U+04D2
 13740 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 13741 \DeclareTextCompositeCommand{\"}{PU}{\cyra}{\84\323}% U+04D3
 13742 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 13743 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 13744 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 13745 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 13746 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
 13747 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 13748 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
 13749 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 13750 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 13751 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 13752 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 13753 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 13754 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiesiscyrillic
 13755 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 13756 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiesiscyrillic
 13757 \DeclareTextCompositeCommand{\"}{PU}{\cyrswa}{\84\333}% U+04DB
 13758 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhadiesiscyrillic
 13759 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
 13760 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhadiesiscyrillic
 13761 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
 13762 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zadiesiscyrillic
 13763 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
 13764 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zadiesiscyrillic
 13765 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
 13766 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
 13767 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 13768 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 13769 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 13770 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 13771 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
 13772 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 13773 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
 13774 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 13775 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
 13776 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 13777 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
 13778 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 13779 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
 13780 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 13781 \DeclareTextCompositeCommand{\"}{PU}{\cyro}{\84\347}% U+04E7
 13782 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 13783 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 13784 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 13785 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 13786 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
 13787 \DeclareTextCompositeCommand{\"}{PU}{\CYROTLD}{\84\352}% U+04EA
 13788 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic

13789 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 13790 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 13791 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 13792 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 13793 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 13794 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 13795 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 13796 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 13797 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 13798 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 13799 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 13800 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 13801 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 13802 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 13803 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
 13804 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 13805 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
 13806 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 13807 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 13808 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 13809 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 13810 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 13811 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 13812 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 13813 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 13814 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 13815 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 13816 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 13817 \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
 13818 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13819 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 13820 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13821 \DeclareTextCommand{\cyrrhk}{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

13822 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13823 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13824 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13825 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 13826 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13827 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 13828 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 13829 \DeclareTextCompositeCommand{b}{PU}{B}{\9036\006}% U+1E06
 13830 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 13831 \DeclareTextCompositeCommand{b}{PU}{b}{\9036\007}% U+1E07
 13832 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 13833 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 13834 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 13835 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B

13836 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
13837 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
13838 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
13839 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
13840 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
13841 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
13842 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
13843 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
13844 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
13845 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
13846 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
13847 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
13848 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
13849 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
13850 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
13851 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
13852 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
13853 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
13854 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
13855 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
13856 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
13857 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
13858 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
13859 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
13860 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
13861 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
13862 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13863 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13864 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13865 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
13866 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13867 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
13868 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13869 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13870 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13871 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13872 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13873 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13874 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13875 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13876 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13877 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
13878 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13879 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
13880 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13881 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13882 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13883 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13884 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
13885 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13886 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13887 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13888 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13889 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13890 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13891 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13892 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute

13893 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
13894 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13895 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
13896 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13897 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
13898 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13899 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
13900 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13901 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
13902 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13903 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
13904 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13905 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
13906 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13907 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
13908 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13909 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
13910 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13911 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
13912 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13913 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
13914 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13915 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
13916 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13917 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
13918 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
13919 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
13920 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13921 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
13922 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13923 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
13924 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13925 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
13926 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13927 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
13928 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13929 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
13930 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13931 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
13932 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13933 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
13934 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13935 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
13936 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13937 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
13938 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13939 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
13940 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13941 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
13942 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
13943 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
13944 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
13945 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
13946 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
13947 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
13948 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
13949 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90

13950 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 13951 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 13952 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 13953 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 13954 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 13955 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 13956 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 13957 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 13958 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 13959 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
 13960 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 13961 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 13962 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 13963 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 13964 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
 13965 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 13966 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 13967 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 13968 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 13969 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 13970 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 13971 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
 13972 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 13973 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 13974 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 13975 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 13976 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 13977 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

13978 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 13979 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 13980 % U+2013 EN DASH; endash
 13981 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 13982 % U+2014 EM DASH; emdash
 13983 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 13984 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 13985 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 13986 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13987 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 13988 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13989 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 13990 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13991 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 13992 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13993 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 13994 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13995 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 13996 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13997 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 13998 % U+2020 DAGGER; dagger
 13999 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 14000 % U+2021 DOUBLE DAGGER; daggerdbl
 14001 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 14002 % U+2022 BULLET; bullet
 14003 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 14004 % U+2026 HORIZONTAL ELLIPSIS; ellipsis

14005 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 14006 % U+2030 PER MILLE SIGN; perthousand
 14007 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14008 % U+2031 PER TEN THOUSAND SIGN
 14009 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14010 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 14011 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14012 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 14013 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14014 % U+203B REFERENCE MARK; referencemark
 14015 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14016 % U+203D INTERROBANG
 14017 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 14018 % U+2044 FRACTION SLASH; fraction
 14019 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 14020 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 14021 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 14022 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 14023 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 14024 % U+2052 COMMERCIAL MINUS SIGN
 14025 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14026 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 14027 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 14028 % U+2074 SUPERSCRIPT FOUR; foursuperior
 14029 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 14030 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 14031 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 14032 % U+2076 SUPERSCRIPT SIX; sixsuperior
 14033 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 14034 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 14035 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 14036 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 14037 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 14038 % U+2079 SUPERSCRIPT NINE; ninesuperior
 14039 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 14040 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 14041 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 14042 % U+207B SUPERSCRIPT MINUS
 14043 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 14044 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 14045 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 14046 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 14047 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 14048 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 14049 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 14050 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 14051 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 14052 % U+2080 SUBSCRIPT ZERO; zeroinferior
 14053 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 14054 % U+2081 SUBSCRIPT ONE; oneinferior
 14055 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 14056 % U+2082 SUBSCRIPT TWO; twoinferior
 14057 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 14058 % U+2083 SUBSCRIPT THREE; threeinferior
 14059 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}% U+2083

14060 % U+2084 SUBSCRIPT FOUR; fourinferior
 14061 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 14062 % U+2085 SUBSCRIPT FIVE; fiveinferior
 14063 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 14064 % U+2086 SUBSCRIPT SIX; sixinferior
 14065 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 14066 % U+2087 SUBSCRIPT SEVEN; seveninferior
 14067 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 14068 % U+2088 SUBSCRIPT EIGHT; eightinferior
 14069 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 14070 % U+2089 SUBSCRIPT NINE; nineinferior
 14071 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 14072 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 14073 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 14074 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 14075 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14076 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 14077 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 14078 % U+20A4 LIRA SIGN; afii08941, *lira
 14079 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14080 % U+20A6 NAIRA SIGN
 14081 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14082 % U+20A7 PESETA SIGN; peseta
 14083 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14084 % U+20A9 WON SIGN; won
 14085 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14086 % U+20AB DONG SIGN; dong
 14087 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14088 % U+20AC EURO SIGN; *Euro, euro
 14089 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14090 % U+20B1 PESO SIGN
 14091 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14092 % U+20B2 GUARANI SIGN
 14093 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14094 % U+2103 DEGREE CELSIUS; centigrade
 14095 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14096 % U+2116 NUMERO SIGN; *afii61352, numero
 14097 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14098 % U+2117 SOUND RECORDING COPYRIGHT
 14099 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14100 % U+211E PRESCRIPTION TAKE; prescription
 14101 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14102 % U+2120 SERVICE MARK
 14103 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14104 % U+2122 TRADE MARK SIGN; trademark
 14105 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14106 % U+2126 OHM SIGN; Ohm, Omega
 14107 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14108 % U+2127 INVERTED OHM SIGN
 14109 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14110 % U+212B ANGSTROM SIGN; angstrom
 14111 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14112 % U+212E ESTIMATED SYMBOL; estimated

14113 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 14114 % U+2135 ALEF SYMBOL; aleph
 14115 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14116 % U+2190 LEFTWARDS ARROW; arrowleft
 14117 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14118 % U+2191 UPWARDS ARROW; arrowup
 14119 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14120 % U+2192 RIGHTWARDS ARROW; arrowright
 14121 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14122 % U+2193 DOWNWARDS ARROW; arrowdown
 14123 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14124 % U+2212 MINUS SIGN; minus
 14125 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 14126 % U+221A SQUARE ROOT; radical
 14127 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14128 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 14129 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 14130 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 14131 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14132 % U+2422 BLANK SYMBOL
 14133 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 14134 % U+2423 OPEN BOX; blank
 14135 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14136 % U+2460 CIRCLED DIGIT ONE; onecircle
 14137 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 14138 % U+2461 CIRCLED DIGIT TWO; twocircle
 14139 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 14140 % U+2462 CIRCLED DIGIT THREE; threecircle
 14141 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 14142 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 14143 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 14144 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 14145 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 14146 % U+2465 CIRCLED DIGIT SIX; sixcircle
 14147 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 14148 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
 14149 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 14150 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 14151 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 14152 % U+2468 CIRCLED DIGIT NINE; ninecircle
 14153 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 14154 % U+2469 CIRCLED NUMBER TEN; tencircle
 14155 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 14156 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 14157 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 14158 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 14159 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B

14160 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 14161 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 14162 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 14163 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 14164 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 14165 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 14166 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 14167 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 14168 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 14169 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 14170 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 14171 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 14172 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 14173 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 14174 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 14175 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 14176 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 14177 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 14178 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 14179 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 14180 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 14181 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 14182 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 14183 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 14184 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 14185 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 14186 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14187 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14188 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14189 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14190 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14191 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14192 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14193 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14194 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14195 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14196 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14197 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14198 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14199 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14200 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14201 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14202 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14203 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14204 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14205 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14206 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14207 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14208 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14209 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14210 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14211 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14212 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14213 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14214 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14215 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14216 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle

14217 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
14218 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
14219 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
14220 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
14221 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
14222 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
14223 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
14224 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
14225 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
14226 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
14227 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
14228 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
14229 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
14230 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
14231 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
14232 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
14233 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
14234 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
14235 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
14236 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
14237 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
14238 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
14239 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
14240 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
14241 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
14242 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
14243 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
14244 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
14245 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
14246 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
14247 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
14248 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
14249 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
14250 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
14251 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
14252 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
14253 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
14254 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
14255 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
14256 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
14257 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
14258 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
14259 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
14260 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
14261 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
14262 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
14263 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
14264 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
14265 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
14266 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
14267 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
14268 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
14269 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
14270 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
14271 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
14272 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
14273 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6

14274 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14275 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14276 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14277 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14278 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14279 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14280 % U+24EA CIRCLED DIGIT ZERO
 14281 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14282 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14283 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14284 % U+25EF LARGE CIRCLE; largecircle
 14285 \DeclareTextCommand{\textbigcirc}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

14286 % U+266A EIGHTH NOTE; musicalnote
 14287 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 14288 % U+26AD MARRIAGE SYMBOL
 14289 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 14290 % U+26AE DIVORCE SYMBOL
 14291 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

14292 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 14293 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 14294 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 14295 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

14296 % U+FB01 LATIN SMALL LIGATURE FI; fi
 14297 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 14298 % U+FB02 LATIN SMALL LIGATURE FL; fl
 14299 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

14300 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

14301 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 14302 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 14303 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 14304 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 14305 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 14306 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 14307 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 14308 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

14309 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 14310 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 14311 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 14312 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 14313 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 14314 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
14315 \langle *puvncenc\rangle
14316 \DeclareTextCommand{\abreve}{PU}{\81\003}
14317 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14318 \DeclareTextCommand{\dj}{PU}{\81\021}
14319 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14320 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14321 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14322 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14323 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14324 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
14325 \DeclareTextCommand{\DJ}{PU}{\81\020}
14326 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14327 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14328 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14329 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14330 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14331 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14332 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14333 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14334 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14335 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
14336 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14337 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14338 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14339 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14340 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14341 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14342 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14343 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14344 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14345 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14346 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14347 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
14348 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14349 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14350 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14351 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14352 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
14353 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
14354 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
14355 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
14356 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
14357 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14358 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
14359 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
14360 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
14361 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
14362 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
14363 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
14364 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
14365 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
14366 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14367 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14368 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
```

14369 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14370 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14371 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
14372 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
14373 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
14374 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
14375 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
14376 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14377 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
14378 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
14379 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
14380 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
14381 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
14382 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
14383 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
14384 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
14385 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
14386 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
14387 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
14388 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
14389 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
14390 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
14391 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
14392 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
14393 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
14394 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
14395 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
14396 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
14397 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
14398 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
14399 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
14400 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
14401 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
14402 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
14403 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
14404 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
14405 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
14406 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
14407 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
14408 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
14409 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
14410 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
14411 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
14412 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
14413 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
14414 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
14415 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
14416 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
14417 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14418 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
14419 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
14420 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
14421 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
14422 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
14423 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
14424 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
14425 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}

```

14426 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
14427 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
14428 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
14429 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
14430 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
14431 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
14432 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
14433 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
14434 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
14435 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
14436 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
14437 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
14438 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
14439 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
14440 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
14441 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
14442 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
14443 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
14444 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
14445 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
14446 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
14447 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
14448 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14449 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}

14450 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```
14451 <*puarenc>
```

```

14452 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14453 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14454 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14455 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA A
14456 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14457 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOV
14458 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14459 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14460 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14461 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14462 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14463 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14464 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14465 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14466 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14467 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14468 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14469 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14470 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14471 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14472 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14473 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14474 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14475 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14476 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14477 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN

```

```

14478 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14479 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14480 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14481 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14482 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14483 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14484 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14485 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14486 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14487 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKSURA
14488 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH

14489 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14490 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
14491 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14492 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14493 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14494 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14495 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14496 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

Farsi

14497 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14498 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14499 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
14500 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14501 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14502 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14503 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14504 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14505 </puarenc>

```

51 End of file hycheck.tex

```

14506 < *check>
14507 \typeout{}
14508 \begin{document}
14509 \end{document}
14510 </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	13169, 13171, 13173, 13175, 13177, 13179, 13181, 13183,	\@@PasswordField . 10474, 10480
\"	202, 227, 2421, 11744, 12050, 12062, 12074, 12195, 12281, 12295, 12303, 12318, 12330, 12346, 12360, 12371, 12372, 12386, 12398, 12404, 12455, 12483, 12502, 12523, 12650, 12664, 12672, 12686, 12698, 12714, 12728, 12739, 12740, 12754, 12766, 12772, 13019, 13234, 13236, 13246, 13298, 13300, 13328, 13341, 13493, 13506, 13739, 13741, 13755, 13757, 13759, 13761, 13763, 13765, 13775, 13777, 13779, 13781, 13787, 13789, 13791, 13793, 13799, 13801, 13807, 13809, 13815, 13817, 13857, 13859, 13929, 13931, 13941, 13943, 13959	13238, 13240, 13242, 13244, 13302, 13305, 13307, 13332, 13351, 13497, 13516, 13865, 13867, 13877, 13879, 13893, 13895, 13925, 13927, 14330, 14335, 14340, 14345, 14350, 14355, 14360, 14365, 14370, 14375, 14380, 14385, 14390, 14395, 14400, 14405, 14410, 14415, 14420, 14425, 14430, 14435, 14440, 14445	\@@Radio . . . 10302, 10323, 10523, 10547, 10754, 10775, 11091, <u>11112</u>
\#	405, 1565, 1566, 3494, 3505, 3507, 3523, 3555, 3570, 3640, 6836, 6838, 7564, 7573, 7600, 8289, 9718, 9727, 9754, 9978, 9987, 10013	\(. 190, 215, 596, 599, 601, 11808, 12118	\@@TextField 10476, 10491
\\$	184, 209, 406, 3496, 3569	\) . 191, 216, 568, 574, 577, 11809, 12120	\@@commahyperpage . . 6346, 6347
\%	407, 1540, 1541, 3493, 3502, 3504, 3556, 6838	\+ 200, 225	\@@hyperref 3604, 3605
\&	185, 210, 408, 3497, 3508, 3510, 9764	\- 201, 226	\@latextohtmlX 2254, 3780
\'	203, 228, 2361, 2375, 2416, 2418, 2419, 2420, 2421, 2426, 2427, 2429, 2434, 2440, 2444, 2445, 2448, 2491, 2492, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2506, 2510, 2523, 11742, 12047, 12059, 12071, 12275, 12291, 12299, 12312, 12326, 12332, 12340, 12356, 12365, 12366, 12380, 12394, 12400, 12423, 12425, 12426, 12427, 12430, 12432, 12433, 12434, 12442, 12480, 12499, 12520, 12644, 12660, 12668, 12680, 12694, 12700, 12708, 12724, 12733, 12734, 12748, 12762, 12768, 12786, 12788, 12893, 12895, 12913, 12915, 12947, 12949, 12959, 12961, 13021, 13023, 13073, 13075, 13081, 13083, 13085, 13087,	\. . 198, 223, 12053, 12065, 12077, 12137, 12428, 12435, 12453, 12486, 12505, 12529, 12569, 12570, 12794, 12796, 12818, 12820, 12838, 12840, 12874, 12905, 12907, 13025, 13027, 13118, 13120, 13126, 13128, 13825, 13827, 13833, 13835, 13845, 13847, 13853, 13855, 13881, 13883, 13885, 13887, 13897, 13899, 13901, 13903, 13909, 13911, 13933, 13935, 13937, 13939, 13945, 13947, 13965	\@writetorep 6293, 6294
		\/ 194, 219, 510, 511, 512, 579, 1283	\@writetorep 11657, 11663
		\: 189, 214	\@Alph 5147, 5148, 5151, 5152
		\; 199, 224, 6534	\@Alph@bul 5151
		\< 196, 221	\@BIBLABEL 5819, 5825, 5831
		\= 167, 173, 180, 183, 12055, 12067, 12079, 12448, 12490, 12509, 12528, 12774, 12776, 12810, 12812, 12859, 12861, 12862, 12931, 12933, 12991, 12993, 13130, 13132, 13771, 13773, 13795, 13797, 13849, 13851	\@BOOKMARK 11737, 11738
		\> 197, 222	\@CITE 5896, 5904
		\@ 2412	\@CITEX 5898
		\@@@ 1741	\@CheckBox . . . 4436, 8349, 10414, 10444, 10578, 10887, <u>11242</u>
		\@BOOKMARK 11737, 11738, <u>11786</u> , 11835, 11840	\@ChoiceMenu . . 4433, 8352, 10254, 10447, 10513, 10705, <u>11042</u>
		\@ListBox . 10317, 10337, 10769, 10800, 11106, <u>11139</u>	\@Form . . 4238, 8341, 10041, 10436, 10457, 10630, <u>10967</u>
		\@Menu 10525, 10533	\@Gauge . 4442, 8343, 10223, 10438, 10462, 10599, <u>10964</u>

5880, 5910, 5933, 5959, 5965,
5989
\@backslashchar 1460, 1464, 1467,
3518, 6851, 6861
\@baseurl 2717, 2719, 3732, 7271,
7274, 7521, 7523, 7762, 7764,
8216, 8226, 8263, 8265, 8759,
8761, 9103, 9117, 9675, 9677,
9857, 9871, 9937, 9939
\@begintheorem 5451, 5457
\@bibitem 5846, 5877
\@biblabel 5819, 5866
\@bookmarkopenstatus 3332, 3349,
11711
\@bookmarkopenlevel 2680, 2682,
3335
\@bsphack 1728, 3637, 5963
\@capstartfalse 5721
\@caption 5690, 5702, 5736, 5770,
5772
\@capytype 1737, 5685, 5689, 5693,
5700, 5707, 5740, 5763, 5767,
5770
\@car 1071, 1087, 1105, 1125, 2659,
3856, 7223, 7234
\@cdr 7224, 7235
\@chapter 11938, 11939
\@cite 5896, 5927, 6024, 6030
\@citeopt 6025, 6031, 6035, 6045
\@citea 5899, 5906, 5907, 5926,
5929, 5930
\@citeb 5905, 5908, 5910, 5912,
5916, 5919, 5928, 5931, 5933,
5935, 5939, 5942
\@citebordercolor 2959
\@citedata@opt 6026, 6032, 6034
\@citedatax 6041, 6046
\@citedatax@opt 6038, 6044
\@citeseppen 6023, 6029
\@citex 5925
\@clubpenalty 5485
\@commahyperpage 6341, 6346
\@currDisplay 4292, 10266, 10328,
10542, 10556, 10717, 10780,
11054, 11118
\@currValue 4294, 4296, 10332,
10542, 10553, 10787, 11129,
11537
\@currentHlabel 5159, 5161, 5170,
5293, 5304, 5532, 5543, 5546,
5548, 5593, 5620
\@currentHref 1743,
4538, 5118, 5169, 5174, 5256,
5259, 5294, 5305, 5307, 5346,
5357, 5361, 5368, 5392, 5477,
5533, 5544, 5547, 5549, 5594,
5621, 5705, 5727, 5729, 5741,
5743, 5968, 6092, 6115, 6124,
6130, 6181, 6182, 6206, 6207,
11646, 11647, 11931, 11933,
11942, 11944, 11974, 11976,
11983, 11988, 12016, 12018
\@currentlabel 5612, 5961, 5968,
6187, 6194, 6399, 6451
\@currentlabelname 1733, 5534,
5595, 5622, 5709
\@currentlabstr 1732, 1740
\@curropt 10263, 10264, 10325,
10326, 10531, 10538, 10539,
10541, 10548, 10549, 10551,
10714, 10715, 10777, 10778,
11051, 11052, 11115, 11116
\@dblarg 1833, 5700, 5770
\@definecounter 6166, 6167
\@ehc 2066, 3078, 3696,
3950, 4074, 4269, 4385, 4421,
10354, 10402, 10820, 10874,
11164, 11224
\@ehd 63, 5686, 5764
\@endForm 4239, 8342, 10222,
10437, 10461, 10675, 10991
\@endpary 5447
\@eqncr 5376
\@eqnstarfalse 5352, 5379
\@eqnstartrue 5376
\@eqnswtrue 5322, 5331
\@esphack 1749, 3642, 5973, 6316
\@extra@b@citeb 5804, 5807, 5824,
5829, 5849, 5897, 5919, 5935,
5942
\@extra@b@info 5803, 5806, 5810
\@fifthoffive 3038, 3447, 3631,
6600, 6715
\@filebordercolor 2957, 7140,
7142, 8080, 8082, 8480, 8482,
9413
\@filecolor 2709, 7160, 7714,
7726, 8092, 8486
\@firstoffive 3443, 3452, 6639,
6720
\@firstofone 423, 424,
425, 426, 427, 428, 429, 430,
431, 432, 433, 463, 919, 923,
927, 2879, 3334, 4205, 4211,
5034, 5145, 5158, 5203, 5698,
5768, 5908, 5931, 6057, 7431,
11322, 11339, 11356
\@firstoftwo 480, 674, 801, 1199,
4617
\@footnotemark 5493, 5539, 5628,
5630, 5642, 5643, 5673, 5675
\@footnotetext 5492, 5499, 5524,
5629, 5631, 5645, 5646, 5666
\@for 2736, 3846, 5905, 5928, 10263,
10325, 10531, 10538, 10548,
10714, 10777, 11051, 11115
\@fourthoffive 3446, 3632, 6710,
6717
\@gobble 49, 56, 117,
456, 457, 458, 459, 483, 484,
485, 494, 681, 825, 829, 832,
1009, 1022, 1026, 1088, 1151,
1152, 1159, 1164, 1178, 1183,
1770, 2009, 2021, 2867, 3026,
3028, 3080, 3484, 4190, 4583,
4587, 4603, 4605, 4621, 4622,
4623, 4625, 4626, 4628, 5013,
5028, 5032, 5440, 5687, 5765,
6091, 6774, 7433, 8639, 8642,
10631, 10968, 11703, 11704,
11705, 11834
\@gobblefour 520, 935, 936, 937,
6514
\@gobbleopt 4628, 4630
\@gobbletwo 487, 513, 521, 522, 934,
1106, 1183, 1187, 1887, 3030,
4136, 4607, 4616, 4624, 4628,
6698, 11929
\@harvarditem 5978, 5980
\@hyper@@anchor 3741, 3742
\@hyper@itemfalse 5064, 5080,
5094
\@hyper@itemtrue 5065
\@hyper@launch 3702, 3711, 7164,
8542, 9425
\@hyper@linkfile 3683, 3686,
3690, 3722
\@hyper@readexternallink 3677,
3681
\@hyperdef 3612, 3613
\@hyperpage 6338, 6339
\@hyperref 3593, 3604
\@ifclasslater 12030, 12035
\@ifclassloaded 1720, 4959, 5188,
5225, 5888, 6374, 6378, 7436,
12029, 12034
\@ifnextchar 12, 88, 103, 123, 514,
3563, 3593, 3612, 3650, 4238,
4430, 4433, 4436, 4439, 4442,
4445, 4448, 4628, 4684, 4693,
5632, 5650, 5978, 6036, 9128,
9351, 9365, 11737, 11738
\@ifpackagelater 1751, 3102,
5179, 6235
\@ifpackageloaded 359, 634, 1723,
2118, 2636, 2640, 3017, 3101,
3190, 5102, 5178, 5191, 5253,
5272, 5276, 5284, 5318, 5432,
5489, 5556, 5601, 5737, 5948,

6021, 6178, 6234, 6270, 6271, 6383, 6645, 6787, 6791, 9929	198, 199, 200, 201, 202, 203, 3508, 6823, 11812	\@pdfauthor . . . 2848, 2962, 7329, 7746, 8170, 8798, 9039, 9790
\@ifpackagewith 3018, 6202	\@makeschapterhead 12021, 12023	\@pdfborder . . . 2258, 2762, 2765, 2767, 3415, 7040, 7895, 8394, 8910, 9001, 9343, 9355, 9370, 9391, 9410, 9435, 9463, 9538, 9626, 9769
\@ifstar . . . 66, 3468, 3470, 6653, 6679, 6698	\@menubordercolor . . . 2956, 7491, 7493, 8135, 8137, 8573, 8575	\@pdfborderstyle . . . 2763, 2769, 2771, 3416, 7041, 7896, 8395, 8911, 9002, 9344, 9356, 9371, 9392, 9411, 9436, 9464, 9539, 9627, 9770
\@ifundefined	\@menucolor . . . 7504, 8141, 8579	\@pdfcreationdate . . . 2854, 2965, 7333, 7335, 7738, 7740, 8162, 8164, 9014, 9016, 9782, 9784
. 34, 240, 464, 505, 580, 615, 645, 646, 647, 653, 661, 677, 680, 707, 713, 719, 724, 729, 736, 742, 748, 753, 759, 764, 774, 780, 786, 792, 1041, 1135, 1136, 1724, 1757, 1864, 1983, 2048, 2131, 2581, 2589, 2596, 2609, 2657, 2979, 2993, 3095, 3096, 3097, 3945, 4264, 4721, 5044, 5106, 5111, 5132, 5146, 5278, 5287, 5341, 5363, 5381, 5387, 5424, 5691, 5802, 5813, 5896, 5912, 5935, 6175, 6215, 6223, 6224, 6237, 6238, 6245, 6687, 6688, 6732, 6733, 6735, 6736, 6891, 7079, 7088, 7459, 8372, 8426, 8510, 8823, 8824, 8866, 8896, 8983, 9149, 10631, 10968, 11331, 11937, 11948	\@minipagefalse 5463	\@pdfcreator . . . 2850, 2964, 7332, 7737, 8161, 8801, 9038, 9781
\@indexfile . . . 6297, 6305, 6309	\@mkboth 487, 6496, 11929, 12009, 12011	\@pdfdirection 7294, 7800, 8196, 8771, 9083, 9837
\@inlabelfalse 5467	\@mpfn 5496, 5651, 5663	\@pdfduplex . . . 7300, 7806, 8202, 8777, 9089, 9843
\@inmathwarn 399, 400	\@mpfootnotetext . . . 5499, 5512, 5513	\@pdfhighlight 2755, 2960, 7060, 7062, 7107, 7136, 7138, 7172, 7174, 7487, 7489, 8909, 9000, 9342, 9390, 9409, 9434
\@inpenc@undefined@ 1595	\@mycount 11788, 11798	\@pdfhightlight 7105
\@labels 5480	\@namedef 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 3956, 3957, 3958, 3959, 4280, 4281, 5189, 5375, 5378, 5953, 5954, 5955, 5956	\@pdfkeywords . . . 2864, 2968, 7345, 7735, 8175, 8806, 9040, 9779
\@latex@ 4715, 4716	\@nameuse . 1737, 2138, 3962, 4272	\@pdflang 2946, 2973, 7320, 7322, 7828, 7830, 8236, 8238, 9113, 9115, 9867, 9869
\@latex@error . . . 2201, 2219, 2229, 2236, 5686, 5764	\@ne . . . 808, 2085, 2180, 8020, 8025, 8738, 9532, 11000	\@pdfm@dest . . . 7842, 7898, 7902
\@latex@warning 3626, 5915, 5938, 6575, 6595, 6612, 6726	\@newctr 6171, 6172	\@pdfm@mark 4984, 7841, 7890, 7910, 7924, 7926, 7940, 7942, 7947, 7948, 7978, 8002, 8004, 8009, 8027, 8046, 8074, 8101, 8125, 8157, 8217, 8244, 10970, 10971, 10972, 10989, 11032, 11038, 11124, 11134, 11145, 11151, 11177, 11184, 11203, 11209, 11232, 11238, 11259, 11265, 11269, 11301, 11309, 11860
\@lbibitem 5820, 5865	\@newl@bel 4678, 5806	\@pdfmoddate . . . 2860, 2966, 7337, 7339, 7742, 7744, 8166, 8168, 9018, 9022, 9786, 9788
\@linkbordercolor . . . 2954, 7096, 8396	\@newlistfalse 5464	\@pdfnonfullscreenpagemode . . . 7293, 7799, 8195, 8770, 9082, 9836
\@linkcolor 9150	\@nil 345, 349, 354, 358, 373, 1071, 1089, 1107, 1123, 1125, 1128, 1131, 1134, 1604, 1606, 1622, 1624, 2659, 3540, 3544, 3549, 3856, 4703, 4706, 4713, 4715, 4716, 4801, 4848, 4849, 4851, 4874, 4891, 4939, 4941, 5288, 5298, 5300, 5313, 6325, 6327, 6334, 6357, 6360, 6370, 6579, 6582, 6734, 6764, 6847, 6853, 6857, 6863, 7223, 7224, 7234, 7235, 8605, 8606, 11329, 11342, 11347	\@pdfnumcopies 7309, 7311, 7815, 7817, 8211, 8213, 8786, 8788, 9098, 9100, 9852, 9854
\@linkdim 326, 7579, 7580, 7585, 7586, 7587, 7647, 7648, 7657, 7658, 7659, 7676, 7677, 7686, 7687, 7688, 7706, 7707, 7716, 7717, 7718, 9733, 9734, 9739, 9740, 9741, 9993, 9994, 10000, 10001, 10002	\@nobreakfalse 4675, 5483	\@pdfpageduration . . . 2725, 7381, 7384, 7389, 8695, 8697, 8700, 8946, 8948, 8956
\@listctr 5855, 5881	\@nocnterr 6224, 6238	\@pdfpagelayout 7319, 7827, 8235, 8791, 8793, 9112, 9866
\@m 822, 5907, 5930, 8686	\@nocounterr 6223, 6237	
\@mainaux . . 4637, 4638, 4996, 5004	\@noparitemfalse 5465	
\@makecaption . . . 5722, 5724, 5782	\@number 5145, 5203, 6057	
\@makefnmark 5551, 5678	\@nx 6227, 6241, 6244, 6246	
\@makefntext 5613	\@onelevel@sanitize 1880, 1884, 2100, 2658, 3055, 3085, 3106, 3108, 3946, 4183, 4265, 4901, 4903, 6120, 6625, 7879	
\@makeoother . . . 166, 167, 179, 180, 182, 183, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197,	\@oparg 5451, 5457	
	\@outlinefile 11709, 11821, 11822, 11824, 11887, 11888, 11890	
	\@pagerefstar . . . 3470, 6641, 6669	
	\@pagesetref 6591	
	\@parboxrestore 5611, 5714, 5777	
	\@parcount 11790, 11798	
	\@part 11957, 11964	

\@pdfpagemode . 3178, 3179, 3345, 3346, 3355, 3356, 7273, 7783, 8230, 8758, 9066, 9820	\@pdfviewparams 2871, 2873, 8860, 8878, 9466, 9541, 9629, 9880	10314, 10315, 10713, 10718, 10720, 10758, 10759, 10760, 10764, 10765, 10766, 10767, 11050, 11055, 11057, 11095, 11096, 11097, 11101, 11102, 11103, 11104
\@pdfpagescrop 2900, 2969, 7258, 7262, 7766, 7767, 7788, 7790, 8242, 8244, 8747, 8749, 9071, 9073, 9825, 9827	\@percentchar . . 3503, 3504, 3556	\@tempdimb . 10266, 10267, 10717, 10718, 11054, 11055
\@pdfpagetransition 2723, 7357, 7361, 7366, 8586, 8588, 8590, 8929, 8931, 8939	\@processme . . 4288, 4289, 7363, 7369, 7386, 7392, 7407, 7413, 9131, 9132, 9201, 9202, 9205, 9206	\@tempswafalse 6040
\@pdfpicktraybypdfsize . . 7301, 7303, 7807, 7809, 8203, 8205, 8778, 8780, 9090, 9092, 9844, 9846	\@protected@testopt 517	\@tempswatru . 6010, 6013, 6016, 6037
\@pdfprintarea 7297, 7803, 8199, 8774, 9086, 9840	\@protected@testopt@xargs 518	\@temptokena . . 2528, 2533, 2536, 2538
\@pdfprintclip 7298, 7804, 8200, 8775, 9087, 9841	\@refstar 3468, 6638	\@tfor 5405
\@pdfprintpagerange 2836, 2972, 7305, 7307, 7811, 7813, 8207, 8209, 8782, 8784, 9094, 9096, 9848, 9850	\@runbordercolor . . 2958, 7176, 7178, 8557, 8559, 9438	\@the@H@page 6059, 6061
\@pdfprintscaling . . 7299, 7805, 8201, 8776, 9088, 9842	\@runcolor 7195, 8563	\@thefnmark . . 5497, 5508, 5570, 5571, 5612, 5652, 5664, 5671
\@pdfproducer . 2849, 2963, 7199, 7341, 7343, 7730, 7731, 7747, 7749, 8147, 8148, 8152, 8171, 8173, 8715, 8716, 8720, 8723, 8724, 8802, 8804, 9025, 9029, 9460, 9461, 9531, 9533, 9535, 9623, 9624, 9774, 9775, 9791, 9793	\@safe@activesfalse . 469, 3449	\@thirdoffive 3445
\@pdfstartpage 2888, 2890, 2971, 7279, 7283, 7770, 7775, 8219, 8223, 8751, 8755, 9053, 9058, 9807, 9812	\@safe@activetrue . . 468, 3448	\@thm 5433
\@pdfstartview 2895, 2897, 2970, 7153, 7281, 7283, 7772, 7776, 8087, 8221, 8223, 8753, 9055, 9059, 9419, 9809, 9813	\@schapter 11925, 11926	\@topnewpage 12021
\@pdfsubject . . 2863, 2967, 7331, 7751, 8160, 8800, 9037, 9795	\@secondoffive 3039, 3444, 3457, 6601, 6602, 6642	\@topsep 5446
\@pdftempa 3688, 3689, 3692	\@secondoftwo . 460, 486, 672, 804, 1197, 3038, 3039	\@topsepadd 5447
\@pdftempwordfile . . 3679, 3689	\@sect 11979, 11980	\@undefined 523, 4618, 4642, 4662, 4863, 4881, 4920, 5685, 5739, 5751, 5754, 5763, 6633, 7017, 7203, 7212, 8366, 8726, 8740
\@pdftempwordrun . . 3680, 3692	\@seqncr 5376	\@undottedtocline 6560
\@pdftitle 2847, 2961, 7330, 7736, 8159, 8799, 9036, 9780	\@serial@counter . 11740, 11787, 11788, 11789	\@unprocessedoptions 3300
\@pdfview 2869, 7026, 7033, 7847, 7851, 7855, 7859, 7863, 7867, 7868, 7871, 7872, 7875, 7879, 7880, 7894, 8393, 8402, 8413, 8860, 8878, 9465, 9540, 9628, 9879	\@seteqlabel 6203, 6204	\@urlbordercolor . . 2955, 7109, 7111, 8107, 8109, 8499, 8501, 9393
\@pdfviewarea . 7295, 7801, 8197, 8772, 9084, 9838	\@setminipage 5716, 5779	\@urlcolor 7124, 7584, 7593, 7684, 7696, 8117, 8505, 9738, 9747, 9999, 10007
\@pdfviewclip . 7296, 7802, 8198, 8773, 9085, 9839	\@setref . 3452, 3457, 6570, 6571, 6608	\@urltype 7554, 7558, 8268, 8292, 8421, 8432, 9708, 9712, 9968, 9972
	\@sharp 5288, 5295	\@vpageref 6663
	\@skiphyperreffalse 5081, 5835, 5847	\@whilenum 951
	\@skiphyperreftrue . 5821, 5847	\@wrintex 6276, 6277, 6293
	\@spart 11970, 11971	\@writefile 5966
	\@ssect 11920, 11921	\@x@sf 5541, 5553, 5677, 5679
	\@startlos 6508, 6515, 6564	\@xfootnote 5650
	\@starttoc 4663	\@xfootnotemark 5505, 5668
	\@tempa . . 5450, 5456, 5460, 5558, 5562, 5565, 5581	\@xfootnotenext 5494, 5661
	\@tempb 5404, 5408	\@exp . 6193, 6226, 6227, 6240, 6241, 6243, 6244
	\@tempboxa 7578, 7579, 7585, 7644, 7647, 7650, 7651, 7657, 7662, 7663, 7674, 7676, 7679, 7680, 7686, 7691, 7692, 7704, 7706, 7709, 7710, 7716, 7721, 7722, 9732, 9733, 9739, 9992, 9993, 10000	\[. 192, 217
	\@tempcnta . 11669, 11670, 11671, 11672, 11673, 11675, 11678, 11679, 11680, 11686, 11688, 11690, 11722, 11723, 11724, 11727, 11728, 11729, 11730, 11731, 11909, 11910, 11911	\{ 402
	\@tempdima	\} 403
	1783, 4470, 4471, 4472, 4473, 4474, 4475, 4476, 4477, 7019, 10262, 10267, 10269, 10306, 10307, 10308, 10312, 10313,	\] 193, 218
		\^ 186, 211, 2439, 3491, 3492, 3500, 12048, 12060, 12072, 12277, 12293, 12301, 12314, 12328, 12342, 12358, 12368, 12369, 12382, 12396, 12444, 12481, 12500, 12521, 12646, 12662,

12670, 12682, 12696, 12710,
 12726, 12736, 12737, 12750,
 12764, 12790, 12792, 12830,
 12832, 12846, 12848, 12882,
 12884, 12885, 12963, 12965,
 13011, 13013, 13015, 13017,
 13949, 13951
 _ . 187, 212, 410, 3495, 3512, 3513
 \^ 166, 172, 179, 182,
 2375, 2509, 2512, 2514, 2522,
 12046, 12058, 12070, 12273,
 12289, 12297, 12310, 12324,
 12338, 12354, 12362, 12363,
 12378, 12392, 12440, 12479,
 12498, 12519, 12642, 12658,
 12666, 12678, 12692, 12706,
 12722, 12730, 12731, 12746,
 12760, 13077, 13079, 13325,
 13353, 13490, 13518, 13921,
 13923, 13971, 13973, 14332,
 14337, 14342, 14347, 14352,
 14357, 14362, 14367, 14372,
 14377, 14382, 14387, 14392,
 14397, 14402, 14407, 14412,
 14417, 14422, 14427, 14432,
 14437, 14442, 14447
 \l 188, 213, 1406, 1522, 2321, 3007,
 6273, 6822, 6832
 \~ 409, 953, 1583, 2433,
 2441, 2442, 2443, 3099, 3516,
 12049, 12061, 12073, 12279,
 12308, 12316, 12344, 12376,
 12384, 12446, 12482, 12501,
 12522, 12648, 12676, 12684,
 12712, 12744, 12752, 12854,
 12856, 12857, 12987, 12989,
 13917, 13919, 13967, 13969,
 13975, 13977, 14334, 14339,
 14344, 14349, 14354, 14359,
 14364, 14369, 14374, 14379,
 14384, 14389, 14394, 14399,
 14404, 14409, 14414, 14419,
 14424, 14429, 14434, 14439,
 14444, 14449
 Numbers
 \3 387, 995, 996, 997, 998,
 999, 1000, 1001, 1002, 1697,
 11807, 12273, 12275, 12277,
 12279, 12281, 12283, 12285,
 12287, 12289, 12291, 12293,
 12295, 12297, 12299, 12301,
 12303, 12305, 12306, 12308,
 12310, 12312, 12314, 12316,
 12318, 12320, 12322, 12324,
 12326, 12328, 12330, 12332,
 12334, 12336, 12338, 12340,
 12342, 12344, 12346, 12348,
 12350, 12352, 12354, 12356,
 12358, 12360, 12362, 12363,
 12365, 12366, 12368, 12369,
 12371, 12372, 12374, 12376,
 12378, 12380, 12382, 12384,
 12386, 12388, 12390, 12392,
 12394, 12396, 12398, 12400,
 12402, 12404, 12405, 12478,
 12642, 12644, 12646, 12648,
 12650, 12652, 12654, 12656,
 12658, 12660, 12662, 12664,
 12666, 12668, 12670, 12672,
 12674, 12676, 12678, 12680,
 12682, 12684, 12686, 12688,
 12690, 12692, 12694, 12696,
 12698, 12700, 12702, 12704,
 12706, 12708, 12710, 12712,
 12714, 12716, 12718, 12720,
 12722, 12724, 12726, 12728,
 12730, 12731, 12733, 12734,
 12736, 12737, 12739, 12740,
 12742, 12744, 12746, 12748,
 12750, 12752, 12754, 12756,
 12758, 12760, 12762, 12764,
 12766, 12768, 12770, 12772,
 13037, 13039, 13041, 13043,
 13044, 13046, 13048, 13050,
 13052, 13054, 13056, 13058,
 13060, 13062, 13064, 13066,
 13068, 13070, 13071, 13073,
 13075, 13077, 13079, 13081,
 13083, 13085, 13087, 13136,
 13138, 13140, 13142, 13144,
 13146, 13148, 13151, 13153,
 13278, 13280, 13282, 13284,
 13286, 13288, 13290, 13292,
 13294, 13296, 13298, 13300,
 13302, 13304, 13305, 13307,
 13309, 13311, 13313, 13315,
 13317, 13319, 13321, 13323,
 13709, 13711, 13713, 13715,
 13717, 13719, 13721, 13723,
 13725, 13727, 13729, 13731,
 13733, 13735, 13737, 13739,
 13741, 13743, 13745, 13747,
 13749, 13751, 13753, 13755,
 13757, 13759, 13761, 13763,
 13765, 13767, 13769, 13771,
 13773, 13775, 13777, 13779,
 13781, 13783, 13785, 13787,
 13789, 13791, 13793, 13795,
 13797, 13799, 13801, 13803,
 13805, 13807, 13809, 13811,
 13813, 13815, 13817, 13819,
 13821, 13971, 13973, 13975,
 13977, 14197, 14199, 14201,
 14203, 14205, 14207, 14209,
 14211, 14213, 14215, 14217,
 14219, 14221, 14223, 14225,
 14227, 14229, 14231, 14233,
 14235, 14237, 14239, 14241,
 14243, 14245, 14247, 14249,
 14251, 14253, 14255, 14257,
 14259, 14261, 14263, 14265,
 14267, 14269, 14271, 14273,
 14275, 14277, 14279, 14281,
 14283, 14285, 14293, 14295,
 14317, 14319, 14320, 14324,
 14326, 14327, 14330, 14332,
 14334, 14345, 14347, 14351,
 14352, 14353, 14354, 14355,
 14356, 14357, 14358, 14360,
 14361, 14362, 14363, 14364,
 14365, 14366, 14367, 14368,
 14369, 14370, 14371, 14372,
 14373, 14374, 14375, 14376,
 14377, 14378, 14380, 14381,
 14382, 14383, 14384, 14385,
 14386, 14387, 14388, 14389,
 14390, 14392, 14394, 14405,
 14407, 14411, 14412, 14413,
 14414, 14415, 14416, 14417,
 14418, 14420, 14421, 14422,
 14423, 14424, 14425, 14426,
 14427, 14428, 14429, 14430,
 14431, 14432, 14433, 14434,
 14435, 14436, 14437, 14438,
 14440, 14441, 14442, 14443,
 14444, 14445, 14446, 14447,
 14448, 14449, 14502, 14504
 \9 390, 1625, 1640, 1649, 1677, 1697,
 12478, 13823, 13825, 13827,
 13829, 13831, 13833, 13835,
 13837, 13839, 13841, 13843,
 13845, 13847, 13849, 13851,
 13853, 13855, 13857, 13859,
 13861, 13863, 13865, 13867,
 13869, 13871, 13873, 13875,
 13877, 13879, 13881, 13883,
 13885, 13887, 13889, 13891,
 13893, 13895, 13897, 13899,
 13901, 13903, 13905, 13907,
 13909, 13911, 13913, 13915,
 13917, 13919, 13921, 13923,
 13925, 13927, 13929, 13931,
 13933, 13935, 13937, 13939,
 13941, 13943, 13945, 13947,
 13949, 13951, 13953, 13955,
 13957, 13959, 13961, 13963,
 13965, 13967, 13969, 13971,
 13973, 13975, 13977, 13979,
 13981, 13983, 13985, 13987,
 13989, 13991, 13993, 13995,
 13997, 13999, 14001, 14003,

14005, 14007, 14009, 14011, 14013, 14015, 14017, 14019, 14021, 14023, 14025, 14027, 14029, 14031, 14033, 14035, 14037, 14039, 14041, 14043, 14045, 14047, 14049, 14051, 14053, 14055, 14057, 14059, 14061, 14063, 14065, 14067, 14069, 14071, 14073, 14075, 14077, 14079, 14081, 14083, 14085, 14087, 14089, 14091, 14093, 14095, 14097, 14099, 14101, 14103, 14105, 14107, 14109, 14111, 14113, 14115, 14117, 14119, 14121, 14123, 14125, 14127, 14129, 14131, 14133, 14135, 14137, 14139, 14141, 14143, 14145, 14147, 14149, 14151, 14153, 14155, 14157, 14159, 14161, 14163, 14165, 14167, 14169, 14171, 14173, 14175, 14177, 14179, 14181, 14183, 14185, 14187, 14189, 14191, 14193, 14195, 14197, 14199, 14201, 14203, 14205, 14207, 14209, 14211, 14213, 14215, 14217, 14219, 14221, 14223, 14225, 14227, 14229, 14231, 14233, 14235, 14237, 14239, 14241, 14243, 14245, 14247, 14249, 14251, 14253, 14255, 14257, 14259, 14261, 14263, 14265, 14267, 14269, 14271, 14273, 14275, 14277, 14279, 14281, 14283, 14285, 14287, 14289, 14291, 14293, 14295, 14297, 14299, 14331, 14333, 14335, 14336, 14337, 14338, 14339, 14340, 14341, 14342, 14343, 14344, 14346, 14348, 14349, 14350, 14351, 14352, 14353, 14354, 14356, 14358, 14361, 14363, 14365, 14366, 14367, 14368, 14369, 14370, 14371, 14372, 14373, 14374, 14376, 14378, 14380, 14381, 14382, 14383, 14384, 14386, 14387, 14388, 14389, 14391, 14393, 14395, 14396, 14397, 14398, 14399, 14400, 14401, 14402, 14403, 14404, 14406, 14408, 14409, 14410, 14411, 14412, 14413, 14414, 14416, 14418, 14421, 14423, 14425, 14426, 14427, 14428, 14429, 14430, 14431, 14432, 14433, 14434, 14436,	14438, 14440, 14441, 14442, 14443, 14444, 14446, 14447, 14448, 14449, 14503 \sqcup ... 502, 2456, 2459, 5907, 5930, 12070, 12071, 12072, 12073, 12074, 12075, 12076, 12077, 12078, 12079, 12080, 12081, 12498, 12499, 12500, 12501, 12502, 12503, 12504, 12505, 12506, 12507, 12508, 12509, 12510, 12511, 12512, 12513, 12514, 12515, 12516 A \ABREVE ... 14323, 14395, 14396, 14397, 14398, 14399 \abreve ... 14316, 14335, 14336, 14337, 14338, 14339 \AccFancyVerbLineautorefname 2483 \Accfootnoteautorefname . 2463 \Acctheoremautorefname .. 2487 \ACIRCUMFLEX 14324, 14400, 14401, 14402, 14403, 14404 \acircumflex . 2514, 14317, 14340, 14341, 14342, 14343, 14344 \Acrobatmenu .. 1772, 3035, 4615, 7482, 8122, 8566, 9337 \active 931, 938, 3492, 3493, 3494, 3495, 3496, 3497, 3500, 3502, 3505, 3513, 11811 \add@accent 401 \addcontentsline ... 5710, 5774, 6089, 6094, 6160, 12026 \addtocontents 6129, 6161, 6391, 6443, 12013, 12014 \addtocounter . 5200, 5223, 5232, 5243, 5247, 5426, 8029 \addvspace 12013, 12014 \advance 324, 325, 952, 3806, 4135, 4181, 4471, 4472, 4475, 4476, 4818, 7248, 7586, 7658, 7687, 7717, 8722, 9740, 10001, 10269, 10313, 10314, 10720, 10765, 10766, 11000, 11057, 11102, 11103, 11670, 11672, 11673, 11679, 11688, 11730, 11910 \AE 12285, 12654, 13081 \ae 12350, 12718, 13083 \afterassignment ... 1295, 1301, 1307 \AfterBeginDocument 240, 2158, 2212, 3169, 3269, 3473, 4540, 4634, 5002, 9516, 9667 \aftergroup 5616	\alef 14458 \alefhamza 14454 \aleflowerhamza 14456 \alefmadda 14453 \alefmaqsura 14487 \Alph 4867, 5133, 5134 \alph 4868, 5397, 5428 \AMSautorefname 6796 \anchor@spot .. 3746, 3759, 3766, 3772, 7075, 7535, 7619, 8336, 8405, 8857, 9689, 9950 \appendix 5130, 5131 \appendixautorefname 2331, 2349, 2367, 2385, 2403, 2421, 2439, 2471, 2472, 2497, 2515, 6806 \arabic .. 4864, 5039, 5042, 5045, 5046, 5047, 5049, 5050, 5051, 5052, 5054, 5055, 5056, 5057, 5058, 5059, 5062, 5072, 5073, 5112, 5207, 6169, 6175, 6222, 6236, 6379, 6384, 6386 \AtBeginDocument 241, 2057, 2117, 2254, 2607, 3024, 3115, 3175, 3399, 5187, 5949, 6644, 6790, 6986, 7429, 7988, 8388 \AtBeginShipout 4747, 7515, 7975 \AtBeginShipoutBox . 4751, 4754, 7510, 7511, 7976, 7977 \AtBeginShipoutFirst 4758, 8247, 9619 \AtEndDocument 4654, 4962, 10638 \AtEndOfPackage 643, 1721, 2580, 2588, 2595, 3157, 3183, 3189, 3328, 3351 \author 4683, 4693 \autopageref 3177, 6678 \autoref .. 491, 3176, 6697, 10021 \ayn 14476 B \b ... 635, 639, 645, 12056, 12068, 12080, 12470, 12493, 12512, 13829, 13831, 13837, 13839, 13869, 13871, 13873, 13875, 13889, 13891, 13905, 13907, 13913, 13915, 13953, 13955, 13957 \baa 14459 \back@none 2266, 2276, 2289 \back@page 2268, 2281 \back@section . 2267, 2273, 2279, 2285 \back@slide 2269, 2278 \backcite 5967 \backref 5998, 10025 \baselineskip . 1775, 4484, 4485, 4486, 4487, 4488, 4489, 7636, 8874, 8895, 9499
---	--	--

<code>\bbl@cite@choice</code>	5814	<code>\capitalnewtie</code>	12531	<code>\contentsline</code>	4643, 4644, 4655, 6130, 6134, 6161, 6163
<code>\BeforeTeXIVht</code>	2154	<code>\capitalogonek</code>	12518	<code>\copy</code>	5300, 5309, 7001, 7511, 7977, 8003
<code>\begin</code>	10030, 14508	<code>\capitalring</code>	12525	<code>\count@</code>	950, 951, 952, 953, 1296, 2666, 2667, 2672, 2673, 3805, 3806, 3821, 4118, 4133, 4135, 4159, 4181, 4197, 7243, 7244, 7245, 7246, 7247, 7248, 7251, 8718, 8719, 8720, 8721, 8722, 8725
<code>\belowpdfbookmark</code>	11726	<code>\capitaltie</code>	12530	<code>\CurrentBorderColor</code>	7064, 7066, 7080, 7082, 7089, 7091, 7096, 8396, 8427, 8429, 8438, 8440, 8459, 8461, 8511, 8513, 8530, 8532
<code>\bfseries</code>	438, 5913, 5936, 6574, 6594, 6611, 6725	<code>\capitaltilde</code>	12522	<code>\currentpdfbookmark</code>	11718
<code>\bgroup</code>	511, 3563, 5603, 5615, 8336, 8887, 10469, 10561, 10582	<code>\caption</code>	5684, 5686, 5762, 5764	<code>\curu</code>	13521
<code>\bibcite</code>	5805, 5811, 5815, 5840, 5855, 5871, 5881	<code>\catcode</code>	172, 173, 184, 185, 186, 187, 206, 698, 931, 938, 1406, 1407, 1522, 1523, 3365, 3367, 3491, 3492, 3493, 3494, 3495, 3496, 3497, 3500, 3502, 3505, 3513, 3523, 3569, 3570, 6822, 8922, 8923, 11742, 11744, 11811	<code>\cyr</code>	470, 2451, 2453, 2456, 2459, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2473, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488
<code>\bitsetGetDec</code>	3858, 3991, 4009, 4023, 4036, 4052, 4084, 4109	<code>\cf@encoding</code>	1007	<code>\CYRA</code>	13360, 13735, 13739
<code>\bitsetGetHex</code>	3859	<code>\chapterautorefname</code>	2332, 2350, 2368, 2386, 2404, 2422, 2440, 2469, 2498, 2516, 6807	<code>\cyra</code>	2453, 2460, 2462, 2467, 2470, 2475, 2476, 2482, 2486, 13425, 13737, 13741
<code>\bitsetGetSetBitList</code>	3847	<code>\chapternumberline</code>	11701, 11705	<code>\CYRABHCH</code>	13699, 13704
<code>\bitsetIsEmpty</code>	3988, 4006, 4020, 4033, 4049, 4081, 4106	<code>\char</code>	10665, 11746, 11783	<code>\cyrabhch</code>	13701, 13707
<code>\bitsetReset</code>	3961, 3995, 4014, 4028, 4041, 4057, 4089	<code>\chardef</code>	1973, 1974, 1975, 1976, 2180, 2182	<code>\CYRABHCHDSC</code>	13703
<code>\bitsetSetValue</code>	3827, 3837	<code>\check@bm@number</code>	11845, 11853, 11901, 11909	<code>\cyrabhchdsc</code>	13706
<code>\BOOKMARK</code>	11710, 11737	<code>\CheckBox</code>	4435	<code>\CYRABHDZE</code>	13767
<code>\box</code>	4478, 4754, 7005, 8007, 9184	<code>\CheckCommand</code>	5557	<code>\cyrabhdze</code>	13769
<code>\bullet</code>	6526, 6534, 6544, 6552	<code>\checkcommand</code>	42, 5242, 5661, 5668, 5675, 5762, 5772, 5865, 5877, 6160, 6163, 6222, 6608	<code>\CYRABHHA</code>	13657
C					
<code>\C</code>	12464, 13569, 13571	<code>\checklatex</code>	4, 5660, 5761, 5864, 6159, 6607	<code>\cyrabhha</code>	13659
<code>\c</code>	636, 640, 646, 2433, 2441, 2442, 2443, 4706, 4713, 12054, 12066, 12078, 12287, 12352, 12472, 12487, 12506, 12517, 12656, 12720, 12842, 12844, 12887, 12889, 12897, 12899, 12917, 12919, 12951, 12953, 12967, 12969, 12975, 12977, 13122, 13124, 13624, 13627, 13841, 13843, 13861, 13863	<code>\checkpackage</code>	9, 5241, 6221	<code>\CYRAE</code>	13743
<code>\c@footnote</code>	5507, 5560, 5568, 5670	<code>\ChoiceBox</code>	4185	<code>\cyrae</code>	13745
<code>\c@page</code>	4800, 4818, 4819, 4823, 4835, 4837, 4842, 4849, 4851, 4853, 4882, 6054	<code>\ChoiceMenu</code>	4432	<code>\CYRB</code>	13362
<code>\c@secnumdepth</code>	11947, 11965, 11981, 11986	<code>\citation</code>	5910, 5933, 5959	<code>\cyrb</code>	2467, 13427
<code>\c@slidesection</code>	6392, 6520, 6521	<code>\citeauthoryear</code>	6025, 6031	<code>\CYRBYUS</code>	13545
<code>\c@slidesubsection</code>	6444	<code>\citeN</code>	6022	<code>\cyrbyus</code>	13547
<code>\c@tocdepth</code>	2650, 2655	<code>\CJK@char</code>	934	<code>\CYRC</code>	13405
<code>\calc@bm@number</code>	11835, 11908	<code>\CJK@charx</code>	935	<code>\cyrch</code>	13470
<code>\calculate@pdfview</code>	2865, 2868	<code>\CJK@ignorespaces</code>	933	<code>\CYRCH</code>	13407, 13807
<code>\capitalacute</code>	12520	<code>\CJK@punctchar</code>	936	<code>\cyrch</code>	2459, 2460, 2468, 13472, 13809
<code>\capitalbreve</code>	12527	<code>\CJK@punctcharx</code>	937	<code>\CYRCHLDSC</code>	13727
<code>\capitalcaron</code>	12526	<code>\clear@document</code>	4960	<code>\cyrchldsc</code>	13729
<code>\capitalcedilla</code>	12517	<code>\clearpage</code>	4962	<code>\CYRCHRDSC</code>	13687
<code>\capitalcircumflex</code>	12521	<code>\close@pdflink</code>	7074, 7086, 7094, 7125, 7161, 7196, 7505	<code>\cyrchrdsc</code>	13689
<code>\capitaldieresis</code>	12523	<code>\closeout</code>	4637	<code>\CYRCHVCRS</code>	13691
<code>\capitaldotaccent</code>	12529	<code>\clubpenalty</code>	5483, 5485	<code>\cyrchvcrs</code>	13693
<code>\capitalgrave</code>	12519	<code>\codeof</code>	5989	<code>\CYRD</code>	13368
<code>\capitalhungarumlaut</code>	12524	<code>\color@endbox</code>	6998, 7578, 7644, 7674, 7704, 8000, 9732, 9992	<code>\cyrd</code>	2456, 2459, 2470, 2475, 2476, 13433
<code>\capitalmacron</code>	12528	<code>\color@hbox</code>	6991, 7578, 7644, 7674, 7704, 7993, 9732, 9992	<code>\CYRDJE</code>	13330
		<code>\columnwidth</code>	5610		
		<code>\comma@entry</code>	4176, 4183, 4185		
		<code>\comma@parse</code>	4175		

\cyrdje	13495	\cyrizh	13567, 13571	\cyrotld	13785, 13789
\CYRDZE	13336	\CYRJE	13343	\CYRP	13391
\cyrdze	13501	\cyrje	13508	\cyrp	2456, 2459, 2460, 2464, 2465, 2471, 2473, 2477, 2478, 2479, 2480, 13456
\CYRDZHE	13358	\CYRK	13351, 13381	\CYRpalochka	13709
\cyrdzhe	13523	\cyrk	2462, 2463, 2465, 2479, 2480, 2482, 2483, 2484, 13446, 13516	\CYRPHK	13653
\CYRE .	13325, 13328, 13370, 13747	\CYRKBEAK	13641	\cyrphk	13655
\cyre	2453, 2459, 2460, 2473, 2485, 2486, 2487, 13435, 13490, 13493, 13749	\CYRKDSC	13629	\CYRPSI	13557
\cyreref	13793	\cyrkdsc	13631	\cyrpsi	13559
\CYREREV	13419, 13791	\CYRKHCRS	13637	\CYRR	13393
\cyrerev	13484	\cyrkhcrs	13639	\cyrr	2451, 2453, 2456, 2459, 2460, 2466, 2470, 2471, 2473, 2475, 2476, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 13458
\CYRERY	13415, 13815	\CYRKHK	13715	\CYRRTICK	13603
\cyrery .	2451, 2453, 13480, 13817	\cyrkhk	13717	\cyrrtick	13605
\CYRF	13401	\CYRKOPPA	13589	\CYRS	13395, 13662
\cyrf	13466	\cyrkoppa	13591	\cyrs	2456, 2459, 2462, 2463, 2466, 2481, 2482, 2483, 2484, 2488, 13460, 13665
\CYRFITA	13561	\CYRKSI	13553	\CYRSCHWA	13751, 13755
\cyrfita	13563	\cyrksi	13555	\cyrschwa	13753, 13757
\CYRG	13332, 13366	\CYRKVCRS	13633	\CYRSDSC	13661, 13662
\cyrg	2469, 13431, 13497	\cyrkvcrs	13635	\cyrsdsc	13664
\CYRGDSC	13811	\CYRL	13383	\CYRSEMISFTSN	13599
\cyrgdsc	13813	\cyrl	2467, 2469, 2471, 2473, 13448	\cyrsemisftsn	13601
\CYRGHCRS	13611	\CYRLDSC	13719	\CYRSFTSN	13417
\cyrghcrs	13613	\cyrl dsc	13721	\cyrstsn	13482
\CYRGHK	13615	\CYRLJE	13345	\CYRSH	13409
\cyrghk	13617	\cyrlje	13510	\cyrsh	13474
\CYRGUP	13607	\CYRLYUS	13537	\CYRSHCH	13411
\cyrgup	13609	\cyrlyus	13539	\cyrshch	13476
\CYRH	13403	\CYRM	13385	\CYRSHHA	13695
\cyrh	13468	\cyrm	2456, 2460, 2486, 2487, 13450	\cyrshha	13697
\CYRHDSC	13679	\CYRMDSC	13731	\CYRT	13397
\cyrhdsc	13681	\cyrmdsc	13733	\cyrt	2456, 2459, 2465, 2467, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 13462
\CYRHHK	13819	\CYRN	13387	\CYRTDSC	13667
\cyrhhk	13821	\cyrn	2453, 2459, 2460, 2462, 2463, 2465, 2473, 2479, 2480, 13452	\cyrt dsc	13669
\CYRHRDSN	13413	\CYRNDSC	13645	\CYRTETSE	13683
\cyrhrdsn	13478	\cyrndsc	13647	\cyrtetse	13685
\CYRI .	13353, 13376, 13379, 13771, 13775	\CYRNG	13649	\cyrthousands	13593
\cyri	2453, 2456, 2460, 2466, 2471, 2473, 13441, 13444, 13518, 13773, 13777	\cyrng	13651	\CYRTSHE	13349
\CYRIE	13334	\CYRNHK	13723	\cyrtshe	13514
\cyrie	13499	\cyrnhk	13725	\CYRU .	13356, 13399, 13795, 13799, 13803
\CYRII	13338, 13341	\CYRNJE	13347	\cyr	2463, 2465, 2479, 2480, 2483, 2487, 13464, 13797, 13801, 13805
\cyr ii	13503, 13506	\cyrnje	13512	\CYRUK	13573
\CYRIOTBYUS	13549	\CYRO	13389, 13779	\cyruk	13575
\cyriotbyus	13551	\cyro	2456, 2459, 2462, 2463, 2473, 2482, 2483, 2485, 2486, 2487, 13454, 13781	\CYRUSHRT	13355
\CYRIOTE	13533	\CYROMEGA	13525	\cyrushrt	13520
\cyriote	13535	\cyromega	13527	\CYRV	13364
\CYRIOTLYUS	13541	\CYROMEGARND	13577	\cyrv	2451, 2453, 13429
\cyriotlyus	13543	\cyromegarnd	13579		
\CYRISHRT	13378	\CYROME GATITLO	13581		
\cyrishrt	13443	\cyromegatitlo	13583		
\CYRISHRTDSC	13595	\CYROT	13585		
\cyrishrt dsc	13597	\cyrot	13587		
\CYRIZH	13565, 13569	\CYROTLD	13783, 13787		

\CYRY	13671	\DeclareTextAccent 12046, 12047,	2763, 2835, 2844, 2847, 2848,
\cyrY	13673	12048, 12049, 12050, 12051,	2849, 2850, 2851, 2857, 2863,
\CYRYA	13423	12052, 12053, 12054, 12055,	2864, 2865, 2866, 2886, 2893,
\cyrYA	13488	12056, 12057	2900, 2901, 2904, 2907, 2910,
\CYRYAT	13529	\DefaultHeightofCheckBox 4484,	2913, 2916, 2919, 2922, 2945,
\cyrYAT	13531	10419, 10892, 11247	2948, 2951, 3799, 3887, 3943,
\CYRYHCRS	13675	\DefaultHeightofChoiceMenu ..	4245, 4250, 4262, 4299, 4302,
\cyrYhcrs	13677	. 4486, 10259, 10710, 11047	4305, 4308, 4311, 4314, 4317,
\CYRYI	13340	\DefaultHeightofReset ... 4482,	4321, 4324, 4327, 4330, 4333,
\cyrYI	13505	10393, 10865, 11215	4336, 4339, 4342, 4345, 4348,
\CYRYO	13327	\DefaultHeightofSubmit .. 4480,	4351, 4354, 4357, 4360, 4363,
\cyrYO	13492	10375, 10842, 11191	4382, 4388, 4402, 4418, 4424,
\CYRYU	13421	\DefaultHeightofText 4488,	9212, 9214, 9217, 9219, 9221,
\cyrYU	13486	10235, 10685, 11014	9230, 9238, 9245, 9247, 9249,
\CYRZ	13374, 13624, 13763	\DefaultHeightofTextMultiline	9251, 9253, 9255, 9264, 9274,
\cyrZ ... 2470, 2475, 2476, 13439,		. 4489, 10233, 10683, 11012	9276, 9278, 9279, 9285, 9294,
13627, 13765		\DefaultOptionsofCheckBox 4494,	9296, 9298, 9300, 9302, 9304,
\CYRZDSC	13623	10422, 10895, 11250	9306, 9308, 9310, 9312, 9314,
\cyrzdsc	13626	\DefaultOptionsofComboBox 4497	9316, 9318, 9320, 9322, 9324,
\CYRZH	13372, 13711, 13759	\DefaultOptionsofListBox 4496	9325, 9326, 9327, 9328, 9329,
\cyrzh .. 2453, 2473, 13437, 13713,		\DefaultOptionsofPopdownBox .	9330, 9331, 9332, 9333, 9334
13761	 4498	\df@tag
\CYRZHDSC	13619	\DefaultOptionsofPushButton .	6185, 6191
\cyrzhdsc	13621	. 4493, 10349, 10814, 11158	\DH
		\DefaultOptionsofRadio .. 4499	12305, 12674
		\DefaultOptionsofReset .. 4492,	\dh
		10396, 10868, 11218	12374, 12742
		\DefaultOptionsofSubmit . 4491,	\dhal
		10378, 10845, 11194	14467
		\DefaultOptionsofText ... 4495,	\dimen@ . 365, 366, 370, 1302, 1370,
		10241, 10691, 11020	1371, 1374, 1376, 2994, 2995,
		\DefaultWidthofCheckBox . 4485,	2997, 3004, 3005, 8685, 8686,
		10418, 10891, 11246	8688, 9175, 9187, 9190
		\DefaultWidthofChoiceMenu 4487,	\dimexpr .. 377, 1601, 1603, 1611,
		10258, 10709, 11046	1616, 1619, 1621, 1635, 1637,
		\DefaultWidthofReset 4483,	1640, 1641, 1648, 1651, 1654,
		10392, 10864, 11214	1655, 1656, 1657, 1667, 1672,
		\DefaultWidthofSubmit ... 4481,	1680, 1684, 1689, 1699, 1702,
		10374, 10841, 11190	1707, 1710, 1715, 1716
		\DefaultWidthofText 4490, 10230,	\DingObject
		10680, 11009	10787
		\define@key .. 1865, 1867, 1910,	\discretionary
		1925, 1928, 1931, 1935, 1939,	513
		1943, 1947, 1951, 1955, 1959,	\divide
		1962, 1965, 1982, 1994, 1996,	7244, 8719
		1999, 2002, 2019, 2023, 2026,	\DJ ... 2523, 12306, 12806, 14325
		2029, 2032, 2035, 2038, 2073,	\dj 2520, 2521, 12808, 14318
		2130, 2150, 2151, 2165, 2168,	\do
		2171, 2174, 2177, 2185, 2188,	951, 1882, 1887, 1892,
		2191, 2194, 2198, 2226, 2242,	2736, 2757, 2758, 2759, 2760,
		2247, 2250, 2253, 2256, 2260,	2775, 2776, 2777, 2778, 2779,
		2263, 2270, 2299, 2318, 2321,	2780, 2783, 2784, 2785, 2786,
		2547, 2578, 2586, 2594, 2601,	2787, 2788, 2791, 2792, 2795,
		2604, 2619, 2644, 2647, 2651,	2796, 2797, 2798, 2799, 2802,
		2679, 2684, 2688, 2691, 2698,	2803, 2804, 2805, 2806, 2809,
		2710, 2718, 2721, 2724, 2726,	2810, 2811, 2812, 2813, 2816,
		2729, 2738, 2748, 2755, 2762,	2817, 2818, 2819, 2820, 2823,
			2824, 2827, 2828, 2829, 2832,
			2833, 2839, 2840, 2841, 2842,
			2938, 2939, 2940, 2941, 2942,
			2943, 3847, 5408, 5905, 5928,
			10263, 10325, 10531, 10538,
			10548, 10714, 10777, 11051,
			11115, 11810
			\documentclass
			2

<code>\dospecials</code>	11815	<code>\everypar</code>	5485	11525, 11527, 11553, 11562,	
<code>\dots</code>	413	<code>\ExecuteOptions</code> 3009, 3010, 3014		11564, 11588, 11596, 11598,	
<code>\dp</code>	4474, 4477, 5608, 7579, 7647, 7676, 7706, 9176, 9179, 9733, 9993, 10995	<code>\ext@figure</code>	6376	11622, 11630, 11632	
<code>\dth@counter</code>	5448, 5449, 5474	<code>\ext@table</code>	6375	<code>\Fld@bordersep</code>	4233, 4340
<code>\dth@everypar</code>	5462	<code>\extra@b@citeb</code>	5912	<code>\Fld@borderstyle</code>	4235, 4337, 11379, 11409, 11486, 11519, 11551, 11586, 11638
<code>\dvipdfm@setdim</code>	10992, 11034, 11126, 11147, 11179, 11205, 11234, 11261	<code>\extrasvietnam</code>	2587	<code>\Fld@borderwidth</code>	4234, 4334, 4468, 4471, 4472, 4475, 4476, 10313, 10314, 10765, 10766, 11102, 11103, 11379, 11409, 11486, 11519, 11551, 11586, 11638
E		<code>\extrasvietnamese</code>	2579		
<code>\ECIRCUMFLEX</code> 14326, 14410, 14411, 14412, 14413, 14414		F		<code>\Fld@calculate@code</code> 4369, 11441, 11443	
<code>\ecircumflex</code> 14319, 14350, 14351, 14352, 14353, 14354		<code>\fa</code>	14479	<code>\Fld@cbsymbol</code>	4236, 4352, 11393
<code>\EdefEscapeString</code>	620	<code>\FancyVerbLineautorefname</code> 2338, 2356, 2374, 2392, 2410, 2428, 2446, 2481, 2484, 2504, 2522, 6813		<code>\Fld@charsize</code>	4226, 4227, 4331, 10312, 10764, 11101, 11395, 11507, 11535, 11572, 11620
<code>\EdefUnescapeString</code>	617	<code>\farsikaf</code>	14500	<code>\Fld@checkedfalse</code>	4222
<code>\egroup</code>	512, 8336, 8918, 10478, 10570, 10595	<code>\farsiya</code>	14502	<code>\Fld@checkequals</code>	4291, 10264, 10326, 10539, 10549, 10715, 10778, 11052, 11116
<code>\em</code>	444	<code>\fatha</code>	14492	<code>\Fld@choices</code>	4115, 4123, 4125, 4129, 4138, 4146, 4151, 4199, 4201, 4209, 4210, 11509
<code>\emph</code>	423	<code>\fbox</code>	10669, 10672	<code>\Fld@color</code>	4230, 4364, 11396, 11508, 11536, 11573
<code>\empty</code>	933, 2654	<code>\Field@addtoks</code> 4287, 4309, 4312, 4403, 4426		<code>\Fld@default</code>	4140, 4143, 4145, 4343, 10228, 10245, 10256, 10297, 10416, 10468, 10486, 10500, 10508, 10515, 10541, 10551, 10581, 10591, 10678, 10696, 10707, 10749, 10889, 11007, 11025, 11044, 11086, 11244, 11537, 11538, 11574
<code>\enc@html</code>	4249, 4252	<code>\Field@boolkey</code> 3800, 3888, 4282, 4303, 4306		<code>\Fld@disabledfalse</code>	4223
<code>\enc@update</code>	398	<code>\Field@toks</code>	4285, 4286, 4288, 10239, 10270, 10347, 10373, 10391, 10420, 10470, 10487, 10498, 10509, 10519, 10536, 10554, 10562, 10567, 10583, 10592, 10689, 10721, 10812, 10840, 10863, 10893, 11018, 11058, 11156, 11189, 11213, 11248	<code>\Fld@export</code> 3952, 3955, 3962, 4254	
<code>\END</code>	1032, 1033, 1058, 1059, 1074, 1075, 1092, 1093, 1110, 1111, 1479, 1485, 1490, 1574, 1576, 7360, 7373, 7377, 7383, 7396, 7400, 7405, 7417, 7421	<code>\Field@Width</code>	4225, 4319	<code>\Fld@findlength</code>	10518, 10529
<code>\end</code>	14509	<code>\figureautorefname</code>	2328, 2346, 2364, 2382, 2400, 2418, 2436, 2466, 2494, 2512, 6803	<code>\Fld@flags</code>	4021, 4023, 4034, 4036, 4050, 4052, 4082, 4084, 4107, 4109, 11377, 11407, 11484, 11517, 11549, 11584, 11618
<code>\endeqnarray</code>	5354, 5372, 5379	<code>\filename@area</code>	3728	<code>\Fld@format@code</code>	4367, 11433, 11435
<code>\endequation</code>	5317, 5349	<code>\filename@base</code>	3728	<code>\Fld@getmethodfalse</code>	4273
<code>\endForm</code>	4239	<code>\filename@ext</code>	3725, 3726, 3728, 3729	<code>\Fld@getmethodtrue</code>	4275
<code>\endinput</code>	64, 2162, 2202, 2203, 2216, 2220, 2221, 2230, 2231, 2237, 2238, 3173, 3273, 6568, 8866, 10028, 11916	<code>\filename@parse</code>	3724	<code>\Fld@height</code>	4328, 10231, 10248, 10259, 10315, 10330, 10340, 10375, 10393, 10419, 10428, 10681, 10700, 10710, 10767, 10792, 10805, 10842, 10865, 10892, 10903, 11010, 11027, 11047, 11104, 11114, 11141, 11191, 11215, 11247, 11255
<code>\endlinechar</code>	3490	<code>\find@pdfink</code>	7043, 7084, 7093		
<code>\endNoHyper</code>	4598	<code>\Fld@additionalactions</code> 11428, 11471, 11475			
<code>\EndPreamble</code>	10031	<code>\Fld@additionalactions</code>	11428, 11510, 11542, 11576		
<code>\endsubeqnarray</code>	5383, 5394	<code>\Fld@align</code>	4229, 4346, 11378, 11485, 11550		
<code>\eqnarray</code>	5353, 5355, 5376	<code>\Fld@annotflags</code>	4007, 4009, 11374, 11404, 11481, 11514, 11546, 11581, 11615		
<code>\equal</code>	5986	<code>\Fld@bcolor</code>	4231, 4358, 11389, 11391, 11501, 11503, 11529, 11531, 11554, 11566, 11568		
<code>\equation</code>	5316, 5325, 5329, 5338	<code>\fld@bcolor</code>	11489		
<code>\equationautorefname</code> 2325, 2343, 2361, 2379, 2397, 2415, 2433, 2451, 2452, 2491, 2509, 6796, 6800		<code>\Fld@bordercolor</code>	4232, 4361, 11385, 11387, 11411, 11419, 11421, 11488, 11497, 11499,		
<code>\errmessage</code>	2544				
<code>\es@roman</code>	471				
<code>\escapechar</code>	383, 5401, 11833, 11834, 11883				
<code>\eTeX</code>	419, 10036				
<code>\etex@unexpanded</code>	1234, 1241				
<code>\eTeXversion</code>	7203, 7205, 7207				
<code>\evensidemargin</code>	6076				

\Fld@hiddenfalse	3910	\Fld@validate@code 4368, 11437,	\g@addto@macro 4761, 4912, 4960,
\Fld@hiddentrue	3911	11439	5814, 6086, 7424, 8709, 8973,
\Fld@invisiblefalse	3906	\Fld@value 4141, 4148, 4150, 4349,	9468, 9542, 9604, 9885, 10042
\Fld@invisibletrue	3907	10229, 10245, 10257, 10296,	\G@refundefinedtrue 3625, 5914,
\Fld@keystroke@code 4370, 11429,		10297, 10679, 10696, 10708,	5937, 6573, 6593, 6610, 6724
11431		10748, 10749, 11008, 11025,	\gaf
\Fld@listcount . . . 10324, 10327,		11045, 11085, 11086, 11575	14501
10336, 10776, 10779, 10793,		\Fld@width . . 4318, 10230, 10244,	\Gauge
10799, 11113, 11117, 11121,		10248, 10258, 10295, 10306,	4441
11125, 11133, 11138		10308, 10330, 10340, 10361,	\GenericError
\Fld@loc	4300	10374, 10382, 10392, 10406,	520
\Fld@maxlen . . 4228, 4322, 11577		10418, 10425, 10428, 10680,	\GenericInfo
\Fld@menulength . . . 4224, 4325,		10695, 10700, 10709, 10747,	522
10261, 10265, 10312, 10530,		10758, 10760, 10792, 10805,	\GenericWarning
10531, 10534, 10712, 10716,		10827, 10841, 10849, 10864,	521
10764, 11049, 11053, 11101		10878, 10891, 10899, 10903,	\getpagerefnnumber
\Fld@name . . . 4315, 10227, 10255,		11009, 11024, 11027, 11046,	5281
10345, 10415, 10467, 10472,		11084, 11095, 11097, 11114,	\getrefbykeydefault 5251, 5252
10483, 10484, 10495, 10496,		11141, 11172, 11190, 11198,	\gexmode
10505, 10506, 10514, 10535,		11214, 11228, 11246, 11254,	8740, 8741, 8825
10552, 10560, 10565, 10580,		11255	\ghayn
10589, 10677, 10706, 10810,		\float@caption	14477
10888, 11006, 11043, 11154,		5694, 5745	\Gin@setfile
11243, 11368, 11370, 11375,		\float@makebox	6260, 6261
11405, 11482, 11515, 11547,		5747, 5748	\glossary
11582, 11616		\floatingpenalty	485
\Fld@norotatefalse	3923	5609	\glq
\Fld@norotatetrue	3922	\flq	474
\Fld@noviewfalse	3926	478	\glqq
\Fld@noviewtrue	3927	\flqq	472
\Fld@nozoomfalse	3919	476	\greek@Alph
\Fld@nozoomtrue	3918	\fmtname	5147
\Fld@onblur@code . . 4372, 11449,		7	\Greeknumeral
11451		\fmtversion	797
\Fld@onclick@code . . 4366, 4425,		7	\greeknumeral
11425		\fontencoding . . . 391, 395, 10661	796
\Fld@onenter@code . 4375, 11461,		\fontfamily	\grq
11463		10660	475
\Fld@onexit@code . . 4376, 11465,		\fontseries	\grqq
11467		5441, 10662	473
\Fld@onfocus@code . 4371, 11445,		\fontshape	\guill@spacing
11447		3431, 10663	726
\Fld@onmousedown@code . . . 4373,		\footins	\guillemotleft 766, 12232, 12412,
11453, 11455		5603	12600, 14305
\Fld@onmouseup@code 4374, 11457,		\footnote	\guillemotright 767, 12263,
11459		3776	12413, 12632, 14306
\Fld@printfalse	3915	\footnoteautorefname 2326, 2344,	\guilsinglleft . . . 12163, 12414,
\Fld@printtrue	3914	2362, 2380, 2398, 2416, 2434,	14011, 14307
\Fld@rotation . 4237, 4355, 11381,		2455, 2458, 2492, 2510, 6797,	\guilsinglright . . 12165, 12415,
11383, 11410, 11415, 11417,		6801	14013, 14308
11487, 11493, 11495, 11521,		\footnotesep	
11523, 11552, 11558, 11560,		5607, 5614	H
11587, 11592, 11594, 11621,		\footnotesize	\H . . . 12459, 12491, 12510, 12524,
11626, 11628		449, 5605	12939, 12941, 13003, 13005,
\Fld@submitflags . . . 3989, 3991,		\footnotetext	13803, 13805
11608		5560	\h 2513, 14333, 14338, 14343, 14348,
		\Form	14353, 14358, 14363, 14368,
		4238	14373, 14378, 14383, 14388,
		\Form@action . 4248, 10459, 11606	14393, 14398, 14403, 14408,
		\Form@boolkey	14413, 14418, 14423, 14428,
		4242	14433, 14438, 14443, 14448
		\Form@htmlfalse 4241, 4259	\H@@footnotemark . . . 5493, 5510,
		\Form@htmltrue	5630, 5642, 5653
		4253	\H@@footnotetext . . . 5492, 5502,
		\Form@method . . 4271, 4279, 10459	5525, 5586, 5631, 5645, 5653
		\frq	\H@@mpfootnotetext . 5500, 5512,
		479	5514
		\frqq	\H@definecounter . . . 6166, 6168
		477	\H@endeqnarray
		\futurelet	5354, 5373
		532, 1026	\H@endequation
		\FV@SetLineNo	5317, 5349
		5181	\H@endsubeqnarray . . 5383, 5395
		\FV@StepLineNo . 5180, 5182, 5183	\H@eqnarray
			5353, 5358
		G	\H@equation
\G . . . 12463, 12489, 12508, 13089,			5316, 5340
13091, 13093, 13095, 13097,			\H@item . . . 5060, 5066, 5822, 5847
13099, 13100, 13102, 13104,			\H@newctr
13106, 13108, 13110, 13112			6171, 6173

<code>\H@old@part</code>	11957, 11968	<code>\htmladdnormallinkfoot</code> . .	3776	<code>7905, 8322, 8338, 8406, 8418,</code>
<code>\H@old@chapter</code> . .	11925, 11927	<code>\htmlref</code>	3777	<code>8881, 9691, 9705, 9952, 9965</code>
<code>\H@old@sect</code>	11979, 11985	<code>\Huge</code>	446	<code>\Hy@activeanchortrue</code> 7076, 7534,
<code>\H@old@spart</code>	11970, 11972	<code>\huge</code>	450	<code>7547, 7618, 7626, 7901, 8318,</code>
<code>\H@old@essect</code>	11920, 11922	<code>\Hurl</code>	3578, 3580, 3582	<code>8335, 8404, 8415, 8871, 9688,</code>
<code>\H@refstepcounter</code> . .	5075, 5085,	<code>\hv@pdf@char</code> 11741, 11804, 11805,		<code>9701, 9949, 9961</code>
<code>5182, 5291, 5339, 5454, 5689,</code>		<code>11806, 11807</code>		<code>\Hy@ActiveCarriageReturn</code> 3524,
<code>6389, 6442</code>		<code>\hvtex@buffer</code> . 8605, 8608, 8616,		<code>3527</code>
<code>\H@seteqlabel</code>	6203, 6205	<code>8619, 8628, 8632, 8648</code>		<code>\Hy@appendixstring</code> . 5128, 5135
<code>\H@subeqnarray</code>	5382, 5386	<code>\hvtex@gettoken</code> 8605, 8617, 8621,		<code>\Hy@author</code> 4695, 4699
<code>\ha</code>	14485	<code>8630, 8634</code>		<code>\Hy@babelnormalise</code> . 3593, 3595
<code>\Haa</code>	14464	<code>\hvtex@gettoken@</code> . . . 8605, 8606		<code>\Hy@backout</code> 3484, 4583, 4587, 5788
<code>\halign</code>	494	<code>\hvtex@par@dimension</code> 8601, 8640		<code>\Hy@backreffalse</code> 288, 2290, 2312,
<code>\hamza</code>	14452	<code>\hvtex@par@direction</code> 8602, 8643		<code>3181</code>
<code>\HAR@checkcitations</code>	6002	<code>\hvtex@par@duration</code> 8603, 8635		<code>\Hy@backreftrue</code> 2283, 2287, 2309
<code>\HAR@citetoaux</code>	5958	<code>\hvtex@par@motion</code> . . 8604, 8637		<code>\Hy@BeginAnnot</code> 8018, 8033, 8071,
<code>\HAR@tempa</code> 6003, 6004, 6005, 6006,		<code>\hvtex@param@dimension</code> . . 8612,		<code>8099, 8124</code>
<code>6007, 6008</code>		<code>8641, 8659, 8662</code>		<code>\Hy@bibcite</code> 5811, 5815
<code>\harvardcite</code>	5952, 5989	<code>\hvtex@param@direction</code> . . 8613,		<code>\Hy@bookmarksdepth</code> . 2650, 2655,
<code>\harvarditem</code>	5977	<code>8644, 8670, 8678</code>		<code>2667, 2673, 11655</code>
<code>\hbox</code>	1294, 1300, 1306, 1787,	<code>\hvtex@param@duration</code> . . 8614,		<code>\Hy@bookmarksnumberedfalse</code> 289
<code>2665, 2671, 4319, 4462, 4463,</code>		<code>8636, 8683, 8685</code>		<code>\Hy@bookmarksopenfalse</code> . . . 290
<code>4464, 4465, 5942, 6071, 7510,</code>		<code>\hvtex@param@motion</code> 8615, 8638,		<code>\Hy@bookmarkstrue</code> 291
<code>7580, 7587, 7648, 7659, 7677,</code>		<code>8659, 8666</code>		<code>\Hy@bookmarkstype</code> . . 2685, 2687,
<code>7688, 7707, 7718, 7976, 8887,</code>		<code>\hvtex@parse@trans</code> . 8590, 8610		<code>6102, 11666</code>
<code>9179, 9190, 9734, 9741, 9994,</code>		<code>\hvtex@produce@trans</code> 8649, 8655		<code>\Hy@boolkey</code> . . 1833, 1926, 1929,
<code>10002, 10607, 11026, 11114,</code>		<code>\hvtex@token</code> . . 8607, 8618, 8624,		<code>1932, 1960, 1963, 1966, 1997,</code>
<code>11141, 11170, 11199, 11229,</code>		<code>8631, 8636, 8639, 8642, 8644</code>		<code>2000, 2003, 2020, 2024, 2027,</code>
<code>11255</code>		<code>\hvtex@trans@code</code> . . 8594, 8595,		<code>2030, 2033, 2036, 2039, 2261,</code>
<code>\hc@currentHref</code>	5705	<code>8596, 8597, 8598, 8599, 8600,</code>		<code>2264, 2319, 2602, 2605, 2620,</code>
<code>\HCode</code> 10459, 10461, 10472, 10481,		<code>8611, 8657, 8658, 8660, 8662,</code>		<code>2645, 2648, 2689, 2692, 2730,</code>
<code>10493, 10501, 10503, 10534,</code>		<code>8664, 8666, 8668, 8670, 8672,</code>		<code>2845, 2902, 2905, 2908, 2911,</code>
<code>10540, 10545, 10550, 10564,</code>		<code>8673, 8674, 8675, 8676, 8678</code>		<code>2914, 2917, 2920, 2928, 2949,</code>
<code>10569, 10573, 10576, 10585</code>		<code>\hvtex@trans@effect@Blinds</code> . .		<code>2952</code>
<code>\headerps@out</code> . 4970, 9458, 9469,		<code>8594</code>		<code>\Hy@BorderArrayPatch</code> 9225, 9228,
<code>9529, 9543, 9596, 9605, 9618,</code>		<code>\hvtex@trans@effect@Box</code> . 8595		<code>9467, 9884</code>
<code>9631, 9669, 9772, 9886, 10043</code>		<code>\hvtex@trans@effect@Dissolve</code> .		<code>\Hy@breaklinks@unsupported</code> . .
<code>\hfill</code> . . . 4462, 4463, 4464, 4465,		<code>8596</code>		<code>2008, 8853</code>
<code>5833, 5866</code>		<code>\hvtex@trans@effect@Glitter</code> .		<code>292</code>
<code>\Hfootnoteautorefname</code> . . . 6797		<code>8597</code>		<code>\Hy@breaklinks@sunhbox</code> 9166, 9182
<code>\hhyperref</code>	3781	<code>\hvtex@trans@effect@R</code> . . . 8600		<code>\Hy@CatcodeWrapper</code> . 3360, 3419,
<code>\hoffset</code>	6072	<code>8598</code>		<code>3463, 3476</code>
<code>\hphantom</code>	459	<code>\hvtex@trans@effect@Split</code> 8599		<code>\Hy@centerwindowfalse</code> 293
<code>\href</code> . 486, 3562, 3775, 3776, 4623		<code>\hvtex@trans@effect@Wipe</code> 8599		<code>\Hy@chapapp</code> . . 5129, 5135, 5142,
<code>\href@</code>	3563, 3566, 3571	<code>\hvtex@trans@par</code> . . . 8631, 8635,		<code>11931, 11942, 12016</code>
<code>\href@split</code>	3571, 3572	<code>8637, 8640, 8643</code>		<code>\Hy@chapterstring</code> . . 5124, 5126,
<code>\hsize</code>	5610	<code>\hvtex@trans@params</code> 8625, 8627,		<code>5129, 5141</code>
<code>\hskip</code> . . . 1305, 1383, 1823, 1824,		<code>8651</code>		<code>\Hy@CheckOptionValue</code> 1877, 1914
<code>4468, 10607</code>		<code>\Hy@@boolkey</code> 1833, 1834		<code>\Hy@CJKbookmarksfalse</code> 294
<code>\hspace</code>	482, 5992, 5993	<code>\Hy@@@DefNameKey</code> 1907, 1909		<code>\Hy@cjkpu</code> 944, 946, 965
<code>\hss</code>	6080	<code>\Hy@@@escapeform</code> . . 11329, 11342,		<code>\Hy@colorlink</code> . 3423, 3431, 3435,
<code>\ht</code>	4470, 4473, 7585, 7651,	<code>11347</code>		<code>6987, 7069, 7124, 7160, 7195,</code>
<code>7657, 7663, 7680, 7686, 7692,</code>		<code>\Hy@@@temp</code> . 2695, 2697, 4378, 4380		<code>7504, 7535, 7556, 7584, 7593,</code>
<code>7710, 7716, 7722, 9175, 9739,</code>		<code>\Hy@abspage</code> 4781, 4846, 4956, 4995		<code>7619, 7633, 7654, 7666, 7684,</code>
<code>10000, 10993</code>		<code>\Hy@Acrobatmenu</code> 3051, 3092, 7483,		<code>7696, 7714, 7726, 7989, 8062,</code>
<code>\htmladdimg</code>	3774	<code>8123, 8567, 9338</code>		<code>8092, 8117, 8141, 8405, 8425,</code>
<code>\htmladdnormallink</code>	3775	<code>\Hy@activeanchorfalse</code> . . . 3488,		<code>8486, 8505, 8536, 8563, 8579,</code>
		<code>7077, 7537, 7551, 7620, 7629,</code>		

8889, 9150, 9152, 9689, 9710, 9738, 9747, 9950, 9970, 9999, 10007	\Hy@DvipdfmxOutlineOpentruer 3308	\Hy@GlobalStepCount 325, 4846, 5173, 5255, 6064, 6180, 6431, 6482, 11645, 11930, 11941, 11973, 11982, 12015
\Hy@ColorList 2735, 2736	\Hy@EndAnnot .. 8024, 8065, 8095, 8120, 8144	\Hy@gtemp .. 631, 632, 4145, 4146, 4150, 4151, 4162, 4176, 6871, 6873, 11368, 11370
\Hy@CounterExists .. 5025, 5038, 5041	\Hy@endcolorlink ... 3427, 3432, 3436, 6996, 7074, 7535, 7570, 7588, 7595, 7619, 7641, 7655, 7667, 7684, 7696, 7714, 7726, 7998, 8026, 8405, 8469, 8486, 8505, 8536, 8563, 8579, 8915, 9159, 9689, 9724, 9742, 9749, 9950, 9984, 9999, 10007	\Hy@href 3563, 3565
\Hy@currentbookmarklevel 11661, 11671, 11672, 11678, 11685, 11719, 11722, 11727, 11731	\Hy@EndWrap 3361, 3363, 3364, 3397	\Hy@hyperfootnotesfalse . 5489
\Hy@defaultdriver .. 3258, 3282, 3288	\Hy@escapeform ... 10247, 10329, 10339, 10364, 10383, 10407, 10427, 10698, 10782, 10803, 10830, 10851, 10879, 10901, 11031, 11120, 11143, 11176, 11201, 11230, 11258, 11323, 11352, 11359	\Hy@hyperfootnotestruer ... 298
\Hy@DefFormAction .. 4246, 4248	\Hy@escapeformfalse 295	\Hy@hyperindextrue 299
\Hy@DefNameKey 1906, 2756, 2774, 2782, 2790, 2794, 2801, 2808, 2815, 2822, 2826, 2831, 2838, 2937	\Hy@escapestring . 11320, 11393, 11425, 11431, 11435, 11439, 11443, 11447, 11451, 11455, 11459, 11463, 11467, 11574, 11575, 11606	\Hy@hypertextnamesfalse .. 1725
\Hy@DEST 9167, 9192	\Hy@EveryPageAnchor 6049, 6087	\Hy@hypertextnamestruer ... 300
\Hy@DestName 7033, 7037	\Hy@EveryPageBoxHook 4745, 4749, 4753, 6086, 8709, 8973	\Hy@implicittrue 301
\Hy@DisableOption .. 1863, 3044, 3045, 3046, 3048, 3162, 3188, 3311, 3312, 3313, 3314, 3315, 3316, 3317, 3318, 3319, 3320, 3321, 3322, 3323, 3324, 3325, 3326, 3327, 3329, 3359, 3412, 3440, 3441, 3486, 3487, 4544, 4545, 4546, 4547, 4548, 4549, 4550, 4551, 4552, 4553, 4554, 4555, 4556, 4557, 4558, 4559, 4560, 4561, 4562, 4563, 4564, 4565, 4566, 4567, 4719, 4914, 5657, 6265, 6321, 6322, 6913, 7014, 7347, 7348, 7349, 7350, 7351, 7352, 7353, 7354, 7480, 7752, 7753, 7754, 7755, 7756, 7757, 7758, 7759, 8016, 8178, 8179, 8180, 8181, 8182, 8183, 8184, 8185, 8254, 8390, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814, 9042, 9043, 9044, 9045, 9046, 9047, 9048, 9049, 9522, 9796, 9797, 9798, 9799, 9800, 9801, 9802, 9803	\Hy@ExchangeLeftParenthesis 6847, 6853	\Hy@Info .. 239, 1852, 3132, 3134, 3137, 3139, 3142, 3144, 3147, 3149, 3152, 3154, 3344, 3350, 3428, 3433, 3437, 3854, 4501, 4503, 4506, 4508, 4511, 4513, 4516, 4518, 4521, 4523, 4526, 4528, 4531, 4533, 5889, 5950, 6107
\Hy@displaydoctitlefalse . 322	\Hy@ExchangeRightParenthesis 6857, 6863	\Hy@LastPage 3065
\Hy@DistillerDestFix 6050, 8818, 8820	\Hy@false . 1769, 1844, 2275, 2311	\Hy@level .. 11667, 11669, 11680, 11685, 11686, 11687, 11711
\Hy@draftfalse 254	\Hy@figuresfalse 296	\Hy@levelcheck ... 11668, 11683
\Hy@drafttrue 255	\Hy@finalfalse 255	\Hy@linkcounter 329, 331, 5173, 5174, 5255, 5256, 6180, 6181, 6206, 6431, 6432, 6436, 6482, 6483, 6487, 11645, 11646, 11930, 11931, 11941, 11942, 11973, 11974, 11982, 11983, 12015, 12016
\Hy@driver 327, 2013, 2155, 2166, 2169, 2172, 2175, 2186, 2189, 2192, 2195, 2206, 2209, 2234, 2243, 2248, 2251, 2257, 3191, 3194, 3198, 3201, 3205, 3208, 3210, 3214, 3218, 3222, 3225, 3229, 3233, 3237, 3240, 3244, 3247, 3249, 3253, 3257, 3260, 3263, 3266, 3277, 3280, 3282, 3288, 3290, 3295, 3297, 3299	\Hy@finaltrue 254	\Hy@linkfileprefix . 2720, 3713, 3734, 7573, 8289, 9727, 9987
	\Hy@FirstPage 3062	\Hy@linktoc .. 1968, 1970, 1978, 1980, 1990, 6138
	\Hy@FirstPageHook .. 4746, 4759, 4761, 4968, 4969, 9468, 9542, 9604, 9885, 10042	\Hy@linktoc@all 1976
	\Hy@fitwindowfalse 297	\Hy@linktoc@none 1973
	\Hy@FixNotFirstPage 7508, 7509, 7515	\Hy@linktoc@page ... 1968, 1975, 1978
	\Hy@float@caption .. 5695, 5736, 5738	\Hy@linktoc@section 1970, 1974, 1980
	\Hy@float@currentHref ... 5739, 5741, 5743, 5751, 5753, 5754	\Hy@linktocpagefalse 302
	\Hy@footnote@currentHlabel 5532, 5546, 5578, 5620	\Hy@LT@currentHlabel 5293, 5304
	\Hy@footnote@currentHref 4539, 5516, 5519, 5527, 5530, 5533, 5547, 5550, 5577, 5618, 5621	\Hy@LT@currentHref . 5294, 5305
	\Hy@Gin@setfile 6260, 6262	\Hy@LT@footnotetext 5575, 5585
		\Hy@make@anchor 6179, 6186, 6192
		\Hy@make@df@tag@@ .. 6184, 6199
		\Hy@make@df@tag@@@ . 6190, 6200
		\Hy@maketitle@end .. 5634, 5639, 5641
		\Hy@maketitle@optarg 5632, 5637
		\Hy@MaybeStopNow ... 2197, 2202, 2220, 2230, 2237, 3015
		\Hy@menubartrue 303

\Hy@naturalnamesfalse	304	7271, 7845, 8042, 8072, 8073,	\Hy@safe@activetrue <u>338</u> , 3451,
\Hy@nestingfalse	305	8100, 8216, 8424, 8491, 8543,	3456, 3520, 3557, 3597, 3655,
\Hy@newline@author	4738	8544, 9103, 9256, 9265, 9384,	6623, 6702
\Hy@newline@title	4737	9402, 9403, 9427, 9428, 9857,	\Hy@saved@currentHlabel . . 5543,
\Hy@newwindowfalse	307	11345, 11843, 11859	5548
\Hy@newwindowsetfalse 306, 2925		\Hy@pstringDest 7032, 7033, 7845,	\Hy@saved@currentHref . . . 5544,
\Hy@newwindowsettrue	2927	7890, 9256, 9257, 9261, 9265,	5549
\Hy@next 4862, 4872, 4877, 11940,		9266, 9270	\Hy@saved@footnotemark . . 5628,
11950, 11953		\Hy@pstringF . . 7130, 7149, 7166,	5643
\Hy@nextfalse	3094, 6269	7185, 7190, 8072, 8086, 8543,	\Hy@saved@footnotetext . . 5629,
\Hy@NextPage	3056	8550, 8552, 9402, 9418, 9427,	5646
\Hy@nexttrue . . 3095, 3096, 3097,		9443, 9446	\Hy@saved@hook 4723, 4733
6270, 6271		\Hy@pstringName . . 11843, 11844,	\Hy@SaveLastskip . . . 1791, 7031,
\Hy@number 2878, 2882, 2890		11859, 11873	7527, 7541, 7613, 7624, 7843,
\Hy@newline . . . 11662, 11699,		\Hy@pstringP . . 7167, 7190, 8544,	8311, 8326, 8398, 8410, 8855,
11700, 11701		8552, 9428, 9446	8868, 9682, 9695, 9943, 9956
\Hy@ocgcolor . . 6990, 7004, 7992,		\Hy@pstringURI 7099, 7120, 8100,	\Hy@scanauthor 4693, 4698
8006		8113, 8424, 8434, 8491, 8495,	\Hy@scanoptauthor . . 4693, 4694
\Hy@ocgcolorlinksfalse . . 3407		9384, 9394	\Hy@scanopttitle . . . 4684, 4685
\Hy@org@chapter . . 11938, 11954		\Hy@PutCatalog . 4908, <u>4916</u> , <u>4984</u>	\Hy@scantitle 4684, 4689
\Hy@OutlineName . . 11844, 11897		\Hy@raisedlink 1776,	\Hy@secnum@part . . 11960, 11962,
\Hy@pageanchortrue 308		5117, 5258, 5264, 5265, 5266,	11965
\Hy@pagecounter . 330, 332, 5213,		5269, 5306, 5346, 5349, 5476,	\Hy@seminarslidesfalse . . 6381
6064, 6065		5518, 5529, 5590, 5617, 5729,	\Hy@seminarslidestrue . . . 6379
\Hy@pageheight 1937, 1941, 1945,		5799, 5823, 5828, 5848, 6182,	\Hy@setbreaklinks . . 2005, 2009,
1949, 1953, 1957, 3005, 9544,		6207, 9456, 9527, 9768, 9928,	2021, 6879, 7839
9632		11647, 11932, 11943, 11975,	\Hy@SetCatcodes . <u>181</u> , 231, 3013
\Hy@pagelabelsfalse 4768		11987, 12017	\Hy@SetNewWindow . . . 2931, 7151,
\Hy@pagelabelstrue 309		\Hy@raiselinksfalse . 313, 5951	7187, 8088, 8551, 9417, 9442
\Hy@param 5140, 5141, 5142, 5170,		\Hy@RemoveDurPageAttr . . 7383,	\Hy@setouterhbox . . . 9165, 9171
5174		<u>7396</u>	\Hy@setpagesizetrue 314
\Hy@PatchLanguageShorthands .		\Hy@RemoveHidPageAttr . . . 7405,	\Hy@setpdfborder . . . 2764, 7059,
. 3103, 3122		<u>7417</u>	7104, 7135, 7171, 7486, 8051,
\Hy@pdfafalse 323		\Hy@RemovePercentCr 3540, 3544,	8079, 8106, 8134, 8437, 8458,
\Hy@pdfencoding@pdfdoc . . 2112		3549	8479, 8498, 8529, 8556, 8572
\Hy@pdfmarkerrorfalse . . . 9130		\Hy@RemoveTransPageAttr . 7359,	\Hy@setpdfversiontrue . . . 2137
\Hy@pdfmarkerrortrue 9258, 9267		<u>7373</u>	\Hy@setref@link 6579, 6582
\Hy@pdfminorversion 6880, 6886,		\Hy@reserved@a 3649, 5356, 5385,	\Hy@slidetitle 6408, 6410, 6417,
6889, 6897, 6902, 6904, 6907,		10466, 10516, 10579	6425, 6435, 6459, 6461, 6468,
6911		\Hy@RestoreCatcodes <u>205</u> , 3011,	6476, 6486
\Hy@pdfpagehiddenfalse . . . 310		3301	\Hy@StartlinkName . . 7057, 7071
\Hy@pdfstringdef <u>630</u> , 4120, 4128		\Hy@RestoreLastskip <u>1791</u> , 7034,	\Hy@StepCount . <u>324</u> , 4823, 10265,
\Hy@pdfstringfalse . . 311, 4569		7538, 7552, 7621, 7630, 7892,	10327, 10531, 10716, 10779,
\Hy@pdfstringtrue . . . 499, 4541		8323, 8339, 8407, 8419, 8864,	11053, 11117, 11723, 11728,
\Hy@pdfversion 2138, 2149, 4122,		8882, 9692, 9706, 9953, 9966	11789
6902, 6904, 6908, 6911, 11363		\Hy@ReturnAfterElseFi <u>333</u> , 3528	\Hy@temp 527, 534,
\Hy@plainpagesfalse 312		\Hy@ReturnAfterElseFiFiEnd 337,	2694, 2703, 2704, 2705, 2706,
\Hy@PrevPage 3059		1268	2707, 2708, 2709, 2736, 2737,
\Hy@ps@CR <u>9586</u> , 9593, 9598, 9599,		\Hy@ReturnAfterFi <u>333</u> , 353, 1446,	2738, 2741, 2743, 2746, 2923,
9616, 9636, 9637, 9638, 9644,		3532, 3548, 6333, 6369, 6852,	2924, 3083, 3087, 3088, 3089,
9651, 9658, 9665		6862, 11346	3090, 3196, 3198, 3203, 3205,
\Hy@pstringB . . 7271, 7276, 8216,		\Hy@ReturnAfterFiFiEnd . . . 336,	3208, 3220, 3222, 3227, 3229,
8228, 9103, 9119, 9857, 9873		1260, 1274, 1352, 1359	3235, 3237, 3242, 3244, 3247,
\Hy@pstringD . . 7131, 7155, 8073,		\Hy@ReturnEnd 335, 336, 337, 1280,	3289, 3290, 3844, 3848, 3849,
8087, 9403, 9419		1364	3860, 3944, 3945, 3946, 3948,
\Hy@pstringdef <u>6817</u> , 7032, 7053,		\Hy@safe@activesfalse <u>338</u> , 3453,	3952, 4263, 4264, 4265, 4267,
7099, 7130, 7131, 7166, 7167,		3458, 3663, 6713	4271, 4272, 4377, 4393, 4394,

4395, 4396, 4397, 4398, 4399,
 4400, 4401, 4406, 4407, 4408,
 4409, 4410, 4411, 4412, 4413,
 4414, 4415, 4416, 4803, 4806,
 4815, 4817, 4821, 4825, 4869,
 4871, 5207, 5210, 5213, 5219,
 5319, 5325, 6330, 6331, 7286,
 7315, 7317, 7769, 7774, 7780,
 7784, 7787, 7792, 7823, 7825,
 8188, 8231, 8233, 9013, 9016,
 9020, 9021, 9027, 9028, 9034,
 9052, 9057, 9063, 9067, 9070,
 9075, 9108, 9110, 9222, 9223,
 9231, 9232, 9806, 9811, 9817,
 9821, 9824, 9829, 9862, 9864,
 11328, 11329, 11841, 11847,
 11855, 11870
 \Hy@temp@A . 558, 559, 1252, 1254,
 1265, 1267, 1272, 1273, 1276,
 6282, 6283, 6284, 6301, 6302,
 6303
 \Hy@temp@B 1253, 1254
 \Hy@tempa 1835,
 1837, 1839, 1840, 1842, 1844,
 1846, 1849, 1852, 1853, 2271,
 2272, 2273, 2275, 2276, 2278,
 2279, 2281, 2285, 2289, 2300,
 2302, 2304, 2305, 2307, 2311,
 3526, 3527, 3538, 3542, 3598,
 3602, 3654, 3657, 3666, 3668,
 4251, 4252, 4852, 4854, 4892,
 4894, 4995, 4997, 5403, 5405,
 5406, 5409, 5410, 5411, 5690,
 5695, 5700, 6101, 6102, 6119,
 6120, 6123, 6395, 6396, 6447,
 6448, 7557, 7558, 8292, 8431,
 8432, 9711, 9712, 9971, 9972,
 11665, 11666, 11689, 11691,
 11707, 11712, 12005, 12031,
 12036, 12039, 12042
 \Hy@tempb 4853, 4854, 4893, 4894,
 11690, 11691, 11712
 \Hy@tempcolor . 8897, 8899, 8912,
 8984, 8986, 8998
 \Hy@TempPageAnchor . 6054, 6061,
 6065, 6079
 \Hy@testname . . 7045, 7046, 7051,
 7053, 7054, 7068, 8034, 8035,
 8040, 8042, 8043, 8058, 8445,
 8446, 8451, 8455, 8516, 8517,
 8522, 8526, 8989, 8990, 8995,
 9006
 \Hy@texhtfalse 315
 \Hy@texhttrue 2152, 3192
 \Hy@title 4686, 4690
 \Hy@toclevel . . . 6112, 6116, 6125
 \Hy@toolbartrue 316
 \Hy@true . 1768, 1840, 1842, 2305,
 2307
 \Hy@typexmlfalse 317
 \Hy@undefinedname . . 7042, 7049,
 7051, 8031, 8038, 8040, 8422,
 8449, 8451, 8520, 8522, 8981,
 8993, 8995
 \Hy@unicodetfalse 318, 622, 2068,
 2069, 2077, 2853, 2859, 5209,
 6058, 11365
 \Hy@unicodetrue 2069
 \Hy@usehidkeyfalse 2728
 \Hy@usehidkeytrue 2732
 \Hy@usemaketitleInfos . . 4739,
 7327, 7734, 8156, 8797, 9012,
 9778
 \Hy@usemaketitleString . . 4720,
 4740, 4741
 \Hy@useNameKey 1919, 7293, 7294,
 7295, 7296, 7297, 7298, 7299,
 7300, 7319, 7799, 7800, 7801,
 7802, 7803, 7804, 7805, 7806,
 7827, 8195, 8196, 8197, 8198,
 8199, 8200, 8201, 8202, 8235,
 8770, 8771, 8772, 8773, 8774,
 8775, 8776, 8777, 9082, 9083,
 9084, 9085, 9086, 9087, 9088,
 9089, 9112, 9836, 9837, 9838,
 9839, 9840, 9841, 9842, 9843,
 9866
 \Hy@usetitlefalse 319
 \Hy@varioref@undefined . . 5275,
 5279, 6708
 \Hy@verbosefalse 320
 \Hy@vt@PutCatalog . . 4939, 4941
 \Hy@VTeXversion 4919, 4931, 8475,
 8583, 8717, 11743
 \Hy@Warning 237, 360, 1192, 1857,
 1872, 1897, 1984, 2096, 2101,
 2611, 2663, 3403, 3669, 3901,
 6093, 6689, 6738, 7047, 7876,
 7880, 8036, 8447, 8518, 8991,
 9259, 9268, 11674, 11692
 \Hy@WarningNoLine . . 238, 2011,
 2122, 2714, 2752, 2998, 3042,
 3200, 3209, 3224, 3239, 3248,
 3744, 4667, 4769, 4933, 5009,
 5194, 6103, 6252, 9138
 \Hy@WarningPageBorderColor . .
 2749, 2751, 2753
 \Hy@WarningPageColor 2711, 2713,
 2715
 \Hy@WarnOptionDisabled . . 1869,
 1871
 \Hy@WarnOptionValue 1850, 1856,
 2292, 2314
 \Hy@windowuitrue 321
 \Hy@writebookmark . . 1773, 6113,
 6415, 6423, 6433, 6466, 6474,
 6484, 11651, 11734
 \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 354, 358
 \HyCal@scan 345, 349, 373
 \HyColor@FieldBColor 4358, 4361
 \HyColor@FieldColor 4364
 \HyColor@HyperrefBorderColor .
 2739
 \HyColor@HyperrefColor . . 2699
 \HyColor@UseColor . . 3425, 6993,
 7004, 7995, 8006
 \HyField@PDFChoices 4140, 4141,
 4156
 \HyField@SetFlag . . 3834, 3836
 \HyField@UseFlag . . 3824, 3826
 \HyField@AddToFields . . 10612,
 10619, 10701, 10794, 10807,
 10834, 10859, 10883, 10905

\HyField@AdvanceAnnotCount . .	11204, 11209, 11233, 11238, 11260, 11265	\HyOrg@author . . 4683, 4696, 4700
10999, 11029, 11122, 11144, 11173, 11202, 11231, 11256		\HyOrg@float@makebox 5747, 5749
\HyField@afields . 10609, 10620, 10621, 10623, 10641	\HyField@UseFlag . . . 3823, 3964, 3965, 3966, 3967, 3968, 3969, 3970, 3971, 3974, 3975, 3976, 3977, 3980, 3981, 3982, 3985, 3996, 3997, 3998, 3999, 4000, 4001, 4002, 4003, 4004, 4015, 4016, 4017, 4029, 4030, 4031, 4042, 4043, 4044, 4045, 4047, 4058, 4059, 4060, 4061, 4062, 4063, 4064, 4065, 4076, 4079, 4090, 4091, 4092, 4093, 4095, 4097, 4098, 4101, 4104	\HyOrg@languageshorthands 3112, 3119, 3125
\HyField@AnnotCount . . . 10997, 11000, 11003		\HyOrg@make@df@tag@@ 6197
\HyField@FlagsAnnot 3994, 4013, 4027, 4040, 4056, 4088	\HyInd@hyperpage . . 6328, 6338	\HyOrg@make@df@tag@@@ . . . 6198
\HyField@FlagsCheckBox . . 4026, 10424, 10898, 11253	\HyInd@wrindex . . . 6277, 6278	\HyOrg@maketitle . . . 5626, 5633, 5638
\HyField@FlagsChoice 4087, 10305, 10757, 11094	\HyInd@EncapChar . . . 2322, 3007, 6273	\HyOrg@subequations 5420, 5427
\HyField@FlagsPushButton 4012, 10360, 10380, 10405, 10826, 10847, 10877, 11171, 11196, 11227	\HyInd@hyperpage . . . 6325, 6327, 6334	\HyOrg@title . . . 4682, 4687, 4691
\HyField@FlagsRadioButton 4039, 10301, 10753, 11090	\HyInd@org@wrindex . 6276, 6280, 6286, 6288	\HyOrg@url 3577
\HyField@FlagsSubmit 3960, 10381, 10848, 11197	\HyInd@pagelink 6343, 6349, 6351, 6354	\hyper@@anchor 3026, 3587, 3589, 3615, 3617, 3644, 3646, 3741, 4573, 4588, 4603, 5516, 5519, 5527, 5530, 5588, 5591, 5618, 5727, 5729, 5753, 6054, 6061, 6065, 6414, 6422, 6432, 6465, 6473, 6483
\HyField@FlagsText 4055, 10243, 10694, 11023	\HyInd@ParenLeft . . . 6267, 6283, 6302	\hyper@@link . . 3560, 3573, 3610, 3629, 3631, 3649, 5807, 5953, 5954, 5955, 6003, 6005, 6007, 6584, 6599, 6698
\HyField@NewBitsetFlag . . 3792, 3795, 3803	\HyInd@ParenRight . . 6268, 6284, 6303	\hyper@@normalise . . 3529, 3533, 3537
\HyField@NewFlag . . . 3790, 3866, 3867, 3868, 3869, 3870, 3871, 3872, 3873, 3874, 3875, 3876, 3877, 3878, 3879, 3880, 3881, 3882, 3883, 3884, 3885, 3890, 3891, 3892, 3893, 3894, 3895, 3896, 3897, 3898, 3931, 3933, 3934, 3936, 3937, 3939, 3940, 3941, 3942	\HyInd@removespaces 6357, 6360, 6370	\hyper@anchor . 3768, 4642, 7075, 7526, 7612, 7897, 8325, 8397, 8854, 9681, 9942
\HyField@NewFlagOnly 3794, 3932, 3935, 3938	\HyLang@addto . 2526, 2548, 2579, 2587	\hyper@anchorend 3029, 4568, 4577, 4591, 4606, 5118, 5259, 5307, 5349, 5368, 5392, 5477, 5801, 5826, 5829, 5849, 5982, 6182, 6207, 7077, 7549, 7628, 7904, 8320, 8417, 8873, 9703, 9963, 11647, 11735, 11933, 11944, 11976, 11988, 12018
\HyField@NewOption . 3791, 3797	\HyLang@afrikaans 2324	\hyper@anchorstart 3028, 4568, 4576, 4590, 4605, 5118, 5259, 5307, 5346, 5368, 5392, 5477, 5799, 5824, 5829, 5849, 5982, 6182, 6207, 7076, 7540, 7623, 7900, 8310, 8409, 8867, 9694, 9955, 11647, 11735, 11933, 11944, 11976, 11988, 12018
\HyField@PDFAFlagWarning 3900, 3908, 3912, 3916, 3920, 3924, 3928	\HyLang@DeclareLang 2540, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577	\hyper@chars 3554, 7100, 7530, 7543, 7562, 7581, 7591, 7604, 7672, 7702, 8278, 8298, 8313, 8329, 8401, 8412, 8492, 9385, 9697, 9716, 9735, 9745, 9758, 9958, 9976, 9996, 10005, 10017
\HyField@PDFChoices 4113, 10338, 10801, 11140	\HyLang@english 2342	\hyper@currentanchor 8870, 8879, 8891, 8908
\HyField@PrintFlags 3841, 3987, 4005, 4019, 4032, 4048, 4080, 4105	\HyLang@french 2360	\hyper@currentlinktype . . 8892, 8896, 8900
\HyField@SetFlag . . . 3833, 3973, 3979, 3984, 4018, 4046	\HyLang@german 2378	\hyper@hash . . 3506, 3507, 3555,
\HyField@SetKeys . . 4217, 10240, 10272, 10275, 10294, 10348, 10377, 10395, 10421, 10690, 10723, 10726, 10745, 10813, 10844, 10867, 10894, 11019, 11060, 11063, 11082, 11157, 11193, 11217, 11249	\HyLang@italian 2396	
\HyField@TheAnnotCount . 11002, 11033, 11038, 11125, 11134, 11146, 11151, 11178, 11184,	\HyLang@magyar 2414	
	\HyLang@portuges 2432	
	\HyLang@russian 2450	
	\HyLang@spanish 2490	
	\HyLang@vietnamese . 2508, 2579, 2587	
	\HyLinguex@OrgB 635, 639	
	\HyLinguex@OrgC 636, 640	
	\HyLinguex@OrgD 637, 641	
	\HyLinguex@Restore 638, 651, 655, 663, 2050	
	\HyOrg@addtoreset . . 6210, 6212, 6239	
	\HyOrg@appendix 5130, 5136	

3705, 3717, 3734, 3737, 4535, 8272
 \hyper@image . . . 3583, 3584, 7602, 8539, 8978, 9756, 10015
 \hyper@last 4658, 4662
 \hyper@link . . . 3027, 3658, 4574, 4575, 4589, 4599, 4604, 7087, 7599, 7643, 8066, 8269, 8509, 8982, 9753, 10012
 \hyper@link@ . . . 3034, 3650, 3652, 4572, 4582, 4586, 4596, 4611
 \hyper@linkend 3031, 4579, 4593, 4608, 5552, 5793, 5796, 6142, 6146, 6150, 6152, 7086, 7568, 7640, 8065, 8067, 8303, 8467, 8894, 9722, 9982
 \hyper@linkfile 3033, 3730, 4581, 4595, 4610, 7128, 7572, 7700, 8069, 8288, 8471, 9400, 9726, 9986
 \hyper@linkstart . . . 3030, 4578, 4592, 4607, 5550, 5789, 5796, 6142, 6146, 6150, 6152, 7078, 7555, 7632, 8032, 8067, 8291, 8423, 8884, 9709, 9969
 \hyper@linkurl 3032, 3582, 3705, 3712, 3733, 3737, 4580, 4594, 4609, 7097, 7573, 7575, 7600, 7670, 8097, 8276, 8289, 8489, 8540, 8979, 9382, 9727, 9729, 9754, 9987, 9989, 10013
 \hyper@livelink 4574, 4599
 \hyper@makecurrent . 5114, 5138, 5292, 5345, 5367, 5391, 5455, 5545, 5707, 5740
 \hyper@n@rmalise . . . 3521, 3525
 \hyper@nat@current 5790
 \hyper@nat@anchorend 5801
 \hyper@nat@anchorstart . . . 5798
 \hyper@nat@linkbreak 5795
 \hyper@nat@linkend 5792
 \hyper@nat@linkstart 5787
 \hyper@normalise . . . 3009, 3014, 3498, 3563, 3566, 3579, 3581, 3583, 3604, 4246
 \hyper@pageduration 7380, 7426, 8694, 8711, 8945, 8975
 \hyper@pagehidden . . 7403, 7427, 8704, 8712, 8962, 8976
 \hyper@pagetransition . . . 7356, 7425, 8585, 8710, 8928, 8974
 \hyper@quote . . . 4537, 7532, 7545, 7559, 7564, 7582, 7592, 7605, 8272, 8282, 8294, 8316, 8333, 9686, 9699, 9713, 9718, 9736, 9746, 9759, 9947, 9959, 9973, 9978, 9996, 10006, 10018
 \hyper@readexternallink . 3660, 3676
 \hyper@refstepcounter . . . 5093, 5096, 5103
 \hyper@tilde . . . 3515, 3516, 3517, 4536
 \hyperbaseurl . . . 2717, 2718, 4622
 \hypercalcbp 340, 340
 \hypercalcbpdef . . . 342, 379, 2897
 \hyperdef 3612, 4624
 \HyperDestNameFilter 2978, 7032, 7054, 7532, 7545, 7564, 7600, 7845, 8043, 8272, 8282, 8299, 8316, 8333, 8402, 8413, 8454, 8525, 9256, 9265, 9686, 9699, 9718, 9754, 9947, 9959, 9978, 10013, 11798, 11843, 11859
 \hypergetpageref 5252
 \hypergetref 5251
 \hyperimage . . . 3583, 3774, 6262
 \hyperlink 3559, 4625, 6366, 6504, 6512, 6527, 6535, 6545, 6553, 6560
 \hyperlinkfileprefix 2720, 2721, 2722, 9934
 \hyperpage 4631, 6324
 \HyperRaiseLinkDefault . . 1775, 1784
 \HyperRaiseLinkHook 1774, 1785
 \HyperRaiseLinkLength . . . 1783, 1784, 1787
 \hyperref 3592, 3781, 3782, 4627, 6656, 6660, 6670, 6684
 \hypersetup . . . 2089, 2564, 3008, 3010, 4621
 \hypertarget 3585, 4626
 \HyPL@CheckThePage 4873, 4891
 \HyPL@CheckThePage 4849, 4851
 \HyPL@Alph 4789
 \HyPL@alph 4790
 \HyPL@arabic 4786
 \HyPL@CheckThePage . . 4801, 4848
 \HyPL@Entry 4997, 5005, 5013, 5015
 \HyPL@EveryPage 4791, 4912
 \HyPL@Format . . . 4864, 4865, 4866, 4867, 4868, 4880
 \HyPL@found . . . 4863, 4870, 4874, 4881, 4891, 4893
 \HyPL@Labels . . . 4780, 4903, 4904, 4906, 4908, 4953, 4954, 5008, 5016, 5017
 \HyPL@LastNumber . . . 4784, 4819, 4842
 \HyPL@LastPrefix . . . 4785, 4813, 4844
 \HyPL@LastType . . 4783, 4804, 4843
 \HyPL@page 4794, 4796, 4801, 4809
 \HyPL@Prefix . . . 4809, 4811, 4813, 4827, 4830, 4832, 4844, 4858, 4896
 \HyPL@Roman 4787
 \HyPL@roman 4788
 \HyPL@SetPageLabels 4902, 4960, 4962, 5011
 \HyPL@storePageLabel 4827, 4829, 4899, 4951, 4992
 \HyPL@thisLabel 4777, 4779, 4793, 4796, 4797
 \HyPL@Type 4799, 4804, 4808, 4826, 4834, 4843, 4857, 4895
 \HyPL@Useless 4900, 4906
 \HyPsd@@@autoref . . . 1113, 1115, 1118
 \HyPsd@@@nameref . . . 1095, 1097, 1100
 \HyPsd@@@pageref . . . 1077, 1079, 1082
 \HyPsd@@@ref . . . 1061, 1063, 1066
 \HyPsd@@@UTFviii@four . . . 1650, 1653
 \HyPsd@@AppendItalcorr . . 1282
 \HyPsd@@autoref 1110, 1111
 \HyPsd@@autorefname 1131, 1134
 \HyPsd@@ConvertToUnicode 1576
 \HyPsd@@GetNextTwoTokens 1574
 \HyPsd@@GlyphProcessWarning 1452, 1455
 \HyPsd@@GreekNum . . 812, 821, 920, 924, 928
 \HyPsd@@hspace 1032, 1033
 \HyPsd@@LetCommand . . 1155, 1176
 \HyPsd@@nameref 1092, 1093
 \HyPsd@@pageref 1074, 1075
 \HyPsd@@ProtectSpacesFi . 1204, 1208, 1226, 1232, 1237
 \HyPsd@@ref 1058, 1059
 \HyPsd@@RemoveBraces . . . 1250
 \HyPsd@@RemoveBracesFi . . 1247, 1250
 \HyPsd@@RemoveCmdPrefix . 1409, 1412
 \HyPsd@@ReplaceFi . . 1479, 1485, 1490
 \HyPsd@@UTFviii@four 1634, 1639
 \HyPsd@add@accent . . . 401, 1021
 \HyPsd@AfterCountRemove . 1295, 1366
 \HyPsd@AfterDimenRemove . 1301, 1369
 \HyPsd@AfterSkipRemove . . 1307, 1381
 \HyPsd@AMSclassfix . . 481, 1042, 1044

\HyPsd@AppendItalcorr ... 1266,
1273, 1282
\HyPsd@autoref 491, 1110
\HyPsd@autorefname . 1122, 1128
\HyPsd@babel@danish 708
\HyPsd@babel@dutch 714
\HyPsd@babel@finnish 720
\HyPsd@babel@frenchb 725
\HyPsd@babel@german 730
\HyPsd@babel@macedonian .. 737
\HyPsd@babel@ngerman 743
\HyPsd@babel@portuges 749
\HyPsd@babel@russian 754
\HyPsd@babel@slovene 760
\HyPsd@babel@spanish 765
\HyPsd@babel@swedish 775
\HyPsd@babel@ukrainian ... 781
\HyPsd@babel@usorbian 787
\HyPsd@CatcodeWarning ... 1311,
1328, 1331, 1334, 1337, 1393
\HyPsd@CheckCatCodes . 545, 1288
\HyPsd@CJKActiveChars . 948, 961
\HyPsd@CJKhook 497, 930
\HyPsd@ConvertToUnicode .. 613,
1524
\HyPsd@DecimalToOctal . 940, 969
\HyPsd@DefCommand 528, 529, 530,
531, 1144
\HyPsd@DisableCommands 686, 688
\HyPsd@DoConvert ... 1526, 1536
\HyPsd@DoEscape 1550
\HyPsd@doxspace 585, 1497
\HyPsd@empty .. 570, 572, 576, 577,
579, 587, 594
\HyPsd@end . 545, 549, 1205, 1208,
1211, 1214, 1217, 1230, 1240,
1247, 1250, 1288, 1296, 1302,
1308, 1353, 1360, 1366, 1369,
1381
\HyPsd@endWithElse . 1011, 1020
\HyPsd@fi . 1222, 1228, 1232, 1238
\HyPsd@GetNextTwoTokens . 1574
\HyPsd@GetOneBye 1569
\HyPsd@GetTwoBytes 1565
\HyPsd@GLYPHERR 550, 1008, 1022,
1029
\HyPsd@GlyphProcess 552, 1440,
1453
\HyPsd@GlyphProcessWarning ..
..... 1447, 1451
\HyPsd@GobbleFiFi .. 1013, 1019
\HyPsd@greekNum .. 801, 804, 806
\HyPsd@greeknumeral .. 797, 803
\HyPsd@greeknumeral .. 796, 800
\HyPsd@greekNumI . 824, 850, 893,
919
\HyPsd@greekNumII 828, 872, 916,
923
\HyPsd@greekNumIII 831, 895, 927
\HyPsd@greekNumIV 840, 918
\HyPsd@greekNumV 843, 922
\HyPsd@greekNumVI 845, 926
\HyPsd@greekPatch 467, 793, 795
\HyPsd@hspace 482, 1032
\HyPsd@hspacetest .. 1035, 1037,
1040
\HyPsd@ifnextchar 514, 515, 516,
1181
\HyPsd@ignorespaces .. 495, 697
\HyPsd@InitUnicode 660
\HyPsd@inmathwarn ... 400, 1005
\HyPsd@ITALCORR . 506, 510, 1029
\HyPsd@LetCommand 532, 533, 1144
\HyPsd@LetUnexpandableSpace .
... 501, 502, 503, 504, 1025,
1028
\HyPsd@LoadStringEnc 2093, 2113,
2115, 2119, 2121
\HyPsd@LoadUnicode . 2045, 2047,
2055, 2058, 2060, 2067
\HyPsd@nameref 490, 1092
\HyPsd@pageref 489, 1074
\HyPsd@pdfencoding . 614, 2041,
2043, 2076, 2088, 2091, 2092,
2097, 2112
\HyPsd@pdfencoding@auto .. 614,
2082, 2092, 2109
\HyPsd@pdfencoding@pdfdoc 2075,
2097, 2110
\HyPsd@pdfencoding@unicode ..
..... 2079, 2111
\HyPsd@protected@testopt . 517,
518, 1185
\HyPsd@ProtectSpaces 538, 1202,
1223, 1272
\HyPsd@ref 488, 1058
\HyPsd@RemoveBraces 540, 1244,
1261, 1269, 1275
\HyPsd@RemoveCmdPrefix .. 1402,
1408
\HyPsd@RemoveMask .. 548, 1211,
1217, 1230, 1240
\HyPsd@RemoveSpaceWarning 1376,
1388, 1414
\HyPsd@ReplaceSpaceWarning ..
.... 1371, 1383, 1427
\HyPsd@Rest .. 1289, 1349, 1357,
1360, 1367, 1372, 1378, 1384,
1390
\HyPsd@SPACEOPTI . 542, 557, 558,
560, 562, 564, 565, 604, 606,
1324, 1508
\HyPsd@spaceopti 606, 1471
\HyPsd@String 539,
541, 544, 546, 551, 553, 1255,
1256, 1266, 1318, 1319, 1323,
1324, 1339, 1340, 1370, 1382,
1441, 1442
\HyPsd@StringSubst 554, 556, 562,
568, 571, 574, 577, 596, 599,
601, 1494
\HyPsd@Subst .. 550, 559, 563, 569,
575, 579, 583, 588, 589, 590,
591, 592, 593, 597, 600, 1478,
1495
\HyPsd@temp .. 617, 618, 620, 621,
2074, 2075, 2076, 2079, 2082,
2088, 2100, 2104
\HyPsd@tocsection .. 1045, 1046,
1047, 1048, 1049, 1050, 1051,
1053
\HyPsd@UnexpandableSpace 1028,
1213, 1237, 1372, 1384
\HyPsd@unichar 1592, 1659, 1665,
1670
\HyPsd@unichar@first@byte 1678,
1698
\HyPsd@unichar@octtwo ... 1700,
1708, 1714
\HyPsd@unichar@second@byte ..
..... 1686, 1706
\HyPsd@UnicodeReplacementCharacter
..... 1662, 1697
\HyPsd@UTFviii .. 392, 1580, 1585
\HyPsd@UTFviii@three ... 1615,
1624
\HyPsd@UTFviii@two 1600, 1606
\HyPsd@UTFviii@ccxliv@def 1590,
1596
\HyPsd@UTFviii@ccxliv@undef .
..... 1589, 1595
\HyPsd@UTFviii@four 1588, 1633
\HyPsd@UTFviii@three 1587, 1614
\HyPsd@UTFviii@two . 1586, 1599
\HyPsd@Warning 1189, 1394, 1415,
1428, 1457, 1463
\HyPsd@XSPACE ... 508, 584, 1029
\HyPsd@xspace 582, 584, 585
\HyRef@@StarSetRef . 6627, 6632
\HyRef@autopageref . 6681, 6683
\HyRef@autopagerefname .. 6680,
6684, 6686
\HyRef@autoref 6698, 6700
\HyRef@autosetref .. 6703, 6706
\HyRef@CaseStar 6766, 6772
\HyRef@currentHtag . 6719, 6737,
6740, 6746, 6752, 6758, 6773
\HyRef@MakeUppercaseFirstOfFive
..... 6647, 6649

\HyRef@name . . . 6735, 6736, 6741, 6747, 6765, 6766, 6767, 6769	8376, 8380, 8383, 9176, 9187, 10267, 10306, 10307, 10718, 10758, 10759, 11055, 11095, 11096	\ifHy@fitwindow 258, 7290, 7796, 8192, 8767, 9079, 9833
\HyRef@Ref 6653, 6655		\ifHy@frenchlinks . . . 259, 3430
\HyRef@ShowKeysInit 6775, 6788, 6792	\ifetex@unexpanded 1196	\ifHy@hyperfootnotes . 260, 5490
\HyRef@ShowKeysRef . 6707, 6774	\IfFileExists 4666, 10028	\ifHy@hyperindex 261, 3141, 4510, 6266
\HyRef@StarSetRef . . 6621, 6639, 6642, 6647	\ifFld@checked 4220, 10586, 11398	\ifHy@hypertextnames 262, 5144, 5205, 6052, 6412, 6463
\HyRef@StripStar . . . 6734, 6764	\ifFld@comb 4066	\ifHy@implicit . 263, 3163, 11914
\HyRef@testreftype . 6712, 6731	\ifFld@combo . . 4094, 4099, 10281, 10310, 10732, 10762, 11069, 11099	\ifHy@linktocpage . . 264, 1967, 1977
\HyRef@thisref 6709, 6712	\ifFld@disabled . . . 4221, 10587	\ifHy@menubar . . . 265, 7288, 7794, 8190, 8765, 9077, 9831
\HyTmp@found . . . 4167, 4177, 4180	\ifFld@edit 4100	\ifHy@naturalnames . 266, 5157, 6413, 6464
\HyTmp@key 4161, 4162	\ifFld@fileselect 4069	\ifHy@nesting . . . 267, 3136, 3586, 3614, 3643, 3750, 4505, 5515, 5526, 5587, 5726
\HyTmp@optitem 4117, 4133, 4160, 4165, 4171, 4192, 4203	\ifFld@hidden 10244, 10295, 10361, 10382, 10406, 10425, 10485, 10497, 10507, 10590, 10695, 10747, 10827, 10849, 10878, 10899, 11024, 11084, 11172, 11198, 11228, 11254	\ifHy@newwindow . 269, 2934, 8475
\HyTmp@optlist 4116, 4131, 4132, 4163, 4164, 4169, 4170, 4178, 4179, 4199, 4201, 4208, 4211	\ifFld@multiline . . 4067, 10232, 10492, 10682, 11011	\ifHy@newwindowset . . 268, 2932
	\ifFld@multiselect 4139	\ifHy@next 706, 3098, 6275
I	\ifFld@password . . . 4068, 10473	\ifHy@ocgcolorlinks 270, 2610, 3400, 3410, 4525, 6896, 6914, 6989, 6997, 7908, 7991, 7999
\i . . . 12200, 12363, 12366, 12369, 12372, 12569, 12731, 12734, 12737, 12740, 12857, 12862, 12867, 12872, 12876, 13043, 13099	\ifFld@popdown 3886, 10282, 10733, 11070	\ifHy@pageanchor 271, 5192, 5204, 5219, 6051
\if . 1054, 1762, 4817, 4825, 5409, 5410, 8657, 8660, 8664, 8668, 8672, 8674, 8676, 11471	\ifFld@radio 10278, 10300, 10522, 10729, 10752, 11066, 11089	\ifHy@pagelabels 272, 4765, 4951, 4991
\if@eqnstar 5351, 5359	\ifFld@readonly . . 10494, 10504, 10588	\ifHy@pdfa 287, 3049, 3402, 3693, 3899, 4381, 4417, 4530, 7058, 7116, 7147, 7183, 7498, 8050, 8078, 8105, 8129, 8436, 8457, 8478, 8497, 8528, 8555, 8571, 9280, 10203, 10351, 10399, 10649, 10817, 10871, 10983, 11161, 11221, 11400, 11473, 11611
\if@files 1730, 3638, 4635, 4671, 4993, 5003, 5201, 5836, 5851, 5867, 5879, 5909, 5932, 5959, 5964, 5983, 6295, 11708, 11820, 11886	\ifForm@html 4240	\ifHy@pdfmarkerror . 9127, 9135
\if@hyper@item 5078, 5091	\ifhmode . 1812, 1821, 5434, 5541, 5553, 5677, 5679	\ifHy@pdfpagehidden 273, 2731, 7406, 8706, 8968
\if@inlabel 5466	\ifHy@activeanchor . . 244, 3765	\ifHy@pdfstring . 274, 671, 5083
\if@Localurl 8260, 8304	\ifHy@backref . . . 245, 3151, 3481, 4515, 5960, 5996	\ifHy@plainpages 275, 3146, 5206, 6053
\if@mid@expandable 480	\ifHy@bookmarks 246, 3343	\ifHy@psize 276
\if@minipage 5715, 5778	\ifHy@bookmarksnumbered . . 247, 6407, 6458, 11698	\ifHy@raiselinks 277, 7577, 7646, 7675, 7705, 9731, 9991
\if@nmbrowse 5065	\ifHy@bookmarksopen . 248, 3333	\ifHy@seminarslides 278
\if@nobreak 5482	\ifHy@breaklinks 249, 2010, 8885, 8916, 9170, 9181	\ifHy@setpagesize . . 279, 7430, 8250, 8370, 9518
\if@skiphyperref . . . 5079, 5089	\ifHy@centerwindow . 250, 7291, 7797, 8193, 8768, 9080, 9834	\ifHy@setpdfversion 2129, 6901
\if@twocolumn 12020	\ifHy@CJKbookmarks . . . 251, 496	\ifHy@texht 280, 3442, 3474, 4568, 6567
\if@twoside 12008	\ifHy@colorlinks 252, 3414, 4520, 9668	\ifHy@toolbar . . . 281, 7287, 7793, 8189, 8764, 9076, 9830
\ifcase 857, 879, 902, 970, 1628, 2079, 2660, 3962, 4067, 4197, 4272, 6138, 6283, 6302, 6519, 6708, 8730, 11410, 11487, 11552, 11587, 11621, 11747	\ifHy@displaydoctitle 286, 7292, 7798, 8194, 8769, 9081, 9835	\ifHy@typexml . . . 243, 3156, 3417, 3461, 4636, 11823, 11889
\ifcat . . . 1290, 1317, 1322, 1327, 1330, 1333, 1336, 3752, 3754	\ifHy@draft 253, 3025	
\ifdim 1040, 1370, 1374, 1382, 1386, 1794, 1813, 2980, 2981, 2986, 2987, 2995, 7440, 7444, 7449, 7453, 7460, 7464, 7469, 7473, 8373,	\ifHy@DvipdfmxOutlineOpen 3303, 11861	
	\ifHy@escapeform . . . 256, 11324, 11353	
	\ifHy@figures . . . 257, 3131, 4500, 6259	

<code>\ifHy@unicode</code> . 282, 388, 555, 567, 595, 603, 612, 807, 943, 1396, 1417, 1430, 1459, 1465, 1660, 2040, 2090, 11364	<code>\input</code> . 654, 662, 2049, 2582, 2590, 2597, 3299, 9459, 9530, 9621, 9773	<code>\label@hyperref</code> 3593, 3620, 3778
<code>\ifHy@useHidKey</code> 2727, 7404, 8705, 8963	<code>\InputIfFileExists</code> 3012, 11816, 11836, 11881, 11883	<code>\labelsep</code> 5993
<code>\ifHy@usetitle</code> 283, 4681	<code>\inputlineno</code> . . . 3757, 6121, 7029	<code>\labelwidth</code> 5992
<code>\ifHy@verbose</code> . . 284, 3842, 6118, 7028	<code>\insert</code> 5603	<code>\lam</code> 14482
<code>\ifHy@windowui</code> . 285, 7289, 7795, 8191, 8766, 9078, 9832	<code>\interfootnotelinepenalty</code> 5606	<code>\language@group</code> 465
<code>\ifmeasuring@</code> 5102, 5115	<code>\interlinepenalty</code> 5606	<code>\languageshorthands</code> 3120, 3121, 3124
<code>\ifnum</code> . . . 808, 811, 822, 823, 827, 835, 839, 842, 852, 874, 897, 1618, 1661, 1664, 1676, 2205, 2208, 2233, 2661, 2662, 3307, 3334, 4122, 4193, 4204, 4800, 4819, 4835, 4931, 6521, 6559, 6897, 6902, 7207, 7214, 7220, 7228, 8020, 8025, 8475, 8583, 8717, 8725, 8727, 8728, 8738, 8741, 8823, 8825, 8925, 9532, 10633, 10793, 11121, 11125, 11133, 11363, 11381, 11410, 11415, 11487, 11493, 11521, 11552, 11558, 11577, 11587, 11592, 11621, 11626, 11655, 11671, 11743, 11811, 11863, 11947, 11965, 11981, 11986	<code>\item</code> 5060, 5063, 5866, 5878, 5981	<code>\LARGE</code> 447
<code>\ifodd</code> 1642, 1647, 6073	<code>\Itemautorefname</code> 6798	<code>\Large</code> 448
<code>\ifpdf</code> 3197, 3259	<code>\itemautorefname</code> . . . 2327, 2345, 2363, 2381, 2399, 2417, 2435, 2464, 2465, 2493, 2511, 6798, 6799, 6802	<code>\large</code> 451, 6524, 6532, 6542, 6550
<code>\ifpdfstringunicode</code> . . 393, 396	<code>\itemindent</code> 5471	<code>\lastbox</code> 5469
<code>\ifportrait</code> 7439	<code>\itshape</code> 440	<code>\lastpage@putlabel</code> 5187
<code>\ifthenelse</code> 5986	J	<code>\lastskip</code> 1794, 1798, 1805, 1813, 1817, 1824
<code>\iftrue</code> . . 1203, 1225, 1489, 11949	<code>\j</code> 12885, 13070, 13134	<code>\LaTeX</code> 417, 418, 10034, 10035
<code>\ifvmode</code> 1777, 1793, 1802	<code>\jarr</code> 14491	<code>\LaTeXe</code> 418, 10035
<code>\ifvoid</code> 5300, 5309, 5470	<code>\jeem</code> 14463	<code>\LayoutCheckField</code> . 4456, 10426, 10900, 11257
<code>\ifvtexhtml</code> 3236, 3265	<code>\jeh</code> 14499	<code>\LayoutChoiceField</code> 4453, 10299, 10751, 11088
<code>\ifvtexpdf</code> 3276	<code>\jobname</code> 4638, 4666, 4673, 10028, 11816, 11822, 11836, 11881, 11883, 11888	<code>\LayoutPushButtonField</code> . . 4459, 10355, 10362, 10821, 10828, 11165, 11174
<code>\ifvtexps</code> 3279	K	<code>\LayoutTextField</code> . . 4450, 10246, 10697, 11030
<code>\ifxetex</code> 3221, 3262	<code>\k</code> . . . 12082, 12422, 12424, 12429, 12431, 12474, 12492, 12511, 12518, 12782, 12784, 12822, 12824, 12869, 12871, 12872, 13007, 13009, 13066, 13068, 13665, 13704, 13707	<code>\lccode</code> 953, 1583, 6273
<code>\ignorespaces</code> . . 495, 5273, 5429, 5623, 5711, 5722, 5725, 5775, 5782, 5844, 5859, 5875, 5884, 5994, 6392, 6444	<code>\kaf</code> 14481	<code>\ldots</code> 412
<code>\IJ</code> 12196, 12878	<code>\kasra</code> 14494	<code>\leavevmode</code> 492, 1772, 3035, 3052, 3092, 3698, 4615, 5540, 5676, 5900, 6659, 6667, 7044, 7101, 7132, 7168, 7576, 7645, 7673, 7703, 8070, 8098, 8270, 8279, 8330, 8472, 8493, 8515, 8545, 8887, 9169, 9386, 9404, 9429, 9730, 9990, 10356, 10363, 10398, 10781, 10802, 10822, 10829, 10850, 10870, 11119, 11142, 11166, 11175, 11200, 11220
<code>\ij</code> 12405, 12880	<code>\keepPDF@SetupDoc</code> . . 9672, 9679	<code>\limits</code> 3546
<code>\immediate</code> . . . 4637, 4638, 4639, 4641, 4673, 4944, 4996, 5004, 5216, 5244, 5839, 5854, 5870, 5880, 5910, 5933, 5959, 5989, 6915, 6930, 6945, 8828, 9529, 10603, 10639, 11797, 11822, 11824, 11888, 11890	<code>\kern</code> 1299, 1371, 1376, 1388, 5471, 6068, 6069, 6070, 6072, 6073, 6078	<code>\listofslides</code> 6493
<code>\incr@eqnum</code> 5320, 5333	<code>\kernel@ifnextchar</code> 515	<code>\listslidenam</code> 6492, 6495, 6497, 6499
<code>\index</code> 484	<code>\kha</code> 14465	<code>\literalps@out</code> 1770, 8817, 8822, 8869, 8874, 8890, 8895, 9145, 9156, 9177, 9179, 9188, 9190, 9457, 9528, 9591, 9771
<code>\indexentry</code> . . . 6298, 6306, 6310	<code>\KV@Hyp@draft</code> 1934	<code>\lower</code> . . . 7580, 7648, 7677, 7707, 9179, 9734, 9994
	<code>\KV@Hyp@nolinks</code> 1934	<code>\lowercase</code> 954, 1584, 1836, 2271, 2301, 3791, 3792, 3795, 3800, 3824, 3834, 3888, 3944, 4263, 4303, 4306, 6274, 8924
	<code>\kv@key</code> . . 4120, 4123, 4125, 4129, 4133	<code>\lslide@flag</code> . . 6519, 6522, 6540, 6559, 6563
	<code>\kv@parse</code> 4119	<code>\LT@array</code> 5286
	<code>\kv@value</code> 4121, 4128, 4129	<code>\LT@firsthead</code> 5300, 5309
	L	
	<code>\L</code> 12189, 12909	
	<code>\l</code> 12202, 12911	
	<code>\l@slide</code> . 6392, 6502, 6507, 6511, 6518	
	<code>\l@subslide</code> 6444, 6507, 6514, 6558	
	<code>\label</code> 483, 6091	
	<code>\label@hyperref</code> . . . 3621, 3623	
	<code>\label@hyperdef</code> 3612, 3635	

`\LTp@ftn` . 5559, 5562, 5566, 5580
`\LTp@ftntext` 5557, 5564
`\LT@start` 5302, 5313
`\luatexrevision` 7251
`\luatexversion` 7243, 7248

M

`\m@ne` 3806, 5232, 5401, 8029,
 11883, 11947, 11962
`\make@df@tag@@` 6197, 6199
`\make@df@tag@@@` 6198, 6200
`\make@stripped@name` 5107, 5342,
 5364, 5388, 5399
`\makeatletter` 3, 685, 4665
`\MakeButtonField` 4466, 10357,
 10365, 10384, 10403, 10408,
 10823, 10832, 10857, 10875,
 10881, 11167, 11170, 11199,
 11225, 11229
`\MakeCheckField` 4463, 10428,
 10903, 11255
`\MakeChoiceField` 4465, 10340,
 10805, 11141
`\MakeFieldObject` 10602, 10658,
 10668, 10671
`\MakeLowercase` 462
`\MakeLowercaseIsNotSupportedInPdfStrings`
 462
`\MakeRadioField` 4462, 10330,
 10792, 11114
`\makeslideheading` 6402
`\makeslidesubheading` 6454
`\maketag@@@` 6186
`\MakeTextField` 4464, 10248,
 10700, 11027
`\maketitle` 5626, 5627
`\MakeUppercase` 461, 6497, 6499,
 6650
`\MakeUppercaseIsNotSupportedInPdfStrings`
 461
`\MathBSuppress` 8280, 8284
`\mathdisplay` 5323, 5332
`\mathdisplay@push` 5321, 5330
`\mathversion` 456
`\maxdimen` 2682, 10607
`\MaybeStopEarly` 328, 2156, 2210,
 3167, 3267, 5024
`\mbox` 493, 5913, 5936, 6999, 8001
`\mddefault` 5441
`\mdseries` 439
`\meaning` 62, 153,
 159, 1733, 4705, 5170, 5406,
 11847, 11855, 11870
`\measuring@false` 5102
`\mediaheight` 8366, 8368, 8374,
 8381
`\mediawidth` 8377, 8384

`\meem` 14483
`\message` 6520
`\MessageBreak`
 361, 1402, 1423, 1436, 1459,
 1464, 1466, 1858, 1859, 1873,
 1895, 1898, 1900, 1985, 1986,
 2012, 2013, 2062, 2063, 2064,
 2102, 2103, 2123, 2133, 2293,
 2612, 3000, 3201, 3202, 3210,
 3211, 3225, 3226, 3240, 3241,
 3249, 3250, 3404, 3845, 3850,
 3859, 3902, 3948, 4072, 4186,
 4267, 4770, 5195, 6095, 6254,
 7048, 8037, 8448, 8519, 8992,
 10614, 10615, 11676, 11694
`\MF` 421, 10037
`\MP` 422, 10038
`\multiply` 7247, 8686, 8721

N

`\name@of@eq` 5076, 5105
`\name@of@slide` 5077, 5087
`\nameref` 490
`\nasb` 14489
`\netscape` 7611
`\new@ifnextchar` 516
`\new@pdflink` 7027, 7075, 7076
`\new@refstepcounter` 5315, 5347
`\newblock` 5997
`\newcommand` 4, 9, 42, 1771, 4619,
 5039, 5042, 5045, 5046, 5047,
 5049, 5050, 5051, 5052, 5054,
 5055, 5056, 5057, 5058, 5059,
 5068, 5069, 5070, 5071, 5072,
 5073, 5397, 6222, 6379, 6384,
 6385, 11718, 11721, 11726
`\newcount` 329, 330, 4224, 4781,
 10336, 10799, 10997, 11138,
 11740
`\newcounter` 5061, 5491, 7907
`\newdimen` 326, 4225, 4226
`\newif` 243, 244, 245,
 246, 247, 248, 249, 250, 251,
 252, 253, 256, 257, 258, 259,
 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, 706, 2129,
 2727, 3303, 3798, 3886, 4220,
 4221, 4240, 5078, 5079, 5102,
 5351, 8260, 9127
`\newlabel` 1736, 3640, 4648, 4649,
 4656, 4678, 5217, 5245
`\newlabelxx` 4650, 4651
`\newline` 415, 4726
`\newname` 5108, 5343, 5365, 5389,
 5402, 5411

`\newsavebox` 7840, 9164
`\newtie` 12084, 12466, 12496,
 12515, 12531
`\newtoks` 90, 4285, 9010, 9197, 9198
`\newwrite` 4672, 11821, 11887
`\next` 5987, 5988, 5989, 8649, 8651,
 8653
`\nfss@text` 6574, 6594, 6611, 6725
`\NG` 12927
`\ng` 12929
`\noboundary` 14504
`\nobreak` 1795, 1803, 1814, 1822,
 5541, 5677
`\nobreakspace` 504, 6662, 6691,
 6694
`\noexpand` 22,
 93, 95, 108, 116, 169, 171, 172,
 173, 176, 206, 695, 965, 1150,
 1167, 1290, 1597, 1801, 1802,
 1803, 1806, 1820, 1821, 1822,
 1825, 2543, 2545, 2547, 2548,
 2564, 2738, 2739, 2741, 3119,
 3120, 3121, 3122, 3124, 3125,
 3540, 3600, 3669, 3752, 3754,
 3854, 4873, 4874, 4883, 4885,
 4888, 4970, 5229, 5230, 5232,
 5405, 5560, 5568, 5569, 5570,
 5571, 5572, 5574, 5686, 5764,
 5838, 5853, 5869, 6214, 6216,
 6627, 6628, 6741, 6742, 6747,
 6748, 6753, 6754, 6759, 6760,
 7250, 7781, 9064, 9131, 9588,
 9818, 10274, 10275, 10276,
 10277, 10725, 10726, 10727,
 10728, 11062, 11063, 11064,
 11065, 11326
`\nofrenchguillemets` 523, 525
`\NoHyper` 4571
`\nohyperpage` 4614, 6323, 6325,
 6327
`\nolinkurl` 3579
`\nolinkurl@` 3579, 3580
`\NomFancyVerbLineautorefname`
 2482
`\Nomfootnoteautorefname` 2462
`\Nomtheoremautorefname` 2486
`\nonumber` 5376, 5379
`\normalfont` 434, 5437
`\normalsize` 452, 5718, 5781
`\null` 5978, 5986, 6616, 6721
`\number` 825, 829, 832, 840, 843, 845,
 1601, 1602, 1603, 1604, 1608,
 1609, 1610, 1611, 1612, 1616,
 1617, 1618, 1619, 1620, 1621,
 1622, 1626, 1627, 1628, 1629,
 1630, 1631, 1634, 1636, 1640,
 1641, 1643, 1645, 1647, 1650,

1654, 1655, 1656, 1657, 1666,
1667, 1671, 1672, 1679, 1680,
1684, 1687, 1688, 1689, 1699,
1701, 1702, 1707, 1709, 1710,
1715, 1716, 2879, 3335, 3812,
6908, 6911, 7636, 7650, 7651,
7662, 7663, 7679, 7680, 7691,
7692, 7709, 7710, 7721, 7722
\numberline . . 5711, 5775, 11699,
11703
\numberwithin 6219
\numexpr . 1608, 1609, 1610, 1612,
1618, 1626, 1627, 1628, 1629,
1630, 1631, 1635, 1637, 1641,
1643, 1645, 1647, 1651, 1654,
1655, 1657, 1666, 1671, 1688,
1702, 1710, 1716, 2883
\nun 14484

O

\O 12322, 12690, 13085
\o 12390, 12758, 13087
\obeylines 9587
\OBJ@acroform . . . 10655, 10656
\OBJ@Helv . . 10636, 10645, 10961
\OBJ@OCG@print 6944, 6947, 6955,
6981, 7925, 7927, 7940, 7944,
7953, 7982
\OBJ@OCG@view . 6929, 6947, 6980,
7909, 7911, 7924, 7944, 7981
\OBJ@OCGs 6950, 6953, 6959, 6964,
6969, 7941, 7943, 7947, 7951,
7957, 7962, 7967
\OBJ@pdfdocencoding . . . 10634,
10942, 10958
\OBJ@ZaDb . . 10635, 10644, 10951
\OCIRCUFLEX 14327, 14425, 14426,
14427, 14428, 14429
\ocircumflex 14320, 14365, 14366,
14367, 14368, 14369
\oddsidemargin 6074
\OE 12191, 12943
\oe 12204, 12945
\offinterlineskip 4752
\OHORN 14328, 14430, 14431, 14432,
14433, 14434
\ohorn . . 2509, 2516, 14321, 14370,
14371, 14372, 14373, 14374
\oldb 645
\oldc 646
\oldcontentsline . . . 4643, 4646,
4655
\oldd 647
\oldnewlabel . . . 4648, 4653, 4656
\OMEGA 10033
\openout 4638, 4673, 11822, 11888
\OpMode . . 2205, 2208, 2219, 2233,
2236, 8738, 8825, 9532

\or 859, 860, 861,
862, 863, 864, 865, 866, 867,
881, 882, 883, 884, 885, 886,
887, 888, 889, 904, 905, 906,
907, 908, 909, 910, 911, 912,
971, 972, 973, 974, 975, 976,
977, 978, 979, 980, 981, 982,
983, 984, 985, 986, 987, 988,
989, 990, 991, 992, 993, 994,
995, 996, 997, 998, 999, 1000,
1001, 1002, 3972, 3978, 3983,
4198, 6140, 6144, 6539, 6548,
8731, 11748, 11749, 11750,
11751, 11752, 11753, 11754,
11755, 11756, 11757, 11758,
11759, 11760, 11761, 11762,
11763, 11764, 11765, 11766,
11767, 11768, 11769, 11770,
11771, 11772, 11773, 11774,
11775, 11776, 11777, 11778,
11779

P

\P 411
\p@ 1667,
1672, 4227, 4233, 5443, 7586,
7658, 7687, 7717, 8685, 9740,
10001, 10269, 10720, 11057,
12013, 12014
\p@equation 6193
\PackageError 61, 2061, 3076, 3694,
3947, 4071, 4266, 4383, 4419,
10352, 10400, 10818, 10872,
11162, 11222
\PackageInfo . . . 239, 6892, 6906,
10613
\PackageWarning . 237, 2132, 4184
\PackageWarningNoLine . . . 238
\pageautorefname . . . 2340, 2358,
2376, 2394, 2412, 2430, 2448,
2488, 2506, 2524, 6694, 6815
\pagename 6691
\pageref . . 489, 3177, 3469, 5195,
6680, 6684
\paperheight . . 2981, 2982, 2993,
7444, 7446, 7449, 7451, 7464,
7466, 8373, 8374, 8376
\paperwidth . . 2980, 2982, 7440,
7442, 7453, 7455, 7460, 7462,
8377
\par . 5435, 5710, 5733, 5773, 5782,
5980, 6000
\paragraphautorefname . . . 2336,
2354, 2372, 2390, 2408, 2426,
2444, 2477, 2479, 2502, 2520,
6811
\partautorefname . . . 2330, 2348,
2366, 2384, 2402, 2420, 2438,

2468, 2496, 2514, 6805
\partnumberline . . 11700, 11704
\PassOptionsToPackage . . . 2245,
2282, 2286, 2308, 3019, 3292
\pdf@addtoks . . 9200, 9219, 9225,
9234, 9241, 9245, 9247, 9249,
9251, 9253, 9261, 9270, 9274,
9276, 9278, 9281, 9290, 9294,
9296, 9298, 9300, 9302, 9304,
9306, 9308, 9310, 9312, 9314,
9316, 9318, 9320, 9322, 9324,
9325, 9326, 9327, 9328, 9329,
9330, 9331, 9332, 9333, 9334
\pdf@addtoksx . . 9194, 9204, 9217
\pdf@box . 9164, 9171, 9173, 9175,
9176, 9179, 9186
\pdf@defaulttoks . . . 9131, 9198,
9199, 9209
\pdf@docset 9010
\pdf@endanchor . 7036, 7075, 7077
\pdf@escapestring 6871
\PDF@FinishDoc 2159, 2160, 2213,
2214, 2975, 3037, 3170, 3171,
3270, 3271, 4613, 4762, 4763,
7326, 7519, 7733, 8155, 8261,
8796, 9011, 9777, 9935
\pdf@linktype . 9149, 9153, 9214,
9215
\pdf@rect 9141, 9155, 9168
\PDF@SetupDoc . 2974, 3036, 4542,
4543, 4612, 7257, 7520, 7761,
8187, 8262, 8746, 9051, 9674,
9805, 9936
\PDF@SetupDox 7257
\pdf@toks 9131, 9146, 9157, 9197,
9201, 9205
\pdf@type 9133, 9137, 9146, 9157,
9192, 9212
\pdfannotlink 7018
\pdfbookmark . . 1771, 4618, 4619,
11719, 11724, 11729, 11733
\pdfcatalog . . 4916, 6951, 7272,
7314, 10656
\PDFdefaults 9208
\pdfdest 7038
\pdfendlink . 7074, 10700, 10792,
10806, 10833, 10858, 10882,
10904
\pdfescapestring 11354
\pdfform 7020
\PDFForm@Check . . . 10427, 10429,
10901, 10902, 11258, 11262,
11372
\PDFForm@List 10339, 10341,
10803, 10804, 11143, 11148,
11479

\PDFForm@Name	10693, 10746, 10816, 10897, 11022, 11083, 11160, 11252, 11361	
\PDFForm@Push	10364, 10366, 10830, 10831, 11176, 11180, 11400	
\PDFForm@Radio	10329, 10332, 10782, 10784, 11120, 11128, 11512	
\PDFForm@Reset	10407, 10409, 10879, 10880, 11230, 11235, 11611	
\PDFForm@Submit	10383, 10386, 10851, 10853, 11201, 11206, 11579	
\PDFForm@Text	10247, 10249, 10698, 10699, 11031, 11034, 11544	
\pdfhorigin	7437	
\pdfinfo	7328	
\pdflastform	7021	
\pdflastlink	10626	
\pdflastobj	6929, 6944, 6950, 10655, 10942, 10951, 10961	
\pdflastxform	7021, 10605, 10607	
\pdflinkmargin	7016, 7019, 7024	
\pdfliteral	7000, 7002, 7007	
\pdfm@box	7840, 10993, 10994, 10995, 11026, 11037, 11114, 11132, 11141, 11150, 11170, 11183, 11199, 11208, 11229, 11237, 11255, 11264	
\pdfmark	4987, 7781, 7790, 7820, 8857, 8875, 8903, 8935, 8952, 8964, 8997, 9033, 9064, 9073, 9104, 9128, 9339, 9353, 9368, 9380, 9387, 9405, 9430, 9818, 9827, 9858, 10248, 10330, 10340, 10365, 10384, 10408, 10428, 11851	
\pdfmark@	9128, 9129	
\pdfminorversion	6889	
\PDFNextPage	9351	
\PDFNextPage@	9351, 9352	
\pdfobj	6915, 6930, 6945, 10639, 10909, 10943, 10952	
\PDFOpen	9379	
\pdfoptionpdfminorversion	6886	
\pdfoutline	11898	
\pdfpageattr	7360, 7364, 7365, 7375, 7383, 7387, 7388, 7398, 7405, 7408, 7409, 7419	
\pdfpageheight	7446, 7455, 7466, 7475	
\pdfpageresources	6978	
\pdfpagesattr	7261, 7263, 7265	
\pdfpagewidth	7442, 7451, 7462, 7471	
\PDFPreviousPage	9364	
\PDFPreviousPage@	9365, 9367	
\pdfreform	7022	
\pdfrefobj	10634, 10635, 10636	
\pdfrefxform	7022, 10607	
\pdfstartlink	7017, 7018, 7072, 7102, 7133, 7169, 7484, 10699, 10783, 10804, 10831, 10852, 10880, 10902	
\pdfstringdef	381, 631, 2847, 2848, 2849, 2850, 2854, 2860, 2863, 2864, 4145, 4150, 4176, 4729, 4809, 4811, 5210, 6059, 11368, 11707	
\pdfstringdefDisableCommands	644, 683, 4616, 4724	
\pdfstringdefPostHook	627, 677	
\pdfstringdefPreHook	500, 677, 689, 691, 3117, 3118, 4723, 4733	
\pdfstringdefWarn	414, 415, 494, 694, 1158, 1163, 1182, 1186	
\pdfTeXrevision	7217, 7225, 7236	
\pdfTeXversion	7212, 7214, 7217, 7220, 7223, 7224, 7228, 7234, 7235, 10633	
\pdfvorigin	7438	
\pdfxform	7020, 10603	
\peh	14497	
\penalty	1293, 1780, 5907, 5930	
\phantom	457	
\phantomsection	2976, 4620, 6097, 11644, 11696, 11923, 11966	
\Preamble	10029	
\process@me	4703, 4715, 4716, 7260, 7269	
\ProcessKeyvalOptions	3023	
\protect	1291, 3625, 5711, 5775, 5838, 5853, 5869, 5985, 5992, 5993, 6130, 6161, 6392, 6444, 6573, 6593, 6599, 6610, 6724, 7529, 7615, 8328, 8400, 9684, 9945, 11710, 12013, 12014	
\protected@edef	3654, 4869, 5403, 5423, 7045, 8034, 8445, 8516, 8989	
\protected@write	1735, 3639, 5965, 6297, 6305, 6309, 11709	
\protected@xdef	5569, 5571, 5652	
\providecommand	1752, 1753, 2258, 2637, 2638, 2641, 2642, 3258, 3448, 3449, 3554, 3584, 4899, 4918, 5005, 5803, 5804, 5819, 5897, 6375, 6376, 6492, 6796, 6797, 6798, 6799, 6800, 6801,	
	6802, 6803, 6804, 6805, 6806, 6807, 6808, 6809, 6810, 6811, 6812, 6813, 6814, 6815, 6878, 7026, 7040, 7041, 7518, 7610, 7611, 7838, 7894, 7895, 7896, 8258, 8371, 8393, 8394, 8395, 8818, 9165, 9166, 9455, 9463, 9464, 9465, 9466, 9526, 9538, 9539, 9540, 9541, 9585, 9626, 9627, 9628, 9629, 9767, 9769, 9770, 9879, 9880, 9927	
\PushButton	4438	
\put@me@back	3747, 3760, 3770	
Q		
\qaf	14480	
\quotedblbase	12171, 12408, 13997, 14301	
\quotesinglbase	12181, 12410, 13991, 14303	
R		
\r	12051, 12063, 12075, 12283, 12348, 12457, 12484, 12503, 12525, 12652, 12716, 12999, 13001, 13961, 13963	
\ra	14468	
\raff	14490	
\raise	1787, 7587, 7659, 7688, 7718, 9190, 9741, 10002	
\ReadBookmarks	3022, 3040, 3184, 3352, 3477, 11802, 11831	
\real@setref	6570, 6636	
\realfootnote	5649	
\Ref	6652, 6656, 6661	
\ref	488, 3176, 3468, 3786, 6671, 10021	
\ref@one	3606, 3607	
\rEfLiNk	10022, 10023	
\refstepcounter	5075, 5082, 5268, 5288, 5315, 5339, 5347, 5767	
\rem@ptetc	8925, 8927	
\renewcommand	1727, 5748, 6236, 11733	
\RequirePackage	22, 232, 233, 234, 235, 236, 1195, 1721, 2114, 3016, 3158, 3159, 3420, 3464, 3482, 3576, 3789, 4112, 4743, 6818, 8259, 9932	
\Reset	4447	
\reset@font	5913, 5936, 6574, 6594, 6611, 6725	
\revtex@checking	5890	
\Rightarrow	6526	
\rlap	7001, 8003	
\rm	445	
\rmfamily	435	
\Roman	4865	

\roman 4866
 \romannumeral 701, 702
 \rule 5614

S

\sad 14472
 \sbox 4467, 9165, 9173, 10602
 \scr@LT@array 5287
 \scriptsize 453
 \scriptstyle 5903
 \scrollmode .. 1210, 1235, 1245,
 1258, 1350, 1482
 \scshape 441
 \section 6494
 \sectionautorefname 2333, 2351,
 2369, 2387, 2405, 2423, 2441,
 2470, 2499, 2517, 6808
 \seen 14470
 \selectfont 3431, 10664
 \setbox 1294, 1300, 1306,
 2665, 2671, 4319, 4751, 5469,
 6991, 7510, 7578, 7644, 7674,
 7704, 7976, 7993, 9732, 9992,
 11026, 11114, 11141, 11170,
 11199, 11229, 11255
 \setkeys . 2153, 2244, 3008, 3050,
 3291, 3401, 4218, 6898, 9134,
 10220, 10458, 10471, 10520,
 10563, 10584, 10632, 10969
 \setlength . 365, 366, 1784, 7437,
 7438, 7442, 7446, 7451, 7455,
 7462, 7466, 7471, 7475, 8374,
 8377, 8381, 8384, 8685
 \setpdflinkmargin .. 2866, 2867,
 7016
 \settowidth 10266, 10717, 11054
 \sffamily 436
 \shadda 14495
 \sheen 14471
 \shortciteN 6028
 \SK@ 6782
 \SK@ref 6782
 \SK@ref 6779
 \skip@ ... 1308, 1382, 1383, 1386,
 1388, 1798, 1804, 1817, 1823
 \slide@cline .. 6512, 6525, 6533,
 6543, 6551
 \Slide@contents 6517
 \slide@contents 6510
 \slide@heading 6388
 \slide@subheading 6441
 \slide@undottedcline 6503
 \slidenumberline ... 6504, 6512,
 6526, 6534, 6544, 6552
 \SliTeX 420
 \slshape 442
 \small 454

\smash 1781
 \spacefactor .. 5541, 5553, 5677,
 5679
 \special@paper 1936, 1940, 1944,
 1948, 1952, 1956, 2977, 2982,
 2988, 8248, 8251, 9517, 9519
 \SpecialDvipdfmxOutlineOpen .
 2180, 2182, 3307
 \splitmaxdepth 5608
 \splittopskip 5607
 \SS 12406, 14300
 \ss ... 2380, 12336, 12421, 12704
 \st@rredfalse 5322, 5331
 \stepcounter .. 5092, 5230, 5422,
 5542, 5651, 8019
 \stockheight .. 2987, 2988, 2993,
 7473, 7475, 8380, 8381
 \stockwidth .. 2986, 2988, 7469,
 7471, 8383, 8384
 \stop@hyper 4585
 \StringEncodingConvertTest 618
 \strip@period 1740
 \strip@prefix 62, 1733, 4705, 5170,
 5406, 11847, 11855, 11870
 \strip@pt 370, 377, 3005,
 7442, 7446, 7451, 7455, 8688,
 11395, 11507, 11535, 11572,
 11620
 \strip@pt@and@otherjunk . 8874,
 8895, 8927
 \strutbox 5608
 \sub@label 1727
 \subeqnarray 5382, 5384
 \subequations 5420, 5421
 \subfig@oldlabel 1729
 \Submit 4444
 \SubmitObject 10854
 \SubmitPObject 10854
 \subparagraphautorefname 2337,
 2355, 2373, 2391, 2409, 2427,
 2445, 2478, 2480, 2503, 2521,
 6812
 \subpdfbookmark 11721
 \subsection 9763
 \subsectionautorefname .. 2334,
 2352, 2370, 2388, 2406, 2424,
 2442, 2475, 2500, 2518, 6809
 \subsubsectionautorefname 2335,
 2353, 2371, 2389, 2407, 2425,
 2443, 2476, 2501, 2519, 6810
 \sukun 14496
 \surd 6534

T

\T 14460
 \t ... 12083, 12476, 12495, 12514,
 12530

\T@pageref 3455, 3470, 6669
 \T@ref 3450, 3468
 \T@temp 5891, 5894
 \Ta 14474
 \taa 14461
 \tableautorefname .. 2329, 2347,
 2365, 2383, 2401, 2419, 2437,
 2467, 2495, 2513, 6804
 \tagform@ 6192
 \tatweel 14478
 \tcheh 14498
 \TeX 416, 417, 419, 420, 10032,
 10034, 10036
 \texorpdfstring 670, 4617
 \textacute . 12047, 12059, 12071,
 12249, 12480, 12499, 12617
 \textacutedbl 13149
 \textaleph 14115
 \textAlpha ... 859, 13169, 13185
 \textalpha ... 859, 13238, 13248
 \textampersand 408, 12116, 12547
 \textangstrom 14111
 \textasciicute 12618
 \textasciibreve .. 12092, 12488,
 12507, 13138
 \textasciicaron .. 12052, 12064,
 12076, 12094, 12485, 12504,
 13136
 \textasciicircum . 12048, 12060,
 12072, 12130, 12481, 12500,
 12563
 \textasciidieresis 12050, 12062,
 12074, 12226, 12483, 12502,
 12594
 \textasciigrave .. 12046, 12058,
 12070, 12135, 12479, 12498,
 12567
 \textasciimacron . 12055, 12067,
 12079, 12239, 12490, 12509,
 12607
 \textasciitilde 409, 3517, 12145,
 12578
 \textasteriskcentered .. 12555
 \textbackslash . 404, 554, 12128,
 12561
 \textbaht 13823
 \textbar 12141, 12574
 \textbardbl 13985
 \textBeta 860, 13187
 \textbeta 860, 12421, 13250
 \textbf 428
 \textbigcircle ... 12497, 12516,
 14285
 \textblank 14133
 \textbraceleft 402, 12139, 12572
 \textbraceright 403, 12143, 12576
 \textbrokenbar ... 12222, 12590

<code>\textbullet</code>	12147, 14003	<code>\textrm{kra}</code>	12891
<code>\textcdot</code>	12420, 14313	<code>\textLambda</code>	883, 13205
<code>\textcedilla</code> 12054, 12066, 12078,		<code>\textlambdab</code>	883, 13268
12257, 12487, 12506, 12626		<code>\textlangle</code>	14129
<code>\textcelsius</code>	12407, 14095	<code>\textlatin</code>	463, 5158
<code>\textcent</code>	12214, 12582	<code>\textlbrackdbl</code>	14293
<code>\textChi</code>	909, 13227	<code>\textleftarrow</code>	14117
<code>\textchi</code>	909, 13292	<code>\textless</code>	12124, 12557
<code>\textcircled</code> 12478, 12497, 12516,		<code>\textLF</code>	12088, 12535
14137, 14139, 14141, 14143,		<code>\textlira</code>	14079
14145, 14147, 14149, 14151,		<code>\textlnot</code>	12235, 12603
14153, 14155, 14157, 14159,		<code>\textlogicalnot</code>	12234, 12416,
14161, 14163, 14165, 14167,		12602, 14309	
14169, 14171, 14173, 14175,		<code>\textlongs</code>	13033, 13965
14177, 14179, 14181, 14183,		<code>\textlquill</code>	14021
14185, 14187, 14189, 14191,		<code>\textmacronbelow</code>	12056, 12068,
14193, 14195, 14197, 14199,		12080, 12133, 12493, 12512,	
14201, 14203, 14205, 14207,		13161	
14209, 14211, 14213, 14215,		<code>\textmarried</code>	14289
14217, 14219, 14221, 14223,		<code>\textmd</code>	429
14225, 14227, 14229, 14231,		<code>\textmho</code>	14109
14233, 14235, 14237, 14239,		<code>\textminus</code>	12167, 14125
14241, 14243, 14245, 14247,		<code>\textminussuperior</code>	14043
14249, 14251, 14253, 14255,		<code>\textMu</code>	884, 13207
14257, 14259, 14261, 14263,		<code>\textmu</code>	884, 12251, 12620
14265, 14267, 14269, 14271,		<code>\textmugreek</code>	13270
14273, 14275, 14277, 14279,		<code>\textmultiply</code>	12320, 12417,
14281		12688, 14310	
<code>\textcircledP</code>	14099	<code>\textmusicalnote</code>	14287
<code>\textcircumflex</code>	12096	<code>\textnaira</code>	14081
<code>\textcolonmonetary</code>	14077	<code>\textnapostrophe</code>	12925
<code>\textcolor</code>	460, 10631, 10669,	<code>\textneg</code>	12416, 14309
10672, 10968		<code>\textnewtie</code> 12496, 12515, 13157	
<code>\textcompwordmark</code>	13979	<code>\textnineinferior</code>	14071
<code>\textcopyright</code>	12228, 12596	<code>\textninesuperior</code>	14039
<code>\textCR</code>	12090, 12537	<code>\textnormal</code>	424
<code>\textcurrency</code>	12218, 12586	<code>\textnsuperior</code>	14051
<code>\textdagger</code>	12149, 13999	<code>\textNu</code>	885, 13209
<code>\textdaggerdbl</code>	12151, 14001	<code>\textnu</code>	885, 13272
<code>\textdegree</code> 12241, 12407, 12609		<code>\textnumbersign</code> 405, 12110, 12541	
<code>\textDelta</code>	862, 13191	<code>\textnumeralsigngreek</code>	836,
<code>\textdelta</code>	862, 13254	13165	
<code>\textDigammagreek</code>	13313	<code>\textnumeralsignlowergreek</code> 853,	
<code>\textdigammagreek</code>	13315	875, 898, 13167	
<code>\textdiscount</code>	14025	<code>\textnumero</code>	14097
<code>\textdiv</code>	12418, 14311	<code>\textogonek</code> 12102, 12492, 12511,	
<code>\textdivide</code> 12388, 12418, 12756,		13144	
14311		<code>\textohm</code>	14107
<code>\textdivorced</code>	14291	<code>\textOmega</code>	911, 13181, 13231
<code>\textdollar</code>	406, 12112, 12543	<code>\textomega</code>	911, 13296, 13307
<code>\textdong</code>	14087	<code>\textOmicron</code>	887, 13177, 13213
<code>\textdotaccent</code>	12053, 12065,	<code>\textomicron</code>	887, 13276, 13302
12077, 12098, 12486, 12505,		<code>\textonehalf</code>	12267, 12636
13140		<code>\textoneinferior</code>	14055
<code>\textdotbelow</code>	12057, 12069,	<code>\textonequarter</code>	12265, 12634
12081, 12122, 12494, 12513,		<code>\textonesuperior</code>	12259, 12628
13159		<code>\textopenbullet</code>	14283
<code>\textrm{doublegrave}</code>	12489, 12508,		
13155			
<code>\textrm{downarrow}</code>	14123		
<code>\textrm{eightinferior}</code>	14069		
<code>\textrm{eightsuperior}</code>	14037		
<code>\textrm{ellipsis}</code>	412, 413, 12153,		
14005			
<code>\textrm{emdash}</code>	588, 12155, 13983		
<code>\textrm{endash}</code>	589, 12157, 13981		
<code>\textrm{Epsilon}</code>	863, 13171, 13193		
<code>\textrm{epsilon}</code>	863, 13240, 13256		
<code>\textrm{equalsuperior}</code>	14045		
<code>\textrm{estimated}</code>	14113		
<code>\textrm{Eta}</code>	866, 13173, 13197		
<code>\textrm{eta}</code>	866, 13242, 13260		
<code>\textrm{euro}</code>	12210, 14089		
<code>\textrm{exclamdown}</code> 592, 770, 12212,			
12580			
<code>\textrm{fi}</code>	590, 12185, 14297		
<code>\textrm{Field}</code>	4429		
<code>\textrm{fiveinferior}</code>	14063		
<code>\textrm{fivesuperior}</code>	14031		
<code>\textrm{fl}</code>	591, 12187, 14299		
<code>\textrm{florin}</code>	12159, 13035		
<code>\textrm{flq}</code>	478, 12414, 14307		
<code>\textrm{flqq}</code>	476, 12412, 14305		
<code>\textrm{fourinferior}</code>	14061		
<code>\textrm{foursuperior}</code>	14029		
<code>\textrm{fractionsolidus}</code>	12161,		
14019			
<code>\textrm{frq}</code>	479, 12415, 14308		
<code>\textrm{frqq}</code>	477, 12413, 14306		
<code>\textrm{Gamma}</code>	861, 13189		
<code>\textrm{gamma}</code>	861, 13252		
<code>\textrm{glq}</code>	474, 12410, 14303		
<code>\textrm{glqq}</code>	472, 12408, 14301		
<code>\textrm{gravedbl}</code>	13151		
<code>\textrm{greater}</code>	12126, 12559		
<code>\textrm{grq}</code>	475, 12411, 14304		
<code>\textrm{grqq}</code>	473, 12409, 14302		
<code>\textrm{Gslash}</code>	13054		
<code>\textrm{gslash}</code>	13056		
<code>\textrm{guarani}</code>	14093		
<code>\textrm{Hslash}</code>	12850		
<code>\textrm{thslash}</code>	12852		
<code>\textrm{HT}</code>	12086, 12533		
<code>\textrm{hungarumlaut}</code> 12100, 12491,			
12510, 13148, 13149			
<code>\textrm{interrobang}</code>	14017		
<code>\textrm{Iota}</code> 881, 13175, 13201, 13234			
<code>\textrm{iota}</code> 881, 13244, 13264, 13298			
<code>\textrm{Iotadieresis}</code> 13183, 13233			
<code>\textrm{it}</code>	430		
<code>\textrm{Kappa}</code>	882, 13203		
<code>\textrm{kappa}</code>	882, 13266		
<code>\textrm{Koppagreek}</code>	889, 13317		
<code>\textrm{koppagreek}</code>	889, 13319		

<code>\textordfeminine</code> . 12230, 12598	<code>\textSigma</code> 905, 13219	<code>\theHenumi</code> 5068
<code>\textordmasculine</code> 12261, 12630	<code>\textsigma</code> 905, 13284	<code>\theHenumii</code> 5069
<code>\textparagraph</code> 411, 12253, 12622	<code>\textsixinferior</code> 14065	<code>\theHenumiii</code> 5070
<code>\textparenleft</code> . 596, 597, 12118, 12551	<code>\textsixsuperior</code> 14033	<code>\theHenumiv</code> 5071
<code>\textparenleftinferior</code> . 14073	<code>\textsl</code> 432	<code>\theHequation</code> . 5039, 5108, 5343, 5365, 5389, 5397, 5424, 5428
<code>\textparenleftsuperior</code> . 14047	<code>\textsterling</code> 12216, 12584	<code>\theHfigure</code> 5046, 5050
<code>\textparenright</code> . . 12120, 12553	<code>\textStigmagreek</code> . . . 864, 13309	<code>\theHHfootnote</code> 5072, 5074
<code>\textparenrightinferior</code> 14075	<code>\textstigmagreek</code> . . . 864, 13311	<code>\theHHmpfootnote</code> 5074
<code>\textparenrightsuperior</code> 14049	<code>\textsurd</code> 14127	<code>\theHItem</code> 5062, 5068, 5069, 5070, 5071
<code>\textpercent</code> . . 407, 12114, 12545	<code>\TextSymbolUnavailable</code> . 12082, 12083, 12084	<code>\theHlisting</code> 2641
<code>\textperiodcentered</code> . . . 12255, 12420, 12624, 14313	<code>\textTau</code> 906, 13221	<code>\theHlstlisting</code> 2637
<code>\textpertenthousand</code> . . . 14009	<code>\texttau</code> 906, 13286	<code>\theHmpfootnote</code> 5073
<code>\textperthousand</code> . 12169, 14007	<code>\textTheta</code> 867, 13199	<code>\theHparagraph</code> 5056, 5057
<code>\textpeseta</code> 14083	<code>\texttheta</code> 867, 13262	<code>\theHparentequation</code> 5423, 5428
<code>\textpeso</code> 14091	<code>\textthreeinferior</code> 14059	<code>\theHpart</code> 5042
<code>\textPhi</code> 908, 13225	<code>\textthreequarters</code> 12269, 12638	<code>\theHsection</code> . . 5039, 5045, 5052, 5054, 5058, 5059, 5133
<code>\textphi</code> 908, 13290	<code>\textthreesuperior</code> 12247, 12615	<code>\theHslide</code> 6379
<code>\textPi</code> 888, 13215	<code>\texttie</code> . . 12495, 12514, 13163	<code>\theHslidesection</code> . . 6384, 6386, 6422, 6426
<code>\textpi</code> 888, 13278	<code>\texttilde</code> . . 3099, 12049, 12061, 12073, 12106, 12482, 12501, 13146	<code>\theHslidesubsection</code> 6385, 6473, 6477
<code>\textplusminus</code> . . . 12243, 12419, 12611, 14312	<code>\texttildelow</code> 13153	<code>\theHsubequation</code> 5397
<code>\textplussuperior</code> 14041	<code>\texttimes</code> 12417, 14310	<code>\theHsubparagraph</code> 5057
<code>\textpm</code> 12419, 14312	<code>\texttrademark</code> 12183, 14105	<code>\theHsubsection</code> 5054, 5055
<code>\textPsi</code> 910, 13229	<code>\textTslash</code> 12983	<code>\theHsubsubsection</code> . 5055, 5056
<code>\textpsi</code> 910, 13294	<code>\texttslash</code> 12985	<code>\theHtable</code> 5047, 5051
<code>\textquestiondown</code> . . . 593, 771, 12271, 12640	<code>\texttt</code> 427	<code>\theHtheorem</code> 5058
<code>\textquotedbl</code> 12108, 12539	<code>\texttwoinferior</code> 14057	<code>\theHthm</code> 5059
<code>\textquotedblleft</code> 12173, 12409, 13993, 14302	<code>\texttwosuperior</code> . 12245, 12613	<code>\thelisting</code> 2641
<code>\textquotedblright</code> 12175, 13995	<code>\textunderscore</code> 410, 3511, 3512, 3514, 12132, 12565	<code>\thelstlisting</code> 2637
<code>\textquoteleft</code> . . . 12177, 12411, 13987, 14304	<code>\textup</code> 433	<code>\thempfn</code> . 5497, 5570, 5572, 5652, 5664
<code>\textquoteright</code> . . 12179, 13989	<code>\textuparrow</code> 14119	<code>\theoremautorefname</code> 2339, 2357, 2375, 2393, 2411, 2429, 2447, 2485, 2505, 2523, 6814
<code>\textquotesingle</code> 12549	<code>\textUpsilon</code> . . 907, 13179, 13223, 13236	<code>\thepage</code> . 1738, 3627, 4771, 4794, 5210, 5218, 5245, 5916, 5939, 5968, 6059, 6130, 6161, 6298, 6306, 6310, 6576, 6596, 6613, 6727
<code>\texttriangle</code> 14131	<code>\textupsilon</code> . . 907, 13288, 13300, 13305	<code>\theslideheading</code> 6405
<code>\texttrbrackdbl</code> 14295	<code>\textupsilonacute</code> 13246, 13304	<code>\theslidesection</code> . . 6393, 6400, 6408, 6414, 6416, 6418, 6424, 6434
<code>\textrecipe</code> 14101	<code>\textvarsigma</code> 13282	<code>\theslidesubheading</code> 6406, 6457
<code>\textreferencemark</code> 14015	<code>\textvisiblespace</code> 14135	<code>\theslidesubsubsection</code> 6445, 6452, 6459, 6465, 6467, 6469, 6475, 6485
<code>\textregistered</code> . . 12237, 12605	<code>\textwon</code> 14085	<code>\This@name</code> 5086, 5087, 5104, 5105
<code>\textRho</code> 904, 13217	<code>\textXi</code> 886, 13211	<code>\thispdfpagelabel</code> 4776
<code>\textrho</code> 904, 13280	<code>\textxi</code> 886, 13274	<code>\ThisShouldNotHappen</code> . . . 11333
<code>\textrightarrow</code> 14121	<code>\textyen</code> 12220, 12588	<code>\thm@headpunct</code> 5442
<code>\textring</code> . . 12051, 12063, 12075, 12104, 12484, 12503, 13142	<code>\textzeroinferior</code> 14053	<code>\thm@headsep</code> 5443
<code>\textrm</code> 425	<code>\textzerosuperior</code> 14027	<code>\thm@notefont</code> 5441
<code>\textrquill</code> 14023	<code>\textZeta</code> 865, 13195	
<code>\textSampigreek</code> 912, 13321	<code>\textzeta</code> 865, 13258	
<code>\textsampigreek</code> 912, 13323	<code>\TH</code> 12334, 12702	
<code>\textsc</code> 431	<code>\th</code> 12402, 12770	
<code>\textsection</code> 12224, 12592	<code>\thaa</code> 14462	
<code>\textservicemark</code> 14103	<code>\theequation</code> . . 5107, 5342, 5364, 5388, 5424	
<code>\textseveninferior</code> 14067	<code>\thefootnote</code> 5508, 5671	
<code>\textsevensuperior</code> 14035	<code>\theHchapter</code> . . 5049, 5050, 5051, 5052, 5134	
<code>\textsf</code> 426, 10669, 10672		

[illegible]

10273, 10293, 10724, 10744,
 11061, 11081
 \XeTeXrevision 8152
 \XeTeXversion 8152
 \XR@dURL 1759, 1760
 \XR@addURL 1759
 \XR@ext .. 1994, 1995, 3726, 3729,
 4918, 6878, 7518, 7610, 7838,
 8258, 9455, 9526, 9585, 9767,
 9927
 \XR@URL 1764
 \xspace 506, 508

Y
 \y .. 1881, 1886, 1891, 2659, 2660,
 2661, 2662, 3057, 3060, 3063,
 3066, 3068, 3074, 3107, 3108,
 3110, 4705, 4713, 5286, 5287,
 5290, 5298
 \ya 14488
 \yahamza 14457
Z
 \z 1883, 1884, 1885
 \z@ 835, 852, 874,
 897, 1040, 1294, 1300, 1306,
 1370, 1374, 1382, 1386, 1794,

1813, 2080, 2083, 2182
 2671, 2980, 2981, 2986
 2995, 3307, 4921, 4924
 5470, 5614, 7440, 7444
 7453, 7460, 7464, 7469
 8717, 8741, 8925, 9176
 10262, 10713, 10998,
 11381, 11410, 11415,
 11493, 11521, 11552,
 11577, 11587, 11592,
 11626, 11863, 11960
 \za
 \zay
 \ZWNJ