

Hypertext marks in \LaTeX

Sebastian Rahtz

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

Heiko Oberdiek

Email: `oberdiek@uni-freiburg.de`

processed May 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	74
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	83
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	95
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	100
19.1.4	Pushbutton field	101
19.1.5	Check box field	101
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	112

24 The Mangling Of Aux and Toc Files	113
25 Title strings	114
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	127
32 Package varioref support	128
33 Package longtable support	128
34 Equations	129
35 Footnotes	132
36 Float captions	136
37 Bibliographic references	138
37.1 Package harvard	141
37.2 Package chicago	143
38 Page numbers	144
39 Table of contents	145
40 New counters	146
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	151
46 Configuration files	159
46.1 PS/PDF strings	159
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	187
46.7	Fix for Adobe bug number 466320	199
46.8	Direct pdfmark support	200
46.9	Rokicki's dvips	211
46.10	VTeX's vtexpdfmark driver	213
46.11	Textures	215
46.12	dvipsone	218
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	233
47.5	dvipdfm	240
47.6	Common forms part	247
48	Bookmarks in the PDF file	253
48.1	Bookmarks	254
49	Compatibility with koma-script classes	261
50	Encoding definition files for encodings of PDF strings	261
50.1	PD1 encoding	261
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	272
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	282
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	300
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	303
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	304

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\textP\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 PD1 encoding. Because the protecting mechanism of \LaTeX doesn't work within an `\edef`, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see `\texorpdfstring`). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with `\csname`. However a PDF reader isn't \TeX , so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

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

```
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 $\backslash\text{HyPsd@CheckCatcodes}$ the command $\backslash\text{HyPsd@RemoveMask}$ is reused to remove the group protection character |. This character is needed to ensure that the string at least consists of one token if $\backslash\text{HyPsd@CheckCatcodes}$ 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 T_EX'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 L^AT_EX 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{%
  \ifmode
    \@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 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         \begin{group}
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     \end{group}
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 \autorefname{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 \autorefname{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 \autorefname{auto}” etc.

```
2471 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2472 % \def\appendixautorefname{%
2473 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\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 \autorefname{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 \define@key{Hyp}{bookmarks}[true]{%
2623   \Hy@boolkey{bookmarks}{#1}%
2624 }

2625 \define@key{Hyp}{bookmarksopen}[true]{%
2626   \Hy@boolkey{bookmarksopen}{#1}%
2627 }

```

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.

```

2628 \let\Hy@bookmarksdepth\c@tocdepth
2629 \define@key{Hyp}{bookmarksdepth}[]{%
2630   \begingroup
2631     \edef\x{#1}%
2632     \ifx\x\empty
2633       \global\let\Hy@bookmarksdepth\c@tocdepth
2634     \else
2635       \@ifundefined{toclevel@\x}{%
2636         \@onelevel@sanitize\x
2637         \edef\y{\expandafter\@car\x\@nil}%
2638         \ifcase 0\expandafter\ifx\y-1\fi
2639           \expandafter\ifnum\expandafter'\y>47 %
2640             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
2641           \Hy@Warning{Unknown document division name (\x)}%
2642         \else
2643           \setbox\z@=\hbox{%
2644             \count@=\x
2645             \xdef\Hy@bookmarksdepth{\the\count@}%
2646           }%
2647         \fi
2648       }{%
2649         \setbox\z@=\hbox{%
2650           \count@=\csname toclevel@\x\endcsname
2651           \xdef\Hy@bookmarksdepth{\the\count@}%
2652         }%
2653       }%
2654     \fi
2655   \endgroup
2656 }

```

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

```

2657 \define@key{Hyp}{bookmarksopenlevel}{%
2658   \def\@bookmarksopenlevel{#1}%
2659 }

2660 \def\@bookmarksopenlevel{\maxdimen}
2661 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2662 \define@key{Hyp}{bookmarkstype}{%
2663   \def\Hy@bookmarkstype{#1}%

```

```

2664 }
2665 \def\Hy@bookmarkstype{toc}

```

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

```

2666 \define@key{Hyp}{bookmarksnumbered}[true]{%
2667   \Hy@boolkey{bookmarksnumbered}{#1}%
2668 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2669 \define@key{Hyp}{CJKbookmarks}[true]{%
2670   \Hy@boolkey{CJKbookmarks}{#1}%
2671 }

2672 \def\Hy@temp#1{%
2673   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2674 }
2675 \def\Hy@@temp#1#2#3{%
2676   \define@key{Hyp}{#2color}{%
2677     \HyColor@HyperrefColor{##1}{#1}%
2678   }%
2679   \def#1{#3}%
2680 }
2681 \Hy@temp{link}{red}
2682 \Hy@temp{anchor}{black}
2683 \Hy@temp{cite}{green}
2684 \Hy@temp{file}{cyan}
2685 \Hy@temp{url}{magenta}
2686 \Hy@temp{menu}{red}
2687 \Hy@temp{run}{\@filecolor}
2688 \define@key{Hyp}{pagecolor}{%
2689   \Hy@WarningPageColor
2690 }
2691 \def\Hy@WarningPageColor{%
2692   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
2693   \global\let\Hy@WarningPageColor\relax
2694 }

2695 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2696 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2697 \let\@baseurl\empty
2698 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2699 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2700 \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.

```

2701 \let\@pdfpagetransition\relax
2702 \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.

```

2703 \let\@pdfpageduration\relax
2704 \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.

```

2705 \newif\ifHy@useHidKey
2706 \Hy@useHidKeyfalse
2707 \define@key{Hyp}{pdfpagehidden}[true]{%
2708   \Hy@boolkey{pdfpagehidden}{#1}%
2709   \ifHy@pdfpagehidden
2710     \global\Hy@useHidKeytrue
2711   \fi
2712 }

```

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).

```

2713 \def\Hy@ColorList{cite,file,link,menu,run,url}
2714 \@for\Hy@temp:=\Hy@ColorList\do{%
2715   \edef\Hy@temp{%
2716     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2717       \noexpand\HyColor@HyperrefBorderColor
2718       {##1}%
2719       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2720       {hyperref}%
2721       {\Hy@temp bordercolor}%
2722     }%
2723   }%
2724   \Hy@temp
2725 }
2726 \define@key{Hyp}{pagebordercolor}{%
2727   \Hy@WarningPageBorderColor
2728 }
2729 \def\Hy@WarningPageBorderColor{%
2730   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2731   \global\let\Hy@WarningPageBorderColor\relax
2732 }
2733 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2734 \Hy@DefNameKey{pdfhighlight}{%
2735   \do{/I}{Invert}%
2736   \do{/N}{None}%
2737   \do{/O}{Outline}%
2738   \do{/P}{Push}%
2739 }
2740 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2741 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2742 \def\Hy@setpdfborder{%
2743   \ifx\@pdfborder\@empty
2744     \else
2745       /Border[\@pdfborder]%
2746     \fi
2747   \ifx\@pdfborderstyle\@empty
2748     \else
2749       /BS<<\@pdfborderstyle>>%
2750     \fi

```

```

2751 }
2752 \Hy@DefNameKey{pdfpagemode}{%
2753   \do{UseNone}{}%
2754   \do{UseOutlines}{}%
2755   \do{UseThumbs}{}%
2756   \do{FullScreen}{}%
2757   \do{UseOC}{PDF 1.5}%
2758   \do{UseAttachments}{PDF 1.6}%
2759 }
2760 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2761   \do{UseNone}{}%
2762   \do{UseOutlines}{}%
2763   \do{UseThumbs}{}%
2764   \do{FullScreen}{}%
2765   \do{UseOC}{PDF 1.5}%
2766   \do{UseAttachments}{PDF 1.6}%
2767 }
2768 \Hy@DefNameKey{pdfdirection}{%
2769   \do{L2R}{Left to right}%
2770   \do{R2L}{Right to left}%
2771 }
2772 \Hy@DefNameKey{pdfviewarea}{%
2773   \do{MediaBox}{}%
2774   \do{CropBox}{}%
2775   \do{BleedBox}{}%
2776   \do{TrimBox}{}%
2777   \do{ArtBox}{}%
2778 }
2779 \Hy@DefNameKey{pdfviewclip}{%
2780   \do{MediaBox}{}%
2781   \do{CropBox}{}%
2782   \do{BleedBox}{}%
2783   \do{TrimBox}{}%
2784   \do{ArtBox}{}%
2785 }
2786 \Hy@DefNameKey{pdfprintarea}{%
2787   \do{MediaBox}{}%
2788   \do{CropBox}{}%
2789   \do{BleedBox}{}%
2790   \do{TrimBox}{}%
2791   \do{ArtBox}{}%
2792 }
2793 \Hy@DefNameKey{pdfprintclip}{%
2794   \do{MediaBox}{}%
2795   \do{CropBox}{}%
2796   \do{BleedBox}{}%
2797   \do{TrimBox}{}%
2798   \do{ArtBox}{}%
2799 }
2800 \Hy@DefNameKey{pdfprintscaling}{%
2801   \do{AppDefault}{}%
2802   \do{None}{}%
2803 }
2804 \Hy@DefNameKey{pdfduplex}{%
2805   \do{Simplex}{}%
2806   \do{DuplexFlipShortEdge}{}%
2807   \do{DuplexFlipLongEdge}{}%

```

```

2808 }
2809 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2810   \do{true}{}%
2811   \do{false}{}%
2812 }
2813 \define@key{Hyp}{pdfprintpagerange}{%
2814   \def\@pdfprintpagerange{#1}%
2815 }
2816 \Hy@DefNameKey{pdfnumcopies}{%
2817   \do{2}{two copies}%
2818   \do{3}{three copies}%
2819   \do{4}{four copies}%
2820   \do{5}{five copies}%
2821 }
2822 \define@key{Hyp}{pdfusetitle}[true]{%
2823   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2824 }
2825 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2826 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2827 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2828 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2829 \define@key{Hyp}{pdfcreationdate}{%
2830   \begingroup
2831     \Hy@unicodedefalse
2832     \pdfstringdef\@pdfcreationdate{#1}%
2833   \endgroup
2834 }
2835 \define@key{Hyp}{pdfmoddate}{%
2836   \begingroup
2837     \Hy@unicodedefalse
2838     \pdfstringdef\@pdfmoddate{#1}%
2839   \endgroup
2840 }
2841 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}
2842 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2843 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2844 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2845 \let\setpdflinkmargin\@gobble
2846 \def\calculate@pdfview#1 #2\{%
2847   \def\@pdfview{#1}%
2848   \ifx\#2\%
2849     \def\@pdfviewparams{ -32768}%
2850   \else
2851     \def\@pdfviewparams{ #2}%
2852   \fi
2853 }
2854 \begingroup\expandafter\expandafter\expandafter\endgroup
2855 \expandafter\ifx\csname numexpr\endcsname\relax
2856   \def\Hy@number#1{%
2857     \expandafter\@firstofone\expandafter{\number#1}%
2858   }%
2859 \else
2860   \def\Hy@number#1{%
2861     \the\numexpr#1\relax
2862   }%
2863 \fi
2864 \define@key{Hyp}{pdfstartpage}{%

```

```

2865 \ifx\#1\%
2866 \def\@pdfstartpage{%
2867 \else
2868 \edef\@pdfstartpage{\Hy@number{#1}}%
2869 \fi
2870 }%
2871 \define@key{Hyp}{pdfstartview}{%
2872 \ifx\#1\%
2873 \def\@pdfstartview{%
2874 \else
2875 \hypercalcbpdef\@pdfstartview{ /#1 }%
2876 \fi
2877 }
2878 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2879 \define@key{Hyp}{pdftoolbar}[true]{%
2880 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2881 }
2882 \define@key{Hyp}{pdfmenubar}[true]{%
2883 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2884 }
2885 \define@key{Hyp}{pdfwindowui}[true]{%
2886 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2887 }
2888 \define@key{Hyp}{pdffitwindow}[true]{%
2889 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2890 }
2891 \define@key{Hyp}{pdfcenterwindow}[true]{%
2892 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2893 }
2894 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2895 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2896 }
2897 \define@key{Hyp}{pdfa}[true]{%
2898 \Hy@boolkey[pdfa]{#1}%
2899 }
2900 \define@key{Hyp}{pdfnewwindow}[true]{%
2901 \def\Hy@temp{#1}%
2902 \ifx\Hy@temp\@empty
2903 \Hy@newwindowsetfalse
2904 \else
2905 \Hy@newwindowsettrue
2906 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2907 \fi
2908 }
2909 \def\Hy@SetNewWindow{%
2910 \ifHy@newwindowset
2911 /NewWindow %
2912 \ifHy@newwindow true\else false\fi
2913 \fi
2914 }
2915 \Hy@DefNameKey{pdfpagelayout}{%
2916 \do{SinglePage}{}%
2917 \do{OneColumn}{}%
2918 \do{TwoColumnLeft}{}%
2919 \do{TwoColumnRight}{}%
2920 \do{TwoPageLeft}{PDF 1.5}%
2921 \do{TwoPageRight}{PDF 1.5}%

```

```

2922 }
2923 \define@key{Hyp}{pdflang}{%
2924   \def\@pdflang{#1}%
2925 }
2926 \define@key{Hyp}{pdfpagelabels}[true]{%
2927   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2928 }
2929 \define@key{Hyp}{pdfescapeform}[true]{%
2930   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2931 }

```

Default values:

```

2932 \def\@linkbordercolor{1 0 0}
2933 \def\@urlbordercolor{0 1 1}
2934 \def\@menubordercolor{1 0 0}
2935 \def\@filebordercolor{0 .5 .5}
2936 \def\@runbordercolor{0 .7 .7}
2937 \def\@citebordercolor{0 1 0}
2938 \def\@pdfhighlight{/I}
2939 \def\@pdftitle{}
2940 \def\@pdfauthor{}
2941 \let\@pdfproducer\relax
2942 \def\@pdfcreator{LaTeX with hyperref package}
2943 \def\@pdfcreationdate{}
2944 \def\@pdfmoddate{}
2945 \def\@pdfsubject{}
2946 \def\@pdfkeywords{}
2947 \def\@pdfpagescrop{}
2948 \def\@pdfstartview{ /Fit }
2949 \def\@pdfstartpage{1}
2950 \def\@pdfprintpagerange{}
2951 \def\@pdflang{}
2952 \let\PDF@SetupDoc\@empty
2953 \let\PDF@FinishDoc\@empty
2954 \let\phantomsection\@empty
2955 \let\special@paper\@empty
2956 \def\HyperDestNameFilter#1{#1}
2957 \@ifundefined{stockwidth}{%
2958   \ifdim\paperwidth>\z@
2959     \ifdim\paperheight>\z@
2960       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2961     \fi
2962   \fi
2963 }{%
2964   \ifdim\stockwidth>\z@
2965     \ifdim\stockheight>\z@
2966       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2967     \fi
2968   \fi
2969 }
2970 \begingroup
2971 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2972 \dimen@=\x\relax
2973 \ifdim\dimen@>\z@
2974   \else
2975     \dimen@=11in\relax
2976     \Hy@WarningNoLine{%
2977       Height of page (\expandafter\string\x) %

```

```

2978         is invalid (\the\x),\MessageBreak
2979         using 11in%
2980     }%
2981 \fi
2982 \dimen@=0.99626401\dimen@
2983 \xdef\Hy@pageheight{\strip@pt\dimen@}%
2984 \endgroup
2985 \def\HyInd@EncapChar{\\}
2986 \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.

```

2987 \let\hyper@normalise\ExecuteOptions
2988 \let\ExecuteOptions\hypersetup
2989 \Hy@RestoreCatcodes
2990 \InputIfFileExists{hyperref.cfg}{-}{-}
2991 \Hy@SetCatcodes
2992 \let\ExecuteOptions\hyper@normalise
2993 \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`.

```

2994 \RequirePackage{kvoptions}[2006/08/17]

```

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

```

2995 \@ifpackageloaded{tex4ht}{-}%
2996 \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
2997 \PassOptionsToPackage{tex4ht}{hyperref}%
2998 }%
2999 }{-}

3000 \let\ReadBookmarks\relax
3001 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3002 \AtBeginDocument{%
3003   \ifHy@draft
3004     \let\hyper@@anchor\@gobble
3005     \gdef\hyper@link#1#2#3{#3}%
3006     \let\hyper@anchorstart\@gobble
3007     \let\hyper@anchorend\@empty
3008     \let\hyper@linkstart\@gobbletwo
3009     \let\hyper@linkend\@empty
3010     \def\hyper@linkurl#1#2{#1}%
3011     \def\hyper@linkfile#1#2#3{#1}%
3012     \def\hyper@link@{#1}#2#3{#1}%
3013     \def\Acrobatmenu#1#2{\leavevmode#2}%
3014     \let\PDF@SetupDoc\@empty
3015     \let\PDF@FinishDoc\@empty
3016     \let\@fifthoffive\@secondoftwo
3017     \let\@secondoffive\@secondoftwo
3018     \let\ReadBookmarks\relax
3019     \let\WriteBookmarks\relax
3020     \Hy@WarningNoLine{ draft mode on}%
3021   \fi

```



```

3022 \Hy@DisableOption{draft}%
3023 \Hy@DisableOption{nolinks}%
3024 \Hy@DisableOption{final}%
3025 }

```

15.1 PDF/A

```

3026 \Hy@DisableOption{pdfa}
3027 \ifHy@pdfa
3028   \setkeys{Hyp}{pdfversion=1.4}%
3029   \def\Hy@Acrobatmenu#1#2{%
3030     \leavevmode
3031     \begingroup
3032     \edef\x{#1}%
3033     \@onelevel@sanitize\x
3034     \ifx\x\Hy@NextPage
3035       \let\y=Y%
3036     \else
3037       \ifx\x\Hy@PrevPage
3038         \let\y=Y%
3039       \else
3040         \ifx\x\Hy@FirstPage
3041           \let\y=Y%
3042         \else
3043           \ifx\x\Hy@LastPage
3044             \let\y=Y%
3045           \else
3046             \let\y=N%
3047           \fi
3048         \fi
3049       \fi
3050     \fi
3051     \expandafter\endgroup
3052     \ifx\y Y%
3053     \else
3054       \PackageError{hyperref}{%
3055         PDF/A: Named action ‘#1’ is not permitted%
3056       }\@ehc
3057       {#2}%
3058       \expandafter\@gobble
3059     \fi
3060   }%
3061   \def\Hy@temp#1{%
3062     \expandafter\def\csname Hy@#1\endcsname{#1}%
3063     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3064   }%
3065   \Hy@temp{NextPage}%
3066   \Hy@temp{PrevPage}%
3067   \Hy@temp{FirstPage}%
3068   \Hy@temp{LastPage}%
3069 \else
3070   \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3071 \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.

```
3072 \Hy@nextfalse
3073 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3074 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3075 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3076 \ifHy@next
3077   \let\texttilde\~%
3078 \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.

```
3079 \@ifpackageloaded{babel}{%
3080   \@ifpackagelater{babel}{2008/03/16}{%
3081     \def\Hy@PatchLanguageShorthands#1{%
3082       \begingroup
3083         \edef\x{#1}%
3084         \@onelevel@sanitize\x
3085         \def\y{system}%
3086         \@onelevel@sanitize\y
3087       \expandafter\endgroup
3088       \ifx\x\y
3089         \else
3090           \HyOrg@languageshorthands{#1}%
3091         \fi
3092     }%
3093   \AtBeginDocument{%
3094     \begingroup
3095       \toks0=\expandafter{\pdfstringdefPreHook}%
3096       \xdef\pdfstringdefPreHook{%
3097         \let\noexpand\HyOrg@languageshorthands
3098         \noexpand\languageshorthands
3099         \let\noexpand\languageshorthands
3100         \noexpand\Hy@PatchLanguageShorthands
3101         \the\toks0 %
3102         \let\noexpand\languageshorthands
3103         \noexpand\HyOrg@languageshorthands
3104       }%
3105     \endgroup
3106   }%
3107 }{}%
3108 }{}

3109 \ifHy@figures
3110   \Hy@Info{Hyper figures ON}%
3111 \else
3112   \Hy@Info{Hyper figures OFF}%
3113 \fi
3114 \ifHy@nesting
3115   \Hy@Info{Link nesting ON}%
3116 \else
3117   \Hy@Info{Link nesting OFF}%
3118 \fi
```

```

3119 \ifHy@hyperindex
3120   \Hy@Info{Hyper index ON}%
3121 \else
3122   \Hy@Info{Hyper index OFF}%
3123 \fi
3124 \ifHy@plainpages
3125   \Hy@Info{Plain pages ON}%
3126 \else
3127   \Hy@Info{Plain pages OFF}%
3128 \fi
3129 \ifHy@backref
3130   \Hy@Info{Backreferencing ON}%
3131 \else
3132   \Hy@Info{Backreferencing OFF}%
3133 \fi
3134 \ifHy@typexml
3135   \AtEndOfPackage{%
3136     \RequirePackage{color}%
3137     \RequirePackage{nameref}%
3138   }%
3139 \fi
3140 \Hy@DisableOption{typexml}
3141 \ifHy@implicit
3142   \typeout{Implicit mode ON; LaTeX internals redefined}%
3143 \else
3144   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3145   \def\MaybeStopEarly{%
3146     \typeout{Hyperref stopped early}%
3147     \AfterBeginDocument{%
3148       \PDF@FinishDoc
3149       \gdef\PDF@FinishDoc{}}%
3150   }%
3151   \endinput
3152 }%
3153 \AtBeginDocument{%
3154   \let\autoref\ref
3155   \let\autopageref\pageref
3156   \ifx\@pdfpagemode\@empty
3157     \gdef\@pdfpagemode{UseNone}%
3158   \fi
3159   \global\Hy@backreffalse
3160 }%
3161 \AtEndOfPackage{%
3162   \global\let\ReadBookmarks\relax
3163   \global\let\WriteBookmarks\relax
3164 }%
3165 \fi
3166 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3167 \AtEndOfPackage{%
3168   \@ifpackageloaded{tex4ht}{%
3169     \def\Hy@driver{htex4ht}%
3170     \Hy@texhttrue
3171   }{}%

```

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.

```

3172 \ifx\Hy@driver\@empty
3173 \else
3174   \def\Hy@temp{hpdtex}%
3175   \ifpdf
3176     \ifx\Hy@driver\Hy@temp
3177     \else
3178       \Hy@WarningNoLine{%
3179         Wrong driver '\Hy@driver.def';\MessageBreak
3180         pdfTeX is running in PDF mode.\MessageBreak
3181         Forcing driver '\Hy@temp.def'%
3182       }%
3183     \let\Hy@driver\Hy@temp
3184   \fi
3185 \else
3186   \ifx\Hy@driver\Hy@temp
3187   \Hy@WarningNoLine{%
3188     Wrong driver '\Hy@driver.def';\MessageBreak
3189     pdfTeX is not running in PDF mode.\MessageBreak
3190     Using default driver%
3191   }%
3192   \let\Hy@driver\@empty
3193 \fi
3194 \fi
3195 \fi
3196 \ifx\Hy@driver\@empty
3197 \else
3198   \def\Hy@temp{hdvipdfm}%
3199   \ifxetex
3200     \ifx\Hy@driver\Hy@temp
3201     \else
3202       \Hy@WarningNoLine{%
3203         Wrong driver '\Hy@driver.def';\MessageBreak
3204         XeTeX is running.\MessageBreak
3205         Forcing driver '\Hy@temp.def' for XeTeX%
3206       }%
3207     \let\Hy@driver\Hy@temp
3208   \fi
3209 \fi
3210 \fi
3211 \ifx\Hy@driver\@empty
3212 \else
3213   \def\Hy@temp{hvtexhtm}%
3214   \ifvtexhtml
3215     \ifx\Hy@driver\Hy@temp
3216     \else
3217       \Hy@WarningNoLine{%
3218         Wrong driver '\Hy@driver.def';\MessageBreak
3219         VTeX is running in HTML mode.\MessageBreak
3220         Forcing driver '\Hy@temp.def'%
3221       }%
3222     \let\Hy@driver\Hy@temp
3223   \fi
3224 \else
3225   \ifx\Hy@driver\Hy@temp
3226     \Hy@WarningNoLine{%

```

```

3227         Wrong driver '\Hy@driver.def';\MessageBreak
3228         VTeX is not running in HTML mode.\MessageBreak
3229         Using default driver%
3230     }%
3231     \let\Hy@driver\@empty
3232 \fi
3233 \fi
3234 \fi

```

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

```

3235 \ifx\Hy@driver\@empty
3236   \providecommand*\Hy@defaultdriver{hypertex}%
3237   \ifpdf
3238     \def\Hy@driver{hpdftex}%
3239   \else
3240     \ifxetex
3241       \def\Hy@driver{hdvipdfm}%
3242     \else
3243       \ifvtexhtml
3244         \def\Hy@driver{hvtexhtm}%
3245         \def\MaybeStopEarly{%
3246           \typeout{Hyperref stopped early}%
3247           \AfterBeginDocument{%
3248             \PDF@FinishDoc
3249             \gdef\PDF@FinishDoc{}}%
3250         }%
3251         \endinput
3252       }%
3253     \else
3254       \ifvtexpdf
3255         \def\Hy@driver{hvtex}%
3256       \else
3257         \ifvtexps
3258           \def\Hy@driver{hvtex}%
3259         \else
3260           \let\Hy@driver\Hy@defaultdriver
3261         \fi
3262       \fi
3263     \fi
3264   \fi
3265 \fi
3266 \ifx\Hy@driver\Hy@defaultdriver
3267   \def\Hy@temp{hdviwind}%
3268   \ifx\Hy@temp\Hy@driver
3269     \setkeys{Hyp}{colorlinks}%
3270     \PassOptionsToPackage{dviwindo}{color}%
3271   \fi
3272 \fi
3273 \typeout{*hyperref using default driver \Hy@driver*}%
3274 \else
3275   \typeout{*hyperref using driver \Hy@driver*}%
3276 \fi
3277 \input{\Hy@driver.def}%
3278 \let\@unprocessedoptions\relax
3279 \Hy@RestoreCatcodes
3280 }
3281 \newif\ifHy@DvipdfmxOutlineOpen
3282 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

3283 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3284 \else
3285   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3286     \Hy@DvipdfmxOutlineOpentruetrue
3287   \fi
3288 \fi
3289 \Hy@DisableOption{tex4ht}
3290 \Hy@DisableOption{pdftex}
3291 \Hy@DisableOption{nativepdf}
3292 \Hy@DisableOption{dvipdfm}
3293 \Hy@DisableOption{dvipdfmx}
3294 \Hy@DisableOption{dvipdfmx-outline-open}
3295 \Hy@DisableOption{pdfmark}
3296 \Hy@DisableOption{dvips}
3297 \Hy@DisableOption{hypertex}
3298 \Hy@DisableOption{vtex}
3299 \Hy@DisableOption{vtexpdfmark}
3300 \Hy@DisableOption{dviwindo}
3301 \Hy@DisableOption{dvipsone}
3302 \Hy@DisableOption{textures}
3303 \Hy@DisableOption{latex2html}
3304 \Hy@DisableOption{ps2pdf}
3305 \Hy@DisableOption{xetex}
3306 \AtEndOfPackage{%
3307   \Hy@DisableOption{pdfversion}%
3308 }

```

15.3.2 Bookmarks

```

3309 \def\WriteBookmarks{0}
3310 \def\@bookmarkopenstatus#1{%
3311   \ifHy@bookmarksopen

```

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

```

3312   \ifnum#1<\expandafter\@firstofone\expandafter
3313     {\number\@bookmarksopenlevel} % explicit space
3314   \else
3315     -%
3316   \fi
3317 \else
3318   -%
3319 \fi
3320 }
3321 \ifHy@bookmarks
3322   \Hy@Info{Bookmarks ON}%
3323   \ifx\@pdfpagemode\@empty
3324     \def\@pdfpagemode{UseOutlines}%
3325   \fi
3326 \else
3327   \def\@bookmarkopenstatus#1{%
3328     \Hy@Info{Bookmarks OFF}%
3329     \AtEndOfPackage{%
3330       \global\let\ReadBookmarks\relax
3331       \global\let\WriteBookmarks\relax
3332     }%
3333   \ifx\@pdfpagemode\@empty
3334     \def\@pdfpagemode{UseNone}%
3335   \fi

```

```

3336 \fi
3337 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
3338 \def\Hy@CatcodeWrapper#1{%
3339   \def\Hy@EndWrap{%
3340     \def\TMP@EnsureCode##1##2{%
3341       \edef\Hy@EndWrap{%
3342         \Hy@EndWrap
3343         \catcode##1 \the\catcode##1\relax
3344       }%
3345       \catcode##1 ##2\relax
3346     }%
3347     \TMP@EnsureCode{10}{12}% ^^J
3348     \TMP@EnsureCode{33}{12}% !
3349     \TMP@EnsureCode{34}{12}% "
3350     \TMP@EnsureCode{36}{3}% $ (math)
3351     \TMP@EnsureCode{38}{4}% & (alignment)
3352     \TMP@EnsureCode{39}{12}% '
3353     \TMP@EnsureCode{40}{12}% (
3354     \TMP@EnsureCode{41}{12}% )
3355     \TMP@EnsureCode{42}{12}% *
3356     \TMP@EnsureCode{43}{12}% +
3357     \TMP@EnsureCode{44}{12}% ,
3358     \TMP@EnsureCode{45}{12}% -
3359     \TMP@EnsureCode{46}{12}% .
3360     \TMP@EnsureCode{47}{12}% /
3361     \TMP@EnsureCode{58}{12}% :
3362     \TMP@EnsureCode{59}{12}% ;
3363     \TMP@EnsureCode{60}{12}% <
3364     \TMP@EnsureCode{61}{12}% =
3365     \TMP@EnsureCode{62}{12}% >
3366     \TMP@EnsureCode{63}{12}% ?
3367     \TMP@EnsureCode{91}{12}% [
3368     \TMP@EnsureCode{93}{12}% ]
3369     \TMP@EnsureCode{94}{7}% ^ (superscript)
3370     \TMP@EnsureCode{95}{8}% _ (subscript)
3371     \TMP@EnsureCode{96}{12}% '
3372     \TMP@EnsureCode{124}{12}% |
3373     \TMP@EnsureCode{126}{13}% ~ (active)
3374     #1\relax
3375   \Hy@EndWrap
3376 }

```

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

```

3377 \AtBeginDocument{%
3378   \ifHy@ocgcolorlinks
3379     \setkeys{Hyp}{colorlinks}%
3380     \ifHy@pdfa
3381       \Hy@Warning{%
3382         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3383         using 'colorlinks' instead of 'ocgcolorlinks'%
3384       }%
3385       \Hy@ocgcolorlinksfalse
3386     \fi
3387   \fi
3388   \ifHy@ocgcolorlinks
3389     \else

```

```

3390 \Hy@DisableOption{ocgcolorlinks}%
3391 \fi
3392 \ifHy@colorlinks
3393 \def\@pdfborder{0 0 0}%
3394 \let\@pdfborderstyle\@empty
3395 \ifHy@typexml
3396 \else
3397 \Hy@CatcodeWrapper{%
3398 \RequirePackage{color}%
3399 }%
3400 \fi
3401 \def\Hy@colorlink#1{%
3402 \begingroup
3403 \HyColor@UseColor#1%
3404 }%
3405 \def\Hy@endcolorlink{\endgroup}%
3406 \Hy@Info{Link coloring ON}%
3407 \else
3408 \ifHy@frenchlinks
3409 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3410 \def\Hy@endcolorlink{\endgroup}%
3411 \Hy@Info{French linking ON}%
3412 \else
for grouping consistency:
3413 \def\Hy@colorlink#1{\begingroup}%
3414 \def\Hy@endcolorlink{\endgroup}%
3415 \Hy@Info{Link coloring OFF}%
3416 \fi
3417 \fi
3418 \Hy@DisableOption{colorlinks}%
3419 \Hy@DisableOption{frenchlinks}%
3420 \ifHy@texht
3421 \long\def\@firstoffive#1#2#3#4#5{#1}%
3422 \long\def\@secondoffive#1#2#3#4#5{#2}%
3423 \long\def\@thirdoffive#1#2#3#4#5{#3}%
3424 \long\def\@fourthoffive#1#2#3#4#5{#4}%
3425 \long\def\@fifthoffive#1#2#3#4#5{#5}%
3426 \providecommand*\@safe@activestruet{}%
3427 \providecommand*\@safe@activesfalse{}%
3428 \def\T@ref#1{%
3429 \Hy@safe@activestruet
3430 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3431 \Hy@safe@activesfalse
3432 }%
3433 \def\T@pageref#1{%
3434 \Hy@safe@activestruet
3435 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3436 \Hy@safe@activesfalse
3437 }%
3438 \else
3439 \ifHy@typexml
3440 \else
3441 \Hy@CatcodeWrapper{%
3442 \RequirePackage{nameref}%
3443 }%
3444 \fi
3445 \fi

```



```

3446 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3447 \DeclareRobustCommand\pageref{%
3448   \@ifstar\@pagerefstar\T@pageref
3449 }%
3450 }
3451 \AfterBeginDocument{%
3452   \ifHy@texht
3453   \else
3454     \Hy@CatcodeWrapper{%
3455       \ReadBookmarks
3456     }%
3457   \fi
3458 }
3459 \ifHy@backref
3460 \RequirePackage{backref}%
3461 \else
3462 \let\Hy@backout\@gobble
3463 \fi
3464 \Hy@DisableOption{backref}
3465 \Hy@DisableOption{pagebackref}
3466 \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.

```

3467 \begingroup
3468   \endlinechar=-1 %
3469   \catcode'\^^A=14 %
3470   \catcode'\^^M\active
3471   \catcode'\%\active
3472   \catcode'\#\active
3473   \catcode'\_\active
3474   \catcode'\$\active
3475   \catcode'\&\active
3476   \gdef\hyper@normalise{^^A
3477     \begingroup
3478       \catcode'\^^M\active
3479       \def^^M{ }^^A
3480       \catcode'\%\active
3481       \let%\@percentchar
3482       \let\%\@percentchar
3483       \catcode'\#\active
3484       \def#{\hyper@hash}^^A
3485       \def\#{\hyper@hash}^^A
3486       \@makeother\&^^A
3487       \edef&{\string&}^^A
3488       \edef\&{\string&}^^A
3489       \edef\textunderscore{\string_}^^A
3490       \let_\textunderscore
3491       \catcode'\_\active
3492       \let_\textunderscore

```

```

3493 \let~\hyper@tilde
3494 \let\~\hyper@tilde
3495 \let\textasciitilde\hyper@tilde
3496 \let\\\@backslashchar
3497 \edef$\string$^~A
3498 \Hy@safe@activetrue
3499 \hyper@n@rmalise
3500 }^~A
3501 \catcode'\# =6 ^~A
3502 \gdef\Hy@ActiveCarriageReturn{^~M}^~A
3503 \gdef\hyper@n@rmalise#1#2{^~A
3504 \def\Hy@tempa{#2}^~A
3505 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3506 \Hy@ReturnAfterElseFi{^~A
3507 \hyper@@normalise{#1}^~A
3508 }^~A
3509 \else
3510 \Hy@ReturnAfterFi{^~A
3511 \hyper@@normalise{#1}{#2}^~A
3512 }^~A
3513 \fi
3514 }^~A
3515 \gdef\hyper@@normalise#1#2{^~A
3516 \edef\Hy@tempa{^~A
3517 \endgroup
3518 \noexpand#1{\Hy@RemovePercentCr#2%^~M\@nil}^~A
3519 }^~A
3520 \Hy@tempa
3521 }^~A
3522 \gdef\Hy@RemovePercentCr#1%^~M#2\@nil{^~A
3523 #1^~A
3524 \ifx\limits#2\limits
3525 \else
3526 \Hy@ReturnAfterFi{^~A
3527 \Hy@RemovePercentCr #2\@nil
3528 }^~A
3529 \fi
3530 }^~A
3531 \endgroup
3532 \providecommand*\hyper@chars{%
3533 \let\#\hyper@hash
3534 \let\%\@percentchar
3535 \Hy@safe@activetrue
3536 }
3537 \def\hyperlink#1#2{%
3538 \hyper@@link{#1}{#2}%
3539 }
3540 \DeclareRobustCommand*\href{%
3541 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3542 }
3543 \def\Hy@href#1{%
3544 \hyper@normalise\href@
3545 }
3546 \begingroup
3547 \catcode'\$ =6 %
3548 \catcode'\# =12 %
3549 \gdef\href@#1{\expandafter\href@split$1##\}%

```

```

3550 \gdef\href@split$1#$2#$3\\{%
3551   \hyper@@link{$1}{$2}%
3552 }%
3553 \endgroup

```

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

```

3554 \RequirePackage{url}
3555 \let\HyOrg@url\url
3556 \def\Hurl{\begingroup \Url}
3557 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3558 \def\nolinkurl@#1{\Hurl{#1}}
3559 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3560 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
3561 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3562 \providecommand\hyper@image[2]{#2}
3563 \def\hypertarget#1#2{%
3564   \ifHy@nesting
3565     \hyper@@anchor{#1}{#2}%
3566   \else
3567     \hyper@@anchor{#1}{\relax}#2%
3568   \fi
3569 }

```

\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 L^AT_EX label which can be used in a short form of \hyperref later, to avoid remembering the name and category.

```

3570 \DeclareRobustCommand*\hyperref{\%
3571   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3572 }
3573 \def\Hy@babelnormalise#1[#2]{%
3574   \begingroup
3575     \Hy@safe@activetrue
3576     \edef\Hy@tempa{%
3577       \endgroup
3578       \noexpand#1[#{#2}]%
3579     }%
3580   \Hy@tempa
3581 }
3582 \def\@hyperref{\hyper@normalise\@hyperref}
3583 \def\@hyperref#1#2#3{%
3584   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
3585   \expandafter\tryhyper@link\ref@one\{#1}%
3586 }
3587 \def\tryhyper@link#1\\#2{%
3588   \hyper@@link{#2}{#1}%
3589 }
3590 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}]
3591 \def\@hyperdef#1#2#3{%, category, name, text
3592   \ifHy@nesting
3593     \hyper@@anchor{#1.#2}{#3}%
3594   \else
3595     \hyper@@anchor{#1.#2}{\relax}#3%
3596   \fi
3597 }

```

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

```

3598 \def\label@hyperref[#1]{%
3599   \expandafter\label@hyperref\csname r@#1\endcsname{#1}%
3600 }%
3601 \def\label@@hyperref#1#2#3{%
3602   \ifx#1\relax
3603     \protect\G@refundefinedtrue
3604     \latex@warning{%
3605       Hyper reference ‘#2’ on page \thepage \space undefined%
3606     }%
3607     \hyper@@link{}{??}{#3}%
3608   \else
3609     \hyper@@link{\expandafter\@fifthoffive#1}%
3610     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3611   \fi
3612 }
3613 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3614                               % anchor text
3615   \@bsphack
3616   \if@filesw
3617     \protected@write\@auxout{%
3618       {\string\newlabel{#1}{#2}{#3}{#4}{#2.#3}}%
3619     \fi
3620   \@esphack
3621   \ifHy@nesting
3622     \hyper@@anchor{#2.#3}{#4}%
3623   \else
3624     \hyper@@anchor{#2.#3}{\relax}#4%
3625   \fi
3626 }

```

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.

```

3627 \def\hyper@@link{\let\Hy@reserved@a\relax
3628   \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3629 }
3630 \def\hyper@link@[#1]#2#3#4{%
3631   \begingroup
3632     \protected@edef\Hy@tempa{#2}%
3633     \Hy@safe@activestrue
3634     \edef\x{#3}%
3635     \ifx\Hy@tempa\@empty
3636       \toks0{\hyper@link{#1}}%
3637     \else
3638       \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3639     \fi
3640     \toks2{%
3641       \Hy@safe@activesfalse
3642       #4%
3643     }%
3644     \edef\Hy@tempa{\the\toks2}%

```

```

3645 \edef\x{\endgroup
3646 \ifx\Hy@tempa\@empty
3647 \noexpand\Hy@Warning{Suppressing empty link}%
3648 \else
3649 \the\toks0 {\x}{\the\toks2}%
3650 \fi
3651 }%
3652 \x
3653 }

```

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.

```

3654 \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.

```

3655 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
3656 }

```

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

```

3657 \def\@pdftempwordfile{file}%
3658 \def\@pdftempwordrun{run}%
3659 \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:

```

3660 \ifx\#6\%
3661 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
3662 \else
3663 \ifx\#4\%
3664 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
3665 \else

```

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

```

3666 \def\@pdftempa{#4}%
3667 \ifx\@pdftempa\@pdftempwordfile
3668 \expandafter\@hyper@linkfile#7\{#3}{#2}%
3669 \else

```

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

```

3670 \ifx\@pdftempa\@pdftempwordrun
3671 \ifHy@pdfa
3672 \PackageError{hyperref}{%
3673 PDF/A: Launch action is prohibited%

```

```

3674         }\@ehc
3675         \begingroup
3676         \leavevmode
3677         #2%
3678         \endgroup
3679     \else
3680         \expandafter\@hyper@launch#7\{\#{3}\#{2}%
3681     \fi
3682 \else

```

otherwise its a URL

```

3683         \hyper@linkurl{\#{3}\#{7}\ifx\\#2\\\else\hyper@hash#2\fi}%
3684     \fi
3685 \fi
3686 \fi
3687 \fi
3688 }

```

By default, turn run: into file:

```

3689 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
3690 \hyper@linkurl{\#{2}}{%
3691 \Hy@linkfileprefix
3692 #1%
3693 \ifx\\#3\\%
3694 \else
3695 \hyper@hash
3696 #3%
3697 \fi
3698 }%
3699 }

```

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

```

3700 \def\@hyper@linkfile file:#1\\#2#3{%
3701     %file url,link string, name
3702     \filename@parse{#1}%
3703     \ifx\filename@ext\relax
3704         \edef\filename@ext{\XR@ext}%
3705     \fi
3706     \def\use@file{\filename@area\filename@base.\filename@ext}%
3707     \ifx\filename@ext\XR@ext
3708         \hyper@linkfile{\#{2}}{\use@file}{\#{3}}%
3709     \else
3710         \ifx\@baseurl\@empty
3711             \hyper@linkurl{\#{2}}{%
3712                 \Hy@linkfileprefix\use@file\ifx\\#3\\\else\hyper@hash#3\fi
3713             }%
3714         \else
3715             \hyper@linkurl{\#{2}}{\use@file\ifx\\#3\\\else\hyper@hash#3\fi}%
3716         \fi
3717     \fi
3718 }

```

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.

```

3719 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3720 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3721   \ifx\#1\%
3722     #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3723   \else
3724     \def\anchor@spot{#2#3}%
3725     \let\put@me@back\@empty
3726     \ifx\relax#2\relax
3727     \else
3728       \ifHy@nesting
3729       \else
3730         \ifcat a\noexpand#2\relax
3731         \else
3732           \ifcat 0\noexpand#2 \relax
3733           \else
3734             \typeout{Anchor start is not alphanumeric %
3735             on input line\the\inputlineno%
3736             }%
3737             \let\anchor@spot\@empty
3738             \def\put@me@back{#2#3}%
3739           \fi
3740         \fi
3741       \fi
3742     \fi
3743     \ifHy@activeanchor
3744       \anchor@spot
3745     \else
3746       \hyper@anchor{#1}%
3747     \fi
3748     \expandafter\put@me@back
3749   \fi
3750   \let\anchor@spot\@empty
3751 }

```

18 Compatibility with the *L^AT_EX2html* package

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

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

```

3752 \let\htmladdimg\hyperimage
3753 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3754 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3755 \def\htmlref#1#2{% anchor text, label
3756   \label@hyperref[{#2}]{#1}%
3757 }

```

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

```

3758 \def\@latextohtmlX{%
3759   \let\hhyperref\hyperref

```

```

3760 \def\hyperref##1##2##3##4{% anchor text for HTML
3761             % text to print before label in print
3762             % label
3763             % post-label text in print
3764     ##2\ref{##4}##3%
3765 }%
3766 }

```

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.

```

3767 \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
3768 \def\HyField@NewFlag#1#2{%
3769     \lowercase{\HyField@NewOption{#2}}%
3770     \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3771 }

```

```

\HyField@NewFlagOnly
3772 \def\HyField@NewFlagOnly#1#2{%
3773     \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3774 }

```

```

\HyField@NewOption #1: option name
3775 \def\HyField@NewOption#1{%
3776     \expandafter\newif\csname ifFld@#1\endcsname
3777     \define@key{Field}{#1}[true]{%
3778         \lowercase{\Field@boolkey{##1}}{#1}%
3779     }%
3780 }

```

```

\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
3781 \def\HyField@NewBitsetFlag#1#2#3#4{%
3782     \begingroup
3783         \count@=#4\relax
3784         \advance\count@\m@ne

```



```

3785 \def\x##1{%
3786 \endgroup
3787 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3788 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
3789 \expandafter\edef\csname HyField@#3@##1\endcsname{%
3790 (\number#4) #2%
3791 }%
3792 \else
3793 \expandafter\edef\csname HyField@#3@##1\endcsname{%
3794 \csname HyField@#3@##1\endcsname
3795 /#2%
3796 }%
3797 \fi
3798 }%
3799 \expandafter\x\expandafter{\the\count@}%
3800 }

```

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

```

3801 \def\HyField@UseFlag#1#2{%
3802 \lowercase{\HyField@@UseFlag{#2}}{#1}%
3803 }

```

\HyField@@UseFlag

```

3804 \def\HyField@@UseFlag#1#2{%
3805 \bitsetSetValue{HyField@#2}{%
3806 \csname HyField@#2@#1\endcsname
3807 }{%
3808 \csname ifFld@#1\endcsname 1\else 0\fi
3809 }%
3810 }

```

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

```

3811 \def\HyField@SetFlag#1#2{%
3812 \lowercase{\HyField@@SetFlag{#2}}{#1}%
3813 }

```

\HyField@@SetFlag

```

3814 \def\HyField@@SetFlag#1#2{%
3815 \bitsetSetValue{HyField@#2}{%
3816 \csname HyField@#2@#1\endcsname
3817 }{1}%
3818 }

```

\HyField@PrintFlags

```

3819 \def\HyField@PrintFlags#1#2{%
3820 \ifHy@verbose
3821 \begingroup
3822 \let\Hy@temp\@empty
3823 \let\MessageBreak\relax
3824 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3825 \bitsetGetSetBitList{HyField@#1}\do{%
3826 \edef\Hy@temp{%
3827 \Hy@temp
3828 \csname HyField@#1@\x\endcsname\MessageBreak
3829 }%
3830 }%

```

```

3831 \edef\x{\endgroup
3832 \noexpand\Hy@Info{%
3833   Field flags: %
3834   \expandafter\ifx\@car#1\@nil S\else/\fi
3835   #1 %
3836   \bitsetGetDec{HyField@#1} %
3837   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3838   \Hy@temp
3839   for #2%
3840 }%
3841 }\x
3842 \fi
3843 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

3844 \HyField@NewFlag{Ff}{ReadOnly}{1}
3845 \HyField@NewFlag{Ff}{Required}{2}
3846 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

3847 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3848 \HyField@NewFlag{Ff}{Radio}{16}
3849 \HyField@NewFlag{Ff}{Pushbutton}{17}
3850 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

3851 \HyField@NewFlag{Ff}{Multiline}{13}
3852 \HyField@NewFlag{Ff}{Password}{14}
3853 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3854 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3855 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3856 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3857 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

3858 \HyField@NewFlag{Ff}{Combo}{18}
3859 \HyField@NewFlag{Ff}{Edit}{19}
3860 \HyField@NewFlag{Ff}{Sort}{20}
3861 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3862 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3863 \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.

```

3864 \newif\ifFld@popdown
3865 \define@key{Field}{popdown}[true]{%
3866   \lowercase{\Field@boolkey{#1}}{popdown}%
3867 }

```

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.

```

3868 \HyField@NewFlag{Ff}{Invisible}{1}

```

```

3869 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3870 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3871 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3872 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3873 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3874 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3875 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3876 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7
3877 \ifHy@pdfa
3878   \def\HyField@PDFAFflagWarning#1#2{%
3879     \Hy@Warning{%
3880       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3881       be set to ‘#2’%
3882     }%
3883   }%
3884   \Fld@invisiblefalse
3885   \def\Fld@invisibletrue{%
3886     \HyField@PDFAFflagWarning{invisible}{false}%
3887   }%
3888   \Fld@hiddenfalse
3889   \def\Fld@hiddentrue{%
3890     \HyField@PDFAFflagWarning{hidden}{false}%
3891   }%
3892   \Fld@printtrue
3893   \def\Fld@printfalse{%
3894     \HyField@PDFAFflagWarning{print}{true}%
3895   }%
3896   \Fld@nozoomtrue
3897   \def\Fld@nozoomfalse{%
3898     \HyField@PDFAFflagWarning{nozoom}{true}%
3899   }%
3900   \Fld@norotatetrue
3901   \def\Fld@norotatefalse{%
3902     \HyField@PDFAFflagWarning{norotate}{true}%
3903   }%
3904   \Fld@noviewfalse
3905   \def\Fld@noviewtrue{%
3906     \HyField@PDFAFflagWarning{noview}{false}%
3907   }%
3908 \fi

```

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

```

3909 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3910 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3911 \HyField@NewFlag{Submit}{GetMethod}{4}
3912 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3913 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3914 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3915 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3916 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3917 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3918 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3919 \HyField@NewFlag{Submit}{ExclFKey}{12}
3920 \HyField@NewFlag{Submit}{EmbedForm}{14}
3921 \define@key{Field}{export}{%
3922   \lowercase{\def\Hy@temp{#1}}%
3923   \@ifundefined{Fld@export@\Hy@temp}{%

```

```

3924 \@onelevel@sanitize\Hy@temp
3925 \PackageError{hyperref}{%
3926   Unknown export format '\Hy@temp'.\MessageBreak
3927   Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
3928 }{\ehc
3929 }{%
3930 \let\Fld@export\Hy@temp
3931 }%
3932 }
3933 \def\Fld@export{fdf}
3934 \@namedef{Fld@export@fdf}{0}%
3935 \@namedef{Fld@export@html}{1}%
3936 \@namedef{Fld@export@xfdf}{2}%
3937 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3938 \def\HyField@FlagsSubmit{%
3939   \bitsetReset{HyField@Submit}%
3940   \ifcase\@nameuse{Fld@export@Fld@export} %
3941     % FDF
3942     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3943     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3944     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3945     \HyField@UseFlag{Submit}{IncludeAnnotations}%
3946     \HyField@UseFlag{Submit}{CanonicalFormat}%
3947     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3948     \HyField@UseFlag{Submit}{ExclFKey}%
3949     \HyField@UseFlag{Submit}{EmbedForm}%
3950   \or % HTML
3951     \HyField@SetFlag{Submit}{ExportFormat}%
3952     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3953     \HyField@UseFlag{Submit}{GetMethod}%
3954     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3955     \HyField@UseFlag{Submit}{CanonicalFormat}%
3956   \or % XFDF
3957     \HyField@SetFlag{Submit}{XFDF}%
3958     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3959     \HyField@UseFlag{Submit}{SubmitCoordinates}%
3960     \HyField@UseFlag{Submit}{CanonicalFormat}%
3961   \or % PDF
3962     \HyField@SetFlag{Submit}{SubmitPDF}%
3963     \HyField@UseFlag{Submit}{GetMethod}%
3964   \fi
3965   \HyField@PrintFlags{Submit}{submit button field}%
3966   \bitsetIsEmpty{HyField@Submit}{%
3967     \def\Fld@submitflags{%
3968     }{%
3969     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3970   }%
3971 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

3972 \def\HyField@FlagsAnnot#1{%
3973   \bitsetReset{HyField@F}%
3974   \HyField@UseFlag{F}{Invisible}%
3975   \HyField@UseFlag{F}{Hidden}%
3976   \HyField@UseFlag{F}{Print}%
3977   \HyField@UseFlag{F}{NoZoom}%
3978   \HyField@UseFlag{F}{NoRotate}%
3979   \HyField@UseFlag{F}{NoView}%
3980   \HyField@UseFlag{F}{Locked}%
3981   \HyField@UseFlag{F}{ToggleNoView}%
3982   \HyField@UseFlag{F}{LockedContents}%
3983   \HyField@PrintFlags{F}{#1}%
3984   \bitsetIsEmpty{HyField@F}{%
3985     \def\Fld@annotflags{%
3986     }{%
3987       \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
3988     }%
3989 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

3990 \def\HyField@FlagsPushButton{%
3991   \HyField@FlagsAnnot{push button field}%
3992   \bitsetReset{HyField@Ff}%
3993   \HyField@UseFlag{Ff}{ReadOnly}%
3994   \HyField@UseFlag{Ff}{Required}%
3995   \HyField@UseFlag{Ff}{NoExport}%
3996   \HyField@SetFlag{Ff}{PushButton}%
3997   \HyField@PrintFlags{Ff}{push button field}%
3998   \bitsetIsEmpty{HyField@Ff}{%
3999     \def\Fld@flags{%
4000     }{%
4001       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4002     }%
4003 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4004 \def\HyField@FlagsCheckBox{%
4005   \HyField@FlagsAnnot{check box field}%
4006   \bitsetReset{HyField@Ff}%
4007   \HyField@UseFlag{Ff}{ReadOnly}%
4008   \HyField@UseFlag{Ff}{Required}%
4009   \HyField@UseFlag{Ff}{NoExport}%
4010   \HyField@PrintFlags{Ff}{check box field}%
4011   \bitsetIsEmpty{HyField@Ff}{%
4012     \def\Fld@flags{%
4013     }{%
4014       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4015     }%
4016 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4017 \def\HyField@FlagsRadioButton{%
4018   \HyField@FlagsAnnot{radio button field}%
4019   \bitsetReset{HyField@Ff}%
4020   \HyField@UseFlag{Ff}{ReadOnly}%
4021   \HyField@UseFlag{Ff}{Required}%
4022   \HyField@UseFlag{Ff}{NoExport}%
4023   \HyField@UseFlag{Ff}{NoToggleToOff}%
4024   \HyField@SetFlag{Ff}{Radio}%
4025   \HyField@UseFlag{Ff}{RadiosInUnison}%
4026   \HyField@PrintFlags{Ff}{radio button field}%
4027   \bitsetIsEmpty{HyField@Ff}{%
4028     \def\Fld@flags{%
4029     }{%
4030       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4031     }%
4032 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4033 \def\HyField@FlagsText{%
4034   \HyField@FlagsAnnot{text field}%
4035   \bitsetReset{HyField@Ff}%
4036   \HyField@UseFlag{Ff}{ReadOnly}%
4037   \HyField@UseFlag{Ff}{Required}%
4038   \HyField@UseFlag{Ff}{NoExport}%
4039   \HyField@UseFlag{Ff}{Multiline}%
4040   \HyField@UseFlag{Ff}{Password}%
4041   \HyField@UseFlag{Ff}{FileSelect}%
4042   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4043   \HyField@UseFlag{Ff}{DoNotScroll}%
4044   \ifFld@comb
4045     \ifcase0\ifFld@multiline
4046       \else\ifFld@password
4047       \else\ifFld@fileselect
4048       \else 1\fi\fi\fi\relax
4049     \PackageError{hyperref}{%
4050       Field option ‘comb’ cannot used together with\MessageBreak
4051       ‘multiline’, ‘password’, or ‘fileselect’%
4052     }\@ehc
4053   \else
4054     \HyField@UseFlag{Ff}{Comb}%
4055   \fi
4056 \fi
4057 \HyField@UseFlag{Ff}{RichText}%
4058 \HyField@PrintFlags{Ff}{text field}%
4059 \bitsetIsEmpty{HyField@Ff}{%
4060   \def\Fld@flags{%
4061   }{%
4062     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4063   }%
4064 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4065 \def\HyField@FlagsChoice{%
4066   \HyField@FlagsAnnot{choice field}%
4067   \bitsetReset{HyField@Ff}%
4068   \HyField@UseFlag{Ff}{ReadOnly}%
4069   \HyField@UseFlag{Ff}{Required}%
4070   \HyField@UseFlag{Ff}{NoExport}%
4071   \HyField@UseFlag{Ff}{Combo}%
4072   \ifFld@combo
4073     \HyField@UseFlag{Ff}{Edit}%
4074   \fi
4075   \HyField@UseFlag{Ff}{Sort}%
4076   \HyField@UseFlag{Ff}{MultiSelect}%
4077   \ifFld@combo
4078     \ifFld@edit
4079       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4080     \fi
4081   \fi
4082   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4083   \HyField@PrintFlags{Ff}{choice field}%
4084   \bitsetIsEmpty{HyField@Ff}{%
4085     \def\Fld@flags{%
4086     }{%
4087     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4088     }%
4089 }
```

19.2 Choice field

4090 \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.

```

4091 \def\HyField@PDFChoices#1{%
4092   \begingroup
4093     \gdef\Fld@choices{%
4094     \def\HyTmp@optlist{%
4095       \let\HyTmp@optitem\relax
4096       \count@=0 %
4097       \kv@parse{#1}{%
4098         \Hy@pdfstringdef\kv@key\kv@key
4099         \ifx\kv@value\relax
4100           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4101             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4102           \else
4103             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4104           \fi
4105         \else
4106           \Hy@pdfstringdef\kv@value\kv@value
4107           \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
4108         \fi
4109       \edef\HyTmp@optlist{%
4110         \HyTmp@optlist
4111         \HyTmp@optitem{\the\count@}{\kv@key}0%
```

```

4112     }%
4113     \advance\count@ by 1 %
4114     \@gobbletwo
4115 }%
4116 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4117 \ifFld@multiselect
4118   \HyField@@PDFChoices{DV}\Fld@default
4119   \HyField@@PDFChoices{V}\Fld@value
4120 \else
4121   \ifx\Fld@default\relax
4122   \else
4123     \pdfstringdef\Hy@gtmp\Fld@default
4124     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtmp)}%
4125   \fi
4126   \ifx\Fld@value\relax
4127   \else
4128     \pdfstringdef\Hy@gtmp\Fld@value
4129     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtmp)}%
4130   \fi
4131 \fi
4132 \endgroup
4133 }

```

\HyField@@PDFChoices

```

4134 \def\HyField@@PDFChoices#1#2{%
4135   \ifx#2\relax
4136   \else
4137     \count@=0 %
4138     \def\HyTmp@optitem##1##2##3{%
4139       \def\HyTmp@key{##2}%
4140       \ifx\HyTmp@key\Hy@gtmp
4141         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4142           \HyTmp@optlist
4143           \HyTmp@optitem{##1}{##2}1%
4144         }%
4145         \let\HyTmp@found=Y%
4146       \else
4147         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4148           \HyTmp@optlist
4149           \HyTmp@optitem{##1}{##2}##3%
4150         }%
4151       \fi
4152     }%
4153     \expandafter\comma@parse\expandafter{#2}{%
4154       \pdfstringdef\Hy@gtmp\comma@entry
4155       \let\HyTmp@found=N %
4156       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4157       \HyTmp@optlist
4158       \ifx\HyTmp@found Y%
4159         \advance\count@ by 1 %
4160       \else
4161         \@onelevel@sanitize\comma@entry
4162         \PackageWarning{hyperref}{%
4163           \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4164           \MessageBreak
4165           it cannot be found in the choices%
4166         }%

```



```

4167     \fi
4168     \@gobble
4169 }%
4170 \def\HyTmp@optitem##1##2##3{%
4171     \ifnum##3=1 %
4172         (##2)%
4173     \fi
4174 }%
4175 \ifcase\count@
4176 \or
4177     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4178 \else
4179     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]]}%
4180     \ifx#1V%
4181         \def\HyTmp@optitem##1##2##3{%
4182             \ifnum##3=1 %
4183                 \@firstofone{ ##1}%
4184             \fi
4185         }%
4186         \edef\HyTmp@optlist{\HyTmp@optlist}%
4187     \xdef\Fld@choices{%
4188         \Fld@choices
4189         /I[\expandafter\@firstofone\HyTmp@optlist]]%
4190     }%
4191     \fi
4192 \fi
4193 \fi
4194 }

```

19.3 Forms

\HyField@SetKeys

```

4195 \def\HyField@SetKeys{%
4196     \setkeys{Field}%
4197 }

4198 \newif\ifFld@checked
4199 \newif\ifFld@disabled
4200 \Fld@checkedfalse
4201 \Fld@disabledfalse
4202 \newcount\Fld@menulength
4203 \newdimen\Fld@Width
4204 \newdimen\Fld@charsize
4205 \Fld@charsize=10\p@
4206 \def\Fld@maxlen{0}
4207 \def\Fld@align{0}
4208 \def\Fld@color{0 0 0 rg}
4209 \def\Fld@bcolor{1 1 1}
4210 \def\Fld@bordercolor{1 0 0}
4211 \def\Fld@bordersep{1\p@}
4212 \def\Fld@borderwidth{1}
4213 \def\Fld@borderstyle{S}
4214 \def\Fld@cbsymbol{4}
4215 \def\Fld@rotation{0}
4216 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4217 \def\endForm{\@endForm}
4218 \newif\ifForm@html

```

```

4219 \Form@htmlfalse
4220 \def\Form@boolkey#1#2{%
4221   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4222 }
4223 \define@key{Form}{action}{%
4224   \hyper@normalise\Hy@DefFormAction{#1}%
4225 }
4226 \def\Hy@DefFormAction{\def\Form@action}
4227 \def\enc@html{html}
4228 \define@key{Form}{encoding}{%
4229   \def\Hy@tempa{#1}%
4230   \ifx\Hy@tempa\enc@html
4231     \Form@htmltrue
4232     \def\Fld@export{html}%
4233   \else
4234     \typeout{hyperref: form 'encoding' key set to #1 %
4235       -- unknown type%
4236     }%
4237     \Form@htmlfalse
4238   \fi
4239 }
4240 \define@key{Form}{method}{%
4241   \lowercase{\def\Hy@temp{#1}}%
4242   \@ifundefined{Form@method@\Hy@temp}{%
4243     \@onelevel@sanitize\Hy@temp
4244     \PackageError{hyperref}{%
4245       Unknown method '\Hy@temp'.\MessageBreak
4246       Known values are 'post' and 'get'%
4247     }\@ehc
4248   }{%
4249     \let\Form@method\Hy@temp
4250     \ifcase\@nameuse{Form@method@\Hy@temp} %
4251       \Fld@getmethodfalse
4252     \else
4253       \Fld@getmethodtrue
4254     \fi
4255   }%
4256 }
4257 \def\Form@method{}
4258 \@namedef{Form@method@post}{0}
4259 \@namedef{Form@method@get}{1}
4260 \def\Field@boolkey#1#2{%
4261   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4262 }
4263 \newtoks\Field@toks
4264 \Field@toks={ }%
4265 \def\Field@addtoks#1#2{%
4266   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4267   \@processme
4268 }
4269 \def\Fld@checkequals#1=#2=#3\{\%
4270   \def\@currDisplay{#1}%
4271   \ifx\@#2\%
4272     \def\@currValue{#1}%
4273   \else
4274     \def\@currValue{#2}%
4275   \fi

```

```

4276 }
4277 \define@key{Field}{loc}{%
4278   \def\Fld@loc{#1}%
4279 }
4280 \define@key{Field}{checked}[true]{%
4281   \lowercase{\Field@boolkey{#1}}{checked}%
4282 }
4283 \define@key{Field}{disabled}[true]{%
4284   \lowercase{\Field@boolkey{#1}}{disabled}%
4285 }
4286 \define@key{Field}{accesskey}{%
4287   \Field@addtoks{accesskey}{#1}%
4288 }
4289 \define@key{Field}{tabkey}{%
4290   \Field@addtoks{tabkey}{#1}%
4291 }
4292 \define@key{Field}{name}{%
4293   \def\Fld@name{#1}%
4294 }
4295 \define@key{Field}{width}{%
4296   \def\Fld@width{#1}%
4297   \Field@Width#1\setbox0=\hbox{m}%
4298 }
4299 \define@key{Field}{maxlen}{%
4300   \def\Fld@maxlen{#1}%
4301 }
4302 \define@key{Field}{menulength}{%
4303   \Fld@menulength=#1\relax
4304 }
4305 \define@key{Field}{height}{%
4306   \def\Fld@height{#1}%
4307 }
4308 \define@key{Field}{charsize}{%
4309   \Fld@charsize#1%
4310 }
4311 \define@key{Field}{borderwidth}{%
4312   \def\Fld@borderwidth{#1}%
4313 }
4314 \define@key{Field}{borderstyle}{%
4315   \def\Fld@borderstyle{#1}%
4316 }
4317 \define@key{Field}{bordersep}{%
4318   \def\Fld@bordersep{#1}%
4319 }
4320 \define@key{Field}{default}{%
4321   \def\Fld@default{#1}%
4322 }
4323 \define@key{Field}{align}{%
4324   \def\Fld@align{#1}%
4325 }
4326 \define@key{Field}{value}{%
4327   \def\Fld@value{#1}%
4328 }
4329 \define@key{Field}{checkboxsymbol}{%
4330   \def\Fld@cbsymbol{#1}%
4331 }
4332 \define@key{Field}{rotation}{%

```

```

4333 \def\Fld@rotation{#1}%
4334 }

4335 \define@key{Field}{backgroundcolor}{%
4336   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4337 }
4338 \define@key{Field}{bordercolor}{%
4339   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4340 }
4341 \define@key{Field}{color}{%
4342   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4343 }

4344 \def\Fld@format@code{}
4345 \def\Fld@validate@code{}
4346 \def\Fld@calculate@code{}
4347 \def\Fld@keystroke@code{}
4348 \def\Fld@onfocus@code{}
4349 \def\Fld@onblur@code{}
4350 \def\Fld@onmousedown@code{}
4351 \def\Fld@onmouseup@code{}
4352 \def\Fld@onenter@code{}
4353 \def\Fld@onexit@code{}
4354 \def\Hy@temp#1{%
4355   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4356 }
4357 \def\Hy@@temp#1#2{%
4358   \ifHy@pdfa
4359     \define@key{Field}{#2}{%
4360       \PackageError{hyperref}{%
4361         PDF/A: Additional action ‘#2’ is prohibited%
4362       }\@ehc
4363     }%
4364   \else
4365     \define@key{Field}{#2}{%
4366       \def#1{##1}%
4367     }%
4368   \fi
4369 }

4370 \Hy@temp{keystroke}
4371 \Hy@temp{format}
4372 \Hy@temp{validate}
4373 \Hy@temp{calculate}
4374 \Hy@temp{onfocus}
4375 \Hy@temp{onblur}
4376 \Hy@temp{onenter}
4377 \Hy@temp{onexit}
4378 \def\Hy@temp#1{%
4379   \define@key{Field}{#1}{%
4380     \Field@addtoks{#1}{##1}%
4381   }%
4382 }

4383 \Hy@temp{onselect}
4384 \Hy@temp{onchange}
4385 \Hy@temp{ondblclick}
4386 \Hy@temp{onmousedown}
4387 \Hy@temp{onmouseup}
4388 \Hy@temp{onmouseover}
4389 \Hy@temp{onmousemove}

```

```

4390 \Hy@temp{onmouseout}
4391 \Hy@temp{onkeypress}
4392 \Hy@temp{onkeydown}
4393 \Hy@temp{onkeyup}
4394 \ifHy@pdfa
4395   \define@key{Field}{onclick}{%
4396     \PackageError{hyperref}{%
4397       PDF/A: Action 'onclick' is prohibited%
4398     }\@ehc
4399   }%
4400 \else
4401   \define@key{Field}{onclick}{%
4402     \def\Fld@onclick{#1}%
4403     \Field@addtoks{onclick}{#1}%
4404   }%
4405 \fi

4406 \DeclareRobustCommand\TextField{%
4407   \@ifnextchar[{\@TextField}{\@TextField[]}%
4408 }
4409 \DeclareRobustCommand\ChoiceMenu{%
4410   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4411 }
4412 \DeclareRobustCommand\CheckBox{%
4413   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4414 }
4415 \DeclareRobustCommand\PushButton{%
4416   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4417 }
4418 \DeclareRobustCommand\Gauge{%
4419   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4420 }
4421 \DeclareRobustCommand\Submit{%
4422   \@ifnextchar[{\@Submit}{\@Submit[]}%
4423 }
4424 \DeclareRobustCommand\Reset{%
4425   \@ifnextchar[{\@Reset}{\@Reset[]}%
4426 }
4427 \def\LayoutTextField#1#2{% label, field
4428   #1 #2%
4429 }
4430 \def\LayoutChoiceField#1#2{% label, field
4431   #1 #2%
4432 }
4433 \def\LayoutCheckField#1#2{% label, field
4434   #1 #2%
4435 }
4436 \def\LayoutPushButtonField#1{% button
4437   #1%
4438 }
4439 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4440 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4441 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4442 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4443 \def\MakeButtonField#1{%
4444   \sbox0{%
4445     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4446   }%

```

```

4447 \@tempdima\ht0 %
4448 \advance\@tempdima by \Fld@borderwidth bp %
4449 \advance\@tempdima by \Fld@borderwidth bp %
4450 \ht0\@tempdima
4451 \@tempdima\dp0 %
4452 \advance\@tempdima by \Fld@borderwidth bp %
4453 \advance\@tempdima by \Fld@borderwidth bp %
4454 \dp0\@tempdima
4455 \box0\relax
4456 }
4457 \def\DefaultHeightofSubmit{14pt}
4458 \def\DefaultWidthofSubmit{2cm}
4459 \def\DefaultHeightofReset{14pt}
4460 \def\DefaultWidthofReset{2cm}
4461 \def\DefaultHeightofCheckBox{\baselineskip}
4462 \def\DefaultWidthofCheckBox{\baselineskip}
4463 \def\DefaultHeightofChoiceMenu{\baselineskip}
4464 \def\DefaultWidthofChoiceMenu{\baselineskip}
4465 \def\DefaultHeightofText{\baselineskip}
4466 \def\DefaultHeightofTextMultiline{4\baselineskip}
4467 \def\DefaultWidthofText{3cm}
4468 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4469 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4470 \def\DefaultOptionsofPushButton{print}
4471 \def\DefaultOptionsofCheckBox{print}
4472 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4473 \def\DefaultOptionsofListBox{print}
4474 \def\DefaultOptionsofComboBox{print,edit,sort}
4475 \def\DefaultOptionsofPopdownBox{print}
4476 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4477 \ifHy@figures
4478 \Hy@Info{Hyper figures ON}%
4479 \else
4480 \Hy@Info{Hyper figures OFF}%
4481 \fi
4482 \ifHy@nesting
4483 \Hy@Info{Link nesting ON}%
4484 \else
4485 \Hy@Info{Link nesting OFF}%
4486 \fi
4487 \ifHy@hyperindex
4488 \Hy@Info{Hyper index ON}%
4489 \else
4490 \Hy@Info{Hyper index OFF}%
4491 \fi
4492 \ifHy@backref
4493 \Hy@Info{backreferencing ON}%
4494 \else
4495 \Hy@Info{backreferencing OFF}%
4496 \fi
4497 \ifHy@colorlinks
4498 \Hy@Info{Link coloring ON}%

```

```

4499 \else
4500   \Hy@Info{Link coloring OFF}%
4501 \fi
4502 \ifHy@ocgcolorlinks
4503   \Hy@Info{Link coloring with OCG ON}%
4504 \else
4505   \Hy@Info{Link coloring with OCG OFF}%
4506 \fi
4507 \ifHy@pdfa
4508   \Hy@Info{PDF/A mode ON}%
4509 \else
4510   \Hy@Info{PDF/A mode OFF}%
4511 \fi

```

21 Low-level utility macros

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

```

4512 \edef\hyper@hash{\string#}
4513 \edef\hyper@tilde{\string~}
4514 \edef\hyper@quote{\string"}
4515 \let\@currentHref\@empty
4516 \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.

```

4517 \AfterBeginDocument{%
4518   \Hy@pdfstringtrue
4519   \PDF@SetupDoc
4520   \let\PDF@SetupDoc\@empty
4521   \Hy@DisableOption{pdfpagescrop}%
4522   \Hy@DisableOption{pdfpagemode}%
4523   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4524   \Hy@DisableOption{pdfdirection}%
4525   \Hy@DisableOption{pdfviewarea}%
4526   \Hy@DisableOption{pdfviewclip}%
4527   \Hy@DisableOption{pdfprintarea}%
4528   \Hy@DisableOption{pdfprintclip}%
4529   \Hy@DisableOption{pdfprintscaling}%
4530   \Hy@DisableOption{pdfduplex}%
4531   \Hy@DisableOption{pdfpicktraybypdfsize}%
4532   \Hy@DisableOption{pdfprintpagerange}%
4533   \Hy@DisableOption{pdfnumcopies}%
4534   \Hy@DisableOption{pdfstartview}%
4535   \Hy@DisableOption{pdfstartpage}%
4536   \Hy@DisableOption{pdftoolbar}%
4537   \Hy@DisableOption{pdfmenubar}%
4538   \Hy@DisableOption{pdfwindowui}%
4539   \Hy@DisableOption{pdffitwindow}%
4540   \Hy@DisableOption{pdfcenterwindow}%
4541   \Hy@DisableOption{pdfdisplaydoctitle}%
4542   \Hy@DisableOption{pdfpagelayout}%
4543   \Hy@DisableOption{pdflang}%
4544   \Hy@DisableOption{baseurl}%
4545   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4546   \Hy@pdfstringfalse
4547 }

```

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 hyperref functions doing anything. This is used, for instance, in the Elsevier classes, to stop hyperref playing havoc in the front matter.

```
4548 \def\NoHyper{%
4549   \def\hyper@link@{##1}##2##3##4{##4}%
4550   \def\hyper@@anchor##1{%
4551     \global\let\hyper@livelink\hyper@link
4552     \gdef\hyper@link##1##2##3{##3}%
4553     \def\hyper@anchorstart##1{%
4554       \let\hyper@anchorend\@empty
4555       \def\hyper@linkstart##1##2{%
4556         \let\hyper@linkend\@empty
4557         \def\hyper@linkurl##1##2{##1}%
4558         \def\hyper@linkfile##1##2##3{##1}%
4559         \def\hyper@link@{##1}##2##3{%
4560           \let\Hy@backout\@gobble
4561       }
4562 \def\stop@hyper{%
4563   \def\hyper@link@{##1}##2##3##4{##4}%
4564   \let\Hy@backout\@gobble
4565   \def\hyper@@anchor##1{%
4566     \def\hyper@link##1##2##3{##3}%
4567     \def\hyper@anchorstart##1{%
4568       \let\hyper@anchorend\@empty
4569       \def\hyper@linkstart##1##2{%
4570         \let\hyper@linkend\@empty
4571         \def\hyper@linkurl##1##2{##1}%
4572         \def\hyper@linkfile##1##2##3{##1}%
4573         \def\hyper@link@{##1}##2##3{%
4574       }
4575 \def\endNoHyper{%
4576   \global\let\hyper@link\hyper@livelink
4577 }
4578 \}
```

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:

```
4579 \def\*nohyperref{
4580   \let\hyper@@anchor\@gobble
4581   \def\hyper@link#1#2#3{#3}%
4582   \let\hyper@anchorstart\@gobble
4583   \let\hyper@anchorend\@empty
4584   \let\hyper@linkstart\@gobbletwo
4585   \let\hyper@linkend\@empty
4586   \def\hyper@linkurl#1#2{#1}%
4587   \def\hyper@linkfile#1#2#3{#1}%

```



```

4588 \def\hyper@link@[#1]#2#3{%
4589 \let\PDF@SetupDoc\@empty
4590 \let\PDF@FinishDoc\@empty
4591 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

4592 \def\Acrobatmenu#1#2{\leavevmode#2}
4593 \let\pdfstringdefDisableCommands\@gobbletwo
4594 \let\texorpdfstring\@firstoftwo
4595 \let\pdfbookmark\@undefined
4596 \newcommand\pdfbookmark[3][]{\@{}}
4597 \let\phantomsection\@empty
4598 \let\hypersetup\@gobble
4599 \let\hyperbaseurl\@gobble
4600 \let\href\@gobble
4601 \let\hyperdef\@gobbletwo
4602 \let\hyperlink\@gobble
4603 \let\hypertarget\@gobble
4604 \def\hyperref{%
4605   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4606 }
4607 \long\def\@gobbleopt[#1]{\@{}}
4608 \let\hyperpage\@empty
4609 \</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}

```

4610 \*package)
4611 \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.

```

4612 \if@filesw
4613   \ifHy@typexml
4614     \immediate\closeout\@mainaux
4615     \immediate\openout\@mainaux\jobname.aux\relax
4616     \immediate\write\@auxout{<relaxxml>\relax}%
4617   \fi
4618   \immediate\write\@auxout{%
4619     \string\ifx\string\hyper@anchor\string\@undefined^^J%
4620     \global\let\string\oldcontentsline\string\contentsline^^J%
4621     \gdef\string\contentsline%
4622       \string#1\string#2\string#3\string#4{%
4623       \string\oldcontentsline%
4624       {\string#1}{\string#2}{\string#3}}^^J%
4625     \global\let\string\oldnewlabel\string\newlabel^^J%
4626     \gdef\string\newlabel\string#1\string#2{%
4627       \string\newlabelxx{\string#1}\string#2}^^J%
4628     \gdef\string\newlabelxx%
4629       \string#1\string#2\string#3\string#4\string#5\string#6{%
4630       \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.

```
4631      \string\AtEndDocument{%
4632      \let\string\contentsline\string\oldcontentsline^^J%
4633      \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.

```
4634      \string\else^^J%
4635      \global\let\string\hyper@last\relax^^J%
4636      \string\fi^^J%
4637  }%
4638  \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.

```
4639  \ifx\hyper@last\@undefined
4640    \def\@starttoc#1{%
4641      \begingroup
4642      \makeatletter
4643      \IfFileExists{\jobname.#1}{%
4644        \Hy@WarningNoLine{%
4645          old #1 file detected, not used; run LaTeX again%
4646        }%
4647      }{%
4648        \if@filesw
4649          \expandafter\newwrite\csname tf@#1\endcsname
4650          \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4651        \fi
4652        \@nobreakfalse
4653      \endgroup
4654    }%
4655    \def\newlabel#1#2{\@newl@bel r{#1}{#2}{ }{}{}}}%
4656  \fi
4657 }
```

25 Title strings

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

```
4658 \ifHy@usetitle
4659   \let\HyOrg@title\title
4660   \let\HyOrg@author\author
4661   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4662   \def\Hy@scanopttitle[#1]{%
4663     \gdef\Hy@title{#1}%
4664     \HyOrg@title[#1]}%
4665   }%
4666   \def\Hy@scantitle#1{%
4667     \gdef\Hy@title{#1}%
4668     \HyOrg@title{#1}%
4669   }%
4670   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
```

```

4671 \def\Hy@scanoptauthor[#1]{%
4672   \gdef\Hy@author{#1}%
4673   \HyOrg@author[{#1}]%
4674 }%
4675 \def\Hy@scanauthor#1{%
4676   \gdef\Hy@author{#1}%
4677   \HyOrg@author{#1}%
4678 }%

```

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.

```

4679 \begingroup
4680   \def\process@me#1\@nil#2{%
4681     \expandafter\let\expandafter\x\csname @#2\endcsname
4682     \edef\y{\expandafter\strip@prefix\meaning\x}%
4683     \def\c##1##2\@nil{%
4684       \ifx\\##1\\%
4685       \else
4686         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4687           \expandafter{\x}%
4688       \fi
4689     }%
4690     \expandafter\c\y\relax#1\@nil
4691   }%
4692   \expandafter\process@me\string\@latex@\@nil{title}%
4693   \expandafter\process@me\string\@latex@\@nil{author}%
4694 \endgroup
4695 \fi
4696 \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.

```

4697 \def\Hy@UseMaketitleString#1{%
4698   \@ifundefined{Hy@#1}{}{%
4699     \begingroup
4700       \let\Hy@saved@hook\pdfstringdefPreHook
4701       \pdfstringdefDisableCommands{%
4702         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4703         \let\newline\\%
4704       }%
4705       \expandafter\ifx\csname @pdf#1\endcsname\@empty
4706         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4707           \csname Hy@#1\endcsname\@empty
4708         }%
4709       \fi
4710       \global\let\pdfstringdefPreHook\Hy@saved@hook
4711     \endgroup
4712   }%
4713 }
4714 \def\Hy@newline@title#1{ #1}

```

```

4715 \def\Hy@newline@author#1{, #1}
4716 \def\Hy@UseMaketitleInfos{%
4717   \Hy@UseMaketitleString{title}%
4718   \Hy@UseMaketitleString{author}%
4719 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

4720 \RequirePackage{atbegshi}[2007/09/09]
4721 \def\Hy@EveryPageHook{}
4722 \def\Hy@EveryPageBoxHook{}
4723 \def\Hy@FirstPageHook{}
4724 \AtBeginShipout{%
4725   \Hy@EveryPageHook
4726   \ifx\Hy@EveryPageBoxHook\@empty
4727   \else
4728     \setbox\AtBeginShipoutBox=\vbox{%
4729       \offinterlineskip
4730       \Hy@EveryPageBoxHook
4731       \box\AtBeginShipoutBox
4732     }%
4733   \fi
4734 }
4735 \AtBeginShipoutFirst{%
4736   \Hy@FirstPageHook
4737 }
4738 \g@addto@macro\Hy@FirstPageHook{%
4739   \PDF@FinishDoc
4740   \gdef\PDF@FinishDoc{}}%
4741 }

```

27.1 PDF /PageLabels

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

```

4742 \ifHy@pagelabels
4743   \begingroup\expandafter\expandafter\expandafter\endgroup
4744   \expandafter\ifx\csname thepage\endcsname\relax
4745     \Hy@pagelabelsfalse
4746     \Hy@WarningNoLine{%
4747       Option 'pdfpagelabels' is turned off\MessageBreak
4748       because \string\thepage\space is undefined%
4749     }%
4750     \csname fi\endcsname
4751     \csname iffalse\expandafter\endcsname
4752   \fi

```

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

```

4753 \def\thispdfpagelabel#1{%
4754   \gdef\HyPL@thisLabel{#1}%
4755 }%
4756 \global\let\HyPL@thisLabel\relax

```

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

```
4757 \def\HyPL@Labels{}%
```

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

```
4758 \newcount\Hy@abspage
```

```
4759 \Hy@abspage=0 %
```

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

```
4760 \def\HyPL@LastType{init}%
```

```
4761 \def\HyPL@LastNumber{0}%
```

```
4762 \def\HyPL@LastPrefix{}%
```

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

```
4763 \def\HyPL@arabic{D}%
```

```
4764 \def\HyPL@Roman{R}%
```

```
4765 \def\HyPL@roman{r}%
```

```
4766 \def\HyPL@Alph{A}%
```

```
4767 \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.

```
4768 \def\HyPL@EveryPage{%
4769   \begingroup
4770   \ifx\HyPL@thisLabel\relax
4771     \let\HyPL@page\thepage
4772   \else
4773     \let\HyPL@page\HyPL@thisLabel
4774     \global\let\HyPL@thisLabel\relax
4775   \fi
4776   \let\HyPL@Type\relax
4777   \ifnum\the\c@page>0 %
4778     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4779   \fi
4780   \let\Hy@temp Y%
4781   \ifx\HyPL@Type\HyPL@LastType
4782   \else
4783     \let\Hy@temp N%
4784   \fi
4785   \ifx\HyPL@Type\relax
4786     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4787   \else
4788     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4789   \fi
4790   \ifx\HyPL@Prefix\HyPL@LastPrefix
4791   \else
4792     \let\Hy@temp N%
4793   \fi
4794   \if Y\Hy@temp
4795     \advance\c@page by -1 %
4796     \ifnum\HyPL@LastNumber=\the\c@page\relax
4797     \else
4798       \let\Hy@temp N%
4799     \fi
4800     \Hy@StepCount\c@page
4801   \fi
4802   \if N\Hy@temp
4803     \ifx\HyPL@Type\relax
```

```

4804         \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4805     \else
4806         \HyPL@StorePageLabel{%
4807             \ifx\HyPL@Prefix\@empty
4808             \else
4809                 /P(\HyPL@Prefix)%
4810             \fi
4811             /S/\csname HyPL\HyPL@Type\endcsname
4812             \ifnum\the\c@page=1 %
4813             \else
4814                 \space/St \the\c@page
4815             \fi
4816         }%
4817     \fi
4818 \fi
4819 \xdef\HyPL@LastNumber{\the\c@page}%
4820 \global\let\HyPL@LastType\HyPL@Type
4821 \global\let\HyPL@LastPrefix\HyPL@Prefix
4822 \endgroup
4823 \Hy@GlobalStepCount\Hy@abspage
4824 }%

```

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

```

4825 \def\HyPL@CheckThePage#1\@nil{%
4826     \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
4827 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, e. g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

4828 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4829     \def\Hy@tempa{#4}%
4830     \def\Hy@tempb{\csname\endcsname\c@page}%
4831     \ifx\Hy@tempa\Hy@tempb
4832         \expandafter\ifx\csname HyPL#3\endcsname\relax
4833     \else
4834         \def\HyPL@Type{#3}%
4835         \def\HyPL@Prefix{#2}%
4836     \fi
4837 \else
4838     \begingroup
4839     \let\Hy@next\endgroup
4840     \let\HyPL@found\@undefined
4841     \def\arabic{\HyPL@Format{arabic}}%
4842     \def\Roman{\HyPL@Format{Roman}}%
4843     \def\roman{\HyPL@Format{roman}}%
4844     \def\Alph{\HyPL@Format{Alph}}%
4845     \def\alph{\HyPL@Format{alph}}%
4846     \protected@edef\Hy@temp{#1}%
4847     \ifx\HyPL@found\relax
4848         \toks@{\expandafter{\Hy@temp}}%
4849         \edef\Hy@next{\endgroup
4850             \noexpand\HyPL@@@CheckThePage\the\toks@
4851             \noexpand\HyPL@found\relax\noexpand\@nil
4852         }%
4853     \fi

```

```

4854     \Hy@next
4855     \fi
4856 }%

```

\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`.

```

4857 \def\HyPL@Format#1#2{%
4858   \ifx\HyPL@found\@undefined
4859     \expandafter\ifx\csname c@#2\endcsname\c@page
4860       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4861     \else
4862       \expandafter\noexpand\csname#1\endcsname{#2}%
4863     \fi
4864   \else
4865     \expandafter\noexpand\csname#1\endcsname{#2}%
4866   \fi
4867 }%

```

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

```

4868 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4869   \def\Hy@tempa{#3}%
4870   \def\Hy@tempb{\HyPL@found\relax}%
4871   \ifx\Hy@tempa\Hy@tempb
4872     \def\HyPL@Type{#2}%
4873     \def\HyPL@Prefix{#1}%
4874   \fi
4875 }%

```

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

```

4876 \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`.

```

4877 \def\HyPL@Useless{0<</S/D>>}%
4878 \@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.

```

4879 \def\HyPL@SetPageLabels{%
4880   \@onelevel@sanitize\HyPL@Labels
4881   \ifx\HyPL@Labels\@empty
4882     \else
4883       \ifx\HyPL@Labels\HyPL@Useless
4884       \else
4885         \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4886       \fi
4887     \fi
4888 }%

4889 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4890 \fi

```

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

```

4891 \Hy@DisableOption{pdfpagelabels}
4892 \</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`

```
4893 <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.

```
4894 <*vTeX>
4895 \providecommand*{\XR@ext}{pdf}
4896 \edef\Hy@VTeXversion{%
4897   \ifx\VTeXversion\@undefined
4898     \z@
4899   \else
4900     \ifx\VTeXversion\relax
4901       \z@
4902     \else
4903       \VTeXversion
4904     \fi
4905   \fi
4906 }
4907 \begingroup
4908   \ifnum\Hy@VTeXversion<660 %
4909     \gdef\Hy@PutCatalog#1{%
4910       \Hy@WarningNoLine{%
4911         VTeX 6.59g or above required for pdfpagelabels%
4912       }%
4913     }%
4914   \else
4915     \gdef\Hy@PutCatalog#1{%
4916       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4917     }%
4918     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
4919       \ifx\#2\%
4920       \else
4921         \immediate\special{!pdfpagelabels #2}%
4922       \fi
4923     }%
4924   \fi
4925 \endgroup
4926 </vTeX>

4927 <*pdfTeX | vTeX>
```

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

```
4928 \ifHy@pagelabels
4929   \def\HyPL@StorePageLabel#1{%
4930     \toks@\expandafter{\HyPL@Labels}%
4931     \xdef\HyPL@Labels{%
4932       \the\toks@
4933       \the\Hy@abspage<<#1>>%
4934     }%
4935   }%
```


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.

```

4936 \ifclassloaded{revtex4}{%
4937   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
4938 }{%
4939   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
4940 }%

4941 \fi
4942 </pdfTeX | vtex>

```

27.1.2 pdfmarkbase, dvipdfm

```

4943 <*pdfmarkbase>
4944 \begingroup
4945   \toks@{\expandafter{\Hy@FirstPageHook}%
4946   \xdef\Hy@FirstPageHook{%
4947     \noexpand\headerps@out{%
4948       systemdict /pdfmark known%
4949       {%
4950         userdict /?pdfmark systemdict /exec get put%
4951       }{%
4952         userdict /?pdfmark systemdict /pop get put %
4953         userdict /pdfmark systemdict /cleartomark get put%
4954       }%
4955       ifelse%
4956     }%
4957     \the\toks@
4958   }%
4959 \endgroup
4960 </pdfmarkbase>

\Hy@PutCatalog
4961 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
4962 <*pdfmarkbase>
4963 \def\Hy@PutCatalog#1{%
4964   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
4965 }
4966 </pdfmarkbase>

4967 <*pdfmarkbase | dvipdfm>
4968 \ifHy@pagelabels

```

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

```

4969 \def\HyPL@StorePageLabel#1{%
4970   \if@filesw
4971     \begingroup
4972       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
4973       \immediate\write\@mainaux{%
4974         \string\HyPL@Entry{\Hy@tempa}%
4975       }%
4976     \endgroup
4977   \fi
4978 }%

```

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.

```

4979 \AfterBeginDocument{%
4980   \if@filesw
4981     \immediate\write\@mainaux{%
4982       \string\providecommand\string*\string\HyPL@Entry[1]{}%
4983     }%
4984   \fi
4985   \ifx\HyPL@Labels\@empty
4986     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
4987   \else
4988     \HyPL@SetPageLabels
4989   \fi
4990   \let\HyPL@Entry\@gobble
4991 }%

\HyPL@Entry
4992 \def\HyPL@Entry#1{%
4993   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
4994     \HyPL@Labels
4995     #1%
4996   }%
4997 }%

4998 \fi
4999 </pdfmarkbase | dvipdfm>

5000 <*package>

5001 \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

```

5002 \def\Hy@CounterExists#1{%
5003   \begingroup\expandafter\expandafter\expandafter\endgroup
5004   \expandafter\ifx\csname c@#1\endcsname\relax
5005     \expandafter\@gobble
5006   \else
5007     \begingroup\expandafter\expandafter\expandafter\endgroup
5008     \expandafter\ifx\csname the#1\endcsname\relax
5009       \expandafter\expandafter\expandafter\@gobble
5010     \else

```

```

5011 \expandafter\expandafter\expandafter\@firstofone
5012 \fi
5013 \fi
5014 }
5015 \Hy@CounterExists{section}{%
5016 \newcommand\theHequation{\theHsection.\arabic{equation}}%
5017 }
5018 \Hy@CounterExists{part}{%
5019 \newcommand\theHpart{\arabic{part}}%
5020 }
5021 \ifundefined{thechapter}{%
5022 \newcommand\theHsection {\arabic{section}}%
5023 \newcommand\theHfigure {\arabic{figure}}%
5024 \newcommand\theHtable {\arabic{table}}%
5025 }{%
5026 \newcommand\theHchapter {\arabic{chapter}}%
5027 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
5028 \newcommand\theHtable {\theHchapter.\arabic{table}}%
5029 \newcommand\theHsection {\theHchapter.\arabic{section}}%
5030 }
5031 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5032 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5033 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5034 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5035 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5036 \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.

```

5037 \let\H@item\item
5038 \newcounter{Item}
5039 \def\theHItem{\arabic{Item}}
5040 \def\item{%
5041 \if@hyper@itemfalse
5042 \if@nmbrlist\@hyper@itemtrue\fi
5043 \H@item
5044 }
5045 \newcommand\theHenumi {\theHItem}
5046 \newcommand\theHenumii {\theHItem}
5047 \newcommand\theHenumiii {\theHItem}
5048 \newcommand\theHenumiv {\theHItem}
5049 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5050 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5051 \let\theHmpfootnote\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.

```

5052 \let\H@refstepcounter\refstepcounter
5053 \edef\name@of@eq{equation}%
5054 \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.

```

5055 \newif\if@hyper@item
5056 \newif\if@skiphyperref

```

```

5057 \@hyper@itemfalse
5058 \@skiphyperreffalse
5059 \def\refstepcounter#1{%
5060   \ifHy@pdfstring
5061   \else
5062     \H@refstepcounter{#1}%
5063     \edef\This@name{#1}%
5064     \ifx\This@name\name@of@slide
5065     \else
5066       \if@skiphyperref
5067       \else
5068         \ifhyper@item
5069         \stepcounter{Item}%
5070         \hyper@refstepcounter{Item}%
5071         \@hyper@itemfalse
5072       \else
5073         \hyper@refstepcounter{#1}%
5074       \fi
5075     \fi
5076   \fi
5077 \fi
5078 }

```

AMS¹TeX 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.

```

5079 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@measuring@false}

```

`\hyper@refstepcounter`

```

5080 \def\hyper@refstepcounter#1{%
5081   \edef\This@name{#1}%
5082   \ifx\This@name\name@of@eq
5083     \@ifundefined{theHequation}{%
5084       \make@stripped@name{\theequation}%
5085       \let\theHequation\newname
5086     }{}%
5087   \fi
5088   \@ifundefined{theH#1}{%
5089     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5090   }{}%
5091   \hyper@makecurrent{#1}%
5092   \ifmeasuring@
5093   \else
5094     \Hy@raisedlink{%
5095       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5096     }%
5097   \fi
5098 }

```

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`.

```

5099 \begingroup\expandafter\expandafter\expandafter\endgroup
5100 \expandafter\ifx\csname chapter\endcsname\relax

```

```

5101 \def\Hy@chapterstring{section}%
5102 \else
5103 \def\Hy@chapterstring{chapter}%
5104 \fi
5105 \def\Hy@appendixstring{appendix}
5106 \def\Hy@chapapp{\Hy@chapterstring}
5107 \let\HyOrg@appendix\appendix
5108 \def\appendix{%
5109 \ifundefined{chapter}%
5110 {\gdef\theHsection{\Alph{section}}}%
5111 {\gdef\theHchapter{\Alph{chapter}}}%
5112 \xdef\Hy@chapapp{\Hy@appendixstring}%
5113 \HyOrg@appendix
5114 }

```

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

```

5115 \def\hyper@makecurrent#1{%
5116 \begingroup
5117 \edef\Hy@param{#1}%
5118 \ifx\Hy@param\Hy@chapterstring
5119 \let\Hy@param\Hy@chapapp
5120 \fi
5121 \ifHy@hypertextnames
5122 \let\@number\@firstofone
5123 \ifundefined{latin@Alph}{-}{%
5124 \ifx\@Alph\greek@Alph
5125 \def\@Alph{Alph\@arabic}%
5126 \fi
5127 }%
5128 \ifx\@Alph\@Alph@bul
5129 \def\@Alph{Alph\@arabic}%
5130 \fi
5131 \ifx\@alph\@alph@bul
5132 \def\@alph{alph\@arabic}%
5133 \fi
5134 \ifHy@naturalnames
5135 \let\textlatin\@firstofone
5136 \xdef\@currentHlabel{\csname the#1\endcsname}%
5137 \else
5138 \xdef\@currentHlabel{\csname theH#1\endcsname}%
5139 \fi
5140 \xdef\@currentHref{%
5141 \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5142 }%
5143 \else
5144 \Hy@GlobalStepCount\Hy@linkcounter
5145 \xdef\@currentHref{\Hy@param.the\Hy@linkcounter}%
5146 \fi
5147 \endgroup
5148 }

5149 \ifpackageloaded{fancyvrb}{%
5150 \ifpackagelater{fancyvrb}{1998/05/20}{-}{%
5151 \def\FV@StepLineNo{%
5152 \FV@SetLineNo
5153 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5154 \FV@StepLineNo

```

```

5155 }%
5156 }%
5157 }{}

```

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`

```

5158 \AtBeginDocument{%
5159   \ifclassloaded{revtex4}{%
5160     \@namedef{ver@lastpage.sty}{1994/06/25}%
5161   }{}%
5162   \@ifpackageloaded{lastpage}{%
5163     \ifHy@pageanchor
5164     \else
5165       \Hy@WarningNoLine{%
5166         The \string\pageref{LastPage} link doesn't work\MessageBreak
5167         with disabled option 'pageanchor'%
5168       }%
5169     \fi
5170     \def\lastpage@putlabel{%
5171       \addtocounter{page}{-1}%
5172       \if@filesw
5173         \begingroup
5174           \let\@number\@firstofone
5175           \ifHy@pageanchor
5176             \ifHy@hypertexnames
5177               \ifHy@plainpages
5178                 \def\Hy@temp{\arabic{page}}%
5179               \else
5180                 \Hy@unicodefalse
5181                 \pdfstringdef\Hy@temp{\thepage}%
5182               \fi
5183             \else
5184               \def\Hy@temp{\the\Hy@pagecounter}%
5185             \fi
5186           \fi
5187           \immediate\write\@auxout{%
5188             \string\newlabel
5189             {LastPage}{}{\thepage}{}{%
5190               \ifHy@pageanchor page.\Hy@temp\fi}{}%
5191             }%
5192           \endgroup
5193         \fi
5194         \addtocounter{page}{1}%
5195       }%
5196     \@ifclassloaded{revtex4}{%
5197       \begingroup
5198         \toks@%expandafter{\lastpage@putlabel}%
5199         \edef\x{\endgroup

```

```

5200         \def\noexpand\lastpage@putlabel{%
5201             \noexpand\stepcounter{page}%
5202             \the\toks@
5203             \noexpand\addtocounter{page}\noexpand\m@ne
5204         }%
5205     }%
5206     \x
5207     }{}%
5208     }{}%
5209 }
5210 </package>
5211 <*check>
5212 \checkpackage{lastpage}[1994/06/25]
5213 \checkcommand\def\lastpage@putlabel{%
5214     \addtocounter{page}{-1}%
5215     \immediate\write\@auxout{%
5216         \string\newlabel{LastPage}{{}\{\thepage}}%
5217     }%
5218     \addtocounter{page}{1}%
5219 }
5220 </check>
5221 <*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.

```

5222 \def\hypergetref#1{\getrefbykeydefault{#1}{\{??}}
5223 \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:

```

5224 \@ifpackageloaded{titlesec}{%
5225     \def\ttl@Hy@steplink#1{%
5226         \Hy@GlobalStepCount\Hy@linkcounter
5227         \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5228         \def\ttl@Hy@saveanchor{%
5229             \Hy@raisedlink{%
5230                 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5231             }%
5232         }%
5233     }%
5234     \def\ttl@Hy@refstepcounter#1{%
5235         \let\ttl@b\Hy@raisedlink
5236         \def\Hy@raisedlink##1{%
5237             \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5238         }%
5239         \refstepcounter{#1}%
5240         \let\Hy@raisedlink\ttl@b
5241     }%
5242 }{}

```

Package titletoc support:

```
5243 \@ifpackageloaded{titletoc}{%
5244   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5245 }{}
```

32 Package varioref support

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

```
5246 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
5247 \@ifpackageloaded{varioref}{%
5248   \def\vref@pagenum#1#2{%
5249     \ifundefined{r@#2}{%
5250       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5251     }{}%
5252     \edef#1{\getpagerefnumber{#2}}%
5253   }%
5254 }{}
```

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

```
5255 \@ifpackageloaded{longtable}{%
5256   \begingroup
5257     \def\y{\LT@array}%
5258     \ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%
5259     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5260       \expandafter\endgroup
5261       \expandafter\def\y[#1]##2{%
5262         \H@refstepcounter{#1}%
5263         \hyper@makecurrent{table}%
5264         \let\Hy@LT@currentHlabel\@currentHlabel
5265         \let\Hy@LT@currentHref\@currentHref
5266         #2\@sharp####4%
5267       }%
5268     }%
5269     \expandafter\expandafter\expandafter\x\y[#1]{#2}\@nil
```

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

```
5270   \begingroup
5271     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5272       \endgroup
5273       \def\LT@start{%
5274         #1%
5275         \let\@currentHlabel\Hy@LT@currentHlabel
5276         \let\@currentHref\Hy@LT@currentHref
5277         \Hy@raisedlink{%
5278           \hyper@anchorstart{\@currentHref}\hyper@anchorend
5279         }%
5280         \ifvoid\LT@firsthead\copy
```



```

5281      #2%
5282    }%
5283  }%
5284  \expandafter\x\LT@start\@nil
5285 }{}

```

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.

```

5286 \let\new@refstepcounter\refstepcounter
5287 \let\H@equation\equation
5288 \let\H@endequation\endequation

5289 \@ifpackageloaded{amsmath}{%
5290   \long\def\Hy@temp{%
5291     \incr@eqnum
5292     \mathdisplay@push
5293     \st@rredfalse \global\@eqnswtrue
5294     \mathdisplay{equation}%
5295   }%
5296   \ifx\Hy@temp\equation
5297     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5298       \csname iftrue\endcsname
5299   \else
5300     \long\def\equation{%
5301       \mathdisplay@push
5302       \st@rredfalse \global\@eqnswtrue
5303       \mathdisplay{equation}%
5304       \incr@eqnum
5305     }%
5306   \fi
5307 \fi
5308 }{%
5309 \def\equation{%
5310   \let\refstepcounter\H@refstepcounter
5311   \H@equation
5312   \@ifundefined{theHequation}{%
5313     \make@stripped@name{\theequation}%
5314     \let\theHequation\newname
5315   }{}%
5316   \hyper@makecurrent{equation}%
5317   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5318   \let\refstepcounter\new@refstepcounter
5319 }%
5320 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5321 }

```

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.

```

5322 \newif\if@eqnstar
5323 \@eqnstarfalse
5324 \let\H@eqnarray\eqnarray
5325 \let\H@endeqnarray\endeqnarray
5326 \def\eqnarray{%
5327   \let\Hy@reserved@a\relax
5328   \def\@currentHref{}%
5329   \H@eqnarray
5330   \if@eqnstar
5331   \else
5332     \ifx\\ \@currentHref\\%
5333     \else
5334       \@ifundefined{theHequation}{%
5335         \make@stripped@name{\theequation}%
5336         \let\theHequation\newname
5337       }{}%
5338       \hyper@makecurrent{equation}%
5339       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5340     \fi
5341   \fi
5342 }
5343 \def\endeqnarray{%
5344   \H@endeqnarray
5345 }

```

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.

```

5346 \@namedef{eqnarray*}{%
5347   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
5348 }
5349 \@namedef{endeqnarray*}{%
5350   \nonumber\endeqnarray\@eqnstarfalse
5351 }

```

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

```

5352 \@ifundefined{subeqnarray}{ }{%
5353   \let\H@subeqnarray\subeqnarray
5354   \let\H@endsubeqnarray\endsubeqnarray
5355   \def\subeqnarray{%
5356     \let\Hy@reserved@a\relax
5357     \H@subeqnarray
5358     \@ifundefined{theHequation}{%
5359       \make@stripped@name{\theequation}%
5360       \let\theHequation\newname
5361     }{}%
5362     \hyper@makecurrent{equation}%
5363     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5364   }%
5365   \def\endsubeqnarray{%
5366     \H@endsubeqnarray
5367   }%
5368   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5369 }

```

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

```

5370 \def\make@stripped@name#1{%
5371   \begingroup
5372     \escapechar\m@ne

```

```

5373 \global\let\newname\@empty
5374 \protected@edef\Hy@tempa{#1}%
5375 \edef\@tempb{%
5376   \noexpand\@tfor\noexpand\Hy@tempa:=%
5377   \expandafter\strip@prefix\meaning\Hy@tempa
5378 }%
5379 \@tempb\do{%
5380   \if\Hy@tempa\else
5381     \if\Hy@tempa\else
5382       \xdef\newname{\newname\Hy@tempa}%
5383     \fi
5384   \fi
5385 }%
5386 \endgroup
5387 }

```

Support for amsmath's subequations:

```

5388 \begingroup\expandafter\expandafter\expandafter\endgroup
5389 \expandafter\ifx\csname subequations\endcsname\relax
5390 \else
5391   \let\HyOrg@subequations\subequations
5392   \def\subequations{%
5393     \stepcounter{equation}%
5394     \protected@edef\theHparentequation{%
5395       \ifundefined{theHequation}\theequation\theHequation
5396     }%
5397     \addtocounter{equation}{-1}%
5398     \HyOrg@subequations
5399     \def\theHequation{\theHparentequation\alph{equation}}%
5400     \ignorespaces
5401   }%
5402 \fi

```

Support for package amsthm (Daniel Müllner):

```

5403 \@ifpackageloaded{amsthm}{%
5404   \def\@thm#1#2#3{%
5405     \ifhmode
5406       \unskip\unskip\par
5407     \fi
5408     \normalfont
5409     \trivlist
5410     \let\thmheadnl\relax
5411     \let\thm@swap\@gobble
5412     \thm@notefont{\fontseries\mddefault\upshape}%
5413     \thm@headpunct{.}% add period after heading
5414     \thm@headsep 5\p@ plus\p@ minus\p@\relax
5415     \thm@space@setup
5416     #1% style overrides
5417     \@topsep \thm@preskip % used by thm head
5418     \@topsepadd \thm@postskip % used by \@endparenv
5419     \def\dth@counter{#2}%
5420     \ifx\@empty\dth@counter
5421       \def\@tempa{%
5422         \@oparg{\@begintheorem{#3}{}} []%
5423       }%
5424     \else
5425       \H@refstepcounter{#2}%
5426       \hyper@makecurrent{#2}%

```

```

5427     \def\@tempa{%
5428       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{[]}%
5429     }%
5430     \fi
5431     \@tempa
5432   }%
5433   \dth@everypar={%
5434     \@minipagefalse
5435     \global\@newlistfalse
5436     \@noparitemfalse
5437     \if@inlabel
5438       \global\@inlabelfalse
5439     \begingroup
5440       \setbox\z@\lastbox
5441       \ifvoid\z@
5442         \kern-\itemindent
5443       \fi
5444     \endgroup
5445     \ifx\@empty\dth@counter
5446     \else
5447       \Hy@raisedlink{%
5448         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5449       }%
5450     \fi
5451     \unhbox\@labels
5452   \fi
5453   \if@nobreak
5454     \@nobreakfalse \clubpenalty\@M
5455   \else
5456     \clubpenalty\@clubpenalty \everypar{}%
5457   \fi
5458 }%
5459 }{}

```

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.

```

5460 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5461 \ifHy@hyperfootnotes
5462   \newcounter{Hfootnote}%
5463   \let\H@@footnotetext\@footnotetext
5464   \let\H@@footnotemark\@footnotemark
5465   \def\@xfootnotenext[#1]{%
5466     \begingroup
5467       \csname c@\@mpfn\endcsname #1\relax
5468       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5469     \endgroup
5470     \ifx\@footnotetext\@mpfootnotetext
5471       \expandafter\H@@mpfootnotetext
5472     \else
5473       \expandafter\H@@footnotetext
5474     \fi

```

```

5475 }%
5476 \def\@footnotemark[#1]{%
5477   \begingroup
5478     \c@footnote #1\relax
5479     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5480   \endgroup
5481   \H@@footnotemark
5482 }%
5483 \let\H@@mpfootnotetext\@mpfootnotetext
5484 \long\def\@mpfootnotetext#1{%
5485   \H@@mpfootnotetext{%
5486     \ifHy@nesting
5487       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5488     \else
5489       \Hy@raisedlink{%
5490         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5491       }#1%
5492     \fi
5493   }%
5494 }%
5495 \long\def\@footnotetext#1{%
5496   \H@@footnotetext{%
5497     \ifHy@nesting
5498       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5499     \else
5500       \Hy@raisedlink{%
5501         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5502       }%
5503       \let\@currentHlabel\Hy@footnote@currentHlabel
5504       \let\@currentHref\Hy@footnote@currentHref
5505       \let\@currentlabelname\@empty
5506       #1%
5507     \fi
5508   }%
5509 }%

```

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.

```

5510 \def\@footnotemark{%
5511   \leavevmode
5512   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
5513   \stepcounter{Hfootnote}%
5514   \global\let\Hy@saved@currentHlabel\@currentHlabel
5515   \global\let\Hy@saved@currentHref\@currentHref
5516   \hyper@makecurrent{Hfootnote}%
5517   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5518   \global\let\Hy@footnote@currentHref\@currentHref
5519   \global\let\@currentHlabel\Hy@saved@currentHlabel
5520   \global\let\@currentHref\Hy@saved@currentHref
5521   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5522   \@makefnmark
5523   \hyper@linkend
5524   \ifhmode\spacefactor\@x@sf\fi
5525   \relax
5526 }%

```

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

```

5527 \@ifpackageloaded{longtable}{%
5528   \CheckCommand*{\LT@p@ftntext}[1]{%
5529     \edef\@tempa{%
5530       \the\LT@p@ftn
5531       \noexpand\footnotetext[\the\c@footnote]%
5532     }%
5533     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5534   }%
5535   \long\def\LT@p@ftntext#1{%
5536     \edef\@tempa{%
5537       \the\LT@p@ftn
5538       \begingroup
5539         \noexpand\c@footnote=\the\c@footnote\relax
5540         \noexpand\protected@xdef
5541           \noexpand\@thefnmark{\noexpand\thempfn}%
5542         \noexpand\protected@xdef\noexpand\@thefnmark{%
5543           \noexpand\thempfn
5544         }%
5545         \expandafter\expandafter\expandafter\noexpand
5546         \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5547         \expandafter\expandafter\expandafter{%
5548           \expandafter\Hy@footnote@currentHref\expandafter
5549           }\expandafter{\Hy@footnote@currentHlabel}%
5550       }%
5551       \global\LT@p@ftn\expandafter{%
5552         \@tempa{#1}%
5553       }\endgroup
5554     }%
5555   }%
5556   \long\def\Hy@LT@footnotetext#1#2#3{%
5557     \H@@footnotetext{%
5558       \ifHy@nesting
5559         \hyper@@anchor{#1}{#3}%
5560       \else
5561         \Hy@raisedlink{%
5562           \hyper@@anchor{#1}{\relax}%
5563         }%
5564         \def\@currentHlabel{#2}%
5565         \def\@currentHref{#1}%
5566         \let\@currentlabelname\@empty
5567         #3%
5568       \fi
5569     }%
5570   }%
5571 }-%

```

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

```

5572 \@ifpackageloaded{fancyvrb}{%
5573   \def\V@@footnotetext{%
5574     \insert\footins\bgroup
5575     \csname reset@font\endcsname
5576     \footnotesize
5577     \interlinepenalty\interfootnotelinepenalty

```

```

5578     \splittopskip\footnotesep
5579     \splitmaxdepth\dp\strutbox
5580     \floatingpenalty \@MM
5581     \hsize\columnwidth
5582     \@parboxrestore
5583     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5584     \@makefnmark}%
5585     \rule{\z@}{\footnotesep}%
5586     \bgroup
5587     \aftergroup\V@@@footnotetext
5588     \Hy@raisedlink{%
5589       \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5590     }%
5591     \let\@currentHlabel\Hy@footnote@currentHlabel
5592     \let\@currentHref\Hy@footnote@currentHref
5593     \let\@currentlabelname\@empty
5594     \ignorespaces
5595   }%
5596 }{}%

```

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.

```

5597 \let\HyOrg@maketitle\maketitle
5598 \def\maketitle{%
5599   \let\Hy@saved@footnotemark\@footnotemark
5600   \let\Hy@saved@footnotetext\@footnotetext
5601   \let\@footnotemark\H@@footnotemark
5602   \let\@footnotetext\H@@footnotetext
5603   \@ifnextchar[\Hy@maketitle@optarg{% ]
5604     \HyOrg@maketitle
5605     \Hy@maketitle@end
5606   }%
5607 }%
5608 \def\Hy@maketitle@optarg[#1]{%
5609   \HyOrg@maketitle[#{#1}]%
5610   \Hy@maketitle@end
5611 }%
5612 \def\Hy@maketitle@end{%
5613   \ifx\@footnotemark\H@@footnotemark
5614     \let\@footnotemark\Hy@saved@footnotemark
5615   \fi
5616   \ifx\@footnotetext\H@@footnotetext
5617     \let\@footnotetext\Hy@saved@footnotetext
5618   \fi
5619 }%

```

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

```

5620 \def\realfootnote{%
5621   \@ifnextchar[\@xfootnote{%
5622     \stepcounter{\@mpfn}%
5623     \protected@xdef\@thefnmark{\thempfn}%
5624     \H@@footnotemark\H@@footnotetext
5625   }%
5626 }%
5627 \fi
5628 \Hy@DisableOption{hyperfootnotes}

```

```

5629 </package>
5630 <*check>
5631 \checklatex
5632 \checkcommand\def\xfootnotenext[#1]{%
5633   \begingroup
5634     \csname c@\mpfn\endcsname #1\relax
5635     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5636   \endgroup
5637   \@footnotetext
5638 }
5639 \checkcommand\def\xfootnotemark[#1]{%
5640   \begingroup
5641     \c@footnote #1\relax
5642     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5643   \endgroup
5644   \@footnotemark
5645 }
5646 \checkcommand\def\@footnotemark{%
5647   \leavevmode
5648   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5649   \@makefnmark
5650   \ifhmode\spacefactor\x@sf\fi
5651   \relax
5652 }
5653 </check>
5654 <*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.

```

5655 \def\caption{%
5656   \ifx\@captive\@undefined
5657     \latex@error{noexpand\caption outside float}\@ehd
5658     \expandafter\@gobble
5659   \else
5660     \H@refstepcounter\@captive
5661     \let\Hy@tempa\@caption
5662     \@ifundefined{float@caption}{%
5663       {%
5664         \expandafter\ifx\csname @float@c@\@captive\endcsname
5665           \float@caption
5666         \let\Hy@tempa\Hy@float@caption
5667       \fi
5668     }%
5669     \expandafter\@firstofone
5670   \fi
5671   {\@dblarg{\Hy@tempa\@captive}}%
5672 }
5673 \long\def\@caption#1[#2]#3{%
5674   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5675     \csname iftrue\endcsname
5676     \global\let\@currentHref\hc@currentHref
5677   \else
5678     \hyper@makecurrent{\@captive}%
5679   \fi

```



```

5680 \def\@currentlabelname{#2}%
5681 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5682 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5683 }%
5684 \begingroup
5685 \@parboxrestore
5686 \if@minipage
5687 \setminipage
5688 \fi
5689 \normalsize
5690 \expandafter\ifx\csname if@capstart\expandafter\endcsname
5691 \csname iftrue\endcsname
5692 \global\@capstartfalse
5693 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5694 \else
5695 \makecaption{\csname fnum@#1\endcsname}{%
5696 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5697 \ifHy@nesting
5698 \hyper@@anchor{\@currentHref}{#3}%
5699 \else
5700 \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5701 \fi
5702 }%
5703 \fi
5704 \par
5705 \endgroup
5706 }

```

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.

```

5707 \let\Hy@float@caption\@caption
5708 \ifpackageloaded{float}{%
5709 \def\Hy@float@caption{%
5710 \ifx\Hy@float@currentHref\@undefined
5711 \hyper@makecurrent{\@cuptype}%
5712 \global\let\Hy@float@currentHref\@currentHref
5713 \else
5714 \let\@currentHref\Hy@float@currentHref
5715 \fi
5716 \float@caption
5717 }%
5718 \let\HyOrg@float@makebox\float@makebox
5719 \renewcommand{\float@makebox}[1]{%
5720 \HyOrg@float@makebox{%
5721 #1\relax
5722 \ifx\Hy@float@currentHref\@undefined
5723 \else
5724 \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5725 \global\let\Hy@float@currentHref\@undefined
5726 \fi
5727 }%
5728 }%
5729 }{}
5730 \endpackage
5731 \ifcheck
5732 \checklatex[1999/06/01 - 2000/06/01]

```

```

5733 \checkcommand\def\caption{%
5734   \ifx\@capttype\undefined
5735     \@latex@error{\noexpand\caption outside float}\@ehd
5736     \expandafter\@gobble
5737   \else
5738     \refstepcounter\@capttype
5739     \expandafter\@firstofone
5740   \fi
5741   {\@dblarg{\@caption\@capttype}}%
5742 }
5743 \checkcommand\long\def\@caption#1[#2]#3{%
5744   \par
5745   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5746   {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5747   \begingroup
5748     \@parboxrestore
5749     \if@minipage
5750       \setminipage
5751     \fi
5752     \normalsize
5753     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5754   \endgroup
5755 }
5756 </check>
5757 <*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 *drfcite* may break.

However, let's make an attempt to get *natbib* right, because that's a powerful, important package. Patrick Daly (daly@linmpi.mpg.de) has provided hooks for us, so all we need to do is activate them.

```

5758 \def\hyper@natlinkstart#1{%
5759   \Hy@backout{#1}%
5760   \hyper@linkstart{cite}{cite.#1}%
5761   \def\hyper@nat@current{#1}%
5762 }
5763 \def\hyper@natlinkend{%
5764   \hyper@linkend
5765 }
5766 \def\hyper@natlinkbreak#1#2{%
5767   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5768 }
5769 \def\hyper@natanchorstart#1{%
5770   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5771 }
5772 \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.

```

5773 \@ifundefined{NAT@parse}{%
5774   \providecommand*\@extra@binfo{}%
5775   \providecommand*\@extra@b@citeb{}%
5776   \def\bibcite#1#2{%
5777     \newl@bel{b}{#1\@extra@binfo}{%
5778       \hyper@link[cite]{cite.#1\@extra@b@citeb}{#2}%
5779     }%
5780   }%
5781   \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.”.

```

5782 \let\Hy@bibcite\bibcite
5783 \begingroup
5784   \@ifundefined{bbl@cite@choice}{%
5785     \g@addto@macro\bbl@cite@choice{%
5786       \let\bibcite\Hy@bibcite
5787     }%
5788   }%
5789 \endgroup

```

\@BIBLABEL is working around a ‘feature’ of RevT_EX.

```

5790 \providecommand*\@BIBLABEL{\@biblabel}%
5791 \def\@lbibitem[#1]#2{%
5792   \@skiphyperreftrue
5793   \H@item[%
5794     \ifx\Hy@raisedlink\@empty
5795       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5796       \@BIBLABEL{#1}%
5797       \hyper@anchorend
5798     \else
5799       \Hy@raisedlink{%
5800         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5801       }%
5802       \@BIBLABEL{#1}%
5803     \fi
5804     \hfill
5805   ]%
5806   \@skiphyperreffalse
5807   \if@filesw
5808     \begingroup
5809       \let\protect\@noexpand
5810       \immediate\write\@auxout{%
5811         \string\bibcite{#2}{#1}%
5812       }%
5813     \endgroup
5814   \fi
5815   \ignorespaces
5816 }%

```

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

```

5817 \def\@bibitem#1{%
5818   \@skiphyperreftrue\H@item\@skiphyperreffalse
5819   \Hy@raisedlink{%
5820     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5821   }%
5822   \if@filesw
5823     \begingroup

```

```

5824         \let\protect\noexpand
5825         \immediate\write\@auxout{%
5826             \string\bibcite{#1}{\the\value{\@listctr}}}%
5827     }%
5828     \endgroup
5829     \fi
5830     \ignorespaces
5831 }%
5832 }{}

5833 </package>
5834 <*check>
5835 \checklatex
5836 \checkcommand\def\@lbibitem[#1]#2{%
5837     \item[\@biblabel{#1}\hfill]%
5838     \if@files
5839     {%
5840         \let\protect\noexpand
5841         \immediate\write\@auxout{%
5842             \string\bibcite{#2}{#1}%
5843         }%
5844     }%
5845     \fi
5846     \ignorespaces
5847 }
5848 \checkcommand\def\@bibitem#1{%
5849     \item
5850     \if@files
5851     \immediate\write\@auxout{%
5852         \string\bibcite{#1}{\the\value{\@listctr}}}%
5853     }%
5854     \fi
5855     \ignorespaces
5856 }
5857 </check>
5858 <*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.

```

5859 \@ifclassloaded{revtex}{%
5860     \Hy@Info{*** compatibility with revtex **** }%
5861     \def\revtex@checking#1#2{%
5862         \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5863         \expandafter\def\csname b@#1\endcsname{#2}%
5864         \@SetMaxRnhefLabel{#1}%
5865         \expandafter\let\csname b@#1\endcsname\T@temp
5866     }%

```

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

```

5867     \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
5868     \providecommand*\@extra@b@citeb{}%
5869     \def\CITE[#1]#2{%
5870         \let\@citea\@empty
5871         \leavevmode
5872         \unskip
5873         $^{}%

```

```

5874 \scriptstyle
5875 \@CITE{%
5876   \@for\@citeb:=#2\do{%
5877     \@citea
5878     \def\@citea{\penalty\@m\ }%
5879     \edef\@citeb{\expandafter\@firstofone\@citeb}%
5880     \if@filesw
5881       \immediate\write\@auxout{\string\citation{\@citeb}}%
5882     \fi
5883     \@ifundefined{b@\@citeb\extra@b@citeb}{%
5884       \mbox{\reset@font\bfseries ?}%
5885       \G@refundefinedtrue
5886       \@latex@warning{%
5887         Citation '\@citeb' on page \thepage \space undefined%
5888       }%
5889     }{%
5890       {\csname b@\@citeb\extra@b@citeb\endcsname}%
5891     }%
5892   }%
5893 }{\#1}%
5894 }$%
5895 }%

```

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.

```

5896 \def\@citex[#1]#2{%
5897   \let\@citea\@empty
5898   \@cite{%
5899     \@for\@citeb:=#2\do{%
5900       \@citea
5901       \def\@citea{\penalty\@m\ }%
5902       \edef\@citeb{\expandafter\@firstofone\@citeb}%
5903       \if@filesw
5904         \immediate\write\@auxout{\string\citation{\@citeb}}%
5905       \fi
5906       \@ifundefined{b@\@citeb\extra@b@citeb}{%
5907         \mbox{\reset@font\bfseries ?}%
5908         \G@refundefinedtrue
5909         \@latex@warning{%
5910           Citation '\@citeb' on page \thepage \space undefined%
5911         }%
5912       }{%
5913         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
5914       }%
5915     }%
5916   }{\#1}%
5917 }%
5918 }{}

```

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

```

5919 \@ifpackageloaded{harvard}{%
5920   \AtBeginDocument{%
5921     \Hy@Info{*** compatibility with harvard **** }%
5922     \Hy@raiselinksfalse
5923     \def\harvardcite#1#2#3#4{%
5924       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
5925       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
5926       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
5927       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5928     }%
5929     \def\HAR@citetoaux#1{%
5930       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5931       \ifHy@backref
5932         \ifx\@empty\@currentlabel
5933           \else
5934             \@bsphack
5935             \if@filesw
5936               \protected@write\@auxout{}{%
5937                 \string\writefile{brf}{%
5938                   \string\backcite{#1}{%
5939                     {\thepage}{\@currentlabel}{\@currentHref}%
5940                   }%
5941                 }%
5942             }%
5943           \fi
5944           \@esphack
5945         \fi
5946       \fi
5947     }%
5948     \def\harvarditem{%
5949       \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
5950     }%
5951     \def\@harvarditem[#1]#2#3#4#5\par{%
5952       \item[]%
5953       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
5954       \if@filesw
5955         \begingroup
5956           \def\protect##1{\string ##1\space}%
5957           \ifthenelse{\equal{#1}{\null}}{%
5958             {\def\next{{#4}{#2}{#3}}}%
5959             {\def\next{{#4}{#2}{#1}{#3}}}%
5960           \immediate\write\@auxout{\string\harvardcite\codeof\next}%
5961         \endgroup
5962         \fi
5963         \protect\hspace*{-\labelwidth}%
5964         \protect\hspace*{-\labelsep}%
5965         \ignorespaces
5966         #5%
5967         \ifHy@backref
5968           \newblock
5969           \backref{\csname br@#4\endcsname}%
5970         \fi
5971       \par
5972     }%

```

`\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:
5973   \long\def\HAR@checkcitations#1#2#3#4{%
5974     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
5975     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
5976     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
5977     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
5978     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
5979     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
5980     \else
5981       \@tempswatrue
5982     \fi
5983   \else
5984     \@tempswatrue
5985   \fi
5986 \else
5987   \@tempswatrue
5988 \fi
5989 }%
5990 }%

5991 }{}

```

37.2 Package chicago

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

```

5992 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

5993   \def\citeN{%
5994     \def\@citesep{-1000}%
5995     \def\@cite##1##2{##1}%
5996     \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
5997     \@citedata@opt
5998   }%

```

`\shortciteN`

```

5999   \def\shortciteN{%
6000     \def\@citesep{-1000}%
6001     \def\@cite##1##2{##1}%
6002     \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6003     \@citedata@opt
6004   }%

```

`\@citedata@opt`

```

6005   \def\@citedata@opt{%
6006     \let\@cite@opt\@empty
6007     \@ifnextchar [{%
6008       \@tempswatrue
6009       \@citedatax@opt
6010     }{%
6011       \@tempswafalse
6012       \@citedatax[]%
6013     }%
6014   }%

```

\@citedatax@opt

```
6015 \def\@citedatax@opt[#1]{%
6016   \def\@cite@opt{, #1}%
6017   \@citedatax[#1]}%
6018 }%
6019 }{}
```

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.

```
6020 \def\Hy@EveryPageAnchor{%
6021   \Hy@DistillerDestFix
6022   \ifHy@pageanchor
6023     \ifHy@hypertextnames
6024       \ifHy@plainpages
6025         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6026       \else
6027         \begingroup
6028           \let\@number\@firstofone
6029           \Hy@unicodetofalse
6030           \pdfstringdef\@the@H@page{\thepage}%
6031         \endgroup
6032         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6033       \fi
6034     \else
6035       \Hy@GlobalStepCount\Hy@pagecounter
6036       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
6037     \fi
6038   \vbox to 0pt{%
6039     \kern\voffset
6040     \kern\topmargin
6041     \kern-1bp\relax
6042     \hbox to 0pt{%
6043       \kern\hoffset
6044       \kern\ifodd\value{page}%
6045         \oddsidemargin
6046       \else
6047         \evensidemargin
6048       \fi
6049       \kern-1bp\relax
6050       \Hy@TempPageAnchor
6051     \hss
6052   }%
6053   \vss
6054 }%
6055 \fi
6056 }
6057 \g@addto@macro\Hy@EveryPageBoxHook{%
6058   \Hy@EveryPageAnchor
6059 }
```


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.

```
6060 \begingroup\expandafter\expandafter\expandafter\endgroup
6061 \expandafter\ifx\csname chapter\endcsname\relax
6062   \def\toclevel@part{0}%
6063 \else
6064   \def\toclevel@part{-1}%
6065 \fi
6066 \def\toclevel@chapter{0}
6067 \def\toclevel@section{1}
6068 \def\toclevel@subsection{2}
6069 \def\toclevel@subsubsection{3}
6070 \def\toclevel@paragraph{4}
6071 \def\toclevel@subparagraph{5}
6072 \def\toclevel@figure{0}
6073 \def\toclevel@table{0}
6074 \@ifpackageloaded{listings}{%
6075   \providecommand*\theHlstlisting{\thelstlisting}%
6076   \providecommand*\toclevel@lstlisting{0}%
6077 }{}
6078 \@ifpackageloaded{listing}{%
6079   \providecommand*\theHlisting{\thelisting}%
6080   \providecommand*\toclevel@listing{0}%
6081 }{}
6082 \def\addcontentsline#1#2#3{% toc extension, type, tag
6083   \begingroup
6084     \let\label\@gobble
6085     \let\textlatin\@firstofone
6086     \ifx\@currentHref\@empty
6087       \Hy@Warning{%
6088         No destination for bookmark of \string\addcontentsline,%
6089         \MessageBreak destination is added%
6090       }%
6091       \phantomsection
6092     \fi
6093     \expandafter\ifx\csname toclevel@#2\endcsname\relax
6094       \begingroup
6095         \def\Hy@tempa{#1}%
6096         \ifx\Hy@tempa\Hy@bookmarkstype
6097           \Hy@WarningNoLine{%
6098             bookmark level for unknown #2 defaults to 0%
6099           }%
6100         \else
6101           \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6102         \fi
6103       \endgroup
6104     \expandafter\gdef\csname toclevel@#2\endcsname{0}%
6105   \fi
6106   \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
6107   \Hy@writebookmark{\csname the#2\endcsname}%
6108     {#3}%
6109     {\@currentHref}%
6110     {\Hy@toclevel}%
6111     {#1}%
```

```

6112 \ifHy@verbose
6113 \def\Hy@tempa{#3}%
6114 \@onelevel@sanitize\Hy@tempa
6115 \typeout{pdfTeX: bookmark at \the\inputlineno: %
6116 {\csname the#2\endcsname}%
6117 {\Hy@tempa}%
6118 {\@currentHref}%
6119 {\Hy@toclevel}%
6120 {#1}%
6121 }%
6122 \fi
6123 \addtocontents{#1}{%
6124 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6125 }%
6126 \endgroup
6127 }
6128 \def\contentsline#1#2#3#4{%
6129 \ifx\#4\%
6130 \csname l@#1\endcsname{#2}{#3}%
6131 \else
6132 \ifcase\Hy@linktoc % none
6133 \csname l@#1\endcsname{#2}{#3}%
6134 \or % section
6135 \csname l@#1\endcsname{%
6136 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6137 }{#3}%
6138 \or % page
6139 \csname l@#1\endcsname{#2}{%
6140 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6141 }%
6142 \else % all
6143 \csname l@#1\endcsname{%
6144 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6145 }{#3}%
6146 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6147 }%
6148 \fi
6149 \fi
6150 }
6151 </package>
6152 <*check>
6153 \checklatex
6154 \checkcommand\def\addcontentsline#1#2#3{%
6155 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6156 }
6157 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6158 </check>
6159 <*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.

```

6160 \let\H@definecounter\@definecounter
6161 \def\@definecounter#1{%
6162 \H@definecounter{#1}%

```

```

6163 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6164 }

```

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.

```

6165 \let\H@newctr\@newctr
6166 \def\@newctr#1[#2]{%
6167   \H@newctr#1[#2]}%
6168 \expandafter\def\csname theH#1\endcsname{%
6169   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
6170 }%
6171 }

```

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.

```

6172 \@ifpackageloaded{amsmath}{%
6173   \def\Hy@make@anchor{%
6174     \Hy@GlobalStepCount\Hy@linkcounter
6175     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6176     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6177   }%
6178   \def\Hy@make@df@tag@#1{%
6179     \gdef\df@tag{%
6180       \maketag@@@{\Hy@make@anchor#1}%
6181       \def\@currentlabel{#1}%
6182     }%
6183   }%
6184   \def\Hy@make@df@tag@@#1{%
6185     \gdef\df@tag{%
6186       \tagform@{\Hy@make@anchor#1}%
6187       \toks@{\xp{\p@equation{#1}}}%
6188       \edef\@currentlabel{\the\toks@}%
6189     }%
6190   }%
6191   \let\HyOrg@make@df@tag@@\make@df@tag@@
6192   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6193   \let\make@df@tag@@\Hy@make@df@tag@@
6194   \let\make@df@tag@@@\Hy@make@df@tag@@@
6195 }{}

```

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

```

6196 \@ifpackagewith{hyperref}{pdf $\text{\LaTeX}$ }{%
6197   \let\H@seteqlabel\@seteqlabel
6198   \def\@seteqlabel#1{%
6199     \H@seteqlabel{#1}%
6200     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6201     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6202   }%
6203 }{}

```

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.

```
6204 \let\HyOrg@addtoreset\@addtoreset
6205 \def\@addtoreset#1#2{%
6206   \HyOrg@addtoreset{#1}{#2}%
6207   \expandafter\xdef\csname theH#1\endcsname{%
6208     \expandafter\noexpand
6209       \csname the\@ifundefined{theH#2}{H#2\endcsname
6210       .\noexpand\the\noexpand\value{#1}}%
6211   }%
6212 }
```

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

```
6213 \</package>
6214 \<*check>
6215 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6216 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6217   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6218     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6219       \@addtoreset{#2}{#3}%
6220       \@xp\xdef\csname the#2\endcsname{%
6221         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6222       }%
6223     }%
6224   }%
6225 }%
6226 \</check>
6227 \<*package>
6228 \@ifpackageloaded{amsmath}{%
6229   \@ifpackagelater{amsmath}[1999/12/14]{%
6230     \renewcommand*\numberwithin[3][\arabic]{%
6231       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6232         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6233           \HyOrg@addtoreset{#2}{#3}%
6234           \@xp\xdef\csname the#2\endcsname{%
6235             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6236           }%
6237           \@xp\xdef\csname theH#2\endcsname{%
6238             \@xp\@nx
6239             \csname the\@ifundefined{theH#3}{H#3\endcsname
6240             .\@nx#1{#2}}%
6241           }%
6242         }%
6243       }%
6244     }%
6245   }%
6246 }
```

```

6243     }%
6244   }%
6245 }{%
6246   \Hy@WarningNoLine{%
6247     \string\numberwithin\space of package ‘amsmath’ %
6248     only fixed\MessageBreak
6249     for version 2000/06/06 v2.12 or newer%
6250   }%
6251 }%
6252 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6253 \ifHy@figures
6254   \let\Hy@Gin@setfile\Gin@setfile
6255   \def\Gin@setfile#1#2#3{%
6256     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6257   }%
6258 \fi
6259 \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.

```

6260 \ifHy@hyperindex
6261   \def\HyInd@ParenLeft{({}%
6262   \def\HyInd@ParenRight{)}}%
6263   \Hy@nextfalse
6264   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6265   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6266   \begingroup
6267     \lccode‘\|=\expandafter‘\HyInd@EncapChar\relax
6268   \lowercase{\endgroup
6269     \ifHy@next
6270       \let\HyInd@org@wrindex\@wrindex
6271       \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\}%
6272       \def\HyInd@@wrindex#1#2|#3|#4\{\%
6273         \ifx\#3\%
6274           \HyInd@org@wrindex{#1}{#2|hyperpage}%
6275         \else
6276           \def\Hy@temp@A{#3}%
6277           \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6278             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6279             \relax
6280           \HyInd@org@wrindex{#1}{#2|#3}%

```

```

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

```

6317 \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.

```

6318 \def\hyperpage#1{%
6319     \HyInd@hyperpage#1\nohyperpage{}\@nil
6320 }
6321 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6322     \HyInd@@hyperpage{#1}%
6323     #2%
6324     \def\Hy@temp{#3}%
6325     \ifx\Hy@temp\@empty
6326     \else
6327         \Hy@ReturnAfterFi{%
6328             \HyInd@hyperpage#3\@nil
6329         }%
6330     \fi
6331 }

```

```

6332 \def\HyInd@hyperpage#1{\@hyperpage#1---\}
6333 \def\@hyperpage#1--#2--#3\{%
6334   \ifx\#2\%
6335     \@commahyperpage{#1}%
6336   \else
6337     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6338   \fi
6339 }
6340 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6341 \def\@commahyperpage#1, #2,#3\{%
6342   \ifx\#2\%
6343     \HyInd@pagelink{#1}%
6344   \else
6345     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6346   \fi
6347 }

```

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

```

6348 \def\HyInd@pagelink#1{%
6349   \begingroup
6350   \toks@={}%
6351   \HyInd@removespaces#1 \@nil
6352 \endgroup
6353 }
6354 \def\HyInd@removespaces#1 #2\@nil{%
6355   \toks@=\expandafter{\the\toks@#1}%
6356   \ifx\#2\%
6357     \edef\x{\the\toks@}%
6358     \ifx\x\empty
6359     \else
6360       \hyperlink{page.\the\toks@}{\the\toks@}%
6361     \fi
6362   \else
6363     \Hy@ReturnAfterFi{%
6364       \HyInd@removespaces#2\@nil
6365     }%
6366   \fi
6367 }

```

44 Compatibility with foiltex

```

6368 \@ifclassloaded{foils}{%
6369   \providecommand*\ext@table{lot}%
6370   \providecommand*\ext@figure{lof}%
6371 }{}

```

45 Compatibility with seminar slide package

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

```

6372 \@ifclassloaded{seminar}{%
6373   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
6374 }{}
6375 \Hy@seminarslidesfalse
6376 }

```

```

6377 \@ifpackageloaded{slidesec}{%
6378   \newcommand\theHslidesection {\arabic{slidesection}}%
6379   \newcommand\theHslidesubsection{%
6380     \theHslidesection.\arabic{slidesubsection}%
6381   }%
6382   \def\slide@heading[#1]#2{%
6383     \H@refstepcounter{slidesection}%
6384     \@addtoreset{slidesubsection}{slidesection}%
6385     \addtocontents{los}{%
6386       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6387       {\SCTR}{slideheading.\theslidesection}%
6388     }%
6389     \def\Hy@tempa{#2}%
6390     \ifx\Hy@tempa\@empty
6391     \else
6392       {%
6393         \edef\@currentlabel{%
6394           \csname p@slidesection\endcsname\theslidesection
6395         }%
6396         \makeslideheading{#2}%
6397       }%
6398     \fi
6399     \gdef\theslideheading{#1}%
6400     \gdef\theslidesubheading{}%
6401     \ifHy@bookmarksnumbered
6402       \def\Hy@slidetitle{\theslidesection\space #1}%
6403     \else
6404       \def\Hy@slidetitle{#1}%
6405     \fi
6406     \ifHy@hypertextnames
6407       \ifHy@naturalnames
6408         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6409         \Hy@writebookmark
6410           {\theslidesection}%
6411           {\Hy@slidetitle}%
6412           {slideheading.\theslidesection}%
6413           {1}%
6414           {toc}%
6415       \else
6416         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6417         \Hy@writebookmark
6418           {\theslidesection}%
6419           {\Hy@slidetitle}%
6420           {slideheading.\theHslidesection}%
6421           {1}%
6422           {toc}%
6423       \fi
6424     \else
6425       \Hy@GlobalStepCount\Hy@linkcounter
6426       \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6427       \Hy@writebookmark
6428         {\theslidesection}%
6429         {\Hy@slidetitle}%
6430         {slideheading.\the\Hy@linkcounter}%
6431         {1}%
6432         {toc}%
6433     \fi

```



```

6434 }%
6435 \def\slide@subheading[#1]#2{%
6436   \H@refstepcounter{slidessubsection}%
6437   \addtocontents{los}{%
6438     \protect\l@subslide{\the\c@slidessubsection}{\ignorespaces#1}%
6439     {\@SCTR}{slideheading.\theslidessubsection}%
6440   }%
6441   \def\Hy@tempa{#2}%
6442   \ifx\Hy@tempa\@empty
6443   \else
6444     {%
6445       \edef\@currentlabel{%
6446         \csname p@slidessubsection\endcsname\theslidessubsection
6447       }%
6448       \makeslidesubheading{#2}%
6449     }%
6450   \fi
6451   \gdef\theslidesubheading{#1}%
6452   \ifHy@bookmarksnumbered
6453     \def\Hy@slidetitle{\theslidessubsection\space #1}%
6454   \else
6455     \def\Hy@slidetitle{#1}%
6456   \fi
6457   \ifHy@hypertextnames
6458     \ifHy@naturalnames
6459       \hyper@@anchor{slideheading.\theslidessubsection}{\relax}%
6460       \Hy@writebookmark
6461         {\theslidessubsection}%
6462         {\Hy@slidetitle}%
6463         {slideheading.\theslidessubsection}%
6464         {2}%
6465         {toc}%
6466     \else
6467       \hyper@@anchor{slideheading.\theHslidessubsection}{\relax}%
6468       \Hy@writebookmark
6469         {\theslidessubsection}%
6470         {\Hy@slidetitle}%
6471         {slideheading.\theHslidessubsection}%
6472         {2}%
6473         {toc}%
6474     \fi
6475   \else
6476     \Hy@GlobalStepCount\Hy@linkcounter
6477     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6478     \Hy@writebookmark
6479       {\theslidessubsection}%
6480       {\Hy@slidetitle}%
6481       {slideheading.\the\Hy@linkcounter}%
6482       {1}%
6483       {toc}%
6484   \fi
6485 }%
6486 \providecommand*\listslidenamelist{List of Slides}%
6487 \def\listofslides{%
6488   \section*{%
6489     \listslidenamelist
6490     \@mkboth{%

```

```

6491         \expandafter\MakeUppercase\listslidenam
6492     }{%
6493         \expandafter\MakeUppercase\listslidenam
6494     }%
6495 }%
6496 \def\l@slide##1##2##3##4{%
6497     \slide@undottedcline{%
6498         \slidenumberline{##3}{\hyperlink{##4}{##2}}}%
6499     }{%
6500     }%
6501     \let\l@subslide\l@slide
6502     \@startlos
6503 }%
6504 \def\slide@contents{%
6505     \def\l@slide##1##2##3##4{%
6506         \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6507     }%
6508     \let\l@subslide\@gobblefour
6509     \@startlos
6510 }%
6511 \def\Slide@contents{%
6512     \def\l@slide##1##2##3##4{%
6513         \ifcase\lslide@flag
6514             \message{##1 ** \the\c@slide@section}%
6515             \ifnum##1>\c@slide@section
6516                 \def\lslide@flag{1}%
6517                 {%
6518                     \large
6519                     \slide@cline{%
6520                         \slidenumberline{$\Rightarrow\bullet$}%
6521                         {\hyperlink{##4}{##2}}}%
6522                     }{##3}%
6523                 }%
6524             \else
6525                 {%
6526                     \large
6527                     \slide@cline{%
6528                         \slidenumberline{$\surd\;\bullet$}%
6529                         {\hyperlink{##4}{##2}}}%
6530                     }{##3}%
6531                 }%
6532             \fi
6533         \or
6534             \def\lslide@flag{2}%
6535             {%
6536                 \large
6537                 \slide@cline{%
6538                     \slidenumberline{$\bullet$}%
6539                     {\hyperlink{##4}{##2}}}%
6540                 }{##3}%
6541             }%
6542         \or
6543             {%
6544                 \large
6545                 \slide@cline{%
6546                     \slidenumberline{$\bullet$}%
6547                     {\hyperlink{##4}{##2}}}%

```

```

6548         }{##3}%
6549     }%
6550     \fi
6551 }%
6552 \def\l@subslide##1##2##3##4{%
6553     \ifnum\l@slide@flag=1 %
6554         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6555     \fi
6556 }%
6557 \def\l@slide@flag{0}%
6558 \@startlos
6559 }%
6560 {}

```

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.)

```

6561 \ifHy@texht
6562     \expandafter\endinput
6563 \fi
6564 \let\real@setref\@setref
6565 \def\@setref#1#2#3{% csname, extract group, refname
6566     \ifx#1\relax
6567         \protect\G@refundefinedtrue
6568         \nfss@text{\reset@font\bfseries ??}%
6569         \@latex@warning{%
6570             Reference ‘#3’ on page \thepage \space undefined%
6571         }%
6572     \else
6573         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6574     \fi
6575 }

```

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

```

6576 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6577     \begingroup
6578     \toks0={\hyper@@link{#5}{#4}}%
6579     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6580     \edef\x{\endgroup
6581         \the\toks0 {\the\toks1 }%
6582     }%
6583     \x
6584 }
6585 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6586     \ifx#1\relax
6587         \protect\G@refundefinedtrue
6588         \nfss@text{\reset@font\bfseries ??}%
6589         \@latex@warning{%
6590             Reference ‘#3’ on page \thepage \space undefined%
6591         }%
6592     \else
6593         \protect\hyper@@link
6594         {\expandafter\@fifthoffive#1}%
6595         {page.\expandafter\@secondoffive#1}%
6596         {\expandafter\@secondoffive#1}%
6597     \fi
6598 }

```

```

6599 </package>
6600 <*check>
6601 \checklatex
6602 \checkcommand\def\@setref#1#2#3{%
6603   \ifx#1\relax
6604     \protect\G@refundefinedtrue
6605     \nfss@text{\reset@font\bfseries ??}%
6606     \@latex@warning{%
6607       Reference ‘#3’ on page \thepage\space undefined%
6608     }%
6609   \else
6610     \expandafter#2#1\null
6611   \fi
6612 }
6613 </check>
6614 <*package>

```

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

```

6615 \def\HyRef@StarSetRef#1{%
6616   \begingroup
6617   \Hy@safe@activetrue
6618   \edef\x{#1}%
6619   \@onelevel@sanitize\x
6620   \edef\x{\endgroup
6621     \noexpand\HyRef@@StarSetRef
6622     \expandafter\noexpand\csname r@\x\endcsname{\x}%
6623   }%
6624   \x
6625 }
6626 \def\HyRef@@StarSetRef#1#2#3{%
6627   \ifx#1\@undefined
6628     \let#1\relax
6629   \fi
6630   \real@setref#1#3{#2}%
6631 }
6632 \def\@refstar#1{%
6633   \HyRef@StarSetRef{#1}\@firstoffive
6634 }
6635 \def\@pagerefstar#1{%
6636   \HyRef@StarSetRef{#1}\@secondoffive
6637 }
6638 \AtBeginDocument{%
6639   \@ifpackageloaded{varioref}{%
6640     \def\@Refstar#1{%
6641       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6642     }%
6643     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6644       \MakeUppercase#1%
6645     }%
6646     \DeclareRobustCommand*\{ \Ref }{%
6647       \@ifstar\@Refstar\HyRef@Ref
6648     }%
6649     \def\HyRef@Ref#1{%
6650       \hyperref[#{#1}]{\Ref*{#1}}%
6651     }%
6652     \def\Vr@f#1{%
6653       \leavevmode\unskip\vref@space

```

```

6654 \hyperref[ $\{ \#1 \}]{\%$ 
6655 \Ref* $\{ \#1 \}$ %
6656 \let\vref@space\nobreakspace
6657 \@vpageref[\unskip] $\{ \#1 \}$ %
6658 }%
6659 }%
6660 \def\vr@f#1{%
6661 \leavevmode\unskip\vref@space
6662 \begingroup
6663 \let\T@pageref\@pagerefstar
6664 \hyperref[ $\{ \#1 \}]{\%$ 
6665 \ref* $\{ \#1 \}$ %
6666 \vpageref[\unskip] $\{ \#1 \}$ %
6667 }%
6668 \endgroup
6669 }%
6670 }{}%
6671 }
6672 \DeclareRobustCommand*\autopageref{%
6673 \@ifstar{%
6674 \HyRef@autopagerefname\pageref*%
6675 }\HyRef@autopageref
6676 }
6677 \def\HyRef@autopageref#1{%
6678 \hyperref[ $\{ \#1 \}]{\HyRef@autopagerefname\pageref* $\{ \#1 \}$ %}
6679 }
6680 \def\HyRef@autopagerefname{%
6681 \@ifundefined{pageautorefname}{%
6682 \@ifundefined{pagename}{%
6683 \Hy@Warning{No autoref name for 'page'}%
6684 }{%
6685 \pagename\nobreakspace
6686 }%
6687 }{%
6688 \pageautorefname\nobreakspace
6689 }%
6690 }
6691 \DeclareRobustCommand*\autoref{%
6692 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@link}%
6693 }
6694 \def\HyRef@autoref#1#2{%
6695 \begingroup
6696 \Hy@safe@activetrue
6697 \expandafter\HyRef@autosetref\csname r@#2\endcsname $\{ \#2 \}$  $\{ \#1 \}$ %
6698 \endgroup
6699 }
6700 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6701 \HyRef@ShowKeysRef $\{ \#2 \}$ %
6702 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6703 \edef\HyRef@thisref{%
6704 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6705 }%
6706 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6707 \Hy@safe@activesfalse
6708 #3{%
6709 \expandafter\@fifthoffive#1\@empty\@empty\@empty
6710 }{%$ 
```

```

6711     \expandafter\@fourthoffive#1\@empty\@empty\@empty
6712   }{%
6713     \HyRef@currentHtag
6714     \expandafter\@firstoffive#1\@empty\@empty\@empty
6715     \null
6716   }%
6717 \else
6718   \protect\G@refundefinedtrue
6719   \nfss@text{\reset@font\bfseries ??}%
6720   \@latex@warning{%
6721     Reference ‘#2’ on page \thepage\space undefined%
6722   }%
6723 \fi
6724 }
6725 \def\HyRef@testreftype#1.#2\\{%
6726   \@ifundefined{#1autorefname}{%
6727     \@ifundefined{#1name}{%
6728       \HyRef@StripStar#1\\*\\@nil{#1}%
6729       \@ifundefined{\HyRef@name autorefname}{%
6730         \@ifundefined{\HyRef@name name}{%
6731           \def\HyRef@currentHtag{%
6732             \Hy@Warning{No autoref name for ‘#1’}%
6733           }{%
6734             \edef\HyRef@currentHtag{%
6735               \expandafter\noexpand\csname\HyRef@name name\endcsname
6736               \noexpand~%
6737             }%
6738           }%
6739         }{%
6740           \edef\HyRef@currentHtag{%
6741             \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6742             \noexpand~%
6743           }%
6744         }%
6745       }{%
6746         \edef\HyRef@currentHtag{%
6747           \expandafter\noexpand\csname#1name\endcsname
6748           \noexpand~%
6749         }%
6750       }%
6751     }{%
6752       \edef\HyRef@currentHtag{%
6753         \expandafter\noexpand\csname#1autorefname\endcsname
6754         \noexpand~%
6755       }%
6756     }%
6757   }
6758 \def\HyRef@StripStar#1*\\#2\@nil#3{%
6759   \def\HyRef@name{#2}%
6760   \ifx\HyRef@name\HyRef@CaseStar
6761     \def\HyRef@name{#1}%
6762   \else
6763     \def\HyRef@name{#3}%
6764   \fi
6765 }
6766 \def\HyRef@CaseStar{*\\}
6767 \def\HyRef@currentHtag{}

```

Support for package showkeys.

`\HyRef@ShowKeysRef`

```
6768 \let\HyRef@ShowKeysRef\@gobble
6769 \def\HyRef@ShowKeysInit{%
6770   \begingroup\expandafter\expandafter\expandafter\endgroup
6771   \expandafter\ifx\csname SK@@label\endcsname\relax
6772   \else
6773     \ifx\SK@ref\@empty
6774     \else
6775       \def\HyRef@ShowKeysRef{%
6776         \SK@\SK@@ref
6777       }%
6778     \fi
6779   \fi
6780 }
6781 \@ifpackageloaded{showkeys}{%
6782   \HyRef@ShowKeysInit
6783 }{%
6784   \AtBeginDocument{%
6785     \@ifpackageloaded{showkeys}{%
6786       \HyRef@ShowKeysInit
6787     }{%
6788     }%
6789 }
```

Defaults for the names that `\autoref` uses.

```
6790 \providecommand*\AMSautorefname{\equationautorefname}
6791 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
6792 \providecommand*\Itemautorefname{\itemautorefname}
6793 \providecommand*\itemautorefname{item}
6794 \providecommand*\equationautorefname{Equation}
6795 \providecommand*\footnoteautorefname{footnote}
6796 \providecommand*\itemautorefname{item}
6797 \providecommand*\figureautorefname{Figure}
6798 \providecommand*\tableautorefname{Table}
6799 \providecommand*\partautorefname{Part}
6800 \providecommand*\appendixautorefname{Appendix}
6801 \providecommand*\chapterautorefname{chapter}
6802 \providecommand*\sectionautorefname{section}
6803 \providecommand*\subsectionautorefname{subsection}
6804 \providecommand*\subsubsectionautorefname{subsubsection}
6805 \providecommand*\paragraphautorefname{paragraph}
6806 \providecommand*\subparagraphautorefname{subparagraph}
6807 \providecommand*\FancyVerbLineautorefname{line}
6808 \providecommand*\theoremautorefname{Theorem}
6809 \providecommand*\pageautorefname{page}
6810 \endpackage
```

46 Configuration files

46.1 PS/PDF strings

Some drivers write PS or PDF strings. These strings are delimited by parentheses, therefore a lonely unmatched parenthesis must be avoided to avoid PS or PDF syntax errors. Also the backslash character itself has to be protected.

`\Hy@pstringdef` Therefore such strings should be passed through `\Hy@pstringdef`. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf_T_EX offers `\pdfescapestring`.

```

6811 <*pdfTeX | dvipdfm | vTeX | pdfmarkbase | dviwindo>
6812 \RequirePackage{pdfTeXcmds}[2007/11/11]
6813 \begingroup\expandafter\expandafter\expandafter\endgroup
6814 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6815   \begingroup
6816     \catcode'\| =0 %
6817     \@makeother\| %
6818     |@firstofone{| \endgroup
6819     |def|Hy@pstringdef#1#2{%
6820       |begingroup
6821         |edef~{|string~}%
6822         |xdef|Hy@gtemp{#2}%
6823       |endgroup
6824       |let#1|Hy@gtemp
6825       |@onelevel@sanitize#1%
6826       |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
6827       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6828       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
6829     }%
6830     |def|Hy@ExchangeBackslash#1\#2|@nil{%
6831       #1%
6832       |ifx|\#2|\%%
6833       |else
6834         \\\%
6835         |Hy@ReturnAfterFi{%
6836           |Hy@ExchangeBackslash#2|@nil
6837         }%
6838       |fi
6839     }%
6840   }%
6841   \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6842     #1%
6843     \ifx\#2\%%
6844     \else
6845       \@backslashchar(%
6846       \Hy@ReturnAfterFi{%
6847         \Hy@ExchangeLeftParenthesis#2\@nil
6848       }%
6849     \fi
6850   }%
6851   \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6852     #1%
6853     \ifx\#2\%%
6854     \else
6855       \@backslashchar)%
6856       \Hy@ReturnAfterFi{%
6857         \Hy@ExchangeRightParenthesis#2\@nil
6858       }%
6859     \fi
6860   }%
6861 \else
6862   \def\Hy@pstringdef#1#2{%
6863     \begingroup
6864     \edef~{\string~}%

```



```

6865      \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6866      \endgroup
6867      \let#1\Hy@gtemp
6868  }%
6869 \fi
6870 </pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

6871 <*pdfTeX>
6872 \providecommand*\XR@ext}{pdf}
6873 \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`

```

6874 \let\Hy@pdfminorversion\relax
6875 \begingroup\expandafter\expandafter\expandafter\endgroup
6876 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6877   \begingroup\expandafter\expandafter\expandafter\endgroup
6878   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6879     \else
6880       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6881     \fi
6882   \else
6883     \def\Hy@pdfminorversion{\pdfminorversion}%
6884   \fi
6885 \@ifundefined{Hy@pdfminorversion}{%
6886   \PackageInfo{hyperref}{%
6887     PDF version is not set, because pdfTeX is too old (<1.10a)%
6888   }%
6889 }{%
6890   \ifHy@ocgcolorlinks
6891     \ifnum\Hy@pdfminorversion<5 %
6892       \setkeys{Hyp}{pdfversion=1.5}%
6893     \fi
6894   \fi
6895   \ifHy@setpdfversion
6896     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
6897     \else
6898       \Hy@pdfminorversion=\Hy@pdfversion\relax
6899     \fi
6900     \PackageInfo{hyperref}{%
6901       \expandafter\string\Hy@pdfminorversion
6902       :=\number\Hy@pdfversion\space
6903     }%
6904   \fi
6905   \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6906 }
6907 \Hy@DisableOption{pdfversion}%
6908 \ifHy@ocgcolorlinks
6909   \immediate\pdfobj{%
6910     <<%

```

```

6911     /Type/OCG%
6912     /Name(View)%
6913     /Usage<<%
6914         /Print<<%
6915             /PrintState/OFF%
6916         >>%
6917     /View<<%
6918         /ViewState/ON%
6919     >>%
6920 >>%
6921 >>%
6922 }%
6923 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6924 \immediate\pdfobj{%
6925     <<%
6926         /Type/OCG%
6927         /Name(Print)%
6928         /Usage<<%
6929             /Print<<%
6930                 /PrintState/ON%
6931             >>%
6932             /View<<%
6933                 /ViewState/OFF%
6934             >>%
6935         >>%
6936     >>%
6937 }%
6938 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6939 \immediate\pdfobj{%
6940     [%
6941         \OBJ@OCG@view\space\OBJ@OCG@print
6942     ]%
6943 }%
6944 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6945 \pdfcatalog{%
6946     /OCProperties<<%
6947         /OCGs \OBJ@OCGs
6948     /D<<%
6949         /OFF[\OBJ@OCG@print]%
6950         /AS[%
6951             <<%
6952                 /Event/View%
6953                 /OCGs \OBJ@OCGs
6954                 /Category[/View]%
6955             >>%
6956             <<%
6957                 /Event/Print%
6958                 /OCGs \OBJ@OCGs
6959                 /Category[/Print]%
6960             >>%
6961             <<%
6962                 /Event/Export%
6963                 /OCGs \OBJ@OCGs
6964                 /Category[/Print]%
6965             >>%
6966         ]%
6967     >>%

```

```

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

```

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

```

7010 \def\setpdflinkmargin#1{\pdflinkmargin#1}
7011 \ifx\pdfstartlink\@undefined% less than version 14
7012   \let\pdfstartlink\pdfannotlink
7013   \let\pdflinkmargin\@tempdima
7014   \let\pdfxform\pdfform
7015   \let\pdflastxform\pdflastform
7016   \let\pdfrefxform\pdfrefform
7017 \else
7018   \pdflinkmargin1pt %
7019 \fi

```

First set up the default linking

```
7020 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7021 \def\new@pdflink#1{%
7022   \ifHy@verbose
7023     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7024   \fi
7025   \Hy@SaveLastskip
7026   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7027   \Hy@DestName\Hy@pstringDest\@pdfview
7028   \Hy@RestoreLastskip
7029 }
7030 \let\pdf@endanchor\@empty

```

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

```

7031 \def\Hy@DestName#1#2{%
7032   \pdfdest name{#1}#2\relax
7033 }

```

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.

```

7034 \providecommand*\@pdfborder{0 0 1}
7035 \providecommand*\@pdfborderstyle{}
7036 \def\Hy@undefinedname{UNDEFINED}
7037 \def\find@pdflink#1#2{%
7038   \leavevmode
7039   \protected@edef\Hy@testname{#2}%
7040   \ifx\Hy@testname\@empty
7041     \Hy@Warning{%
7042       Empty destination name,\MessageBreak
7043       using '\Hy@undefinedname'%
7044     }%
7045     \let\Hy@testname\Hy@undefinedname
7046   \else
7047     \Hy@pstringdef\Hy@testname{%
7048       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7049     }%
7050   \fi
7051   \Hy@StartlinkName{%
7052     \ifHy@pdfa /F 4\fi
7053     \Hy@setpdfborder
7054     \ifx\@pdfhighlight\@empty
7055       \else
7056         /H\@pdfhighlight
7057       \fi
7058       \ifx\CurrentBorderColor\relax
7059       \else
7060         /C[\CurrentBorderColor]%
7061       \fi
7062     }\Hy@testname
7063     \expandafter\Hy@colorlink\csname @#1color\endcsname
7064   }
7065   \def\Hy@StartlinkName#1#2{%
7066     \pdfstartlink attr{#1}goto name{#2}\relax
7067   }
7068   \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
7069   \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}

```

```

7070 \def\hyper@anchorstart#1{\new@pdflink{#1}\Hy@activeanchortrue}
7071 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7072 \def\hyper@linkstart#1#2{%
7073   \@ifundefined{#@#1bordercolor}{%
7074     \let\CurrentBorderColor\relax
7075   }{%
7076     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7077   }%
7078   \find@pdflink{#1}{#2}%
7079 }
7080 \def\hyper@linkend{\close@pdflink}
7081 \def\hyper@link#1#2#3{%
7082   \@ifundefined{#@#1bordercolor}{%
7083     \let\CurrentBorderColor\relax
7084   }{%
7085     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7086   }%
7087   \find@pdflink{#1}{#2}#3%
7088   \close@pdflink
7089 }
7090 \let\CurrentBorderColor\@linkbordercolor
7091 \def\hyper@linkurl#1#2{%
7092   \begingroup
7093     \Hy@pstringdef\Hy@pstringURI{#2}%
7094     \hyper@chars
7095     \leavevmode
7096     \pdfstartlink
7097       attr{%
7098         \Hy@setpdfborder
7099         \ifx\@pdfhighlight\@empty
7100         \else
7101           /H\@pdfhighlight
7102         \fi
7103         \ifx\@urlbordercolor\relax
7104         \else
7105           /C[\@urlbordercolor]%
7106         \fi
7107       }%
7108     user{%
7109       /Subtype/Link%
7110       \ifHy@pdfa /F 4\fi
7111       /A<<%
7112         /Type/Action%
7113         /S/URI%
7114         /URI(\Hy@pstringURI)%
7115       >>%
7116     }%
7117     \relax
7118     \Hy@colorlink\@urlcolor#1%
7119     \close@pdflink
7120   \endgroup
7121 }
7122 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7123   \begingroup
7124     \Hy@pstringdef\Hy@pstringF{#2}%
7125     \Hy@pstringdef\Hy@pstringD{#3}%
7126     \leavevmode

```

```

7127 \pdfstartlink
7128   attr{%
7129     \Hy@setpdfborder
7130     \ifx\@pdfhighlight\@empty
7131     \else
7132       /H\@pdfhighlight
7133     \fi
7134     \ifx\@filebordercolor\relax
7135     \else
7136       /C[\@filebordercolor]%
7137     \fi
7138   }%
7139   user {%
7140     /Subtype/Link%
7141     \ifHy@pdfa /F 4\fi
7142     /A<<%
7143     /F(\Hy@pstringF)%
7144     /S/GoToR%
7145     \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}

```

```

7146     \ifx\#3\%
7147       /D[0 \pdfstartview]%
7148     \else
7149       /D(\Hy@pstringD)%
7150     \fi
7151   >>%
7152   }%
7153   \relax
7154   \Hy@colorlink\@filecolor#1%
7155   \close@pdflink
7156 \endgroup
7157 }
7158 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7159   \begingroup
7160     \Hy@pstringdef\Hy@pstringF{#1}%
7161     \Hy@pstringdef\Hy@pstringP{#3}%
7162     \leavevmode
7163     \pdfstartlink
7164     attr{%
7165       \Hy@setpdfborder
7166       \ifx\@pdfhighlight\@empty
7167       \else
7168         /H\@pdfhighlight
7169       \fi
7170       \ifx\@runbordercolor\relax
7171       \else
7172         /C[\@runbordercolor]%

```

```

7173     \fi
7174   }%
7175   user {%
7176     /Subtype/Link%
7177     \ifHy@pdfa /F 4\fi
7178     /A<<%
7179     /F(\Hy@pstringF)%
7180     /S/Launch%
7181     \Hy@SetNewWindow
7182     \ifx\\#3\\%
7183     \else
7184     /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7185     \fi
7186   >>%
7187 }%
7188 \relax
7189 \Hy@colorlink\@runcolor#2%
7190 \close@pdflink
7191 \endgroup
7192 }

```

\@pdfproducer

```

7193 \ifx\@pdfproducer\relax
7194 \beginingroup\expandafter\expandafter\expandafter\endgroup
7195 \expandafter\ifx\csname luatexversion\endcsname\relax
7196 \def\@pdfproducer{pdfTeX}%
7197 \ifx\eTeXversion\@undefined
7198 \else
7199 \ifx\eTeXversion\relax
7200 \else
7201 \ifnum\eTeXversion>0 %
7202 \def\@pdfproducer{pdfTeX}%
7203 \fi
7204 \fi
7205 \fi
7206 \ifx\pdfTeXversion\@undefined
7207 \else
7208 \ifnum\pdfTeXversion<100 %
7209 \edef\@pdfproducer{%
7210 \@pdfproducer
7211 \the\pdfTeXversion.\pdfTeXrevision
7212 }%
7213 \else
7214 \ifnum\pdfTeXversion<130 %
7215 \edef\@pdfproducer{%
7216 \@pdfproducer-%
7217 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7218 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7219 \pdfTeXrevision
7220 }%
7221 \else
7222 \ifnum\pdfTeXversion<140 %
7223 \else
7224 \def\@pdfproducer{pdfTeX}%
7225 \fi
7226 \edef\@pdfproducer{%
7227 \@pdfproducer-%

```

```

7228         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7229         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7230         \pdfTeXrevision
7231     }%
7232     \fi
7233     \fi
7234     \fi
7235     \else
7236         \begingroup
7237         \count@=\luaTeXversion
7238         \divide\count@ by 100 %
7239         \edef\x{\the\count@}%
7240         \count@=-\x\relax
7241         \multiply\count@ by 100 %
7242         \advance\count@ by \luaTeXversion
7243         \edef\x{\endgroup
7244             \def\noexpand\@pdfproducer{%
7245                 LuaTeX-\x.\the\count@.\luaTeXrevision
7246             }%
7247         }%
7248         \x
7249     \fi
7250 \fi

```

\PDF@SetupDox

```

7251 \def\PDF@SetupDoc{%
7252     \ifx\@pdfpagescrop\@empty
7253     \else
7254         \edef\process@me{%
7255             \pdfpagesattr={%
7256                 /CropBox[\@pdfpagescrop]%
7257                 \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
7258                 \else
7259                 ^^J\the\pdfpagesattr
7260             }%
7261         }%
7262     }%
7263     \process@me
7264     \fi
7265     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7266     \pdfcatalog{%
7267         /PageMode/\@pdfpagemode
7268         \ifx\@baseurl\@empty
7269         \else
7270             /URI<</Base(\Hy@pstringB)>>%
7271         \fi
7272     }%
7273     \ifx\@pdfstartpage\@empty
7274     \else
7275         \ifx\@pdfstartview\@empty
7276         \else
7277             openaction goto page\@pdfstartpage{\@pdfstartview}%
7278         \fi
7279     \fi
7280     \edef\Hy@temp{%
7281         \ifHy@toolbar\else /HideToolbar true\fi
7282         \ifHy@menubar\else /HideMenubar true\fi

```



```

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

```

\PDF@FinishDoc

```

7320 \def\PDF@FinishDoc{%
7321 \Hy@UseMaketitleInfos
7322 \pdfinfo{%
7323 /Author(\@pdfauthor)%
7324 /Title(\@pdftitle)%
7325 /Subject(\@pdfsubject)%
7326 /Creator(\@pdfcreator)%
7327 \ifx\@pdfcreationdate\@empty
7328 \else
7329 /CreationDate(\@pdfcreationdate)%
7330 \fi
7331 \ifx\@pdfmoddate\@empty
7332 \else
7333 /ModDate(\@pdfmoddate)%
7334 \fi
7335 \ifx\@pdfproducer\relax
7336 \else
7337 /Producer(\@pdfproducer)%

```

```

7338 \fi
7339 /Keywords(\@pdfkeywords)%
7340 }%
7341 \Hy@DisableOption{pdfauthor}%
7342 \Hy@DisableOption{pdftitle}%
7343 \Hy@DisableOption{pdfsubject}%
7344 \Hy@DisableOption{pdfcreator}%
7345 \Hy@DisableOption{pdfcreationdate}%
7346 \Hy@DisableOption{pdfmoddate}%
7347 \Hy@DisableOption{pdfproducer}%
7348 \Hy@DisableOption{pdfkeywords}%
7349 }

```

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

```

7350 \def\hyper@pagetransition{%
7351 \ifx\@pdfpagetransition\relax
7352 \else
7353 \expandafter\Hy@RemoveTransPageAttr
7354 \the\pdfpageattr^^J/Trans{}}>>\END
7355 \ifx\@pdfpagetransition\@empty
7356 \else
7357 \edef\@processme{%
7358 \global\pdfpageattr{%
7359 \the\pdfpageattr
7360 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7361 }%
7362 }%
7363 \@processme
7364 \fi
7365 \fi
7366 }

```

`\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.

```

7367 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7368 \ifx\#2\%
7369 \global\pdfpageattr{#1}%
7370 \else
7371 \Hy@RemoveTransPageAttr#1#4\END
7372 \fi
7373 }

```

`\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`.

```

7374 \def\hyper@pageduration{%
7375 \ifx\@pdfpageduration\relax
7376 \else
7377 \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
7378 \ifx\@pdfpageduration\@empty
7379 \else
7380 \edef\@processme{%
7381 \global\pdfpageattr{%

```

```

7382         \the\pdfpageattr
7383         ^^J/Dur \@pdfpageduration\space
7384     }%
7385 }%
7386 \@processme
7387 \fi
7388 \fi
7389 }

```

\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.

```

7390 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7391     \ifx\#2\%
7392         \global\pdfpageattr{#1}%
7393     \else
7394         \Hy@RemoveDurPageAttr#1#4\END
7395     \fi
7396 }

```

\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).

```

7397 \def\hyper@pagehidden{%
7398     \ifHy@useHidKey
7399         \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7400     \ifHy@pdfpagehidden
7401         \edef\@processme{%
7402             \global\pdfpageattr{%
7403                 \the\pdfpageattr
7404                 ^^J/Hid true % SPACE
7405             }%
7406         }%
7407         \@processme
7408     \fi
7409 \fi
7410 }

```

\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.

```

7411 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7412     \ifx\#2\%
7413         \global\pdfpageattr{#1}%
7414     \else
7415         \Hy@RemoveHidPageAttr#1#4\END
7416     \fi
7417 }

7418 \g@addto@macro\Hy@EveryPageHook{%
7419     \hyper@pagetransition
7420     \hyper@pageduration
7421     \hyper@pagehidden
7422 }

```

```

7423 \AtBeginDocument{%
7424   \ifHy@setpagesize
7425     \expandafter\@firstofone
7426   \else
7427     \expandafter\@gobble
7428   \fi
7429   {%
7430     \@ifclassloaded{seminar}{%
7431       \setlength{\pdfhorigin}{1truein}%
7432       \setlength{\pdfvorigin}{1truein}%
7433       \ifportrait
7434         \ifdim\paperwidth=\z@
7435         \else
7436           \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7437         \fi
7438         \ifdim\paperheight=\z@
7439         \else
7440           \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7441         \fi
7442       \else
7443         \ifdim\paperheight=\z@
7444         \else
7445           \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7446         \fi
7447         \ifdim\paperwidth=\z@
7448         \else
7449           \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7450         \fi
7451       \fi
7452     }{%
7453       \@ifundefined{stockwidth}{%
7454         \ifdim\paperwidth=\z@
7455         \else
7456           \setlength{\pdfpagewidth}{\paperwidth}%
7457         \fi
7458         \ifdim\paperheight=\z@
7459         \else
7460           \setlength{\pdfpageheight}{\paperheight}%
7461         \fi
7462       }{%
7463         \ifdim\stockwidth=\z@
7464         \else
7465           \setlength{\pdfpagewidth}{\stockwidth}%
7466         \fi
7467         \ifdim\stockheight=\z@
7468         \else
7469           \setlength{\pdfpageheight}{\stockheight}%
7470         \fi
7471       }%
7472     }%
7473   }%
7474   \Hy@DisableOption{setpagesize}%
7475 }
7476 \def\Acrobatmenu#1#2{%
7477   \Hy@Acrobatmenu{#1}{#2}{%
7478     \pdfstartlink
7479     attr{%

```

```

7480      \Hy@setpdfborder
7481      \ifx\@pdfhighlight\@empty
7482      \else
7483      /H\@pdfhighlight
7484      \fi
7485      \ifx\@menubordercolor\relax
7486      \else
7487      /C[\@menubordercolor]%
7488      \fi
7489    }%
7490    user{%
7491      /Subtype/Link%
7492      \ifHy@pdfa /F 4\fi
7493      /A<<%
7494      /S/Named/N/#1%
7495      >>%
7496    }%
7497    \relax
7498    \Hy@colorlink\@menucolor#2%
7499    \close@pdflink
7500  }%
7501 }

```

46.2.1 Fix for problem with different nesting levels

\AtBeginShipoutFirst adds an additional box layer around the first output page. This disturbs pdfTeX's low level link commands \pdfstartlink and \pdfendlink, if a link is broken across the first and second output page.

The problem could be fixed by replacing \AtBeginShipoutFirst, because the box layer is not necessary for pdfTeX— no \specials need to be inserted. However it's easier to add an additional box level for the pages after the first one. Also \AtBeginShipoutFirst could be invoked independently from hyperref.

```

7502 \def\Hy@FixNotFirstPage{%
7503   \gdef\Hy@FixNotFirstPage{%
7504     \setbox\AtBeginShipoutBox=\hbox{%
7505       \copy\AtBeginShipoutBox
7506     }%
7507   }%
7508 }
7509 \AtBeginShipout{\Hy@FixNotFirstPage}
7510 </pdfTeX>

```

46.3 hypertex

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \special commands:

href: html:

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.

```

7511 \*hypertext
7512 \providecommand*\XR@ext}{dvi}
7513 \def\PDF@FinishDoc{}
7514 \def\PDF@SetupDoc{%
7515   \ifx\@baseurl\@empty
7516   \else
7517     \special{html:<base href="\@baseurl">}%
7518   \fi
7519 }
7520 \def\hyper@anchor#1{%
7521   \Hy@SaveLastskip
7522   \begingroup
7523     \let\protect=\string
7524     \hyper@chars
7525     \special{html:<a name=%
7526       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7527   \endgroup
7528   \Hy@activeanchortrue
7529   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7530   \special{html:</a>}%
7531   \Hy@activeanchorfalse
7532   \Hy@RestoreLastskip
7533 }
7534 \def\hyper@anchorstart#1{%
7535   \Hy@SaveLastskip
7536   \begingroup
7537     \hyper@chars
7538     \special{html:<a name=%
7539       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7540   \endgroup
7541   \Hy@activeanchortrue
7542 }
7543 \def\hyper@anchorend{%
7544   \special{html:</a>}%
7545   \Hy@activeanchorfalse
7546   \Hy@RestoreLastskip
7547 }
7548 \def\@urltype{url}
7549 \def\hyper@linkstart#1#2{%

```

```

7550 \expandafter\Hy@colorlink\csname @#1color\endcsname
7551 \def\Hy@tempa{#1}%
7552 \ifx\Hy@tempa\@urltype
7553   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7554 \else
7555   \begingroup
7556   \hyper@chars
7557   \special{html:<a href=%
7558     \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
7559   \endgroup
7560 \fi
7561 }
7562 \def\hyper@linkend{%
7563   \special{html:</a>}%
7564   \Hy@endcolorlink
7565 }
7566 \def\hyper@linkfile#1#2#3{%
7567   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
7568 }
7569 \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.

```

7570 \leavevmode
7571 \ifHy@raiselinks
7572   \setbox\@tempboxa=\color@hbox #1\color@endbox
7573   \@linkdim\dp\@tempboxa
7574   \lower\@linkdim\hbox{%
7575     \hyper@chars
7576     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7577   }%
7578   \Hy@colorlink\@urlcolor#1%
7579   \@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).

```

7580   \advance\@linkdim by -6.5\p@
7581   \raise\@linkdim\hbox{\special{html:</a>}}%
7582   \Hy@endcolorlink
7583 \else
7584   \begingroup
7585   \hyper@chars
7586   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7587   \Hy@colorlink\@urlcolor#1%
7588   \special{html:</a>}%
7589   \Hy@endcolorlink
7590 \endgroup
7591 \fi
7592 }

```

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

```

7593 \def\hyper@link#1#2#3{%
7594   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
7595 }
7596 \def\hyper@image#1#2{%
7597   \begingroup

```

```

7598 \hyper@chars
7599 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7600 \endgroup
7601 }
7602 </hypertex>
7603 <*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.

```

7604 \providecommand*\XR@ext}{dvi}
7605 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7606 \def\hyper@anchor#1{%
7607   \Hy@SaveLastskip
7608   \begingroup
7609     \let\protect=\string
7610     \special{mark: #1}%
7611   \endgroup
7612   \Hy@activeanchortrue
7613   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7614   \Hy@activeanchorfalse
7615   \Hy@RestoreLastskip
7616 }
7617 \def\hyper@anchorstart#1{%
7618   \Hy@SaveLastskip
7619   \special{mark: #1}%
7620   \Hy@activeanchortrue
7621 }
7622 \def\hyper@anchorend{%
7623   \Hy@activeanchorfalse
7624   \Hy@RestoreLastskip
7625 }
7626 \def\hyper@linkstart#1#2{%
7627   \expandafter\Hy@colorlink\csname @#1color\endcsname
7628   \special{button: %
7629     10000000 %
7630     \number\baselineskip\space
7631     #2%
7632   }%
7633 }
7634 \def\hyper@linkend{%
7635   \Hy@endcolorlink
7636 }
7637 \def\hyper@link#1#2#3{%
7638   \setbox\@tempboxa=\color@hbox #3\color@endbox
7639   \leavevmode
7640   \ifHy@raiselinks

```



```

7641 \@linkdim\dp\@tempboxa
7642 \lower\@linkdim\hbox{%
7643 \special{button: %
7644 \number\wd\@tempboxa\space
7645 \number\ht\@tempboxa\space
7646 #2%
7647 }%
7648 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7649 \Hy@endcolorlink
7650 }%
7651 \@linkdim\ht\@tempboxa
7652 \advance\@linkdim by -6.5\p@
7653 \raise\@linkdim\hbox{}%
7654 \else
7655 \special{button: %
7656 \number\wd\@tempboxa\space
7657 \number\ht\@tempboxa\space
7658 #2%
7659 }%
7660 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7661 \Hy@endcolorlink
7662 \fi
7663 }
7664 \def\hyper@linkurl#1#2{%
7665 \begingroup
7666 \hyper@chars
7667 \leavevmode
7668 \setbox\@tempboxa=\color@hbox #1\color@endbox
7669 \ifHy@raiselinks
7670 \@linkdim\dp\@tempboxa
7671 \lower\@linkdim\hbox{%
7672 \special{button: %
7673 \number\wd\@tempboxa\space
7674 \number\ht\@tempboxa\space
7675 launch: \wwwbrowser\space
7676 #2%
7677 }%
7678 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7679 }%
7680 \@linkdim\ht\@tempboxa
7681 \advance\@linkdim by -6.5\p@
7682 \raise\@linkdim\hbox{}%
7683 \else
7684 \special{button: %
7685 \number\wd\@tempboxa\space
7686 \number\ht\@tempboxa\space
7687 launch: \wwwbrowser\space
7688 #2%
7689 }%
7690 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7691 \fi
7692 \endgroup
7693 }
7694 \def\hyper@linkfile#1#2#3{%
7695 \begingroup
7696 \hyper@chars
7697 \leavevmode

```

```

7698 \setbox\@tempboxa=\color@hbox #1\color@endbox
7699 \ifHy@raiselinks
7700 \@linkdim\dp\@tempboxa
7701 \lower\@linkdim\hbox{%
7702 \special{button: %
7703 \number\wd\@tempboxa\space
7704 \number\ht\@tempboxa\space
7705 #3,%
7706 file: #2%
7707 }%
7708 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7709 }%
7710 \@linkdim\ht\@tempboxa
7711 \advance\@linkdim by -6.5\p@
7712 \raise\@linkdim\hbox{}}%
7713 \else
7714 \special{button: %
7715 \number\wd\@tempboxa\space
7716 \number\ht\@tempboxa\space
7717 #3,%
7718 file: #2%
7719 }%
7720 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7721 \fi
7722 \endgroup
7723 }
7724 \ifx\@pdfproducer\relax
7725 \def\@pdfproducer{dviwindo + Distiller}%
7726 \fi
7727 \def\PDF@FinishDoc{%
7728 \Hy@UseMaketitleInfos
7729 \special{PDF: Keywords \@pdfkeywords}%
7730 \special{PDF: Title \@pdftitle}%
7731 \special{PDF: Creator \@pdfcreator}%
7732 \ifx\@pdfcreationdate\@empty
7733 \else
7734 \special{PDF: CreationDate \@pdfcreationdate}%
7735 \fi
7736 \ifx\@pdfmoddate\@empty
7737 \else
7738 \special{PDF: ModDate \@pdfmoddate}%
7739 \fi
7740 \special{PDF: Author \@pdfauthor}%
7741 \ifx\@pdfproducer\relax
7742 \else
7743 \special{PDF: Producer \@pdfproducer}%
7744 \fi
7745 \special{PDF: Subject \@pdfsubject}%
7746 \Hy@DisableOption{pdfauthor}%
7747 \Hy@DisableOption{pdftitle}%
7748 \Hy@DisableOption{pdfsubject}%
7749 \Hy@DisableOption{pdfcreator}%
7750 \Hy@DisableOption{pdfcreationdate}%
7751 \Hy@DisableOption{pdfmoddate}%
7752 \Hy@DisableOption{pdfproducer}%
7753 \Hy@DisableOption{pdfkeywords}%
7754 }

```

```

7755 \def\PDF@SetupDoc{%
7756   \ifx\@baseurl\@empty
7757   \else
7758     \special{PDF: Base \@baseurl}%
7759   \fi
7760   \ifx\@pdfpagescrop\@empty\else
7761     \special{PDF: BBox \@pdfpagescrop}%
7762   \fi
7763   \def\Hy@temp{}%
7764   \ifx\@pdfstartpage\@empty
7765   \else
7766     \ifx\@pdfstartview\@empty
7767     \else
7768       \edef\Hy@temp{%
7769         ,Page=\@pdfstartpage
7770         ,View=\@pdfstartview
7771       }%
7772     \fi
7773   \fi
7774   \edef\Hy@temp{%
7775     \noexpand\pdfmark{%
7776       pdfmark=/DOCVIEW,%
7777       PageMode=/\@pdfpagemode
7778     }\Hy@temp
7779   }%
7780 }%
7781 \Hy@temp
7782 \ifx\@pdfpagescrop\@empty
7783 \else
7784   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7785 \fi
7786 \edef\Hy@temp{%
7787   \ifHy@toolbar\else /HideToolbar true\fi
7788   \ifHy@menubar\else /HideMenubar true\fi
7789   \ifHy>windowui\else /HideWindowUI true\fi
7790   \ifHy@fitwindow /FitWindow true\fi
7791   \ifHy@centerwindow /CenterWindow true\fi
7792   \ifHy@displaydoctitle /DisplayDocTitle true\fi
7793   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7794   \Hy@UseNameKey{Direction}\@pdfdirection
7795   \Hy@UseNameKey{ViewArea}\@pdfviewarea
7796   \Hy@UseNameKey{ViewClip}\@pdfviewclip
7797   \Hy@UseNameKey{PrintArea}\@pdfprintarea
7798   \Hy@UseNameKey{PrintClip}\@pdfprintclip
7799   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7800   \Hy@UseNameKey{Duplex}\@pdfduplex
7801   \ifx\@pdfpicktraybypdfsize\@empty
7802   \else
7803     /PickTrayByPDFSize \@pdfpicktraybypdfsize
7804   \fi
7805   \ifx\@pdfprintpagerange\@empty
7806   \else
7807     /PrintPageRange[\@pdfprintpagerange]%
7808   \fi
7809   \ifx\@pdfnumcopies\@empty
7810   \else
7811     /NumCopies \@pdfnumcopies

```

```

7812     \fi
7813 }%
7814 \pdfmark{pdfmark=/PUT,%
7815   Raw={%
7816     \string{Catalog\string}<<%
7817     \ifx\Hy@temp\@empty
7818     \else
7819       /ViewerPreferences<<\Hy@temp>>%
7820     \fi
7821     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7822     \ifx\@pdflang\@empty
7823     \else
7824       /Lang(\@pdflang)%
7825     \fi
7826   >>%
7827 }%
7828 }%
7829 }
7830 </dviwindo>
7831 <*dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7832 \providecommand*{\XR@ext}{pdf}
7833 \Hy@setbreaklinks{true}
7834 \newsavebox{\pdfm@box}
7835 \def\@pdfm@mark#1{\special{pdf:#1}}
7836 \def\@pdfm@dest#1{%
7837   \Hy@SaveLastskip
7838   \begingroup
7839     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7840     \def\x{XYZ}%
7841     \ifx\x\@pdfview
7842       \def\x{XYZ @xpos @ypos null}%
7843     \else
7844       \def\x{FitH}%
7845       \ifx\x\@pdfview
7846         \def\x{FitH @ypos}%
7847       \else
7848         \def\x{FitBH}%
7849         \ifx\x\@pdfview
7850           \def\x{FitBH @ypos}%
7851         \else
7852           \def\x{FitV}%
7853           \ifx\x\@pdfview
7854             \def\x{FitV @xpos}%
7855           \else
7856             \def\x{FitBV}%
7857             \ifx\x\@pdfview
7858               \def\x{FitBV @xpos}%
7859             \else
7860               \def\x{Fit}%
7861               \ifx\x\@pdfview
7862                 \let\x\@pdfview
7863               \else
7864                 \def\x{FitB}%

```

```

7865         \ifx\x\@pdfview
7866         \let\x\@pdfview
7867     \else
7868         \def\x{FitR}%
7869         \ifx\x\@pdfview
7870             \Hy@Warning{'pdfview=FitR' is not supported}%
7871             \def\x{XYZ @xpos @ypos null}%
7872         \else
7873             \@onelevel@sanitize\@pdfview
7874             \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
7875             \def\x{XYZ @xpos @ypos null}%
7876         \fi
7877     \fi
7878 \fi
7879 \fi
7880 \fi
7881 \fi
7882 \fi
7883 \fi
7884 \pdfmark{dest (\Hy@pstringDest) [@thispage /x]}%
7885 \endgroup
7886 \Hy@RestoreLastskip
7887 }
7888 \providecommand*\@pdfview{XYZ}
7889 \providecommand*\@pdfborder{0 0 1}
7890 \providecommand*\@pdfborderstyle{}
7891 \def\hyper@anchor#1{%
7892     \pdfmark{dest{#1}}%
7893 }
7894 \def\hyper@anchorstart#1{%
7895     \Hy@activeanchortrue
7896     \pdfmark{dest{#1}}%
7897 }
7898 \def\hyper@anchorend{%
7899     \Hy@activeanchorfalse
7900 }
7901 \newcounter{Hy@AnnotLevel}
7902 \ifHy@ocgcolorlinks
7903     \def\OBJ@OCG@view{@OCG@view}%
7904     \pdfmark{%
7905         obj \OBJ@OCG@view <<%
7906             /Type/OCG%
7907             /Name(View)%
7908             /Usage<<%
7909                 /Print<<%
7910                 /PrintState/OFF%
7911             >>%
7912             /View<<%
7913                 /ViewState/ON%
7914             >>%
7915         >>%
7916     }%
7917 \pdfmark{close \OBJ@OCG@view}%
7918 \def\OBJ@OCG@print{@OCG@print}%
7919 \pdfmark{%
7920     obj \OBJ@OCG@print <<%

```

```

7922      /Type/OCG%
7923      /Name(Print)%
7924      /Usage<<%
7925          /Print<<%
7926          /PrintState/ON%
7927      >>%
7928      /View<<%
7929          /ViewState/OFF%
7930      >>%
7931  >>%
7932  >>%
7933 }%
7934  \@pdfmark{close \OBJ@OCG@print}%
7935  \def\OBJ@OCGs{@OCGs}%
7936  \@pdfmark{%
7937      obj \OBJ@OCGs [%
7938          \OBJ@OCG@view\space\OBJ@OCG@print
7939      ]%
7940  }%
7941  \@pdfmark{close \OBJ@OCGs}%
7942  \@pdfmark{%
7943      put @catalog <<%
7944          /OCProperties<<%
7945          /OCGs \OBJ@OCGs
7946          /D<<%
7947              /OFF[\OBJ@OCG@print]%
7948              /AS[%
7949                  <<%
7950                      /Event/View%
7951                      /OCGs \OBJ@OCGs
7952                      /Category[/View]%
7953                  >>%
7954                  <<%
7955                      /Event/Print%
7956                      /OCGs \OBJ@OCGs
7957                      /Category[/Print]%
7958                  >>%
7959                  <<%
7960                      /Event/Export%
7961                      /OCGs \OBJ@OCGs
7962                      /Category[/Print]%
7963                  >>%
7964              ]%
7965          >>%
7966      >>%
7967  >>%
7968 }%
7969  \AtBeginShipout{%
7970      \setbox\AtBeginShipoutBox=\hbox{%
7971          \copy\AtBeginShipoutBox
7972          \@pdfmark{%
7973              put @resources <<%
7974                  /Properties<<%
7975                  /OCView \OBJ@OCG@view
7976                  /OCPrint \OBJ@OCG@print
7977              >>%
7978          >>%

```

```

7979     }%
7980 }%
7981 }%
7982 \AtBeginDocument{%
7983   \def\Hy@colorlink#1{%
7984     \begingroup
7985     \ifHy@ocgcolorlinks
7986       \def\Hy@ocgcolor{#1}%
7987       \setbox0=\color@hbox
7988     \else
7989       \HyColor@UseColor#1%
7990     \fi
7991   }%
7992   \def\Hy@endcolorlink{%
7993     \ifHy@ocgcolorlinks
7994       \color@endbox
7995       \mbox{%
7996         \@pdfm@mark{content /OC/OCPrint BDC}%
7997         \rlap{\copy0}%
7998         \@pdfm@mark{content EMC/OC/OCView BDC}%
7999         \begingroup
8000           \expandafter\HyColor@UseColor\Hy@ocgcolor
8001           \box0 %
8002         \endgroup
8003         \@pdfm@mark{content EMC}%
8004       }%
8005     \fi
8006   \endgroup
8007 }%
8008 }%
8009 \else
8010   \Hy@DisableOption{ocgcolorlinks}%
8011 \fi

8012 \def\Hy@BeginAnnot#1{%
8013   \stepcounter{Hy@AnnotLevel}%
8014   \ifnum\value{Hy@AnnotLevel}=\@ne
8015     #1%
8016   \fi
8017 }
8018 \def\Hy@endAnnot{%
8019   \ifnum\value{Hy@AnnotLevel}=\@ne
8020     \Hy@endcolorlink
8021     \@pdfm@mark{eann}%
8022   \fi
8023   \addtocounter{Hy@AnnotLevel}\m@ne
8024 }

8025 \def\Hy@undefinedname{UNDEFINED}
8026 \def\hyper@linkstart#1#2{%
8027   \Hy@BeginAnnot{%
8028     \protected@edef\Hy@testname{#2}%
8029     \ifx\Hy@testname\@empty
8030       \Hy@Warning{%
8031         Empty destination name,\MessageBreak
8032         using '\Hy@undefinedname'%
8033       }%
8034     \let\Hy@testname\Hy@undefinedname
8035   \else

```

```

8036     \Hy@pstringdef\Hy@testname{%
8037         \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8038     }%
8039     \fi
8040     \@pdfm@mark{%
8041         bann<<%
8042         /Type/Annot%
8043         /Subtype/Link%
8044         \ifHy@pdfa /F 4\fi
8045         \Hy@setpdfborder
8046         \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8047         \else
8048             /C[\csname @#1bordercolor\endcsname]%
8049         \fi
8050         /A<<%
8051         /S/GoTo%
8052         /D(\Hy@testname)%
8053         >>%
8054     >>%
8055     }%
8056     \expandafter\Hy@colorlink\csname @#1color\endcsname
8057 }%
8058 }
8059 \def\hyper@linkend{\Hy@EndAnnot}%
8060 \def\hyper@link#1#2#3{%
8061     \hyper@linkstart{#1}{#2}#3\hyper@linkend
8062 }
8063 \def\hyper@linkfile#1#2#3{%
8064     \leavevmode
8065     \Hy@BeginAnnot{%
8066         \Hy@pstringdef\Hy@pstringF{#2}%
8067         \Hy@pstringdef\Hy@pstringD{#3}%
8068         \@pdfm@mark{%
8069             bann<<%
8070             /Type/Annot%
8071             /Subtype/Link%
8072             \ifHy@pdfa /F 4\fi
8073             \Hy@setpdfborder
8074             \ifx\@filebordercolor\relax
8075             \else
8076                 /C[\@filebordercolor]%
8077             \fi
8078             /A<<%
8079             /S/GoToR%
8080             /F(\Hy@pstringF)%
8081             /D\ifx\@#3\@pdfstartview\else(\Hy@pstringD)\fi
8082             \Hy@SetNewWindow
8083             >>%
8084         >>%
8085     }%
8086     \Hy@colorlink\@filecolor
8087 }%
8088 #1%
8089 \Hy@EndAnnot
8090 }
8091 \def\hyper@linkurl#1#2{%
8092     \leavevmode

```



```

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

```

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

```

8143 \begingroup\expandafter\expandafter\expandafter\endgroup
8144 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8145 \else
8146   \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8147 \fi
8148 \fi

```

```

8149 \def\PDF@FinishDoc{%
8150   \Hy@UseMaketitleInfos
8151   \@pdfm@mark{%
8152     docinfo<<%
8153       /Title(\@pdftitle)%
8154       /Subject(\@pdfsubject)%
8155       /Creator(\@pdfcreator)%
8156       \ifx\@pdfcreationdate\@empty
8157       \else
8158         /CreationDate(\@pdfcreationdate)%
8159       \fi
8160       \ifx\@pdfmoddate\@empty
8161       \else
8162         /ModDate(\@pdfmoddate)%
8163       \fi
8164       /Author(\@pdfauthor)%
8165       \ifx\@pdfproducer\relax
8166       \else
8167         /Producer(\@pdfproducer)%
8168       \fi
8169       /Keywords(\@pdfkeywords)%
8170     >>%
8171   }%
8172   \Hy@DisableOption{pdfauthor}%
8173   \Hy@DisableOption{pdftitle}%
8174   \Hy@DisableOption{pdfsubject}%
8175   \Hy@DisableOption{pdfcreator}%
8176   \Hy@DisableOption{pdfcreationdate}%
8177   \Hy@DisableOption{pdfmoddate}%
8178   \Hy@DisableOption{pdfproducer}%
8179   \Hy@DisableOption{pdfkeywords}%
8180 }

8181 \def\PDF@SetupDoc{%
8182   \edef\Hy@temp{%
8183     \ifHy@toolbar\else /HideToolbar true\fi
8184     \ifHy@menubar\else /HideMenubar true\fi
8185     \ifHy>windowui\else /HideWindowUI true\fi
8186     \ifHy@fitwindow /FitWindow true\fi
8187     \ifHy@centerwindow /CenterWindow true\fi
8188     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8189     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8190     \Hy@UseNameKey{Direction}\@pdfdirection
8191     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8192     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8193     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8194     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8195     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8196     \Hy@UseNameKey{Duplex}\@pdfduplex
8197     \ifx\@pdfpicktraybypdfsize\@empty
8198     \else
8199       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8200     \fi
8201     \ifx\@pdfprintpagerange\@empty
8202     \else
8203       /PrintPageRange[\@pdfprintpagerange]%
8204     \fi
8205     \ifx\@pdfnumcopies\@empty

```

```

8206     \else
8207         /NumCopies \@pdfnumcopies
8208     \fi
8209 }%
8210 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8211 \@pdfm@mark{%
8212     docview<<%
8213         \ifx\@pdfstartpage\@empty
8214         \else
8215             \ifx\@pdfstartview\@empty
8216             \else
8217                 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8218             \fi
8219         \fi
8220         \ifx\@baseurl\@empty
8221         \else
8222             /URI<</Base(\Hy@pstringB)>>%
8223         \fi
8224         /PageMode/\@pdfpagemode
8225         \ifx\Hy@temp\@empty
8226         \else
8227             /ViewerPreferences<<\Hy@temp>>%
8228         \fi
8229         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8230         \ifx\@pdflang\@empty
8231         \else
8232             /Lang(\@pdflang)%
8233         \fi
8234     >>%
8235 }%
8236 \ifx\@pdfpagescrop\@empty
8237 \else
8238     \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8239 \fi
8240 }

8241 \AtBeginShipoutFirst{%
8242     \ifx\special@paper\@empty
8243     \else
8244         \ifHy@setpagesize
8245             \special{papersize=\special@paper}%
8246         \fi
8247     \fi
8248     \Hy@DisableOption{setpagesize}%
8249 }
8250 </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.

```

8251 < *vtexhtml>
8252 \providecommand*{\XR@ext}{htm}
8253 \RequirePackage{vtexhtml}
8254 \newif\if@Localurl
8255 \def\PDF@FinishDoc{}
8256 \def\PDF@SetupDoc{%

```

```

8257 \ifx\@baseurl\@empty
8258 \else
8259 \special{!direct <base href="\@baseurl">}%
8260 \fi
8261 }
8262 \def\@urltype{url}
8263 \def\hyper@link#1#2#3{%
8264 \leavevmode
8265 \special{!direct <a href=%
8266 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8267 #3%
8268 \special{!direct </a>}%
8269 }
8270 \def\hyper@linkurl#1#2{%
8271 \begingroup
8272 \hyper@chars
8273 \leavevmode
8274 \MathBSuppress=1\relax
8275 \special{!direct <a href=%
8276 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8277 #1%
8278 \MathBSuppress=0\relax
8279 \special{!direct </a>}%
8280 \endgroup
8281 }
8282 \def\hyper@linkfile#1#2#3{%
8283 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
8284 }
8285 \def\hyper@linkstart#1#2{%
8286 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8287 \@Localurltrue
8288 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8289 \else
8290 \@Localurlfalse
8291 \begingroup
8292 \hyper@chars
8293 \special{!aref \HyperDestNameFilter{#2}}%
8294 \endgroup
8295 \fi
8296 }
8297 \def\hyper@linkend{%
8298 \if@Localurl
8299 \special{!endaref}%
8300 \else
8301 \special{!direct </a>}%
8302 \fi
8303 }
8304 \def\hyper@anchorstart#1{%
8305 \Hy@SaveLastskip
8306 \begingroup
8307 \hyper@chars
8308 \special{!aname #1}%
8309 \special{!direct <a name=%
8310 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8311 \endgroup
8312 \Hy@activeanchortrue
8313 }

```

```

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

```

8360 \ifx\mediaheight\@undefined
8361 \else
8362   \ifx\mediaheight\relax
8363   \else
8364     \ifHy@setpagesize
8365       \providecommand*{\VTeXInitMediaSize}{%
8366         \@ifundefined{stockwidth}{%

```

```

8367         \ifdim\paperheight>0pt %
8368             \setlength\mediaheight\paperheight
8369         \fi
8370         \ifdim\paperheight>0pt %
8371             \setlength\mediawidth\paperwidth
8372         \fi
8373     }{%
8374         \ifdim\stockheight>0pt %
8375             \setlength\mediaheight\stockheight
8376         \fi
8377         \ifdim\stockwidth>0pt %
8378             \setlength\mediawidth\stockwidth
8379         \fi
8380     }%
8381 }%
8382 \AtBeginDocument{\VTeXInitMediaSize}%
8383 \fi
8384 \Hy@DisableOption{setpagesize}%
8385 \fi
8386 \fi

```

Older versions of VTeX require xyz in lower case.

```

8387 \providecommand*\@pdfview{xyz}
8388 \providecommand*\@pdfborder{0 0 1}
8389 \providecommand*\@pdfborderstyle{}
8390 \let\CurrentBorderColor\@linkbordercolor
8391 \def\hyper@anchor#1{%
8392     \Hy@SaveLastskip
8393     \begingroup
8394         \let\protect=\string
8395         \hyper@chars
8396         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8397     \endgroup
8398     \Hy@activeanchortrue
8399     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8400     \Hy@activeanchorfalse
8401     \Hy@RestoreLastskip
8402 }
8403 \def\hyper@anchorstart#1{%
8404     \Hy@SaveLastskip
8405     \begingroup
8406         \hyper@chars
8407         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8408     \endgroup
8409     \Hy@activeanchortrue
8410 }
8411 \def\hyper@anchorend{%
8412     \Hy@activeanchorfalse
8413     \Hy@RestoreLastskip
8414 }
8415 \def\@urltype{url}
8416 \def\Hy@undefinedname{UNDEFINED}
8417 \def\hyper@linkstart#1#2{%
8418     \Hy@pstringdef\Hy@pstringURI{#2}%
8419     \expandafter\Hy@colorlink\csname @#1color\endcsname
8420     \@ifundefined{@#1bordercolor}{%
8421         \let\CurrentBorderColor\relax
8422     }{%

```

```

8423 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8424 }%
8425 \def\Hy@tempa{#1}%
8426 \ifx\Hy@tempa\@urlltype
8427 \special{!%
8428   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8429   a=<%
8430     \ifHy@pdfa /F 4\fi
8431     \Hy@setpdfborder
8432     \ifx\CurrentBorderColor\relax
8433     \else
8434       /C [\CurrentBorderColor]%
8435     \fi
8436   >%
8437   }%
8438 \else
8439 \protected@edef\Hy@testname{#2}%
8440 \ifx\Hy@testname\@empty
8441 \Hy@Warning{%
8442   Empty destination name,\MessageBreak
8443   using '\Hy@undefinedname'%
8444   }%
8445 \let\Hy@testname\Hy@undefinedname
8446 \fi
8447 \special{!%
8448   aref \expandafter\HyperDestNameFilter
8449   \expandafter{\Hy@testname};%
8450   a=<%
8451     \ifHy@pdfa /F 4\fi
8452     \Hy@setpdfborder
8453     \ifx\CurrentBorderColor\relax
8454     \else
8455       /C [\CurrentBorderColor]%
8456     \fi
8457   >%
8458   }%
8459 \fi
8460 }
8461 \def\hyper@linkend{%
8462 \special{!endaref}%
8463 \Hy@endcolorlink
8464 }
8465 \def\hyper@linkfile#1#2#3{%
8466 \leavevmode
8467 \special{!%
8468   aref <%
8469     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
8470     f=#2>#3;%
8471     a=<%
8472       \ifHy@pdfa /F 4\fi
8473       \Hy@setpdfborder
8474       \ifx\@filebordercolor\relax
8475       \else
8476         /C [\@filebordercolor]%
8477       \fi
8478     >%
8479   }%

```

```

8480 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8481 \special{!endaref}%
8482 }
8483 \def\hyper@linkurl#1#2{%
8484 \begingroup
8485 \Hy@pstringdef\Hy@pstringURI{#2}%
8486 \hyper@chars
8487 \leavevmode
8488 \special{!%
8489   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8490   a=<%
8491     \ifHy@pdfa /F 4\fi
8492     \Hy@setpdfborder
8493     \ifx\@urlbordercolor\relax
8494     \else
8495       /C [\@urlbordercolor]%
8496     \fi
8497   >%
8498   }%
8499   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8500   \special{!endaref}%
8501 \endgroup
8502 }
8503 \def\hyper@link#1#2#3{%
8504 \@ifundefined{#@#1bordercolor}{%
8505 \let\CurrentBorderColor\relax
8506 }{%
8507 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8508 }%
8509 \leavevmode
8510 \protected@edef\Hy@testname{#2}%
8511 \ifx\Hy@testname\@empty
8512 \Hy@Warning{%
8513   Empty destination name,\MessageBreak
8514   using '\Hy@undefinedname'%
8515 }%
8516 \let\Hy@testname\Hy@undefinedname
8517 \fi
8518 \special{!%
8519   aref \expandafter\HyperDestNameFilter
8520     \expandafter{\Hy@testname};%
8521   a=<%
8522     \ifHy@pdfa /F 4\fi
8523     \Hy@setpdfborder
8524     \ifx\CurrentBorderColor\relax
8525     \else
8526       /C [\CurrentBorderColor]%
8527     \fi
8528   >%
8529   }%
8530 \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8531 \special{!endaref}%
8532 }
8533 \def\hyper@image#1#2{%
8534 \hyper@linkurl{#2}{#1}%
8535 }
8536 \def\@hyper@launch run:#1\#2#3{%

```



```

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

```

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

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

Please never use $\text{\ifundefined{VTeXversion}}\{..\}\{..\}$ globally.

```

8577 \ifnum\Hy@VTeXversion<702 %
8578 \else
8579   \def\hyper@pagetransition{%
8580     \ifx\@pdfpagetransition\relax
8581     \else
8582       \ifx\@pdfpagetransition\empty

```

Standard incantation.

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

```

8583     \else
8584       \hvtex@parse@trans\@pdfpagetransition
8585     \fi
8586   \fi
8587 }%

```

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

Syntax of \TeX \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:

```
8588 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8589 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8590 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8591 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8592 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8593 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8594 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
8595 \def\hvtex@par@dimension{/Dm}%
8596 \def\hvtex@par@direction{/Di}%
8597 \def\hvtex@par@duration{/D}%
8598 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
8599 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%
```

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

```
8600 \def\hvtex@gettoken@#1 #2\@nil{%
8601   \edef\hvtex@token{#1}%
8602   \edef\hvtex@buffer{#2}%
8603 }%
8604 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
8605 \let\hvtex@trans@code\@empty
8606 \let\hvtex@param@dimension\@empty
8607 \let\hvtex@param@direction\@empty
8608 \let\hvtex@param@duration\@empty
8609 \let\hvtex@param@motion\@empty
8610 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
8611 \hvtex@gettoken
8612 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
8613 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```

8614     \else
8615     \hvtex@gettoken
8616     \fi
8617 \fi
8618 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

8619     \hvtex@trans@params
8620 }%

```

Reentrant macro to parse optional parameters.

```

8621 \def\hvtex@trans@params{%
8622     \ifx\hvtex@buffer\@empty
8623     \else
8624     \hvtex@gettoken
8625     \let\hvtex@trans@par\hvtex@token
8626     \ifx\hvtex@buffer\@empty
8627     \else
8628     \hvtex@gettoken
8629     \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

8630         \let\hvtex@param@duration\hvtex@token
8631     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

8632         \expandafter\edef\expandafter\hvtex@param@motion
8633         \expandafter{\expandafter\@gobble\hvtex@token}%
8634     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

8635         \expandafter\edef\expandafter\hvtex@param@dimension
8636         \expandafter{\expandafter\@gobble\hvtex@token}%
8637     \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).

```

8638         \let\hvtex@param@direction\hvtex@token
8639     \fi\fi\fi\fi
8640 \fi
8641 \fi
8642 \ifx\hvtex@buffer\@empty
8643     \let\next\hvtex@produce@trans
8644 \else
8645     \let\next\hvtex@trans@params
8646 \fi
8647 \next
8648 }%

```

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

```

8649 \def\hvtex@produce@trans{%
8650     \let\vtex@trans@special\@empty
8651     \if S\hvtex@trans@code
8652     \edef\vtex@trans@special{\hvtex@trans@code
8653     \hvtex@param@dimension\hvtex@param@motion}%
8654 \else\if B\hvtex@trans@code
8655     \edef\vtex@trans@special{%
8656     \hvtex@trans@code\hvtex@param@dimension

```

```

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

```

I'm not guilty of possible overflow.

```

8680         \multiply\dimen@\@m
8681         \edef\vtex@trans@special{%
8682             \vtex@trans@special,\strip@pt\dimen@
8683         }%
8684     \fi

```

And all the mess is just for this.

```

8685     \special{!trans \vtex@trans@special}%
8686     \fi
8687 }%
8688 \def\hyper@pageduration{%
8689     \ifx\@pdfpageduration\relax
8690     \else
8691         \ifx\@pdfpageduration\@empty
8692             \special{!duration-}%
8693         \else
8694             \special{!duration \@pdfpageduration}%
8695         \fi
8696     \fi
8697 }%
8698 \def\hyper@pagehidden{%
8699     \ifHy@useHidKey
8700         \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8701     \fi
8702 }%
8703 \g@addto@macro\Hy@EveryPageBoxHook{%
8704     \hyper@pagetransition
8705     \hyper@pageduration
8706     \hyper@pagehidden
8707 }%
8708 \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

```

8709 \ifx\@pdfproducer\relax
8710 \def\@pdfproducer{VTeX}%
8711 \ifnum\Hy@VTeXversion>\z@
8712 \count@VTeXversion
8713 \divide\count@ 100 %
8714 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8715 \multiply\count@ -100 %
8716 \advance\count@VTeXversion
8717 \edef\@pdfproducer{%
8718 \@pdfproducer
8719 .\ifnum\count@<10 0\fi\the\count@
8720 \ifx\VTeXOS\@undefined\else
8721 \ifnum\VTeXOS>0 %
8722 \ifnum\VTeXOS<6 %
8723 \space(%
8724 \ifcase\VTeXOS
8725 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8726 \fi
8727 )%
8728 \fi
8729 \fi
8730 \fi
8731 ,\space
8732 \ifnum\OpMode=\@ne PDF\else PS\fi
8733 \space backend%
8734 \ifx\gexmode\@undefined\else
8735 \ifnum\gexmode>\z@\space with GeX\fi
8736 \fi
8737 }%
8738 \fi
8739 \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).

```

8740 \def\PDF@SetupDoc{%
8741 \ifx\@pdfpagescrop\@empty

```

```

8742 \else
8743   \special{!pdfinfo b=<\@pdfpagescrop>}%
8744 \fi
8745 \ifx\@pdfstartpage\@empty
8746 \else
8747   \ifx\@pdfstartview\@empty
8748   \else
8749     \special{!onopen Page\@pdfstartpage}%
8750   \fi
8751 \fi
8752 \special{!pdfinfo p=<\/\@pdfpagemode>}%
8753 \ifx\@baseurl\@empty
8754 \else
8755   \special{!pdfinfo u=<<<\/Base (\@baseurl)>>>}%
8756 \fi
8757 \special{!pdfinfo v=<<<%
8758   \ifHy@toolbar\else /HideToolbar true\fi
8759   \ifHy@menubar\else /HideMenubar true\fi
8760   \ifHy@windowui\else /HideWindowUI true\fi
8761   \ifHy@fitwindow /FitWindow true\fi
8762   \ifHy@centerwindow /CenterWindow true\fi
8763   \ifHy@displaydoctitle /DisplayDocTitle true\fi
8764   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8765   \Hy@UseNameKey{Direction}\@pdfdirection
8766   \Hy@UseNameKey{ViewArea}\@pdfviewarea
8767   \Hy@UseNameKey{ViewClip}\@pdfviewclip
8768   \Hy@UseNameKey{PrintArea}\@pdfprintarea
8769   \Hy@UseNameKey{PrintClip}\@pdfprintclip
8770   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8771   \Hy@UseNameKey{Duplex}\@pdfduplex
8772   \ifx\@pdfpicktraybypdfsize\@empty
8773   \else
8774     /PickTrayByPDFSize \@pdfpicktraybypdfsize
8775   \fi
8776   \ifx\@pdfprintpagerange\@empty
8777   \else
8778     /PrintPageRange[\@pdfprintpagerange]%
8779   \fi
8780   \ifx\@pdfnumcopies\@empty
8781   \else
8782     /NumCopies \@pdfnumcopies
8783   \fi
8784 >>>}%
8785 \ifx\@pdfpagelayout\@empty
8786 \else
8787   \special{!pdfinfo l=<\/\@pdfpagelayout\space>}%
8788 \fi
8789 }%
8790 \def\PDF@FinishDoc{%
8791   \Hy@UseMaketitleInfos
8792   \special{!pdfinfo a=<\@pdfauthor>}%
8793   \special{!pdfinfo t=<\@pdftitle>}%
8794   \special{!pdfinfo s=<\@pdfsubject>}%
8795   \special{!pdfinfo c=<\@pdfcreator>}%
8796   \ifx\@pdfproducer\relax
8797   \else
8798     \special{!pdfinfo r=<\@pdfproducer>}%

```

```

8799 \fi
8800 \special{!pdfinfo k=<\@pdfkeywords>}%
8801 \Hy@DisableOption{pdfauthor}%
8802 \Hy@DisableOption{pdftitle}%
8803 \Hy@DisableOption{pdfsubject}%
8804 \Hy@DisableOption{pdfcreator}%
8805 \Hy@DisableOption{pdfcreationdate}%
8806 \Hy@DisableOption{pdfmoddate}%
8807 \Hy@DisableOption{pdfproducer}%
8808 \Hy@DisableOption{pdfkeywords}%
8809 }
8810 </vtex>

```

46.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

8811 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8812 <package>\providecommand*{\Hy@DistillerDestFix}{}
8813 <*pdfmark | dviwindo>
8814 \def\Hy@DistillerDestFix{%
8815   \begingroup
8816     \let\x\literalps@out

```

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

```

8817   \ifnum \@ifundefined{OpMode}{0}{}%
8818     \@ifundefined{gexmode}{0}{}%
8819     \ifnum\gexmode>0 \OpMode\else 0\fi
8820   }>1 %
8821   \def\x##1{%
8822     \immediate\special{!=##1}%
8823   }%
8824   \fi
8825   \x{%
8826     /product where{%
8827       pop %
8828       product(Distiller)search{%
8829         pop pop pop %
8830         version(.)search{%
8831           exch pop exch pop%
8832           (3011)eq{%
8833             gsave %
8834             newpath 0 0 moveto closepath clip%
8835             /Courier findfont 10 scalefont setfont %
8836             72 72 moveto(.)show %
8837             grestore%
8838           }if%
8839         }{pop}ifelse%
8840       }{pop}ifelse%

```

```

8841     }if%
8842   }%
8843   \endgroup
8844 }
8845 </pdfmark | dviwindo>

```

46.8 Direct pdfmark support

Drivers that load `pdfmark.def` have to provide the correct macro definitions of

<code>\@pdfproducer</code>	for document information
<code>\literalps@out</code>	PostScript output
<code>\headerps@out</code>	PostScript output that goes in the header area

and the correct definitions of the following PostScript procedures:

<code>H.S</code>	start of anchor, link or rect
<code>#1 H.A</code>	end of anchor, argument=baselineskip in pt
<code>#1 H.L</code>	end of link, argument=baselineskip in pt
<code>H.R</code>	end of rect
<code>H.B</code>	raw rect code

```

8846 <*pdfmark>
8847 \Hy@breaklinks@unsupported
8848 \def\hyper@anchor#1{%
8849   \Hy@SaveLastskip
8850   \begingroup
8851     \pdfmark[\anchor@spot]{%
8852       pdfmark=/DEST,%
8853       linktype=anchor,%
8854       View=/\@pdfview \@pdfviewparams,%
8855       DestAnchor={#1}%
8856     }%
8857   \endgroup
8858   \Hy@RestoreLastskip
8859 }
8860 \@ifundefined{hyper@anchorstart}{-}{\endinput}
8861 \def\hyper@anchorstart#1{%
8862   \Hy@SaveLastskip
8863   \literalps@out{H.S}%
8864   \xdef\hyper@currentanchor{#1}%
8865   \Hy@activeanchortrue
8866 }
8867 \def\hyper@anchorend{%
8868   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8869   \pdfmark{%
8870     pdfmark=/DEST,%
8871     linktype=anchor,%
8872     View=/\@pdfview \@pdfviewparams,%
8873     DestAnchor=\hyper@currentanchor,%
8874   }%
8875   \Hy@activeanchorfalse
8876   \Hy@RestoreLastskip
8877 }
8878 \def\hyper@linkstart#1#2{%
8879   \ifHy@breaklinks
8880     \else
8881     \leavevmode\hbox\bgroup

```



```

8882 \fi
8883 \expandafter\Hy@colorlink\csname @#1color\endcsname
8884 \literalps@out{H.S}%
8885 \xdef\hyper@currentanchor{#2}%
8886 \gdef\hyper@currentlinktype{#1}%
8887 }
8888 \def\hyper@linkend{%
8889 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8890 \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8891 \let\Hy@tempcolor\relax
8892 }{%
8893 \edef\Hy@tempcolor{%
8894 \csname @\hyper@currentlinktype bordercolor\endcsname
8895 }%
8896 }%
8897 \pdfmark{%
8898 pdfmark=/ANN,%
8899 linktype=link,%
8900 Subtype=/Link,%
8901 PDFAFlags=4,%
8902 Dest=\hyper@currentanchor,%
8903 AcroHighlight=\@pdfhighlight,%
8904 Border=\@pdfborder,%
8905 BorderStyle=\@pdfborderstyle,%
8906 Color=\Hy@tempcolor,%
8907 Raw=H.B%
8908 }%
8909 \Hy@endcolorlink
8910 \ifHy@breaklinks
8911 \else
8912 \egroup
8913 \fi
8914 }

```

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.

```

8915 \begingroup
8916 \catcode'P=12 %
8917 \catcode'T=12 %
8918 \lowercase{\endgroup
8919 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
8920 }
8921 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8922 \def\hyper@pagetransition{%
8923 \ifx\@pdfpagetransition\relax
8924 \else
8925 \ifx\@pdfpagetransition\@empty
8926 % 1. Does an old entry have to be deleted?
8927 % 2. If 1=yes, how to delete?
8928 \else
8929 \pdfmark{%
8930 pdfmark=/PUT,%
8931 Raw={%
8932 \string{ThisPage\string}%

```

```

8933         <</Trans << /S /\@pdfpagetransition\space >> >>%
8934     }%
8935 }%
8936 \fi
8937 \fi
8938 }

```

\hyper@pageduration

```

8939 \def\hyper@pageduration{%
8940   \ifx\@pdfpageduration\relax
8941   \else
8942     \ifx\@pdfpageduration\@empty
8943       % 1. Does an old entry have to be deleted?
8944       % 2. If 1=yes, how to delete?
8945     \else
8946       \pdfmark{%
8947         pdfmark=/PUT,%
8948         Raw={%
8949           \string{ThisPage\string}%
8950           <</Dur \@pdfpageduration>>%
8951         }%
8952       }%
8953     \fi
8954   \fi
8955 }

```

\hyper@pagehidden

```

8956 \def\hyper@pagehidden{%
8957   \ifHy@useHidKey
8958     \pdfmark{%
8959       pdfmark=/PUT,%
8960       Raw={%
8961         \string{ThisPage\string}%
8962         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
8963       }%
8964     }%
8965   \fi
8966 }

```

```

8967 \g@addto@macro\Hy@EveryPageBoxHook{%
8968   \hyper@pagetransition
8969   \hyper@pageduration
8970   \hyper@pagehidden
8971 }

```

```

8972 \def\hyper@image#1#2{%
8973   \hyper@linkurl{#2}{#1}%
8974 }
8975 \def\Hy@undefinedname{UNDEFINED}
8976 \def\hyper@link#1#2#3{%
8977   \@ifundefined{#1bordercolor}{%
8978     \let\Hy@tempcolor\relax
8979   }{%
8980     \edef\Hy@tempcolor{\csname #1bordercolor\endcsname}%
8981   }%
8982   \begingroup
8983     \protected@edef\Hy@testname{#2}%
8984     \ifx\Hy@testname\@empty

```

```

8985     \Hy@Warning{%
8986         Empty destination name,\MessageBreak
8987         using '\Hy@undefinedname'%
8988     }%
8989     \let\Hy@testname\Hy@undefinedname
8990 \fi
8991 \pdfmark[#{3}]{%
8992     Color=\Hy@tempcolor,%
8993     linktype=#{1},%
8994     AcroHighlight=\@pdfhighlight,%
8995     Border=\@pdfborder,%
8996     BorderStyle=\@pdfborderstyle,%
8997     pdfmark=/ANN,%
8998     Subtype=/Link,%
8999     PDFAFlags=4,%
9000     Dest=\Hy@testname
9001 }%
9002 \endgroup
9003 }
9004 \newtoks\pdf@docset
9005 \def\PDF@FinishDoc{%
9006     \Hy@UseMaketitleInfos
9007     \let\Hy@temp\@empty
9008     \ifx\@pdfcreationdate\@empty
9009     \else
9010         \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9011     \fi
9012     \ifx\@pdfmoddate\@empty
9013     \else
9014         \expandafter\def\expandafter\Hy@temp\expandafter{%
9015             \Hy@temp
9016             ModDate=\@pdfmoddate,%
9017         }%
9018     \fi
9019     \ifx\@pdfproducer\relax
9020     \else
9021         \expandafter\def\expandafter\Hy@temp\expandafter{%
9022             \Hy@temp
9023             Producer=\@pdfproducer,%
9024         }%
9025     \fi
9026     \expandafter
9027     \pdfmark\expandafter{%
9028         \Hy@temp
9029         pdfmark=/DOCINFO,%
9030         Title=\@pdftitle,%
9031         Subject=\@pdfsubject,%
9032         Creator=\@pdfcreator,%
9033         Author=\@pdfauthor,%
9034         Keywords=\@pdfkeywords
9035     }%
9036     \Hy@DisableOption{pdfauthor}%
9037     \Hy@DisableOption{pdftitle}%
9038     \Hy@DisableOption{pdfsubject}%
9039     \Hy@DisableOption{pdfcreator}%
9040     \Hy@DisableOption{pdfcreationdate}%
9041     \Hy@DisableOption{pdfmoddate}%

```

```

9042 \Hy@DisableOption{pdfproducer}%
9043 \Hy@DisableOption{pdfkeywords}%
9044 }
9045 \def\PDF@SetupDoc{%
9046 \def\Hy@temp{%
9047 \ifx\@pdfstartpage\@empty
9048 \else
9049 \ifx\@pdfstartview\@empty
9050 \else
9051 \edef\Hy@temp{%
9052 ,Page=\@pdfstartpage
9053 ,View=\@pdfstartview
9054 }%
9055 \fi
9056 \fi
9057 \edef\Hy@temp{%
9058 \noexpand\pdfmark{%
9059 pdfmark=/DOCVIEW,%
9060 PageMode=/\@pdfpagemode
9061 \Hy@temp
9062 }%
9063 }%
9064 \Hy@temp
9065 \ifx\@pdfpagescrop\@empty
9066 \else
9067 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9068 \fi
9069 \edef\Hy@temp{%
9070 \ifHy@toolbar\else /HideToolbar true\fi
9071 \ifHy@menubar\else /HideMenubar true\fi
9072 \ifHy@windowui\else /HideWindowUI true\fi
9073 \ifHy@fitwindow /FitWindow true\fi
9074 \ifHy@centerwindow /CenterWindow true\fi
9075 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9076 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9077 \Hy@UseNameKey{Direction}\@pdfdirection
9078 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9079 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9080 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9081 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9082 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9083 \Hy@UseNameKey{Duplex}\@pdfduplex
9084 \ifx\@pdfpicktraybypdfsize\@empty
9085 \else
9086 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9087 \fi
9088 \ifx\@pdfprintpagerange\@empty
9089 \else
9090 /PrintPageRange[\@pdfprintpagerange]%
9091 \fi
9092 \ifx\@pdfnumcopies\@empty
9093 \else
9094 /NumCopies \@pdfnumcopies
9095 \fi
9096 }%
9097 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9098 \pdfmark{%

```

```

9099 pdfmark=/PUT,%
9100 Raw={%
9101   \string{Catalog\string}<<%
9102     \ifx\Hy@temp\@empty
9103     \else
9104       /ViewerPreferences<<\Hy@temp>>%
9105     \fi
9106     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9107     \ifx\@pdflang\@empty
9108     \else
9109       /Lang(\@pdflang)%
9110     \fi
9111     \ifx\@baseurl\@empty
9112     \else
9113       /URI<</Base(\Hy@pstringB)>>%
9114     \fi
9115   >>%
9116 }%
9117 }%
9118 }
9119 </pdfmark>
9120 <*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.

```

9121 \newif\ifHy@pdfmarkerror
9122 \def\pdfmark{\@ifnextchar [{\pdfmark@}{\pdfmark@[]}}
9123 \def\pdfmark@[#1]#2{%
9124   \Hy@pdfmarkerrorfalse
9125   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9126   \@processme
9127   \let\pdf@type\relax
9128   \setkeys{PDF}{#2}%
9129   \ifHy@pdfmarkerror
9130   \else
9131     \ifx\pdf@type\relax
9132       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9133       \ifx\#1\%
9134       \else
9135         \pdf@rect{#1}%
9136       \fi
9137     \else
9138       \ifx\#1\%
9139         \literalps@out{%
9140           [\the\pdf@toks\space\pdf@type\space pdfmark%
9141           ]%
9142         \else
9143           \@ifundefined{@\pdf@linktype color}{%
9144             \Hy@colorlink\@linkcolor
9145           }{%
9146             \expandafter\Hy@colorlink
9147               \csname @\pdf@linktype color\endcsname
9148           }%
9149           \pdf@rect{#1}%

```

```

9150         \literalps@out{%
9151         [\the\pdf@toks\space\pdf@type\space pdfmark%
9152         }%
9153         \Hy@endcolorlink
9154     \fi
9155 \fi
9156 \fi
9157 }

```

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}

```

```

9158 \newsavebox{\pdf@box}
9159 \providecommand*{\Hy@setouterhbox}{\sbox}
9160 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9161 \def\Hy@DEST{/DEST}
9162 \def\pdf@rect#1{%
9163     \leavevmode
9164     \ifHy@breaklinks
9165         \Hy@setouterhbox\pdf@box{#1}%
9166     \else
9167         \sbox\pdf@box{#1}%
9168     \fi
9169     \dimen@ht\pdf@box
9170     \ifdim\dp\pdf@box=\z@
9171         \literalps@out{H.S}%
9172     \else
9173         \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9174     \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...).

```

9175     \ifHy@breaklinks
9176         \expandafter\Hy@breaklinksunhbox
9177     \else
9178         \expandafter\box
9179     \fi
9180     \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

9181 \ifdim\dimen@=\z@
9182     \literalps@out{H.R}%
9183 \else
9184     \raise\dimen@\hbox{\literalps@out{H.R}}%
9185 \fi
9186 \ifx\pdf@type\Hy@DEST

```

```

9187 \else
9188     \pdf@addtoksx{H.B}%
9189 \fi
9190 }

```

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.

```

9191 \newtoks\pdf@toks
9192 \newtoks\pdf@defaulttoks
9193 \pdf@defaulttoks={}
9194 \def\pdf@addtoks#1#2{%
9195     \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9196     \@processme
9197 }
9198 \def\pdf@addtoksx#1{%
9199     \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9200     \@processme
9201 }
9202 \def\PDFdefaults#1{%
9203     \pdf@defaulttoks={#1}%
9204 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

9205 % what is the type of pdfmark?
9206 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9207 % what is the link type?
9208 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9209 \def\pdf@linktype{link}
9210 % parameter is a stream of PDF
9211 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9212 % parameter is a name
9213 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9214 % parameter is a array
9215 \define@key{PDF}{Border}{%
9216     \edef\Hy@temp{#1}%
9217     \ifx\Hy@temp\@empty
9218     \else
9219         \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9220     \fi
9221 }
9222 \let\Hy@BorderArrayPatch\@empty
9223 % parameter is a dictionary
9224 \define@key{PDF}{BorderStyle}{%
9225     \edef\Hy@temp{#1}%
9226     \ifx\Hy@temp\@empty
9227     \else
9228         \pdf@addtoks{<<#1>>}{BS}%
9229     \fi
9230 }
9231 % parameter is a array
9232 \define@key{PDF}{Color}{%
9233     \ifx\relax#1\relax
9234     \else
9235         \pdf@addtoks{[#1]}{Color}% hash-ok
9236     \fi
9237 }
9238 % parameter is a string
9239 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}

```

```

9240 % parameter is a integer
9241 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9242 % parameter is a array
9243 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9244 % parameter is a string
9245 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9246 % parameter is a string or file
9247 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9248 % parameter is a destination
9249 \define@key{PDF}{Dest}{%
9250   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9251   \ifx\Hy@pstringDest@empty
9252     \Hy@pdfmarkerrortrue
9253     \Hy@Warning{Destination with empty name ignored}%
9254   \else
9255     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9256   \fi
9257 }
9258 \define@key{PDF}{DestAnchor}{%
9259   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9260   \ifx\Hy@pstringDest@empty
9261     \Hy@pdfmarkerrortrue
9262     \Hy@Warning{Destination with empty name ignored}%
9263   \else
9264     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9265   \fi
9266 }
9267 % parameter is a string
9268 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9269 % parameter is a string
9270 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9271 % parameter is a int
9272 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9273 \define@key{PDF}{PDFAFlags}{%
9274   \ifHy@pdfa
9275     \pdf@addtoks{#1}{F}%
9276   \fi
9277 }
9278 % parameter is a name
9279 \define@key{PDF}{AcroHighlight}{%
9280   \begingroup
9281     \edef\x{#1}%
9282     \expandafter\endgroup\ifx\x@empty
9283     \else
9284       \pdf@addtoks{#1}{H}%
9285     \fi
9286 }
9287 % parameter is a string
9288 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9289 % parameter is a string
9290 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9291 % parameter is a string
9292 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9293 % parameter is a string
9294 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9295 % parameter is a Boolean
9296 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}

```



```

9297 % parameter is a integer or name
9298 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9299 % parameter is a name
9300 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9301 % parameter is a string
9302 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
9303 % parameter is a array
9304 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
9305 % parameter is a integer
9306 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9307 % parameter is a name
9308 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9309 % parameter is a string
9310 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
9311 % parameter is a string
9312 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
9313 % parameter is a string
9314 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
9315 % parameter is an array
9316 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
9317 % parameter is a string
9318 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9319 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
9320 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
9321 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
9322 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
9323 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
9324 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
9325 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
9326 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
9327 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
9328 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9329 </pdfmarkbase>
9330 <*pdfmark>
9331 \def\Acrobatmenu#1#2{%
9332   \Hy@Acrobatmenu{#1}{#2}{%
9333     \pdfmark[{#2}]{%
9334       linktype=menu,%
9335       pdfmark=/ANN,%
9336       AcroHighlight=\pdfhighlight,%
9337       Border=\pdfborder,%
9338       BorderStyle=\pdfborderstyle,%
9339       Action={<< /Subtype /Named /N /#1 >>},%
9340       Subtype=/Link,%
9341       PDFAFlags=4%
9342     }%
9343   }%
9344 }

```

And now for some useful examples:

```

9345 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9346 \def\PDFNextPage@[#1]#2{%
9347   \pdfmark[{#2}]{%
9348     #1,%
9349     Border=\pdfborder,%
9350     BorderStyle=\pdfborderstyle,%

```

```

9351     Color=.2 .1 .5,%
9352     pdfmark=/ANN,%
9353     Subtype=/Link,%
9354     PDFAFlags=4,%
9355     Page=/Next%
9356 }%
9357 }
9358 \def\PDFPreviousPage{%
9359   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9360 }
9361 \def\PDFPreviousPage@[#1]#2{%
9362   \pdfmark[#{#2}]{%
9363     #1,%
9364     Border=\pdfborder,%
9365     BorderStyle=\pdfborderstyle,%
9366     Color=.4 .4 .1,%
9367     pdfmark=/ANN,%
9368     Subtype=/Link,%
9369     PDFAFlags=4,%
9370     Page=/Prev%
9371   }%
9372 }
9373 \def\PDFOpen#1{%
9374   \pdfmark{#1,pdfmark=/DOCVIEW}%
9375 }

```

This will only work if you use Distiller 2.1 or higher.

```

9376 \def\hyper@linkurl#1#2{%
9377   \begingroup
9378     \Hy@pstringdef\Hy@pstringURI{#2}%
9379     \hyper@chars
9380     \leavevmode
9381     \pdfmark[#{#1}]{%
9382       pdfmark=/ANN,%
9383       linktype=url,%
9384       AcroHighlight=\pdfhighlight,%
9385       Border=\pdfborder,%
9386       BorderStyle=\pdfborderstyle,%
9387       Color=\urlbordercolor,%
9388       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9389       Subtype=/Link,%
9390       PDFAFlags=4%
9391     }%
9392   \endgroup
9393 }
9394 \def\hyper@linkfile#1#2#3{%
9395   \begingroup
9396     \Hy@pstringdef\Hy@pstringF{#2}%
9397     \Hy@pstringdef\Hy@pstringD{#3}%
9398     \leavevmode
9399     \pdfmark[#{#1}]{%
9400       pdfmark=/ANN,%
9401       Subtype=/Link,%
9402       PDFAFlags=4,%
9403       AcroHighlight=\pdfhighlight,%
9404       Border=\pdfborder,%
9405       BorderStyle=\pdfborderstyle,%
9406       linktype=file,%

```

```

9407     Color=\@filebordercolor,%
9408     Action={%
9409         <<%
9410             /S/GoToR%
9411             \Hy@SetNewWindow
9412             /F(\Hy@pstringF)%
9413             /D\ifx\#3\[\[O \@pdfstartview]\else(\Hy@pstringD)cvn\fi
9414         >>%
9415     }%
9416 }%
9417 \endgroup
9418 }
9419 \def\@hyper@launch run:#1\#2#3{%
9420     \begingroup
9421     \Hy@pstringdef\Hy@pstringF{#1}%
9422     \Hy@pstringdef\Hy@pstringP{#3}%
9423     \leavevmode
9424     \pdfmark[{#2}]{%
9425         pdfmark=/ANN,%
9426         Subtype=/Link,%
9427         PDFAFlags=4,%
9428         AcroHighlight=\@pdfhighlight,%
9429         Border=\@pdfborder,%
9430         BorderStyle=\@pdfborderstyle,%
9431         linktype=run,%
9432         Color=\@runbordercolor,%
9433         Action={%
9434             <<%
9435                 /S/Launch%
9436                 \Hy@SetNewWindow
9437                 /F(\Hy@pstringF)%
9438                 \ifx\#3\%
9439                 \else
9440                 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9441                 \fi
9442             >>%
9443         }%
9444     }%
9445 \endgroup
9446 }
9447 \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.

```

9448 \dvips
9449 \providecommand*\XR@ext{pdf}
9450 \def\Hy@raisedlink{}
9451 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9452 \def\headerps@out#1{\special{! #1}}%
9453 \input{pdfmark.def}%
9454 \ifx\@pdfproducer\relax

```

```

9455 \def\pdfproducer{dvips + Distiller}%
9456 \fi
9457 \providecommand*\pdfborder{0 0 1}
9458 \providecommand*\pdfborderstyle{}
9459 \providecommand*\pdfview{XYZ}
9460 \providecommand*\pdfviewparams{ H.V}
9461 \def\Hy@BorderArrayPatch{BorderArrayPatch}

9462 \g@addto@macro\Hy@FirstPageHook{%
9463   \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.

```

9464   /DvipsToPDF{72.27 mul Resolution div} def%
9465   /PDFToDvips{72.27 div Resolution mul} def%
9466   /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.

```

9467   /BorderArrayPatch{%
9468     [exch%
9469       dup dup type/integertype eq exch type/realtype eq or%
9470       {BPToDvips}if%
9471     ]forall}%
9472   }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.

```

9473   /HyperBorder {1 PDFToDvips} def%
9474   /H.V {pdf@hoff pdf@voff null} def%
9475   /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

```

9476   /H.S {%
9477     currentpoint %
9478     HyperBorder add /pdf@lly exch def %
9479     dup DvipsToPDF 72 add /pdf@hoff exch def %
9480     HyperBorder sub /pdf@llx exch def%
9481   } def%

```

The calculation of upper left y is done without raising the point in T_EX, 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`

```

9482 /H.L {%
9483 2 sub dup%
9484 /HyperBasePt exch def %
9485 PDFToDvips /HyperBaseDvips exch def %
9486 currentpoint %
9487 HyperBaseDvips sub /pdf@ury exch def%
9488 /pdf@urx exch def%
9489 } def%
9490 /H.A {%
9491 H.L %
9492 % | /pdf@voff| = the distance from the top of the page to a point
9493 % | \baselineskip| above the current point in PDF coordinates
9494 currentpoint exch pop %
9495 vsize 72 sub exch DvipsToPDF %
9496 HyperBasePt sub % baseline skip
9497 sub /pdf@voff exch def%
9498 } def%
9499 /H.R {%
9500 currentpoint %
9501 HyperBorder sub /pdf@ury exch def %
9502 HyperBorder add /pdf@urx exch def %
9503 % | /pdf@voff| = the distance from the top of the page to the current point, in
9504 % PDF coordinates
9505 currentpoint exch pop vsize 72 sub %
9506 exch DvipsToPDF sub /pdf@voff exch def%
9507 } def%
9508 }%
9509 }
9510 \AfterBeginDocument{%
9511 \ifx\special@paper\@empty\else
9512 \ifHy@setpagesize
9513 \special{papersize=\special@paper}%
9514 \fi
9515 \fi
9516 \Hy@DisableOption{setpagesize}%
9517 }
9518 </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.

```

9519 <*vtexpdfmark>
9520 \providecommand*{\XR@ext}{pdf}
9521 \def\Hy@raisedlink{}
9522 \def\literalps@out#1{\special{pS:#1}}%
9523 \def\headerps@out#1{\immediate\special{pS:#1}}%
9524 \input{pdfmark.def}%
9525 \ifx\@pdfproducer\relax
9526 \ifnum\OpMode=\@ne
9527 \def\@pdfproducer{VTeX}%
9528 \else

```

```

9529 \def\pdfproducer{VTeX + Distiller}%
9530 \fi
9531 \fi
9532 \providecommand*\pdfborder{0 0 1}
9533 \providecommand*\pdfborderstyle{}
9534 \providecommand*\pdfview{XYZ}
9535 \providecommand*\pdfviewparams{ H.V}

9536 \g@addto@macro\Hy@FirstPageHook{%
9537 \headerps@out{%
9538 /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.

```

9539 /HyperBorder {1} def%
9540 /H.V {pdf@hoff pdf@voff null} def%
9541 /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9542 /H.S {%
9543 currentpoint %
9544 HyperBorder sub%
9545 /pdf@lly exch def %
9546 dup 72 add /pdf@hoff exch def %
9547 HyperBorder sub%
9548 /pdf@llx exch def%
9549 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9550 /H.L {%
9551 2 sub%
9552 /HyperBasePt exch def %
9553 currentpoint %
9554 HyperBasePt add HyperBorder add%
9555 /pdf@ury exch def %
9556 HyperBorder add%
9557 /pdf@urx exch def%
9558 } def%
9559 /H.A {%
9560 H.L %
9561 currentpoint exch pop %
9562 vsize 72 sub exch %
9563 HyperBasePt add add%
9564 /pdf@voff exch def%
9565 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9566 /H.R {%
9567 currentpoint %
9568 HyperBorder add%
9569 /pdf@ury exch def %
9570 HyperBorder add%
9571 /pdf@urx exch def %
9572 currentpoint exch pop vsize 72 sub add%
9573 /pdf@voff exch def%
9574 } def%

```

```

9575 }%
9576 }
9577 </vtxpdfmark>

```

46.11 Textures

```

9578 <*textures>
9579 \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.

```

9580 \begingroup
9581 \obeylines %
9582 \gdef\Hy@ps@CR{\noexpand
9583 }%
9584 \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`.

```

9585 \def\literalps@out#1{%
9586 \special{postscript 0 0 transform}%
9587 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9588 }%
9589 %

```

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.

```

9590 \def\headerps@out#1{%
9591 \special{%
9592 prepostscript TeXdict begin\Hy@ps@CR
9593 #1\Hy@ps@CR
9594 end%
9595 }%
9596 }%
9597 %

```

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.

```

9598 \g@addto@macro\Hy@FirstPageHook{%
9599 \headerps@out{%
9600 /betterpdfmark {%
9601 systemdict begin %

```

```

9602      dup /BP eq%
9603      {cleartomark gsave nulldevice []}%
9604      {dup /EP eq%
9605        {cleartomark cleartomark grestore}%
9606        {cleartomark}%
9607        ifelse%
9608      }ifelse %
9609    end%
9610  }def\Hy@ps@CR
9611  __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9612 }% end of \headerps@out
9613}% end of \AtBeginShipoutFirst
9614%
9615\input{pdfmark.def}%
9616%
9617\ifx\@pdfproducer\relax
9618  \def\@pdfproducer{Textures + Distiller}%
9619\fi
9620\providecommand*\@pdfborder{0 0 1}
9621\providecommand*\@pdfborderstyle{}
9622\providecommand*\@pdfview{XYZ}
9623\providecommand*\@pdfviewparams{ H.V}
9624%

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

9625\headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

9626  /vsize {\Hy@pageheight} def%
9627  /DvipsToPDF {} def%
9628  /PDFToDvips {} def%
9629  /BPToDvips {} def%
9630  /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9631  /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9632  /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9633  /H.S {%
9634    currentpoint %
9635    HyperBorder add /pdf@lly exch def %
9636    dup DvipsToPDF 72 add /pdf@hoff exch def %
9637    HyperBorder sub /pdf@llx exch def%
9638  } def\Hy@ps@CR
9639  /H.L {%
9640    2 sub %
9641    PDFToDvips /HyperBase exch def %
9642    currentpoint %
9643    HyperBase sub /pdf@ury exch def%
9644    /pdf@urx exch def%
9645  } def\Hy@ps@CR
9646  /H.A {%
9647    H.L %
9648    currentpoint exch pop %
9649    vsize 72 sub exch DvipsToPDF %
9650    HyperBase sub % baseline skip
9651    sub /pdf@voff exch def%

```



```

9652 } def\Hy@ps@CR
9653 /H.R {%
9654   currentpoint %
9655   HyperBorder sub /pdf@ury exch def %
9656   HyperBorder add /pdf@urx exch def %
9657   currentpoint exch pop vsize 72 sub %
9658   exch DvipsToPDF sub /pdf@voff exch def%
9659 } def\Hy@ps@CR
9660 }

9661 \AfterBeginDocument{%
9662   \ifHy@colorlinks
9663     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9664   \fi
9665 }

```

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.

```

9666 \expandafter\let\expandafter\keepPDF@SetupDoc
9667   \csname PDF@SetupDoc\endcsname
9668 \def\PDF@SetupDoc{%
9669   \ifx\@baseurl\@empty
9670   \else
9671     \special{html:<base href="\@baseurl">}%
9672   \fi
9673   \keepPDF@SetupDoc
9674 }

9675 \def\hyper@anchor#1{%
9676   \Hy@SaveLastskip
9677   \begingroup
9678     \let\protect=\string
9679     \special{html:<a name=%
9680       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9681   \endgroup
9682   \Hy@activeanchortrue
9683   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9684   \special{html:</a>}%
9685   \Hy@activeanchorfalse
9686   \Hy@RestoreLastskip
9687 }

9688 \def\hyper@anchorstart#1{%
9689   \Hy@SaveLastskip
9690   \begingroup
9691     \hyper@chars
9692     \special{html:<a name=%
9693       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9694   \endgroup
9695   \Hy@activeanchortrue
9696 }

9697 \def\hyper@anchorend{%
9698   \special{html:</a>}%
9699   \Hy@activeanchorfalse
9700   \Hy@RestoreLastskip
9701 }

9702 \def\@urltype{url}
9703 \def\hyper@linkstart#1#2{%
9704   \expandafter\Hy@colorlink\csname @#1color\endcsname
9705   \def\Hy@tempa{#1}%

```

```

9706 \ifx\Hy@tempa\@urltype
9707 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9708 \else
9709 \begingroup
9710 \hyper@chars
9711 \special{html:<a href=%
9712 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9713 \endgroup
9714 \fi
9715 }
9716 \def\hyper@linkend{%
9717 \special{html:</a>}}%
9718 \Hy@endcolorlink
9719 }
9720 \def\hyper@linkfile#1#2#3{%
9721 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9722 }
9723 \def\hyper@linkurl#1#2{%
9724 \leavevmode
9725 \ifHy@raiselinks
9726 \setbox\@tempboxa=\color@hbox #1\color@endbox
9727 \@linkdim\dp\@tempboxa
9728 \lower\@linkdim\hbox{%
9729 \hyper@chars
9730 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9731 }%
9732 \Hy@colorlink\@urlcolor#1%
9733 \@linkdim\ht\@tempboxa
9734 \advance\@linkdim by -6.5\p@
9735 \raise\@linkdim\hbox{\special{html:</a>}}%
9736 \Hy@endcolorlink
9737 \else
9738 \begingroup
9739 \hyper@chars
9740 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9741 \Hy@colorlink\@urlcolor#1%
9742 \special{html:</a>}}%
9743 \Hy@endcolorlink
9744 \endgroup
9745 \fi
9746 }

```

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

```

9747 \def\hyper@link#1#2#3{%
9748 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}}%
9749 }
9750 \def\hyper@image#1#2{%
9751 \begingroup
9752 \hyper@chars
9753 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
9754 \endgroup
9755 }
9756 </textures>

```

46.12 dvipsone

```

9757 % \subsection{dvipsone driver}
9758 % Over-ride the default setup macro in pdfmark driver to use Y\&Y

```

```

9759 % |\special| commands.
9760 (*dvipsone)
9761 \providecommand*\XR@ext}{pdf}
9762 \def\Hy@raisedlink{}
9763 \providecommand*\@pdfborder{0 0 1}
9764 \providecommand*\@pdfborderstyle{}
9765 \def\literalps@out#1{\special{ps:#1}}%
9766 \def\headerps@out#1{\special{headertext=#1}}%
9767 \input{pdfmark.def}%
9768 \ifx\@pdfproducer\relax
9769   \def\@pdfproducer{dvipsone + Distiller}%
9770 \fi
9771 \def\PDF@FinishDoc{%
9772   \Hy@UseMaketitleInfos
9773   \special{PDF: Keywords \@pdfkeywords}%
9774   \special{PDF: Title \@pdftitle}%
9775   \special{PDF: Creator \@pdfcreator}%
9776   \ifx\@pdfcreationdate\@empty
9777   \else
9778     \special{PDF: CreationDate \@pdfcreationdate}%
9779   \fi
9780   \ifx\@pdfmoddate\@empty
9781   \else
9782     \special{PDF: ModDate \@pdfmoddate}%
9783   \fi
9784   \special{PDF: Author \@pdfauthor}%
9785   \ifx\@pdfproducer\relax
9786   \else
9787     \special{PDF: Producer \@pdfproducer}%
9788   \fi
9789   \special{PDF: Subject \@pdfsubject}%
9790   \Hy@DisableOption{pdfauthor}%
9791   \Hy@DisableOption{pdftitle}%
9792   \Hy@DisableOption{pdfsubject}%
9793   \Hy@DisableOption{pdfcreator}%
9794   \Hy@DisableOption{pdfcreationdate}%
9795   \Hy@DisableOption{pdfmoddate}%
9796   \Hy@DisableOption{pdfproducer}%
9797   \Hy@DisableOption{pdfkeywords}%
9798 }
9799 \def\PDF@SetupDoc{%
9800   \def\Hy@temp{}%
9801   \ifx\@pdfstartpage\@empty
9802   \else
9803     \ifx\@pdfstartview\@empty
9804     \else
9805       \edef\Hy@temp{%
9806         ,Page=\@pdfstartpage
9807         ,View=\@pdfstartview
9808       }%
9809     \fi
9810   \fi
9811   \edef\Hy@temp{%
9812     \noexpand\pdfmark{%
9813       pdfmark=/DOCVIEW,%
9814       PageMode=/\@pdfpagemode
9815     }\Hy@temp

```

```

9816     }%
9817 }%
9818 \Hy@temp
9819 \ifx\@pdfpagescrop\@empty
9820 \else
9821     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9822 \fi
9823 \edef\Hy@temp{%
9824     \ifHy@toolbar\else /HideToolbar true\fi
9825     \ifHy@menubar\else /HideMenubar true\fi
9826     \ifHy@windowui\else /HideWindowUI true\fi
9827     \ifHy@fitwindow /FitWindow true\fi
9828     \ifHy@centerwindow /CenterWindow true\fi
9829     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9830     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9831     \Hy@UseNameKey{Direction}\@pdfdirection
9832     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9833     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9834     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9835     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9836     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9837     \Hy@UseNameKey{Duplex}\@pdfduplex
9838     \ifx\@pdfpicktraybypdfsize\@empty
9839     \else
9840         /PickTrayByPDFSize \@pdfpicktraybypdfsize
9841     \fi
9842     \ifx\@pdfprintpagerange\@empty
9843     \else
9844         /PrintPageRange[\@pdfprintpagerange]%
9845     \fi
9846     \ifx\@pdfnumcopies\@empty
9847     \else
9848         /NumCopies \@pdfnumcopies
9849     \fi
9850 }%
9851 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9852 \pdfmark{%
9853     pdfmark=/PUT,%
9854     Raw={%
9855         \string{Catalog\string}<<%
9856         \ifx\Hy@temp\@empty
9857         \else
9858             /ViewerPreferences<<\Hy@temp>>%
9859         \fi
9860         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9861         \ifx\@pdflang\@empty
9862         \else
9863             /Lang(\@pdflang)%
9864         \fi
9865         \ifx\@baseurl\@empty
9866         \else
9867             /URI<</Base(\Hy@pstringB)>>%
9868         \fi
9869     >>%
9870 }%
9871 }%
9872 }

```

```

9873 \providecommand*\@pdfview{XYZ}
9874 \providecommand*\@pdfviewparams{ %
9875   gsave revscl currentpoint grestore %
9876   72 add exch pop null exch null%
9877 }
9878 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

9879 \g@addto@macro\Hy@FirstPageHook{%
9880   \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

9881   /DvipsToPDF { 65781 div } def%
9882   /PDFToDvips { 65781 mul } def%
9883   /BPToDvips{65781 mul}def%
9884   /HyperBorder { 1 PDFToDvips } def%
9885   /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.

```

9886   /BorderArrayPatch{%
9887     [exch{%
9888       dup dup type/integertype eq exch type/realtype eq or%
9889       {BPToDvips}if%
9890     }forall]%
9891   }def%
9892   /H.S {%
9893     currentpoint %
9894     HyperBorder add /pdf@lly exch def %
9895     dup DvipsToPDF 72 add /pdf@hoff exch def %
9896     HyperBorder sub /pdf@llx exch def%
9897   } def%
9898   /H.L {%
9899     2 sub %
9900     PDFToDvips /HyperBase exch def %
9901     currentpoint %
9902     HyperBase sub /pdf@ury exch def%
9903     /pdf@urx exch def%
9904   } def%
9905   /H.A {%
9906     H.L %
9907     currentpoint exch pop %
9908     HyperBase sub % baseline skip
9909     DvipsToPDF /pdf@voff exch def%
9910   } def%
9911   /H.R {%
9912     currentpoint %
9913     HyperBorder sub /pdf@ury exch def %
9914     HyperBorder add /pdf@urx exch def %
9915     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9916   } def%
9917   }%
9918 }
9919 </dvipsone>

```

46.13 TeX4ht

```
9920 <*tex4ht>
9921 \providecommand*{\XR@ext}{html}
9922 \def\Hy@raisedlink{}
9923 \@ifpackageloaded{tex4ht}{%
9924   \typeout{hyperref tex4ht: tex4ht already loaded}%
9925 }{%
9926   \RequirePackage[htex4ht]{tex4ht}%
9927 }
9928 \hyperlinkfileprefix{}
9929 \def\PDF@FinishDoc{}
9930 \def\PDF@SetupDoc{%
9931   \ifx\@baseurl\@empty
9932   \else
9933     \special{t4ht=<base href="\@baseurl">}%
9934   \fi
9935 }
9936 \def\hyper@anchor#1{%
9937   \Hy@SaveLastskip
9938   \begingroup
9939     \let\protect=\string
9940     \special{t4ht=<a name=%
9941       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9942   \endgroup
9943   \Hy@activeanchortrue
9944   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9945   \special{t4ht=</a>}%
9946   \Hy@activeanchorfalse
9947   \Hy@RestoreLastskip
9948 }
9949 \def\hyper@anchorstart#1{%
9950   \Hy@SaveLastskip
9951   \begingroup
9952     \hyper@chars\special{t4ht=<a name=%
9953       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9954   \endgroup
9955   \Hy@activeanchortrue
9956 }
9957 \def\hyper@anchorend{%
9958   \special{t4ht=</a>}%
9959   \Hy@activeanchorfalse
9960   \Hy@RestoreLastskip
9961 }
9962 \def\@urltype{url}
9963 \def\hyper@linkstart#1#2{%
9964   \expandafter\Hy@colorlink\csname @#1color\endcsname
9965   \def\Hy@tempa{#1}%
9966   \ifx\Hy@tempa\@urltype
9967     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9968   \else
9969     \begingroup
9970       \hyper@chars
9971       \special{t4ht=<a href=%
9972         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9973     \endgroup
9974   \fi
9975 }
```

```

9976 \def\hyper@linkend{%
9977   \special{t4ht=</a>}%
9978   \Hy@endcolorlink
9979 }
9980 \def\hyper@linkfile#1#2#3{%
9981   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9982 }
9983 \def\hyper@linkurl#1#2{%
9984   \leavevmode
9985   \ifHy@raiselinks
9986     \setbox\@tempboxa=\color@hbox #1\color@endbox
9987     \@linkdim\dp\@tempboxa
9988     \lower\@linkdim\hbox{%
9989       \begingroup
9990         \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9991       \endgroup
9992     }%
9993     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9994     \@linkdim\ht\@tempboxa
9995     \advance\@linkdim by -6.5\p@
9996     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
9997   \else
9998     \begingroup
9999     \hyper@chars
10000     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10001     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10002     \special{t4ht=</a>}%
10003   \endgroup
10004 \fi
10005 }

```

Poor implementation of \hyper@link without considering #1.

```

10006 \def\hyper@link#1#2#3{%
10007   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10008 }
10009 \def\hyper@image#1#2{%
10010   \begingroup
10011     \hyper@chars
10012     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10013   \endgroup
10014 }
10015 \let\autoref\ref
10016 \ifx \rEfLiNK \UnDef
10017   \def\rEfLiNK #1#2{#2}%
10018 \fi
10019 \def\backref#1{}
10020 </tex4ht>
10021 <*tex4htcfg>
10022 \IfFileExists{\jobname.cfg}{\endinput}{}
10023 \Preamble{html}
10024   \begin{document}%
10025 \EndPreamble
10026 \def\TeX{TeX}
10027 \def\OMEGA{\Omega}
10028 \def\LaTeX{LaTeX}
10029 \def\LaTeXe{\LaTeX2e}
10030 \def\eTeX{e-TeX}
10031 \def\MF{Metafont}

```

```
10032 \def\MP{MetaPost}
10033 \</tex4htcfg>
```

47 Driver-specific form support

47.1 pdfmarks

```
10034 \<*pdfmark>
10035 \long\def\@Form[#1]{%
10036 \g@addto@macro\Hy@FirstPageHook{%
10037 \headerps@out{%
10038 [%
10039 /_objdef{pdfDocEncoding}%
10040 /type/dict%
10041 /OBJ pdfmark%
10042 [%
10043 {pdfDocEncoding}%
10044 <<%
10045 /Type/Encoding%
10046 /Differences[%
10047 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10048 /tilde %
10049 39/quotesingle %
10050 96/grave %
10051 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10052 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10053 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10054 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10055 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10056 164/currency %
10057 166/brokenbar %
10058 168/dieresis/copyright/ordfeminine %
10059 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10060 /twosuperior/threesuperior/acute/mu %
10061 183/periodcentered/cedilla/onesuperior/ordmasculine %
10062 188/onequarter/onehalf/threequarters %
10063 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10064 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10065 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10066 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10067 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10068 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10069 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10070 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10071 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10072 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10073 ]%
10074 >>%
10075 /PUT pdfmark%
10076 [%
10077 /_objdef{ZaDb}%
10078 /type/dict%
10079 /OBJ pdfmark%
10080 [%
10081 {ZaDb}%
10082 <<%
10083 /Type/Font%
10084 /Subtype/Type1%
```



```

10085     /Name/ZaDb%
10086     /BaseFont/ZapfDingbats%
10087   >>%
10088 /PUT pdfmark%
10089 [%
10090   /_objdef{Helv}%
10091   /type/dict%
10092 /OBJ pdfmark%
10093 [%
10094   {Helv}%
10095   <<%
10096     /Type/Font%
10097     /Subtype/Type1%
10098     /Name/Helv%
10099     /BaseFont/Helvetica%
10100     /Encoding{pdfDocEncoding}%
10101   >>%
10102 /PUT pdfmark%
10103 [%
10104   /_objdef{aform}%
10105   /type/dict%
10106 /OBJ pdfmark%
10107 [%
10108   /_objdef{afields}%
10109   /type/array%
10110 /OBJ pdfmark%
10111 {%
10112   [%
10113     /BBox[0 0 100 100]%
10114     /_objdef{Check}%
10115   /BP pdfmark %
10116   1 0 0 setrgbcolor%
10117   /ZapfDingbats 80 selectfont %
10118   20 20 moveto%
10119   (4)show%
10120 [/EP pdfmark%
10121 [%
10122   /BBox[0 0 100 100]%
10123   /_objdef{Cross}%
10124 /BP pdfmark %
10125   1 0 0 setrgbcolor%
10126   /ZapfDingbats 80 selectfont %
10127   20 20 moveto%
10128   (8)show%
10129 [/EP pdfmark%
10130 [%
10131   /BBox[0 0 250 100]%
10132   /_objdef{Submit}%
10133 /BP pdfmark %
10134   0.6 setgray %
10135   0 0 250 100 rectfill %
10136   1 setgray %
10137   2 2 moveto %
10138   2 98 lineto %
10139   248 98 lineto %
10140   246 96 lineto %
10141   4 96 lineto %

```

```

10142 4 4 lineto %
10143 fill %
10144 0.34 setgray %
10145 248 98 moveto %
10146 248 2 lineto %
10147 2 2 lineto %
10148 4 4 lineto %
10149 246 4 lineto %
10150 246 96 lineto %
10151 fill%
10152 /Helvetica 76 selectfont %
10153 0 setgray %
10154 8 22.5 moveto%
10155 (Submit)show%
10156 [/EP pdfmark%
10157 [%
10158   /BBox[0 0 250 100]%
10159   /_objdef{SubmitP}%
10160 /BP pdfmark %
10161 0.6 setgray %
10162 0 0 250 100 rectfill %
10163 0.34 setgray %
10164 2 2 moveto %
10165 2 98 lineto %
10166 248 98 lineto %
10167 246 96 lineto %
10168 4 96 lineto %
10169 4 4 lineto %
10170 fill %
10171 1 setgray %
10172 248 98 moveto %
10173 248 2 lineto %
10174 2 2 lineto %
10175 4 4 lineto %
10176 246 4 lineto %
10177 246 96 lineto %
10178 fill%
10179 /Helvetica 76 selectfont %
10180 0 setgray %
10181 10 20.5 moveto%
10182 (Submit)show%
10183 [/EP pdfmark%
10184 } ?pdfmark%
10185 [%
10186 {aform}%
10187 <<%
10188   /Fields{afields}%
10189   /DR<<%
10190     /Font<<%
10191       /ZaDb{ZaDb}%
10192       /Helv{Helv}%
10193     >>%
10194   >>%
10195   /DA(/Helv 10 Tf 0 g)%
10196   /CO{corder}%
10197   \ifHy@pdfa
10198   \else

```

```

10199      /NeedAppearances true%
10200      \fi
10201    >>%
10202  /PUT pdfmark%
10203 [%
10204   {Catalog}%
10205   <<%
10206     /AcroForm{aform}%
10207   >>%
10208  /PUT pdfmark%
10209 [%
10210   /_objdef{corder}%
10211   /type/array%
10212  /OBJ pdfmark% dps
10213 }]%
10214   \setkeys{Form}{#1}%
10215 }
10216 \def\@endForm{}
10217 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10218   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10219 }
10220 \def\@TextField[#1]#2{% parameters, label
10221   \def\Fld@name{#2}%
10222   \def\Fld@default{}%
10223   \let\Fld@value\@empty
10224   \def\Fld@width{\DefaultWidthofText}%
10225   \def\Fld@height{%
10226     \ifFld@multiline
10227       \DefaultHeightofTextMultiline
10228     \else
10229       \DefaultHeightofText
10230     \fi
10231   }%
10232   \begingroup
10233     \Field@toks={ }%
10234     \expandafter\HyField@SetKeys\expandafter{%
10235       \DefaultOptionsofText,#1%
10236     }%
10237     \HyField@FlagsText
10238     \ifFld@hidden\def\Fld@width{1sp}\fi
10239     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10240     \LayoutTextField{#2}{%
10241       \Hy@escapeform\PDFForm@Text
10242       \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10243         pdfmark=/ANN,Raw={\PDFForm@Text}%
10244       }%
10245     }%
10246   \endgroup
10247 }
10248 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10249   \def\Fld@name{#2}%
10250   \let\Fld@default\relax
10251   \let\Fld@value\relax
10252   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10253   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10254   \begingroup
10255     \Fld@menulength=0 %

```

```

10256 \@tempdima\z@
10257 \@for\@curropt:=#3\do{%
10258   \expandafter\Fld@checkequals\@curropt==\%
10259   \Hy@StepCount\Fld@menulength
10260   \settowidth{\@tempdimb}{\@currDisplay}%
10261   \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10262 }%
10263 \advance\@tempdima by 15\p@
10264 \Field@toks={ }%
10265 \beginngroup
10266   \HyField@SetKeys{#1}%
10267 \edef\x{\endgroup
10268   \noexpand\expandafter
10269   \noexpand\HyField@SetKeys
10270   \noexpand\expandafter{%
10271     \expandafter\noexpand\csname DefaultOptionsof%
10272       \ifFld@radio
10273         Radio%
10274       \else
10275         \ifFld@combo
10276           \ifFld@popdown
10277             PopdownBox%
10278           \else
10279             ComboBox%
10280           \fi
10281         \else
10282           ListBox%
10283         \fi
10284       \fi
10285     \endcsname
10286   }%
10287 }\x
10288 \HyField@SetKeys{#1}%
10289 \ifFld@hidden\def\Fld@width{1sp}\fi
10290 \ifx\Fld@value\relax
10291   \let\Fld@value\Fld@default
10292 \fi
10293 \LayoutChoiceField{#2}{%
10294   \ifFld@radio
10295     \HyField@FlagsRadioButton
10296     \@@Radio{#3}%
10297   \else
10298     \beginngroup
10299     \HyField@FlagsChoice
10300     \ifdim\Fld@width<\@tempdima
10301       \ifdim\@tempdima<1cm\@tempdima1cm\fi
10302       \edef\Fld@width{\the\@tempdima}%
10303     \fi
10304     \ifFld@combo
10305     \else
10306       \@tempdima=\the\Fld@menulength\Fld@charsize
10307       \advance\@tempdima by \Fld@borderwidth bp %
10308       \advance\@tempdima by \Fld@borderwidth bp %
10309       \edef\Fld@height{\the\@tempdima}%
10310     \fi
10311     \@@ListBox{#3}%
10312   \endgroup

```

```

10313     \fi
10314   }%
10315 \endgroup
10316 }
10317 \def\@@Radio#1{%
10318   \Fld@listcount=0 %
10319   \@for\@curropt:=#1\do{%
10320     \expandafter\Fld@checkequals\@curropt==\%
10321     \Hy@StepCount\Fld@listcount
10322     \@currDisplay\space
10323     \Hy@escapeform\PDFForm@Radio
10324     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10325       pdfmark=/ANN,%
10326       Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10327     } % deliberate space between radio buttons
10328   }%
10329 }
10330 \newcount\Fld@listcount
10331 \def\@@Listbox#1{%
10332   \HyField@PDFChoices{#1}%
10333   \Hy@escapeform\PDFForm@List
10334   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10335     pdfmark=/ANN,Raw={\PDFForm@List}%
10336   }%
10337 }
10338 \def\@PushButton[#1]#2{% parameters, label
10339   \def\Fld@name{#2}%
10340   \begingroup
10341     \Field@toks={ }%
10342     \expandafter\HyField@SetKeys\expandafter{%
10343       \DefaultOptionsofPushButton,#1%
10344     }%
10345     \ifHy@pdfa
10346       \PackageError{hyperref}{%
10347         PDF/A: Push button with JavaScript is prohibited%
10348       }{\@ehc
10349         \LayoutPushButtonField{%
10350           \leavevmode
10351           \MakeButtonField{#2}%
10352         }%
10353       \else
10354         \HyField@FlagsPushButton
10355         \ifFld@hidden\def\Fld@width{1sp}\fi
10356         \LayoutPushButtonField{%
10357           \leavevmode
10358           \Hy@escapeform\PDFForm@Push
10359           \pdfmark[\MakeButtonField{#2}]{%
10360             pdfmark=/ANN,Raw={\PDFForm@Push}%
10361           }%
10362         }%
10363       \fi
10364     \endgroup
10365 }
10366 \def\@Submit[#1]#2{%
10367   \Field@toks={ }%
10368   \def\Fld@width{\DefaultWidthofSubmit}%
10369   \def\Fld@height{\DefaultHeightofSubmit}%

```

```

10370 \begingroup
10371   \expandafter\HyField@SetKeys\expandafter{%
10372     \DefaultOptionsofSubmit,#1%
10373   }%
10374   \HyField@FlagsPushButton
10375   \HyField@FlagsSubmit
10376   \ifFld@hidden\def\Fld@width{1sp}\fi
10377   \Hy@escapeform\PDFForm@Submit
10378   \pdfmark[\MakeButtonField{#2}]{%
10379     pdfmark=/ANN,%
10380     Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10381   }%
10382 \endgroup
10383 }
10384 \def\@Reset[#1]#2{%
10385   \Field@toks={ }%
10386   \def\Fld@width{\DefaultWidthofReset}%
10387   \def\Fld@height{\DefaultHeightofReset}%
10388   \begingroup
10389     \expandafter\HyField@SetKeys\expandafter{%
10390       \DefaultOptionsofReset,#1%
10391     }%
10392     \leavevmode
10393     \ifHy@pdfa
10394       \PackageError{hyperref}{%
10395         PDF/A: Reset action is prohibited%
10396       }{\@ehc
10397         \MakeButtonField{#2}%
10398       }%
10399     \else
10400       \HyField@FlagsPushButton
10401       \ifFld@hidden\def\Fld@width{1sp}\fi
10402       \Hy@escapeform\PDFForm@Reset
10403       \pdfmark[\MakeButtonField{#2}]{%
10404         pdfmark=/ANN,Raw={\PDFForm@Reset}%
10405       }%
10406     \fi
10407   \endgroup
10408 }%
10409 \def\@CheckBox[#1]#2{% parameters, label
10410   \def\Fld@name{#2}%
10411   \def\Fld@default{0}%
10412   \begingroup
10413     \def\Fld@width{\DefaultWidthofCheckBox}%
10414     \def\Fld@height{\DefaultHeightofCheckBox}%
10415     \Field@toks={ }%
10416     \expandafter\HyField@SetKeys\expandafter{%
10417       \DefaultOptionsofCheckBox,#1%
10418     }%
10419     \HyField@FlagsCheckBox
10420     \ifFld@hidden\def\Fld@width{1sp}\fi
10421     \LayoutCheckField{#2}{%
10422       \Hy@escapeform\PDFForm@Check
10423       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10424         pdfmark=/ANN,Raw={\PDFForm@Check}%
10425       }%
10426     }%
10427   \endgroup

```

```

10427 }
10428 </pdfmark>

```

47.2 HyperTeX

```

10429 <*hypertext>
10430 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10431 \def\@endForm{}
10432 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10433   \typeout{Sorry, HyperTeX does not support FORM gauges}%
10434 }
10435 \def\@TextField[#1]#2{% parameters, label
10436   \typeout{Sorry, HyperTeX does not support FORM text fields}%
10437 }
10438 \def\@CheckBox[#1]#2{% parameters, label
10439   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10440 }
10441 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10442   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10443 }
10444 \def\@PushButton[#1]#2{% parameters, label
10445   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10446 }
10447 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10448 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10449 </hypertext>

```

47.3 TeX4ht

```

10450 <*tex4ht>
10451 \def\@Form[#1]{%
10452   \setkeys{Form}{#1}%
10453   \HCode{<form action="\Form@action" method="\Form@method">}%
10454 }
10455 \def\@endForm{\HCode{</form>}}
10456 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10457   \typeout{Sorry, TeX4ht does not support gauges}%
10458 }
10459 \def\@TextField[#1]#2{% parameters, label
10460   \let\Hy@reserved@a\@empty
10461   \def\Fld@name{#2}%
10462   \def\Fld@default{}%
10463   \bgroup
10464     \Field@toks={ }%
10465     \setkeys{Field}{#1}%
10466     \HCode{<label for="\Fld@name">#2</label>}%
10467     \ifFld@password
10468       \@@PasswordField
10469     \else
10470       \@@TextField
10471     \fi
10472   \egroup
10473 }
10474 \def\@@PasswordField{%
10475   \HCode{%
10476     <input type="password" %
10477       id="\Fld@name" %
10478       name="\Fld@name" %
10479       \ifFld@hidden type="hidden" \fi

```

```

10480     value="\Fld@default" %
10481     \the\Field@toks
10482     >%
10483 }%
10484 }
10485 \def\@@TextField{%
10486   \ifFld@multiline
10487     \HCode{<textarea %
10488       \ifFld@readonly readonly \fi
10489       id="\Fld@name" %
10490       name="\Fld@name" %
10491       \ifFld@hidden type="hidden" \fi
10492       \the\Field@toks>%
10493   }%
10494   \Fld@default
10495   \HCode{</textarea>}%
10496 \else
10497   \HCode{<input type="textbox" %
10498     \ifFld@readonly readonly \fi
10499     id="\Fld@name" %
10500     name="\Fld@name" %
10501     \ifFld@hidden type="hidden" \fi
10502     value="\Fld@default" %
10503     \the\Field@toks>%
10504   }%
10505 \fi
10506 }
10507 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10508   \def\Fld@name{#2}%
10509   \def\Fld@default{}%
10510   \let\Hy@reserved@a\relax
10511   \begin{group}
10512     \expandafter\Fld@findlength#3\\%
10513     \Field@toks={ }%
10514     \setkeys{Field}{#1}%
10515     #2%
10516     \ifFld@radio
10517       \expandafter\@@Radio#3\\%
10518     \else
10519       \expandafter\@@Menu#3\\%
10520     \fi
10521   \end{group}
10522 }
10523 \def\Fld@findlength#1\\{%
10524   \Fld@menulength=0 %
10525   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10526 }
10527 \def\@@Menu#1\\{%
10528   \HCode{<select size="\the\Fld@menulength" %
10529     name="\Fld@name" %
10530     \the\Field@toks>%
10531   }%
10532   \@for\@curropt:=#1\do{%
10533     \expandafter\Fld@checkequals\@curropt==\\%
10534     \HCode{<option %
10535       \ifx\@curropt\Fld@default selected \fi
10536       value="\@currValue">\@currDisplay</option>%

```



```

10537     }%
10538 }%
10539 \HCode{</select>}%
10540 }
10541 \def\@Radio#1\{%
10542   \@for\@curropt:=#1\do{%
10543     \expandafter\Fld@checkequals\@curropt==\%
10544     \HCode{<input type="radio" %
10545       \ifx\@curropt\Fld@default checked \fi
10546       name="\Fld@name" %
10547       value="\@currValue" %
10548       \the\Field@toks>%
10549     }%
10550     \@currDisplay
10551   }%
10552 }
10553 \def\@PushButton[#1]#2{% parameters, label
10554   \def\Fld@name{#2}%
10555   \bgroup
10556     \Field@toks={ }%
10557     \setkeys{Field}{#1}%
10558     \HCode{<input type="button" %
10559       name="\Fld@name" %
10560       value="#2" %
10561       \the\Field@toks>%
10562     }%
10563     \HCode{</button>}%
10564   \egroup
10565 }
10566 \def\@Submit[#1]#2{%
10567   \HCode{<button type="submit">#2</button>}%
10568 }
10569 \def\@Reset[#1]#2{%
10570   \HCode{<button type="reset">#2</button>}%
10571 }
10572 \def\@CheckBox[#1]#2{% parameters, label
10573   \let\Hy@reserved@a\@empty
10574   \def\Fld@name{#2}%
10575   \def\Fld@default{0}%
10576   \bgroup
10577     \Field@toks={ }%
10578     \setkeys{Field}{#1}%
10579     \HCode{<input type="checkbox" %
10580       \ifFld@checked checked \fi
10581       \ifFld@disabled disabled \fi
10582       \ifFld@readonly readonly \fi
10583       name="\Fld@name" %
10584       \ifFld@hidden type="hidden" \fi
10585       value="\Fld@default" %
10586       \the\Field@toks>%
10587     #2%
10588   }%
10589   \egroup
10590 }
10591 </tex4ht>

```

47.4 pdfTeX

```

10592 <*pdfTeX>
10593 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10594 \typeout{Sorry, pdfTeX does not support FORM gauges}%
10595 }
10596 \def\MakeFieldObject#1#2{\sbox0{#1}%
10597 \immediate\pdfxform0 %
10598 \expandafter\edef\csname #20bject\endcsname{%
10599 \the\pdflastxform\space 0 R%
10600 }%
10601 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10602 }%
10603 \def\HyField@afields{}
10604 \begingroup\expandafter\expandafter\expandafter\endgroup
10605 \expandafter\ifx\csname pdflastlink\endcsname\relax
10606 \let\HyField@AddToFields\relax
10607 \PackageInfo{hyperref}{%
10608 You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10609 Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10610 but other PDF viewers might complain%
10611 }%
10612 \else
10613 \def\HyField@AddToFields{%
10614 \xdef\HyField@afields{%
10615 \ifx\HyField@afields\@empty
10616 \else
10617 \HyField@afields
10618 \space
10619 \fi
10620 \the\pdflastlink\space 0 R%
10621 }%
10622 }%
10623 \fi
10624 \def\@Form[#1]{%
10625 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
10626 \setkeys{Form}{#1}%
10627 \ifnum\pdfTeXversion>13 %
10628 \pdfrefobj\OBJ\pdfdocencoding
10629 \pdfrefobj\OBJ@ZaDb
10630 \pdfrefobj\OBJ@Helv
10631 \fi
10632 \AtEndDocument{%
10633 \immediate\pdfobj{%
10634 <<%
10635 /Fields[\HyField@afields]%
10636 /DR<<%
10637 /Font<<%
10638 /ZaDb \OBJ@ZaDb\space 0 R%
10639 /Helv \OBJ@Helv\space 0 R%
10640 >>%
10641 >>%
10642 /DA(/Helv 10 Tf 0 g)%
10643 \ifHy@pdfa
10644 \else
10645 /NeedAppearances true%
10646 \fi
10647 >>%
10648 }%

```

```

10649 \edef\OBJ@acroform{\the\pdflastobj}%
10650 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10651 }%
10652 \MakeFieldObject{%
Same as \ding{123} of package pifont.
10653 \beginpgroup
10654 \fontfamily{pzd}%
10655 \fontencoding{U}%
10656 \fontseries{m}%
10657 \fontshape{n}%
10658 \selectfont
10659 \char123 %
10660 \endpgroup
10661 }{Ding}%
10662 \MakeFieldObject{%
10663 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10664 }{Submit}%
10665 \MakeFieldObject{%
10666 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10667 }{SubmitP}%
10668 }
10669 \def\@endForm{}
10670 \def\@TextField[#1]#2{% parameters, label
10671 \def\Fld@name{#2}%
10672 \def\Fld@default{}%
10673 \let\Fld@value\@empty
10674 \def\Fld@width{\DefaultWidthofText}%
10675 \def\Fld@height{%
10676 \ifFld@multiline
10677 \DefaultHeightofTextMultiline
10678 \else
10679 \DefaultHeightofText
10680 \fi
10681 }%
10682 \beginpgroup
10683 \Field@toks={ }%
10684 \expandafter\HyField@SetKeys\expandafter{%
10685 \DefaultOptionsofText,#1%
10686 }%
10687 \PDFForm@Name
10688 \HyField@FlagsText
10689 \ifFld@hidden\def\Fld@width{1sp}\fi
10690 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10691 \LayoutTextField{#2}{%
10692 \Hy@escapeform\PDFForm@Text
10693 \pdfstartlink user {\PDFForm@Text}\relax
10694 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10695 \HyField@AddToFields
10696 }%
10697 \endpgroup
10698 }
10699 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10700 \def\Fld@name{#2}%
10701 \let\Fld@default\relax
10702 \let\Fld@value\relax
10703 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10704 \def\Fld@height{\DefaultHeightofChoiceMenu}%

```

```

10705 \beginngroup
10706   \Fld@menulength=0 %
10707   \@tempdima\z@
10708   \@for\@curropt:=#3\do{%
10709     \expandafter\Fld@checkequals\@curropt==\%
10710     \Hy@StepCount\Fld@menulength
10711     \settowidth{\@tempdimb}{\@currDisplay}%
10712     \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10713   }%
10714   \advance\@tempdima by 15\p@
10715   \Field@toks={ }%
10716   \beginngroup
10717     \HyField@SetKeys{#1}%
10718   \edef\x{\endgroup
10719     \noexpand\expandafter
10720     \noexpand\HyField@SetKeys
10721     \noexpand\expandafter{%
10722       \expandafter\noexpand\csname DefaultOptionsof%
10723         \ifFld@radio
10724           Radio%
10725         \else
10726           \ifFld@combo
10727             \ifFld@popdown
10728               PopdownBox%
10729             \else
10730               ComboBox%
10731             \fi
10732           \else
10733             ListBox%
10734           \fi
10735         \fi
10736       \endcsname
10737     }%
10738   }\x
10739   \HyField@SetKeys{#1}%
10740   \PDFForm@Name
10741   \ifFld@hidden\def\Fld@width{1sp}\fi
10742   \ifx\Fld@value\relax
10743     \let\Fld@value\Fld@default
10744   \fi
10745   \LayoutChoiceField{#2}{%
10746     \ifFld@radio
10747       \HyField@FlagsRadioButton
10748       \@@Radio{#3}%
10749     \else
10750       \beginngroup
10751         \HyField@FlagsChoice
10752         \ifdim\Fld@width<\@tempdima
10753           \ifdim\@tempdima<1cm\@tempdima1cm\fi
10754           \edef\Fld@width{\the\@tempdima}%
10755         \fi
10756         \ifFld@combo
10757         \else
10758           \@tempdima=\the\Fld@menulength\Fld@charsize
10759           \advance\@tempdima by \Fld@borderwidth bp %
10760           \advance\@tempdima by \Fld@borderwidth bp %
10761           \edef\Fld@height{\the\@tempdima}%

```

```

10762         \fi
10763         \@@ListBox{#3}%
10764     \endgroup
10765     \fi
10766 }%
10767 \endgroup
10768 }
10769 \def\@@Radio#1{%
10770     \Fld@listcount=0 %
10771     \@for\@curropt:=#1\do{%
10772         \expandafter\Fld@checkequals\@curropt==\\%
10773         \Hy@StepCount\Fld@listcount
10774         \@currDisplay\space
10775         \leavevmode
10776         \Hy@escapeform\PDFForm@Radio
10777         \pdfstartlink user {%
10778             \PDFForm@Radio
10779         /AP<<%
10780         /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.

```

10781         /\@currValue\space \DingObject
10782         >>%
10783     >>%
10784 }%
10785 \relax
10786 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10787 \ifnum\Fld@listcount=1 %
10788     \HyField@AddToFields
10789 \fi
10790 \space % deliberate space between radio buttons
10791 }%
10792 }
10793 \newcount\Fld@listcount
10794 \def\@@ListBox#1{%
10795     \HyField@PDFChoices{#1}%
10796     \leavevmode
10797     \Hy@escapeform\PDFForm@List
10798     \pdfstartlink user {\PDFForm@List}\relax
10799     \MakeChoiceField{\Fld@width}{\Fld@height}%
10800     \pdfendlink
10801     \HyField@AddToFields
10802 }
10803 \def\@PushButton[#1]#2{% parameters, label
10804     \def\Fld@name{#2}%
10805     \begingroup
10806         \Field@toks={ }%
10807         \expandafter\HyField@SetKeys\expandafter{%
10808             \DefaultOptionsofPushButton,#1%
10809         }%
10810         \PDFForm@Name
10811         \ifHy@pdfa
10812             \PackageError{hyperref}{%
10813                 PDF/A: Push button with JavaScript is prohibited%
10814             }\@ehc
10815         \LayoutPushButtonField{%

```

```

10816         \leavevmode
10817         \MakeButtonField{#2}%
10818     }%
10819 \else
10820     \HyField@FlagsPushButton
10821     \ifFld@hidden\def\Fld@width{1sp}\fi
10822     \LayoutPushButtonField{%
10823         \leavevmode
10824         \Hy@escapeform\PDFForm@Push
10825         \pdfstartlink user {\PDFForm@Push}\relax
10826         \MakeButtonField{#2}%
10827         \pdfendlink
10828         \HyField@AddToFields
10829     }%
10830 \fi
10831 \endgroup
10832 }
10833 \def\@Submit[#1]#2{%
10834     \Field@toks={ }%
10835     \def\Fld@width{\DefaultWidthofSubmit}%
10836     \def\Fld@height{\DefaultHeightofSubmit}%
10837     \begingroup
10838         \expandafter\HyField@SetKeys\expandafter{%
10839             \DefaultOptionsofSubmit,#1%
10840         }%
10841         \HyField@FlagsPushButton
10842         \HyField@FlagsSubmit
10843         \ifFld@hidden\def\Fld@width{1sp}\fi
10844         \leavevmode
10845         \Hy@escapeform\PDFForm@Submit
10846         \pdfstartlink user {%
10847             \PDFForm@Submit
10848             /AP<</N \SubmitObject/D \SubmitPObject>>%
10849         }%
10850         \relax
10851         \MakeButtonField{#2}%
10852         \pdfendlink
10853         \HyField@AddToFields
10854     \endgroup
10855 }
10856 \def\@Reset[#1]#2{%
10857     \Field@toks={ }%
10858     \def\Fld@width{\DefaultWidthofReset}%
10859     \def\Fld@height{\DefaultHeightofReset}%
10860     \begingroup
10861         \expandafter\HyField@SetKeys\expandafter{%
10862             \DefaultOptionsofReset,#1%
10863         }%
10864         \leavevmode
10865         \ifHy@pdfa
10866             \PackageError{hyperref}{%
10867                 PDF/A: Reset action is prohibited%
10868             }\@ehc
10869             \MakeButtonField{#2}%
10870         \else
10871             \HyField@FlagsPushButton
10872             \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

10873      \Hy@escapeform\PDFForm@Reset
10874      \pdfstartlink user {\PDFForm@Reset}\relax
10875      \MakeButtonField{#2}%
10876      \pdfendlink
10877      \HyField@AddToFields
10878      \fi
10879      \endgroup
10880 }
10881 \def\@CheckBox[#1]#2{% parameters, label
10882   \def\Fld@name{#2}%
10883   \def\Fld@default{0}%
10884   \begingroup
10885     \def\Fld@width{\DefaultWidthofCheckBox}%
10886     \def\Fld@height{\DefaultHeightofCheckBox}%
10887     \Field@toks={ }%
10888     \expandafter\HyField@SetKeys\expandafter{%
10889       \DefaultOptionsofCheckBox,#1%
10890     }%
10891     \PDFForm@Name
10892     \HyField@FlagsCheckBox
10893     \ifFld@hidden\def\Fld@width{1sp}\fi
10894     \LayoutCheckField{#2}{%
10895       \Hy@escapeform\PDFForm@Check
10896       \pdfstartlink user {\PDFForm@Check}\relax
10897       \MakeCheckField{\Fld@width}{\Fld@height}%
10898       \pdfendlink
10899       \HyField@AddToFields
10900     }%
10901   \endgroup
10902 }
10903 \pdfobj {%
10904   <<%
10905     /Type/Encoding%
10906     /Differences[%
10907       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10908       /ring/tilde %
10909       39/quotesingle %
10910       96/grave %
10911       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10912       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10913       /quotedblbase/quotedblleft/quotedblright/quoteleft%
10914       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
10915       /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10916       164/currency %
10917       166/brokenbar %
10918       168/dieresis/copyright/ordfeminine %
10919       172/logicalnot/.notdef/registered/macron/degree/plusminus%
10920       /twosuperior/threesuperior/acute/mu %
10921       183/periodcentered/cedilla/onesuperior/ordmasculine %
10922       188/onequarter/onehalf/threequarters %
10923       192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10924       /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10925       /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10926       /Ocircumflex/Otilde/Odieresis/multiply/Ugrave%
10927       /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10928       /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10929       /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%

```

```

10930      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10931      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10932      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10933    ]%
10934  >>%
10935 }
10936 \edef\OBJ@pdfdocencoding{\the\pdflastobj}
10937 \pdfobj{%
10938   <<%
10939     /Type/Font%
10940     /Subtype/Type1%
10941     /Name/ZaDb%
10942     /BaseFont/ZapfDingbats%
10943   >>%
10944 }
10945 \edef\OBJ@ZaDb{\the\pdflastobj}
10946 \pdfobj{%
10947   <<%
10948     /Type/Font%
10949     /Subtype/Type1%
10950     /Name/Helv%
10951     /BaseFont/Helvetica%
10952     /Encoding \OBJ@pdfdocencoding\space 0 R%
10953   >>%
10954 }
10955 \edef\OBJ@Helv{\the\pdflastobj}
10956 \pdfobj{</pdfobj>}

```

47.5 dvipdfm

D. P. Story adapted the pdf_T_EX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

10957 \def\*dvipdfm

```

\@Gauge

```

10958 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10959   \typeout{Sorry, dvipdfm does not support FORM gauges}%
10960 }

```

\@Form

```

10961 \def\@Form[#1]{%
10962   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
10963   \setkeys{Form}{#1}%
10964   \@pdfm@mark{obj @afields []}%
10965   \@pdfm@mark{obj @corder []}%
10966   \@pdfm@mark{%
10967     obj @aform <<%
10968       /Fields @afields%
10969       /DR<<%
10970       /Font<<%
10971         /ZaDb @OBJZaDb%
10972         /Helv @OBJHelv%
10973       >>%
10974     >>%
10975     /DA(/Helv 10 Tf 0 g)%
10976     /CO @corder%
10977     \ifHy@pdfa

```



```

10978         \else
10979             /NeedAppearances true%
10980         \fi
10981     >>%
10982 }%
10983 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
10984 }

\@endForm

10985 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
10986 \def\dvipdfm@setdim{%
10987     height \the\ht\pdfm@box\space
10988     width \the\wd\pdfm@box\space
10989     depth \the\dp\pdfm@box\space
10990 }

\HyField@AnnotCount
10991 \newcount\HyField@AnnotCount
10992 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
10993 \def\HyField@AdvanceAnnotCount{%
10994     \global\advance\HyField@AnnotCount\@ne
10995 }

\HyField@TheAnnotCount
10996 \def\HyField@TheAnnotCount{%
10997     \the\HyField@AnnotCount
10998 }

\@TextField
10999 \def\@TextField[#1]#2{% parameters, label
11000     \def\Fld@name{#2}%
11001     \def\Fld@default{}%
11002     \let\Fld@value\@empty
11003     \def\Fld@width{\DefaultWidthofText}%
11004     \def\Fld@height{%
11005         \ifFld@multiline
11006             \DefaultHeightofTextMultiline
11007         \else
11008             \DefaultHeightofText
11009         \fi
11010     }%
11011     \beginngroup
11012     \Field@toks={ }%
11013     \expandafter\HyField@SetKeys\expandafter{%
11014         \DefaultOptionsofText,#1%
11015     }%
11016     \PDFForm@Name
11017     \HyField@FlagsText
11018     \ifFld@hidden\def\Fld@width{1sp}\fi
11019     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11020     \setbox\pdfm@box=\hbox{%
11021         \MakeTextField{\Fld@width}{\Fld@height}%

```

```

11022 }%
11023 \HyField@AdvanceAnnotCount
11024 \LayoutTextField{#2}{%
11025   \Hy@escapeform\PDFForm@Text
11026   \@pdfm@mark{%
11027     ann @text\HyField@TheAnnotCount\space
11028     \dvipdfm@setdim << \PDFForm@Text >>%
11029   }%
11030 }%
11031 \unhbox\pdfm@box
11032 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11033 % record in @afields array
11034 \endgroup
11035 }

```

\@ChoiceMenu

```

11036 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11037   \def\Fld@name{#2}%
11038   \let\Fld@default\relax
11039   \let\Fld@value\relax
11040   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11041   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11042   \begingroup
11043     \Fld@menulength=0 %
11044     \@tempdima\z@
11045     \@for\@curropt:=#3\do{%
11046       \expandafter\Fld@checkequals\@curropt==\%
11047       \Hy@StepCount\Fld@menulength
11048       \settowidth{\@tempdimb}{\@currDisplay}%
11049       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11050     }%
11051     \advance\@tempdima by 15\p@
11052     \Field@toks={ }%
11053     \begingroup
11054       \HyField@SetKeys{#1}%
11055     \edef\x{\endgroup
11056       \noexpand\expandafter
11057       \noexpand\HyField@SetKeys
11058       \noexpand\expandafter{%
11059         \expandafter\noexpand\csname DefaultOptionsof%
11060           \ifFld@radio
11061             Radio%
11062           \else
11063             \ifFld@combo
11064               \ifFld@popdown
11065                 PopdownBox%
11066               \else
11067                 ComboBox%
11068               \fi
11069             \else
11070               ListBox%
11071             \fi
11072           \fi
11073         \endcsname
11074       }%
11075     }\x
11076     \HyField@SetKeys{#1}%

```

```

11077 \PDFForm@Name
11078 \ifFld@hidden\def\Fld@width{1sp}\fi
11079 \ifx\Fld@value\relax
11080 \let\Fld@value\Fld@default
11081 \fi
11082 \LayoutChoiceField{#2}{%
11083 \ifFld@radio
11084 \HyField@FlagsRadioButton
11085 \@@Radio{#3}%
11086 \else
11087 \beginngroup
11088 \HyField@FlagsChoice
11089 \ifdim\Fld@width<\@tempdima
11090 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11091 \edef\Fld@width{\the\@tempdima}%
11092 \fi
11093 \ifFld@combo
11094 \else
11095 \@tempdima=\the\Fld@menulength\Fld@charsize
11096 \advance\@tempdima by \Fld@borderwidth bp %
11097 \advance\@tempdima by \Fld@borderwidth bp %
11098 \edef\Fld@height{\the\@tempdima}%
11099 \fi
11100 \@@ListBox{#3}%
11101 \endgroup
11102 \fi
11103 }%
11104 \endgroup
11105 }

```

\@@Radio

```

11106 \def\@@Radio#1{%
11107 \Fld@listcount=0 %
11108 \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11109 \@for\@curropt:=#1\do{%
11110 \expandafter\Fld@checkequals\@curropt==\%
11111 \Hy@StepCount\Fld@listcount
11112 \@currDisplay\space
11113 \leavevmode
11114 \Hy@escapeform\PDFForm@Radio
11115 \ifnum\Fld@listcount=1 %
11116 \HyField@AdvanceAnnotCount
11117 \fi
11118 \@pdfm@mark{%
11119 ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
11120 \dvi pdfm@setdim
11121 <<%
11122 \PDFForm@Radio
11123 /AP<</N<</\@currValue /null>>>>%
11124 >>%
11125 }%
11126 \unhcopy\pdfm@box\space% deliberate space between radio buttons
11127 \ifnum\Fld@listcount=1 %
11128 \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11129 \fi
11130 }%
11131 }

```

```

\Fld@listcount
11132 \newcount\Fld@listcount

@@Listbox
11133 \def\@@Listbox#1{%
11134   \HyField@PDFChoices{#1}%
11135   \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
11136   \leavevmode
11137   \Hy@escapeform\PDFForm@List
11138   \HyField@AdvanceAnnotCount
11139   \@pdfm@mark{%
11140     ann @list\HyField@TheAnnotCount\space
11141     \dvipdfm@setdim
11142     <<\PDFForm@List>>%
11143   }%
11144   \unhbox\pdfm@box
11145   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11146 }

@PushButton
11147 \def\@PushButton[#1]#2{% parameters, label
11148   \def\Fld@name{#2}%
11149   \begingroup
11150     \Field@toks={ }%
11151     \expandafter\HyField@SetKeys\expandafter{%
11152       \DefaultOptionsofPushButton,#1%
11153     }%
11154     \PDFForm@Name
11155     \ifHy@pdfa
11156       \PackageError{hyperref}{%
11157         PDF/A: Push button with JavaScript is prohibited%
11158       }\@ehc
11159       \LayoutPushButtonField{%
11160         \leavevmode
11161         \MakeButtonField{#2}%
11162       }%
11163     \else
11164       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11165       \HyField@FlagsPushButton
11166       \ifFld@hidden\def\Fld@width{1sp}\fi
11167       \HyField@AdvanceAnnotCount
11168       \LayoutPushButtonField{%
11169         \leavevmode
11170         \Hy@escapeform\PDFForm@Push
11171         \@pdfm@mark{%
11172           ann @push\HyField@TheAnnotCount\space
11173           \dvipdfm@setdim
11174           <<\PDFForm@Push>>%
11175         }%
11176       }%
11177       \unhbox\pdfm@box
11178       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11179     \fi
11180   \endgroup
11181 }

@Submit

```

```

11182 \def \@Submit[#1]#2{%
11183   \Field@toks={ }%
11184   \def \Fld@width{\DefaultWidthofSubmit}%
11185   \def \Fld@height{\DefaultHeightofSubmit}%
11186   \begingroup
11187     \expandafter\HyField@SetKeys\expandafter{%
11188       \DefaultOptionsofSubmit,#1%
11189     }%
11190     \HyField@FlagsPushButton
11191     \HyField@FlagsSubmit
11192     \ifFld@hidden\def \Fld@width{1sp}\fi
11193     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11194     \leavevmode
11195     \Hy@escapeform\PDFForm@Submit
11196     \HyField@AdvanceAnnotCount
11197     \@pdfm@mark{%
11198       ann @submit\HyField@TheAnnotCount\space
11199       \dvi pdfm@setdim
11200       <<\PDFForm@Submit>>%
11201     }%
11202     \unhbox\pdfm@box%
11203     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11204   \endgroup
11205 }

\@Reset
11206 \def \@Reset[#1]#2{%
11207   \Field@toks={ }%
11208   \def \Fld@width{\DefaultWidthofReset}%
11209   \def \Fld@height{\DefaultHeightofReset}%
11210   \begingroup
11211     \expandafter\HyField@SetKeys\expandafter{%
11212       \DefaultOptionsofReset,#1%
11213     }%
11214     \leavevmode
11215     \ifHy@pdfa
11216       \PackageError{hyperref}{%
11217         PDF/A: Reset action is prohibited%
11218       }{@ehc}
11219       \MakeButtonField{#2}%
11220     \else
11221       \HyField@FlagsPushButton
11222       \ifFld@hidden\def \Fld@width{1sp}\fi
11223       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11224       \Hy@escapeform\PDFForm@Reset
11225       \HyField@AdvanceAnnotCount
11226       \@pdfm@mark{%
11227         ann @reset\HyField@TheAnnotCount\space
11228         \dvi pdfm@setdim
11229         <<\PDFForm@Reset>>%
11230       }%
11231       \unhbox\pdfm@box
11232       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11233     \fi
11234   \endgroup
11235 }

```

\@CheckBox

```
11236 \def\@CheckBox[#1]#2{% parameters, label
11237   \def\Fld@name{#2}%
11238   \def\Fld@default{0}%
11239   \begingroup
11240     \def\Fld@width{\DefaultWidthofCheckBox}%
11241     \def\Fld@height{\DefaultHeightofCheckBox}%
11242     \Field@toks={ }%
11243     \expandafter\HyField@SetKeys\expandafter{%
11244       \DefaultOptionsofCheckBox,#1%
11245     }%
11246     \PDFForm@Name
11247     \HyField@FlagsCheckBox
11248     \ifFld@hidden\def\Fld@width{1sp}\fi
11249     \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11250     \HyField@AdvanceAnnotCount
11251     \LayoutCheckField{#2}{%
11252       \Hy@escapeform\PDFForm@Check
11253       \@pdfm@mark{%
11254         ann @check\HyField@TheAnnotCount\space
11255         \dvipdfm@setdim
11256         <<\PDFForm@Check>>%
11257       }%
11258       \unhbox\pdfm@box
11259       \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11260     }%
11261   \endgroup
11262 }

11263 \@pdfm@mark{obj @OBJpdfdocencoding%
11264 <<%
11265   /Type/Encoding%
11266   /Differences[%
11267     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11268     39/quotesingle %
11269     96/grave %
11270     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11271     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11272     /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11273     /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11274     /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11275     164/currency %
11276     166/brokenbar %
11277     168/dieresis/copyright/ordfeminine %
11278     172/logicalnot/.notdef/registered/macron/degree/plusminus%
11279     /twosuperior/threesuperior/acute/mu %
11280     183/periodcentered/cedilla/onesuperior/ordmasculine %
11281     188/onequarter/onehalf/threequarters %
11282     192/Agave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11283     /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11284     /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11285     /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11286     /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11287     /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11288     /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11289     /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
11290     /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
```

```

11291         /thorn/ydieresis%
11292     ]%
11293 >>%
11294 }
11295 \pdfmark{obj @OBJZaDb%
11296 <<%
11297     /Type/Font%
11298     /Subtype/Type1%
11299     /Name/ZaDb%
11300     /BaseFont/ZapfDingbats%
11301 >>%
11302 }
11303 \pdfmark{obj @OBJHelv%
11304 <<%
11305     /Type/Font%
11306     /Subtype/Type1%
11307     /Name/Helv%
11308     /BaseFont/Helvetica%
11309     /Encoding @OBJpdfdocencoding%
11310 >>%
11311 }
11312 </dvipdfm>

```

47.6 Common forms part

```
11313 <*pdfform>
```

\Hy@escapestring

```

11314 \begingroup\expandafter\expandafter\expandafter\endgroup
11315 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11316   \let\Hy@escapestring\@firstofone
11317   \def\Hy@escapeform#1{%
11318     \ifHy@escapeform
11319       \def\Hy@escapestring##1{%
11320         \noexpand\Hy@escapestring{\noexpand##1}%
11321       }%
11322     \edef\Hy@temp{#1}%
11323     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11324     \def\Hy@escapestring##1{%
11325       \@ifundefined{Hy@esc@\string##1}{%
11326         ##1%
11327         \ThisShouldNotHappen
11328       }{%
11329         \csname Hy@esc@\string##1\endcsname
11330       }%
11331     }%
11332   \else
11333     \let\Hy@escapestring\@firstofone
11334   \fi
11335 }%
11336 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11337   \ifx\#3\%
11338   \else
11339     \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11340     \Hy@ReturnAfterFi{%
11341       \Hy@@escapeform#3\@nil
11342     }%

```

```

11343     \fi
11344   }%
11345 \else
11346   \def\Hy@escapeform#1{%
11347     \ifHy@escapeform
11348       \let\Hy@escapestring\pdfescapestring
11349     \else
11350       \let\Hy@escapestring\@firstofone
11351     \fi
11352   }%
11353   \Hy@escapeform{}}%
11354 \fi

\PDFForm@Name
11355 \def\PDFForm@Name{%
11356   \begingroup
11357     \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11358       \ifHy@unicode
11359         \Hy@unicodetrue
11360       \fi
11361     \fi
11362     \pdfstringdef\Hy@gtemp\Fld@name
11363   \endgroup
11364   \let\Fld@name\Hy@gtemp
11365 }

\PDFForm@Check
11366 \def\PDFForm@Check{%
11367   /Subtype/Widget%
11368   \Fld@annotflags
11369   /T(\Fld@name)%
11370   /FT/Btn%
11371   \Fld@flags
11372   /Q \Fld@align
11373   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11374   /MK<<%
11375     \ifnum\Fld@rotation=\z@
11376     \else
11377       /R \Fld@rotation
11378     \fi
11379     \ifx\Fld@bordercolor\relax
11380     \else
11381       /BC[\Fld@bordercolor]%
11382     \fi
11383     \ifx\Fld@bcolor\relax
11384     \else
11385       /BG[\Fld@bcolor]%
11386     \fi
11387     /CA(\Hy@escapestring{\Fld@cbsymbol})%
11388   >>%
11389   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11390     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11391   /H/P%
11392   \ifFld@checked /V/Yes\else /V/Off\fi
11393 }

\PDFForm@Push

```



```

11394 \ifHy@pdfa
11395 \else
11396   \def\PDFForm@Push{%
11397     /Subtype/Widget%
11398     \Fld@annotflags
11399     /T(\Fld@name)%
11400     /FT/Btn%
11401     \Fld@flags
11402     /H/P%
11403     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11404     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
11405       \ifx\Fld@bordercolor\relax\else 1\fi
11406       \space
11407     \else
11408       /MK<<%
11409         \ifnum\Fld@rotation=\z@
11410         \else
11411           /R \Fld@rotation
11412         \fi
11413         \ifx\Fld@bordercolor\relax
11414         \else
11415           /BC[\Fld@bordercolor]%
11416         \fi
11417       >>%
11418     \fi
11419     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick})>>%
11420   }%
11421 \fi

```

\Fld@additionalactions

```

11422 \def\Fld@@additionalactions{%
K input (keystroke) format
11423   \ifx\Fld@keystroke@code\@empty
11424   \else
11425     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11426   \fi
F display format
11427   \ifx\Fld@format@code\@empty
11428   \else
11429     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11430   \fi
V validation
11431   \ifx\Fld@validate@code\@empty
11432   \else
11433     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11434   \fi
C calculation
11435   \ifx\Fld@calculate@code\@empty
11436   \else
11437     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11438   \fi
Fo receiving the input focus
11439   \ifx\Fld@onfocus@code\@empty
11440   \else

```

```

11441     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11442     \fi
Bl loosing the input focus (blurred)
11443     \ifx\Fld@onblur@code\@empty
11444     \else
11445         /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11446     \fi
D pressing the mouse button (down)
11447     \ifx\Fld@onmousedown@code\@empty
11448     \else
11449         /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11450     \fi
U releasing the mouse button (up)
11451     \ifx\Fld@onmouseup@code\@empty
11452     \else
11453         /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11454     \fi
E cursor enters the annotation's active area.
11455     \ifx\Fld@onenter@code\@empty
11456     \else
11457         /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11458     \fi
X cursor exits the annotation's active area.
11459     \ifx\Fld@onexit@code\@empty
11460     \else
11461         /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11462     \fi
11463 }
11464 \def\Fld@additionalactions{%
11465     \if-\Fld@@additionalactions-%
11466     \else
11467         \ifHy@pdfa
11468         \else
11469             /AA<<\Fld@@additionalactions>>%
11470         \fi
11471     \fi
11472 }

```

\PDFForm@List

```

11473 \def\PDFForm@List{%
11474     /Subtype/Widget%
11475     \Fld@annotflags
11476     /T(\Fld@name)%
11477     /FT/Ch%
11478     \Fld@flags
11479     /Q \Fld@align
11480     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11481     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11482         \ifx\Fld@bordercolor\relax\else 1\fi
11483         \ifx\Fld@bcolor\relax \else 1\fi
11484         \space
11485     \else
11486         /MK<<%
11487         \ifnum\Fld@rotation=\z@

```

```

11488     \else
11489         /R \Fld@rotation
11490     \fi
11491     \ifx\Fld@bordercolor\relax
11492     \else
11493         /BC[\Fld@bordercolor]%
11494     \fi
11495     \ifx\Fld@bcolor\relax
11496     \else
11497         /BG[\Fld@bcolor]%
11498     \fi
11499     >>%
11500 \fi
11501 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11502     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11503 \Fld@choices
11504 \Fld@additionalactions
11505 }

```

\PDFForm@Radio

```

11506 \def\PDFForm@Radio{%
11507     /Subtype/Widget%
11508     \Fld@annotflags
11509     /T(\Fld@name)%
11510     /FT/Btn%
11511     \Fld@flags
11512     /H/P%
11513     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11514     /MK<<%
11515         \ifnum\Fld@rotation=\z@
11516         \else
11517             /R \Fld@rotation
11518         \fi
11519         \ifx\Fld@bordercolor\relax
11520         \else
11521             /BC[\Fld@bordercolor]%
11522         \fi
11523         \ifx\Fld@bcolor\relax
11524         \else
11525             /BG[\Fld@bcolor]%
11526         \fi
11527         /CA(H)%
11528     >>%
11529     /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11530         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11531     \ifx\@currValue\Fld@default
11532         /V/\Fld@default
11533     \else
11534         /V/Off%
11535     \fi
11536     \Fld@additionalactions
11537 }

```

\PDFForm@Text

```

11538 \def\PDFForm@Text{%
11539     /Subtype/Widget%
11540     \Fld@annotflags

```

```

11541 /T(\Fld@name)%
11542 /FT/Tx%
11543 \Fld@flags
11544 /Q \Fld@align
11545 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11546 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11547 \ifx\Fld@bordercolor\relax\else 1\fi
11548 \ifx\Fld@bcolor\relax \else 1\fi
11549 \space
11550 \else
11551 /MK<<%
11552 \ifnum\Fld@rotation=\z@
11553 \else
11554 /R \Fld@rotation
11555 \fi
11556 \ifx\Fld@bordercolor\relax
11557 \else
11558 /BC[\Fld@bordercolor]%
11559 \fi
11560 \ifx\Fld@bcolor\relax
11561 \else
11562 /BG[\Fld@bcolor]%
11563 \fi
11564 >>%
11565 \fi
11566 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11567 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11568 /DV(\Hy@escapestring{\Fld@default})%
11569 /V(\Hy@escapestring{\Fld@value})%
11570 \Fld@additionalactions
11571 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11572 }

```

\PDFForm@Submit

```

11573 \def\PDFForm@Submit{%
11574 /Subtype/Widget%
11575 \Fld@annotflags
11576 /T(\Fld@name)%
11577 /FT/Btn%
11578 \Fld@flags
11579 /H/P%
11580 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11581 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11582 \ifx\Fld@bordercolor\relax\else 1\fi
11583 \space
11584 \else
11585 /MK<<%
11586 \ifnum\Fld@rotation=\z@
11587 \else
11588 /R \Fld@rotation
11589 \fi
11590 \ifx\Fld@bordercolor\relax
11591 \else
11592 /BC[\Fld@bordercolor]%
11593 \fi
11594 >>%
11595 \fi

```

```

11596 /A<<%
11597 /S/SubmitForm%
11598 /F<<%
11599 /FS/URL%
11600 /F(\Hy@escapestring{\Form@action})%
11601 >>%
11602 \Fld@submitflags
11603 >>%
11604 }

\PDFForm@Reset

11605 \ifHy@pdfa
11606 \else
11607 \def\PDFForm@Reset{%
11608 /Subtype/Widget%
11609 \Fld@annotflags
11610 /T(\Fld@name)%
11611 /FT/Btn%
11612 \Fld@flags
11613 /H/P%
11614 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11615 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11616 \ifx\Fld@bordercolor\relax\else 1\fi
11617 \space
11618 \else
11619 /MK<<%
11620 \ifnum\Fld@rotation=\z@
11621 \else
11622 /R \Fld@rotation
11623 \fi
11624 \ifx\Fld@bordercolor\relax
11625 \else
11626 /BC[\Fld@bordercolor]%
11627 \fi
11628 % /CA (Clear)
11629 % /AC (Done)
11630 >>%
11631 \fi
11632 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11633 /A<</S/ResetForm>>%
11634 }%
11635 \fi

11636 </pdfform>
11637 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

11638 \def\phantomsection{%
11639   \Hy@GlobalStepCount\Hy@linkcounter
11640   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11641   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11642 }
11643 \</package>

```

48.1 Bookmarks

```
11644 \<*outlines>
```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper.pdf and slides.pdf in the doc directory of hyperref.

```

11645 \def\Hy@writebookmark#1#2#3#4#5{%
11646   % section number, text, label, level, file
11647   \ifx\WriteBookmarks\relax%
11648   \else
11649     \ifnum#4>\Hy@bookmarksdepth\relax
11650     \else
11651       \@writetorep{#1}{#2}{#3}{#4}{#5}%
11652     \fi
11653   \fi
11654 }
11655 \def\Hy@currentbookmarklevel{0}
11656 \def\Hy@numberline#1{#1 }
11657 \def\@writetorep#1#2#3#4#5{%
11658   \begingroup
11659     \edef\Hy@tempa{#5}%
11660     \ifx\Hy@tempa\Hy@bookmarkstype
11661       \edef\Hy@level{#4}%
11662       \ifx\Hy@levelcheck Y%
11663         \@tempcnta\Hy@level\relax
11664         \advance\@tempcnta by -1 %
11665         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11666           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11667           \advance\@tempcnta by 1 %
11668           \Hy@Warning{%
11669             Difference (\the\@tempcnta) between bookmark levels is %
11670             greater \MessageBreak than one, level fixed%
11671           }%
11672           \@tempcnta\Hy@currentbookmarklevel
11673           \advance\@tempcnta by 1 %
11674           \edef\Hy@level{\the\@tempcnta}%
11675         \fi
11676       \else
11677         \global\let\Hy@levelcheck Y%
11678       \fi
11679       \global\let\Hy@currentbookmarklevel\Hy@level
11680       \@tempcnta\Hy@level\relax
11681       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11682       \advance\@tempcnta by -1 %
11683       \edef\Hy@tempa{#3}%
11684       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11685       \ifx\Hy@tempa\Hy@tempb

```

```

11686      \Hy@Warning{%
11687          The anchor of a bookmark and its parent's must not%
11688          \MessageBreak be the same. Added a new anchor%
11689      }%
11690      \phantomsection
11691  \fi
11692  \ifHy@bookmarksnumbered
11693      \let\numberline\Hy@numberline
11694      \let\partnumberline\Hy@numberline
11695      \let\chapternumberline\Hy@numberline
11696  \else
11697      \let\numberline\@gobble
11698      \let\partnumberline\@gobble
11699      \let\chapternumberline\@gobble
11700  \fi
11701  \pdfstringdef\Hy@tempa{#2}%
11702  \if@files
11703      \protected@write\@outlinefile{}{%
11704          \protect\BOOKMARK
11705              [\Hy@level] [\@bookmarkopenstatus{\Hy@level}]{#3}%
11706              {\Hy@tempa}{\Hy@tempb}%
11707      }%
11708  \fi
11709  \fi
11710  \endgroup
11711 }

```

In the call of `\BOOKMARK` the braces around #4 are omitted, because it is not likely, that the level number contains] .

```

11712 \newcommand{\currentpdfbookmark}{%
11713     \pdfbookmark[\Hy@currentbookmarklevel]%
11714 }
11715 \newcommand{\subpdfbookmark}{%
11716     \@tempcnta\Hy@currentbookmarklevel
11717     \Hy@StepCount\@tempcnta
11718     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11719 }
11720 \newcommand{\belowpdfbookmark}[2]{%
11721     \@tempcnta\Hy@currentbookmarklevel
11722     \Hy@StepCount\@tempcnta
11723     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11724     \advance\@tempcnta by -1 %
11725     \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11726 }

```

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.

```

11727 \renewcommand\pdfbookmark[3][0]{%
11728     \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11729     \hyper@anchorstart{#3.#1}\hyper@anchorend
11730 }
11731 \def\BOOKMARK{\@ifnextchar[{\@BOOKMARK}{\@BOOKMARK[1] [-]}}
11732 \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 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.

11733 *vtex)

11734 \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.

11735 \begingroup

11736 \catcode'\'=12 %

11737 \ifnum\Hy@VTeXversion<650 %

11738 \catcode'\ "=12 %

11739 \gdef\hv@pdf@char#1#2#3{%

11740 \char

11741 \ifcase'#1#2#3 %

11742 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%

11743 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%

11744 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%

11745 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%

11746 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%

11747 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%

11748 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%

11749 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%

11750 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%

11751 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

11752 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%

11753 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%

11754 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%

11755 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%

11756 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%

11757 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%

11758 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%

11759 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%

11760 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%

11761 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%

11762 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%

11763 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%

11764 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%

11765 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%

11766 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%

11767 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%

11768 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%

11769 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%

11770 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%

11771 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%

11772 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%

11773 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%

11774 \fi

11775 }%

11776 \else

11777 \gdef\hv@pdf@char{\char'}%

11778 \fi

11779 \endgroup

\@@BOOKMARK

11780 \def\@@BOOKMARK[#1][#2]#3#4#5{%

11781 \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%


```

11782 \edef\@mycount{\the\@serial@counter}%
11783 \Hy@StepCount\@serial@counter
11784 \edef\@parcount{%
11785   \expandafter\ifx\csname @count@#5\endcsname\relax
11786     0%
11787   \else
11788     \csname @count@#5\endcsname
11789   \fi
11790 }%
11791 \immediate\special{%
11792   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11793   s=\ifx#2-c\else o\fi,t=#4%
11794 }%
11795 }%

```

\ReadBookmarks

```

11796 \def\ReadBookmarks{%
11797   \begingroup
11798   \def\O{\hv@pdf@char 0}%
11799   \def\1{\hv@pdf@char 1}%
11800   \def\2{\hv@pdf@char 2}%
11801   \def\3{\hv@pdf@char 3}%
11802   \def\({}%
11803   \def\)}%
11804   \def\do##1{%
11805     \ifnum\the\catcode'##1=\active
11806       \makeother##1%
11807     \fi
11808   }%
11809   \dospecials
11810   \InputIfFileExists{\jobname.out}{\}{}%
11811 \endgroup
11812 \ifx\WriteBookmarks\relax
11813 \else
11814   \if@filesw
11815     \newwrite\@outlinefile
11816     \immediate\openout\@outlinefile=\jobname.out\relax
11817     \ifHy@typexml
11818       \immediate\write\@outlinefile{<relaxxml>\relax}%
11819     \fi
11820   \fi
11821 \fi
11822 }

11823 </vtex>
11824 <*\vtex>
11825 \def\ReadBookmarks{%
11826   \begingroup
11827   \escapechar='\\%
11828   \let\escapechar\@gobble %
11829   \def\@@BOOKMARK[##1][##2]##3##4##5{\calc@bm@number{##5}}%
11830   \InputIfFileExists{\jobname.out}{\}{}%
11831   \ifx\WriteBookmarks\relax
11832     \global\let\WriteBookmarks\relax
11833   \fi
11834   \def\@@BOOKMARK[##1][##2]##3##4##5{%
11835     \def\Hy@temp{##4}%

```

```

11836 <*pdfTex>
11837   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11838   \Hy@OutlineName{}\Hy@pstringName{%
11839     ##2\check@bm@number{##3}%
11840   }{%
11841     \expandafter\strip@prefix\meaning\Hy@temp
11842   }%
11843 </pdfTex>
11844 <*pdfmark>
11845   \pdfmark{%
11846     pdfmark=/OUT,%
11847     Count={##2\check@bm@number{##3}},%
11848     Dest={##3},%
11849     Title=\expandafter\strip@prefix\meaning\Hy@temp
11850   }%
11851 </pdfmark>
11852 <*dvipdfm>
11853   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11854   \@pdfm@mark{%
11855     outline \ifHy@DvipdfmxOutlineOpen
11856       [%
11857         \ifnum##21>\z@
11858         \else
11859           -%
11860         \fi
11861       ] %
11862     \fi
11863     ##1<%
11864     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11865     /A<%
11866     /S/GoTo%
11867     /D(\Hy@pstringName)%
11868     >>%
11869   >>%
11870   }%
11871 </dvipdfm>
11872   }%
11873   {%
11874     \def\WriteBookmarks{0}%
11875     \InputIfFileExists{\jobname.out}{\relax}%
11876   }%
11877   {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
11878   \ifx\WriteBookmarks\relax
11879   \else
11880     \if@files
11881       \newwrite\@outlinefile
11882       \immediate\openout\@outlinefile=\jobname.out\relax
11883       \ifHy@typexml
11884         \immediate\write\@outlinefile{<relaxxml>\relax}%
11885       \fi
11886     \fi
11887   \fi
11888   \endgroup
11889 }
11890 <*pdfTex>
11891 \def\Hy@OutlineName#1#2#3#4{%
11892   \pdfoutline goto name{#2}count#3{#4}%

```

```

11893 }
11894 </pdfTeX>
11895 \def\check@bm@number#1{%
11896   \expandafter\ifx\csname B_#1\endcsname\relax
11897     0%
11898   \else
11899     \csname B_#1\endcsname
11900   \fi
11901 }
11902 \def\calc@bm@number#1{%
11903   \@tempcnta=\check@bm@number{#1}\relax
11904   \advance\@tempcnta by 1 %
11905   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11906 }
11907 </!vTeX>

11908 \ifHy@implicit
11909 \else
11910   \expandafter\endinput
11911 \fi

11912 </outlines>
11913 <*outlines | hypertex>

11914 \let\H@old@ssect\@ssect
11915 \def\@ssect#1#2#3#4#5{%
11916   \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11917   \phantomsection
11918 }
11919 \let\H@old@schapter\@schapter
11920 \def\@schapter#1{%
11921   \H@old@schapter{#1}%
11922   \begingroup
11923     \let\mkboth\@gobbletwo
11924     \Hy@GlobalStepCount\Hy@linkcounter
11925     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11926     \Hy@raisedlink{%
11927       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11928     }%
11929   \endgroup
11930 }

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:

11931 \@ifundefined{@chapter}{-}{%
11932   \let\Hy@org@chapter\@chapter
11933   \def\@chapter{%
11934     \def\Hy@next{%
11935       \Hy@GlobalStepCount\Hy@linkcounter
11936       \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11937       \Hy@raisedlink{%
11938         \hyper@anchorstart{\@currentHref}\hyper@anchorend
11939       }%
11940     }%
11941     \ifnum\c@secnumdepth>\m@ne
11942       \@ifundefined{if@mainmatter}%
11943       \iftrue{\csname if@mainmatter\endcsname}%
11944       \let\Hy@next\relax

```

```

11945     \fi
11946     \fi
11947     \Hy@next
11948     \Hy@org@chapter
11949 }%
11950 }

11951 \let\H@old@part\@part
11952 \begingroup\expandafter\expandafter\expandafter\endgroup
11953 \expandafter\ifx\csname chapter\endcsname\relax
11954   \let\Hy@secnum@part\z@
11955 \else
11956   \let\Hy@secnum@part\m@ne
11957 \fi
11958 \def\@part{%
11959   \ifnum\Hy@secnum@part>\c@secnumdepth
11960     \phantomsection
11961   \fi
11962   \H@old@part
11963 }

11964 \let\H@old@spart\@spart
11965 \def\@spart#1{%
11966   \H@old@spart{#1}%
11967   \Hy@GlobalStepCount\Hy@linkcounter
11968   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
11969   \Hy@raisedlink{%
11970     \hyper@anchorstart{\@currentHref}\hyper@anchorend
11971   }%
11972 }

11973 \let\H@old@sect\@sect
11974 \def\@sect#1#2#3#4#5#6[#7]#8{%
11975   \ifnum #2>\c@secnumdepth
11976     \Hy@GlobalStepCount\Hy@linkcounter
11977     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11978   \fi
11979   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
11980   \ifnum #2>\c@secnumdepth
11981     \Hy@raisedlink{%
11982       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11983     }%
11984   \fi
11985 }

11986 </outlines | hypertex>
11987 <*outlines>

11988 \expandafter\def\csname Parent-4\endcsname{}
11989 \expandafter\def\csname Parent-3\endcsname{}
11990 \expandafter\def\csname Parent-2\endcsname{}
11991 \expandafter\def\csname Parent-1\endcsname{}
11992 \expandafter\def\csname Parent0\endcsname{}
11993 \expandafter\def\csname Parent1\endcsname{}
11994 \expandafter\def\csname Parent2\endcsname{}
11995 \expandafter\def\csname Parent3\endcsname{}
11996 \expandafter\def\csname Parent4\endcsname{}

11997 </outlines>

```

49 Compatibility with koma-script classes

11998 < *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.

```
11999 \def\Hy@tempa{%
12000   \def\@addchap[##1]##2{%
12001     \typeout{##2}%
12002     \if@twoside
12003       \mkboth{##1}{}%
12004     \else
12005       \mkboth{}{##1}%
12006     \fi
12007     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12008     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12009     \Hy@GlobalStepCount\Hy@linkcounter
12010     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12011     \Hy@raisedlink{%
12012       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12013     }%
12014     \if@twocolumn
12015       \topnewpage[\@makeschapterhead{##2}]%
12016     \else
12017       \@makeschapterhead{##2}%
12018       \@afterheading
12019     \fi
12020     \addcontentsline{toc}{chapter}{##1}%
12021   }%
12022 }
12023 \@ifclassloaded{scrbook}{%
12024   \@ifclasslater{scrbook}{2001/01/01}{%
12025     \let\Hy@tempa\@empty
12026   }{}%
12027 }{%
12028   \@ifclassloaded{scrreprt}{%
12029     \@ifclasslater{scrreprt}{2001/01/01}{%
12030       \let\Hy@tempa\@empty
12031     }{}%
12032   }{%
12033     \let\Hy@tempa\@empty
12034   }%
12035 }%
12036 \Hy@tempa
12037 </outlines | hypertex >
```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```
12038 < *pd1enc >
12039 \DeclareFontEncoding{PD1}{}{}
```

Accents

```
12040 \DeclareTextAccent{\'}{PD1}{\textasciigrave}
```

```

12041 \DeclareTextAccent{'}{PD1}{\textacute}
12042 \DeclareTextAccent{^}{PD1}{\textasciicircum}
12043 \DeclareTextAccent{~}{PD1}{\texttilde}
12044 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
12045 \DeclareTextAccent{r}{PD1}{\textring}
12046 \DeclareTextAccent{v}{PD1}{\textasciicaron}
12047 \DeclareTextAccent{.}{PD1}{\textdotaccent}
12048 \DeclareTextAccent{c}{PD1}{\textcedilla}
12049 \DeclareTextAccent{=}{PD1}{\textasciimacron}
12050 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
12051 \DeclareTextAccent{d}{PD1}{\textdotbelow}
12052 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
12053 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
12054 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
12055 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
12056 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
12057 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}
12058 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
12059 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
12060 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
12061 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
12062 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
12063 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
12064 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}
12065 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}
12066 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
12067 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
12068 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
12069 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}
12070 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
12071 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
12072 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
12073 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
12074 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
12075 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
12076 \DeclareTextCommand{k}{PD1}[1]{\TextSymbolUnavailable{k#1}}#1}
12077 \DeclareTextCommand{t}{PD1}[1]{\TextSymbolUnavailable{t#1}}#1}
12078 \DeclareTextCommand{newtie}{PD1}[1]{\TextSymbolUnavailable{newtie#1}}#1}

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

12079 % U+0009 (CHARACTER TABULATION)
12080 \DeclareTextCommand{textHT}{PD1}{\011}% U+0009
12081 % U+000A (LINE FEED)
12082 \DeclareTextCommand{textLF}{PD1}{\012}% U+000A
12083 % U+000D (CARRIAGE RETURN)
12084 \DeclareTextCommand{textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

12085 % U+02D8 BREVE; breve
12086 \DeclareTextCommand{textasciibreve}{PD1}{\030}% U+02D8
12087 % U+02C7 CARON; caron
12088 \DeclareTextCommand{textasciicaron}{PD1}{\031}% U+02C7
12089 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
12090 \DeclareTextCommand{textcircumflex}{PD1}{\032}% U+02C6
12091 % U+02D9 DOT ABOVE; dotaccent
12092 \DeclareTextCommand{textdotaccent}{PD1}{\033}% U+02D9
12093 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
12094 \DeclareTextCommand{texthungarumlaut}{PD1}{\034}% U+02DD
12095 % U+02DB OGONEK; ogonek

```

12096 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 12097 % U+02DA RING ABOVE; ring
 12098 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 12099 % U+02DC SMALL TILDE; ilde, *tilde
 12100 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 12101 % U+0022 QUOTATION MARK; quotedbl
 12102 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 12103 % U+0023 NUMBER SIGN; numbersign
 12104 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 12105 % U+0024 DOLLAR SIGN; dollar
 12106 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 12107 % U+0025 PERCENT SIGN; percent
 12108 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 12109 % U+0026 AMPERSAND; ampersand
 12110 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 12111 % U+0028 LEFT PARENTHESIS; parenleft
 12112 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 12113 % U+0029 RIGHT PARENTHESIS; parenright
 12114 \DeclareTextCommand{\textparenright}{PD1}{\string\)%} \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
 12115 % U+002E FULL STOP; period
 12116 \DeclareTextCommand{\textdotbelow}{PD1}{.}% \056 U+002E
 \057: U+002F SOLIDUS; slash
 \060: U+0030 DIGIT ZERO; zero
 ...
 \071: U+0039 DIGIT NINE; nine
 \072: U+003A COLON; colon
 \073: U+003B SEMICOLON; semicolon
 12117 % U+003C LESS-THAN SIGN; less
 12118 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 12119 % U+003E GREATER-THAN SIGN; greater
 12120 \DeclareTextCommand{\textgreater}{PD1}{>}% \076 U+003E
 \077: U+003F QUESTION MARK; question
 \100: U+0040 COMMERCIAL AT; at
 \101: U+0041 LATIN CAPITAL LETTER A; A
 ...
 \132: U+005A LATIN CAPITAL LETTER Z; Z
 \133: U+005B LEFT SQUARE BRACKET; bracketleft
 12121 % U+005C REVERSE SOLIDUS; backslash
 12122 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12123 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12124 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12125 % U+005F LOW LINE; underscore
 12126 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F

```

12127 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
12128 % U+0060 GRAVE ACCENT; grave
12129 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
12130 % U+0069 LATIN SMALL LETTER I; i
12131 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
12132 % U+007B LEFT CURLY BRACKET; braceleft
12133 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
12134 % U+007C VERTICAL LINE; *bar, verticalbar
12135 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
12136 % U+007D RIGHT CURLY BRACKET; braceright
12137 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
12138 % U+007E TILDE; asciitilde
12139 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
12140 % U+2022 BULLET; bullet
12141 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
12142 % U+2020 DAGGER; dagger
12143 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
12144 % U+2021 DOUBLE DAGGER; daggerdbl
12145 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
12146 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
12147 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
12148 % U+2014 EM DASH; emdash
12149 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
12150 % U+2013 EN DASH; endash
12151 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
12152 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
12153 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
12154 % U+2044 FRACTION SLASH; fraction
12155 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
12156 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
12157 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
12158 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
12159 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
12160 % U+2212 MINUS SIGN; minus
12161 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
12162 % U+2030 PER MILLE SIGN; perthousand
12163 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
12164 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12165 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12166 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12167 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12168 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12169 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12170 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12171 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12172 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12173 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12174 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12175 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A

```


12176 % U+2122 TRADE MARK SIGN; trademark
 12177 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 12178 % U+FB01 LATIN SMALL LIGATURE FI; fi
 12179 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 12180 % U+FB02 LATIN SMALL LIGATURE FL; fl
 12181 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 12182 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 12183 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 12184 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 12185 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 12186 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 12187 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 12188 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 12189 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
 12190 \DeclareTextCommand{\IJ}{PD1}{\230}
 12191 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 12192 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 12193 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 12194 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 12195 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 12196 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 12197 % U+0153 LATIN SMALL LIGATURE OE; oe
 12198 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 12199 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 12200 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 12201 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 12202 \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.
 12203 % U+20AC EURO SIGN; *Euro, euro
 12204 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 12205 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12206 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 12207 % U+00A2 CENT SIGN; cent
 12208 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 12209 % U+00A3 POUND SIGN; sterling
 12210 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 12211 % U+00A4 CURRENCY SIGN; currency
 12212 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 12213 % U+00A5 YEN SIGN; yen
 12214 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 12215 % U+00A6 BROKEN BAR; brokenbar
 12216 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 12217 % U+00A7 SECTION SIGN; section
 12218 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 12219 % U+00A8 DIAERESIS; dieresis
 12220 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 12221 % U+00A9 COPYRIGHT SIGN; copyright
 12222 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 12223 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12224 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 12225 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12226 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 12227 % U+00AC NOT SIGN; logicalnot
 12228 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 12229 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.

12230 % U+00AE REGISTERED SIGN; registered
12231 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
12232 % U+00AF MACRON; *macron, overscore
12233 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
12234 % U+00B0 DEGREE SIGN; degree
12235 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
12236 % U+00B1 PLUS-MINUS SIGN; plusminus
12237 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
12238 % U+00B2 SUPERSCRIP T TWO; twosuperior
12239 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
12240 % U+00B3 SUPERSCRIP T THREE; threesuperior
12241 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
12242 % U+00B4 ACUTE ACCENT; acute
12243 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
12244 % U+00B5 MICRO SIGN; mu, mu1
12245 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
12246 % U+00B6 PILCROW SIGN; paragraph
12247 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
12248 % U+00B7 MIDDLE DOT; middot, *periodcentered
12249 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
12250 % U+00B8 CEDILLA; cedilla
12251 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
12252 % U+00B9 SUPERSCRIP T ONE; onesuperior
12253 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
12254 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12255 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
12256 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12257 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
12258 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12259 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
12260 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12261 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
12262 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12263 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
12264 % U+00BF INVERTED QUESTION MARK; questiondown
12265 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
12266 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12267 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
12268 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12269 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
12270 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12271 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
12272 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12273 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
12274 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12275 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
12276 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12277 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
12278 % U+00C6 LATIN CAPITAL LETTER AE; AE
12279 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
12280 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12281 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
12282 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12283 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
12284 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12285 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
12286 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex

12287 \DeclareTextCompositeCommand{\`}{PD1}{E}{\312}% U+00CA
12288 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12289 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12290 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12291 \DeclareTextCompositeCommand{\'}{PD1}{I}{\314}% U+00CC
12292 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12293 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12294 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12295 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12296 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12297 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
12298 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12299 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12300 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12301 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12302 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12303 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12304 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
12305 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12306 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
12307 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12308 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
12309 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12310 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
12311 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12312 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
12313 % U+00D7 MULTIPLICATION SIGN; multiply
12314 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12315 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12316 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12317 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12318 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
12319 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12320 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
12321 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12322 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
12323 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12324 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
12325 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12326 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
12327 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12328 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12329 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12330 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12331 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12332 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
12333 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12334 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12335 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12336 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12337 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12338 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12339 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12340 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12341 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12342 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12343 % U+00E6 LATIN SMALL LETTER AE; ae

12344 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12345 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12346 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12347 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12348 \DeclareTextCompositeCommand{\'}{PD1}{e}{\350}% U+00E8
12349 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12350 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12351 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12352 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12353 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12354 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
12355 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12356 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12357 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12358 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12359 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12360 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12361 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12362 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12363 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12364 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12365 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12366 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12367 % U+00F0 LATIN SMALL LETTER ETH; eth
12368 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12369 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12370 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12371 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12372 \DeclareTextCompositeCommand{\'}{PD1}{o}{\362}% U+00F2
12373 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12374 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
12375 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12376 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
12377 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12378 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
12379 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12380 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
12381 % U+00F7 DIVISION SIGN; divide
12382 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
12383 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12384 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
12385 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12386 \DeclareTextCompositeCommand{\'}{PD1}{u}{\371}% U+00F9
12387 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12388 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
12389 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
12390 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
12391 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
12392 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
12393 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
12394 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
12395 % U+00FE LATIN SMALL LETTER THORN; thorn
12396 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
12397 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
12398 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
12399 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

```

12400 \DeclareTextCommand{\SS}{PD1}{SS}
12401 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)
12402 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
12403 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
12404 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
12405 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
12406 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
12407 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
12408 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
12409 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)
12410 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12411 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12412 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12413 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12414 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12415 \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;

```

12416 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12417 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
12418 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12419 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
12420 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
12421 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
12422 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot

12423 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12424 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
12425 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12426 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
12427 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
12428 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
12429 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

12430 </pd1enc>

```

50.2 PU encoding

```

12431 <*puenc>
12432 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

```

12433 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
12434 \DeclareTextCommand{\'}{PU}[1]{\#1\83\000}% U+0300
12435 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
12436 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
12437 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12438 \DeclareTextCommand{\^}{PU}[1]{\#1\83\002}% U+0302
12439 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
12440 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
12441 % U+0304 COMBINING MACRON; macroncmb
12442 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
12443 % U+0306 COMBINING BREVE; brevecmb
12444 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
12445 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306
12446 % U+0307 COMBINING DOT ABOVE; dotaccentcmb

```

```

12447 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12448 % U+0308 COMBINING DIAERESIS; dieresiscmb
12449 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12450 % U+030A COMBINING RING ABOVE; ringcmb
12451 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12452 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12453 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12454 % U+030C COMBINING CARON; caroncmb
12455 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12456 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
12457 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12458 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
12459 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12460 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12461 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
12462 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12463 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12464 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12465 % U+0327 COMBINING CEDILLA; cedillacmb
12466 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12467 % U+0328 COMBINING OGONEK; ogonekcmb
12468 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12469 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12470 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12471 % U+20DD COMBINING ENCLOSING CIRCLE
12472 \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.

```

12473 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
12474 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12475 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
12476 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12477 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12478 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12479 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12480 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12481 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12482 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12483 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12484 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12485 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12486 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12487 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12488 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12489 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12490 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12491 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
12492 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
12493 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12494 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
12495 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12496 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12497 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12498 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12499 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12500 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12501 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}

```

```

12502 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12503 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12504 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12505 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12506 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12507 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12508 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12509 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12510 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12511 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
12512 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12513 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
12514 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12515 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12516 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12517 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\#{#1}}
12518 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12519 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12520 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12521 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12522 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12523 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
12524 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12525 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12526 % U+0009 (CHARACTER TABULATION)
12527 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12528 % U+000A (LINE FEED)
12529 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12530 % U+000D (CARRIAGE RETURN)
12531 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```

\80\040: U+0020 SPACE; space, spacehackarabic

\80\041: U+0021 EXCLAMATION MARK; exclam

```

12532 % U+0022 QUOTATION MARK; quotedbl
12533 \DeclareTextCommand{\textquotedbl}{PU}{\string"% \80\042 U+0022
12534 % U+0023 NUMBER SIGN; numbersign
12535 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12536 % U+0024 DOLLAR SIGN; dollar
12537 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
12538 % U+0025 PERCENT SIGN; percent
12539 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
12540 % U+0026 AMPERSAND; ampersand
12541 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
12542 % U+0027 APOSTROPHE; quotesingle
12543 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
12544 % U+0028 LEFT PARENTHESIS; parenleft
12545 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
12546 % U+0029 RIGHT PARENTHESIS; parenright
12547 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
12548 % U+002A ASTERISK; asterisk
12549 \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
 12550 % U+003C LESS-THAN SIGN; less
 12551 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 12552 % U+003E GREATER-THAN SIGN; greater
 12553 \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
 12554 % U+005C REVERSE SOLIDUS; backslash
 12555 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12556 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12557 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12558 % U+005F LOW LINE; underscore
 12559 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12560 % U+0060 GRAVE ACCENT; grave
 12561 \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
 12562 % U+0069 LATIN SMALL LETTER I; i
 12563 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 12564 \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
 12565 % U+007B LEFT CURLY BRACKET; braceleft
 12566 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12567 % U+007C VERTICAL LINE; *bar, verticalbar
 12568 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12569 % U+007D RIGHT CURLY BRACKET; braceright
 12570 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12571 % U+007E TILDE; asciitilde
 12572 \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
 12573 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12574 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12575 % U+00A2 CENT SIGN; cent

12576 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
12577 % U+00A3 POUND SIGN; sterling
12578 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
12579 % U+00A4 CURRENCY SIGN; currency
12580 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
12581 % U+00A5 YEN SIGN; yen
12582 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
12583 % U+00A6 BROKEN BAR; brokenbar
12584 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
12585 % U+00A7 SECTION SIGN; section
12586 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
12587 % U+00A8 DIAERESIS; dieresis
12588 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
12589 % U+00A9 COPYRIGHT SIGN; copyright
12590 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
12591 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
12592 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
12593 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
12594 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
12595 % U+00AC NOT SIGN; logicalnot
12596 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
12597 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
12598 % U+00AE REGISTERED SIGN; registered
12599 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
12600 % U+00AF MACRON; *macron, overscore
12601 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
12602 % U+00B0 DEGREE SIGN; degree
12603 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
12604 % U+00B1 PLUS-MINUS SIGN; plusminus
12605 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
12606 % U+00B2 SUPERSCRIPT TWO; twosuperior
12607 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
12608 % U+00B3 SUPERSCRIPT THREE; threesuperior
12609 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
12610 % U+00B4 ACUTE ACCENT; acute
12611 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
12612 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
12613 % U+00B5 MICRO SIGN; mu, mu1
12614 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
12615 % U+00B6 PILCROW SIGN; paragraph
12616 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
12617 % U+00B7 MIDDLE DOT; middot, *periodcentered
12618 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
12619 % U+00B8 CEDILLA; cedilla
12620 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
12621 % U+00B9 SUPERSCRIPT ONE; onesuperior
12622 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
12623 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12624 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
12625 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12626 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
12627 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12628 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
12629 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12630 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
12631 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters

12632 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
12633 % U+00BF INVERTED QUESTION MARK; questiondown
12634 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
12635 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12636 \DeclareTextCompositeCommand{`}{PU}{A}{\80\300}% U+00C0
12637 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12638 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}% U+00C1
12639 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12640 \DeclareTextCompositeCommand{^}{PU}{A}{\80\302}% U+00C2
12641 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12642 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}% U+00C3
12643 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12644 \DeclareTextCompositeCommand{"}{PU}{A}{\80\304}% U+00C4
12645 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12646 \DeclareTextCompositeCommand{r}{PU}{A}{\80\305}% U+00C5
12647 % U+00C6 LATIN CAPITAL LETTER AE; AE
12648 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12649 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12650 \DeclareTextCompositeCommand{c}{PU}{C}{\80\307}% U+00C7
12651 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12652 \DeclareTextCompositeCommand{`}{PU}{E}{\80\310}% U+00C8
12653 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12654 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}% U+00C9
12655 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12656 \DeclareTextCompositeCommand{^}{PU}{E}{\80\312}% U+00CA
12657 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12658 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
12659 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12660 \DeclareTextCompositeCommand{`}{PU}{I}{\80\314}% U+00CC
12661 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12662 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}% U+00CD
12663 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12664 \DeclareTextCompositeCommand{^}{PU}{I}{\80\316}% U+00CE
12665 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12666 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
12667 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12668 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12669 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12670 \DeclareTextCompositeCommand{~}{PU}{N}{\80\321}% U+00D1
12671 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12672 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
12673 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12674 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
12675 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12676 \DeclareTextCompositeCommand{^}{PU}{O}{\80\324}% U+00D4
12677 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12678 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}% U+00D5
12679 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12680 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
12681 % U+00D7 MULTIPLICATION SIGN; multiply
12682 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12683 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12684 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12685 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12686 \DeclareTextCompositeCommand{`}{PU}{U}{\80\331}% U+00D9
12687 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12688 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}% U+00DA

12689 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12690 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12691 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12692 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
12693 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12694 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12695 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12696 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12697 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12698 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12699 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12700 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
12701 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12702 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12703 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12704 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12705 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12706 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12707 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12708 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
12709 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12710 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12711 % U+00E6 LATIN SMALL LETTER AE; ae
12712 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12713 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12714 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12715 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12716 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12717 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12718 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12719 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12720 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12721 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12722 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
12723 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12724 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12725 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
12726 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12727 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12728 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12729 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12730 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12731 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12732 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12733 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12734 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12735 % U+00F0 LATIN SMALL LETTER ETH; eth
12736 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
12737 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12738 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
12739 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12740 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
12741 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12742 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
12743 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12744 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
12745 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde

12746 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 12747 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12748 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 12749 % U+00F7 DIVISION SIGN; divide
 12750 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 12751 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12752 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 12753 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12754 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 12755 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12756 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 12757 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12758 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 12759 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12760 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 12761 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12762 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 12763 % U+00FE LATIN SMALL LETTER THORN; thorn
 12764 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12765 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12766 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12767 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12768 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 12769 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12770 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 12771 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12772 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12773 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12774 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12775 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12776 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12777 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12778 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12779 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12780 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 12781 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12782 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 12783 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12784 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 12785 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 12786 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 12787 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 12788 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 12789 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 12790 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 12791 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 12792 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 12793 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 12794 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 12795 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 12796 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 12797 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 12798 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 12799 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash

12800 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
12801 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
12802 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
12803 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
12804 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
12805 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
12806 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
12807 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
12808 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
12809 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
12810 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
12811 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
12812 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12813 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12814 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12815 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12816 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12817 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12818 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12819 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12820 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12821 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12822 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12823 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12824 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12825 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12826 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12827 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12828 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12829 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12830 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12831 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12832 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12833 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12834 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
12835 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
12836 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
12837 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
12838 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
12839 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
12840 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
12841 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
12842 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
12843 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
12844 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
12845 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
12846 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
12847 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
12848 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
12849 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
12850 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12851 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12852 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
12853 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
12854 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
12855 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12856 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B

12857 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 12858 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 12859 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 12860 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 12861 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 12862 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 12863 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 12864 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 12865 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 12866 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 12867 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 12868 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 12869 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 12870 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 12871 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 12872 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 12873 % U+0133 LATIN SMALL LIGATURE IJ; ij
 12874 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 12875 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 12876 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 12877 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 12878 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 12879 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 12880 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 12881 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 12882 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 12883 \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`.

12884 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 12885 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 12886 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 12887 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 12888 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 12889 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 12890 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 12891 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 12892 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 12893 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 12894 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 12895 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 12896 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 12897 \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`.

12898 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 12899 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 12900 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 12901 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 12902 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 12903 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 12904 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 12905 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 12906 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 12907 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143

12908 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
12909 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
12910 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
12911 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
12912 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
12913 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
12914 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
12915 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
12916 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
12917 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
12918 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
12919 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
12920 % U+014A LATIN CAPITAL LETTER ENG; Eng
12921 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
12922 % U+014B LATIN SMALL LETTER ENG; eng
12923 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
12924 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
12925 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
12926 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
12927 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
12928 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
12929 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
12930 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
12931 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
12932 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
12933 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
12934 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
12935 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
12936 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12937 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
12938 % U+0153 LATIN SMALL LIGATURE OE; oe
12939 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
12940 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
12941 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
12942 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
12943 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
12944 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
12945 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
12946 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
12947 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
12948 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
12949 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
12950 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
12951 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
12952 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
12953 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
12954 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
12955 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
12956 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
12957 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
12958 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
12959 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
12960 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
12961 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
12962 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
12963 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
12964 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron

12965 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
12966 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12967 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
12968 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
12969 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
12970 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
12971 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
12972 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
12973 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
12974 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
12975 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
12976 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
12977 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
12978 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
12979 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
12980 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
12981 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
12982 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
12983 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
12984 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
12985 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
12986 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
12987 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
12988 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
12989 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
12990 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
12991 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
12992 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
12993 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
12994 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
12995 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
12996 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
12997 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
12998 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
12999 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
13000 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
13001 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
13002 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
13003 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
13004 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
13005 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
13006 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
13007 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
13008 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
13009 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
13010 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
13011 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
13012 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13013 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
13014 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
13015 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
13016 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
13017 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
13018 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
13019 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
13020 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
13021 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C

13022 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13023 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13024 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13025 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13026 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13027 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

13028 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13029 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 13030 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 13031 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 13032 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 13033 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 13034 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 13035 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 13036 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 13037 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13038 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13039 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 13040 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 13041 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 13042 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 13043 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 13044 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 13045 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 13046 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 13047 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 13048 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 13049 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 13050 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 13051 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 13052 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 13053 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 13054 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 13055 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 13056 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 13057 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 13058 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 13059 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 13060 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 13061 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 13062 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 13063 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 13064 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 13065 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 13066 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 13067 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 13068 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 13069 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 13070 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 13071 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 13072 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 13073 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 13074 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 13075 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 13076 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

13077 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
13078 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
13079 \DeclareTextCompositeCommand{\'}{PU}{\0}{\81\376}% U+01FE
13080 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
13081 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
13082 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13083 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13084 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13085 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13086 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13087 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13088 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13089 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13090 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13091 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13092 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13093 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13094 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13095 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13096 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13097 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13098 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13099 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13100 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13101 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13102 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13103 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13104 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13105 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13106 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13107 % U+021E LATIN CAPITAL LETTER H WITH CARON
13108 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13109 % U+021F LATIN SMALL LETTER H WITH CARON
13110 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13111 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13112 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
13113 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
13114 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
13115 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
13116 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
13117 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
13118 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
13119 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
13120 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
13121 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
13122 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
13123 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
13124 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
13125 % U+0233 LATIN SMALL LETTER Y WITH MACRON
13126 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
13127 % U+0237 LATIN SMALL LETTER DOTLESS J
13128 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13129 % U+02C7 CARON; caron
13130 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
13131 % U+02D8 BREVE; breve

13132 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13133 % U+02D9 DOT ABOVE; dotaccent
 13134 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13135 % U+02DA RING ABOVE; ring
 13136 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13137 % U+02DB OGONEK; ogonek
 13138 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13139 % U+02DC SMALL TILDE; ilde, *tilde
 13140 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13141 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13142 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13143 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13144 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13145 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13146 % U+02F7 MODIFIER LETTER LOW TILDE
 13147 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13148 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13149 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13150 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13151 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13152 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 13153 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13154 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13155 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13156 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13157 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13158 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13159 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13160 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13161 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13162 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 13163 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13164 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13165 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13166 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13167 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13168 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13169 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13170 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 13171 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 13172 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 13173 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 13174 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 13175 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 13176 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadiesisistonos
 13177 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 13178 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 13179 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 13180 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 13181 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 13182 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 13183 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 13184 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta

13185 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13186 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13187 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13188 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13189 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
13190 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13191 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13192 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13193 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13194 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13195 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13196 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13197 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13198 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13199 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13200 % U+039C GREEK CAPITAL LETTER MU; Mu
13201 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13202 % U+039D GREEK CAPITAL LETTER NU; Nu
13203 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13204 % U+039E GREEK CAPITAL LETTER XI; Xi
13205 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13206 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13207 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13208 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13209 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13210 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13211 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13212 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13213 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13214 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13215 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13216 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13217 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13218 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13219 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13220 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13221 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13222 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13223 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13224 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13225 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13226 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13227 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13228 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13229 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13230 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13231 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13232 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13233 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
13234 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13235 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
13236 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13237 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
13238 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13239 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13240 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
13241 % U+03B1 GREEK SMALL LETTER ALPHA; alpha

13242 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13243 % U+03B2 GREEK SMALL LETTER BETA; beta
13244 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13245 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13246 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13247 % U+03B4 GREEK SMALL LETTER DELTA; delta
13248 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13249 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13250 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13251 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13252 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13253 % U+03B7 GREEK SMALL LETTER ETA; eta
13254 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13255 % U+03B8 GREEK SMALL LETTER THETA; theta
13256 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13257 % U+03B9 GREEK SMALL LETTER IOTA; iota
13258 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13259 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13260 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13261 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13262 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13263 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13264 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13265 % U+03BD GREEK SMALL LETTER NU; nu
13266 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13267 % U+03BE GREEK SMALL LETTER XI; xi
13268 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13269 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13270 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13271 % U+03C0 GREEK SMALL LETTER PI; pi
13272 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13273 % U+03C1 GREEK SMALL LETTER RHO; rho
13274 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13275 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13276 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13277 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13278 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13279 % U+03C4 GREEK SMALL LETTER TAU; tau
13280 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13281 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13282 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13283 % U+03C6 GREEK SMALL LETTER PHI; phi
13284 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13285 % U+03C7 GREEK SMALL LETTER CHI; chi
13286 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13287 % U+03C8 GREEK SMALL LETTER PSI; psi
13288 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13289 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13290 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13291 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13292 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13293 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13294 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13295 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
13296 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13297 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13298 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD

```

13299 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
13300 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13301 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
13302 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13303 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13304 % U+03DB GREEK SMALL LETTER STIGMA
13305 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13306 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13307 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13308 % U+03DD GREEK SMALL LETTER DIGAMMA
13309 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13310 % U+03DE GREEK LETTER KOPPA; Koppagreek
13311 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13312 % U+03DF GREEK SMALL LETTER KOPPA
13313 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13314 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13315 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
13316 % U+03E1 GREEK SMALL LETTER SAMPI
13317 \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.

```

13318 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13319 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
13320 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
13321 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13322 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
13323 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13324 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13325 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13326 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
13327 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
13328 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13329 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13330 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
13331 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
13332 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13333 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
13334 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13335 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
13336 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13337 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13338 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
13339 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
13340 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13341 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13342 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13343 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13344 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13345 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13346 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13347 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
13348 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
13349 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13350 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13351 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145

```

13352 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13353 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13354 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13355 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13356 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13357 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13358 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13359 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13360 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13361 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13362 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13363 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
13364 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13365 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13366 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13367 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13368 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13369 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13370 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13371 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13372 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13373 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13374 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13375 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13376 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13377 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13378 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13379 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13380 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13381 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13382 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13383 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13384 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13385 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13386 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13387 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13388 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13389 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13390 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13391 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13392 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13393 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13394 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13395 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13396 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
13397 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13398 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13399 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13400 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13401 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13402 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13403 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13404 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13405 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13406 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13407 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13408 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045

13409 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13410 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13411 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13412 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13413 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13414 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13415 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13416 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13417 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13418 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13419 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13420 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
13421 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13422 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13423 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13424 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13425 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13426 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13427 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13428 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13429 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13430 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13431 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13432 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13433 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13434 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
13435 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13436 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13437 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13438 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13439 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13440 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13441 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13442 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
13443 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13444 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
13445 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13446 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13447 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13448 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13449 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13450 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13451 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13452 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13453 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13454 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
13455 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13456 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13457 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13458 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13459 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13460 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13461 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13462 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13463 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13464 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13465 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic

13466 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13467 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13468 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13469 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13470 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13471 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13472 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
13473 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13474 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
13475 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13476 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
13477 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
13478 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13479 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13480 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
13481 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13482 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
13483 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13484 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13485 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13486 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
13487 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13488 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13489 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13490 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13491 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13492 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13493 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13494 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13495 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13496 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13497 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
13498 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13499 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
13500 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
13501 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13502 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13503 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13504 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
13505 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13506 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13507 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13508 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13509 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13510 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13511 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13512 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13513 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13514 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13515 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13516 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13517 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13518 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13519 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13520 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13521 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13522 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146

13523 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13524 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13525 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
13526 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13527 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13528 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13529 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13530 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13531 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13532 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13533 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13534 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitleiotifiedcyrillic
13535 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13536 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleiotifiedcyrillic
13537 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13538 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13539 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13540 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13541 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13542 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13543 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13544 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13545 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13546 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13547 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13548 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13549 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13550 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13551 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13552 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13553 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13554 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13555 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13556 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13557 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13558 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
13559 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
13560 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
13561 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
13562 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
13563 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
13564 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
13565 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
13566 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
13567 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
13568 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
13569 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
13570 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
13571 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
13572 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
13573 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
13574 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
13575 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
13576 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
13577 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
13578 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
13579 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E

13580 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 13581 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 13582 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 13583 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 13584 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 13585 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 13586 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 13587 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 13588 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 13589 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 13590 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 13591 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 13592 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 13593 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 13594 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 13595 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 13596 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 13597 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 13598 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 13599 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 13600 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 13601 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 13602 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 13603 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 13604 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 13605 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 13606 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 13607 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 13608 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 13609 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 13610 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 13611 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 13612 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 13613 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 13614 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 13615 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 13616 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 13617 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 13618 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 13619 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 13620 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 13621 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 13622 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 13623 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 13624 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 13625 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

13626 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaverticalstrokecyrillic
 13627 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 13628 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaverticalstrokecyrillic
 13629 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 13630 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 13631 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 13632 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 13633 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
 13634 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 13635 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 13636 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 13637 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 13638 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 13639 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 13640 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 13641 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 13642 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 13643 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 13644 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 13645 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 13646 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 13647 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 13648 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 13649 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 13650 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 13651 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 13652 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 13653 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 13654 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 13655 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 13656 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 13657 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 13658 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 13659 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 13660 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 13661 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 13662 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 13663 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
 13664 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 13665 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 13666 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 13667 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 13668 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 13669 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 13670 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
 13671 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
 13672 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescendercyrillic
 13673 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 13674 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 13675 \DeclareTextCommand{\cyrhds}{PU}{\84\263}% U+04B3
 13676 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 13677 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 13678 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 13679 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 13680 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
 13681 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 13682 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic

13683 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13684 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13685 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13686 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13687 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13688 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13689 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13690 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13691 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13692 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13693 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13694 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13695 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
13696 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13697 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
13698 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13699 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13700 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13701 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13702 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13703 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13704 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13705 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13706 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13707 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13708 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13709 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13710 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13711 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13712 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13713 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13714 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13715 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
13716 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13717 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13718 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
13719 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
13720 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
13721 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
13722 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
13723 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
13724 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
13725 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
13726 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
13727 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
13728 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
13729 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
13730 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
13731 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
13732 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
13733 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
13734 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
13735 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
13736 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
13737 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
13738 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic

13739 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
13740 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
13741 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
13742 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
13743 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
13744 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
13745 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
13746 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
13747 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
13748 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadieresiscyrillic
13749 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
13750 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadieresiscyrillic
13751 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
13752 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
13753 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
13754 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
13755 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
13756 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
13757 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
13758 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
13759 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
13760 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
13761 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
13762 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
13763 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
13764 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
13765 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
13766 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
13767 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
13768 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
13769 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
13770 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
13771 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
13772 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
13773 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
13774 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
13775 \DeclareTextCompositeCommand{\"}{PU}{\cyro}{\84\347}% U+04E7
13776 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
13777 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
13778 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
13779 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
13780 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
13781 \DeclareTextCompositeCommand{\"}{PU}{\CYROTLD}{\84\352}% U+04EA
13782 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
13783 \DeclareTextCompositeCommand{\"}{PU}{\cyrotld}{\84\353}% U+04EB
13784 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
13785 \DeclareTextCompositeCommand{\"}{PU}{\CYREREV}{\84\354}% U+04EC
13786 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
13787 \DeclareTextCompositeCommand{\"}{PU}{\cyreref}{\84\355}% U+04ED
13788 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
13789 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
13790 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
13791 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
13792 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
13793 \DeclareTextCompositeCommand{\"}{PU}{\CYRU}{\84\360}% U+04F0
13794 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
13795 \DeclareTextCompositeCommand{\"}{PU}{\cyru}{\84\361}% U+04F1

13796 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 13797 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 13798 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 13799 \DeclareTextCompositeCommand{\h}{PU}{\cyru}{\84\363}% U+04F3
 13800 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 13801 \DeclareTextCompositeCommand{\"}{PU}{\CYRCH}{\84\364}% U+04F4
 13802 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 13803 \DeclareTextCompositeCommand{\"}{PU}{\cyrch}{\84\365}% U+04F5
 13804 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 13805 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 13806 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 13807 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 13808 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 13809 \DeclareTextCompositeCommand{\"}{PU}{\CYRERY}{\84\370}% U+04F8
 13810 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 13811 \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
 13812 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13813 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 13814 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13815 \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

13816 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13817 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13818 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13819 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 13820 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13821 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 13822 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 13823 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 13824 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 13825 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 13826 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 13827 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 13828 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 13829 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 13830 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 13831 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 13832 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 13833 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 13834 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 13835 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 13836 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 13837 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 13838 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 13839 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 13840 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 13841 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 13842 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron

13843 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
13844 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
13845 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
13846 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
13847 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
13848 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
13849 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
13850 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
13851 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
13852 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
13853 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
13854 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
13855 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
13856 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13857 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13858 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13859 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
13860 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13861 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
13862 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13863 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13864 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13865 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13866 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13867 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13868 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13869 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13870 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13871 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
13872 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13873 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
13874 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13875 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13876 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13877 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13878 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
13879 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13880 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13881 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13882 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13883 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13884 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13885 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13886 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
13887 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
13888 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13889 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
13890 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13891 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
13892 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13893 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
13894 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13895 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
13896 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13897 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
13898 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13899 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E

13900 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13901 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
13902 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13903 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
13904 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13905 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
13906 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13907 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
13908 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13909 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
13910 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13911 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
13912 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
13913 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
13914 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13915 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
13916 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13917 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
13918 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13919 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
13920 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13921 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
13922 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13923 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
13924 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13925 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
13926 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13927 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
13928 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13929 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
13930 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13931 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
13932 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13933 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
13934 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13935 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
13936 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
13937 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
13938 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
13939 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
13940 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
13941 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
13942 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
13943 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
13944 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
13945 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
13946 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
13947 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
13948 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
13949 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
13950 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
13951 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
13952 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
13953 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
13954 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
13955 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
13956 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring

13957 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 13958 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
 13959 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 13960 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 13961 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 13962 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 13963 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 13964 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 13965 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 13966 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 13967 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 13968 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 13969 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 13970 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 13971 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

13972 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 13973 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 13974 % U+2013 EN DASH; endash
 13975 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 13976 % U+2014 EM DASH; emdash
 13977 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 13978 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 13979 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 13980 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13981 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 13982 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13983 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 13984 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13985 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 13986 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13987 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 13988 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13989 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 13990 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13991 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 13992 % U+2020 DAGGER; dagger
 13993 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 13994 % U+2021 DOUBLE DAGGER; daggerdbl
 13995 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 13996 % U+2022 BULLET; bullet
 13997 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 13998 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13999 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 14000 % U+2030 PER MILLE SIGN; perthousand
 14001 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14002 % U+2031 PER TEN THOUSAND SIGN
 14003 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14004 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 14005 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14006 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 14007 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14008 % U+203B REFERENCE MARK; referencemark
 14009 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14010 % U+203D INTERROBANG
 14011 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D

14012 % U+2044 FRACTION SLASH; fraction
14013 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
14014 % U+2045 LEFT SQUARE BRACKET WITH QUILL
14015 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
14016 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
14017 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
14018 % U+2052 COMMERCIAL MINUS SIGN
14019 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14020 % U+2070 SUPERSCRIPT ZERO; zerosuperior
14021 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
14022 % U+2074 SUPERSCRIPT FOUR; foursuperior
14023 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
14024 % U+2075 SUPERSCRIPT FIVE; fivesuperior
14025 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
14026 % U+2076 SUPERSCRIPT SIX; sixsuperior
14027 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
14028 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
14029 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
14030 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
14031 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
14032 % U+2079 SUPERSCRIPT NINE; ninesuperior
14033 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
14034 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
14035 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
14036 % U+207B SUPERSCRIPT MINUS
14037 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
14038 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
14039 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
14040 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
14041 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
14042 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
14043 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
14044 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
14045 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
14046 % U+2080 SUBSCRIPT ZERO; zeroinferior
14047 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
14048 % U+2081 SUBSCRIPT ONE; oneinferior
14049 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
14050 % U+2082 SUBSCRIPT TWO; twoinferior
14051 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
14052 % U+2083 SUBSCRIPT THREE; threeinferior
14053 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
14054 % U+2084 SUBSCRIPT FOUR; fourinferior
14055 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
14056 % U+2085 SUBSCRIPT FIVE; fiveinferior
14057 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
14058 % U+2086 SUBSCRIPT SIX; sixinferior
14059 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
14060 % U+2087 SUBSCRIPT SEVEN; seveninferior
14061 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
14062 % U+2088 SUBSCRIPT EIGHT; eightinferior
14063 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
14064 % U+2089 SUBSCRIPT NINE; nineinferior
14065 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
14066 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior

14067 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 14068 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 14069 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14070 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 14071 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 14072 % U+20A4 LIRA SIGN; afii08941, *lira
 14073 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14074 % U+20A6 NAIRA SIGN
 14075 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14076 % U+20A7 PESETA SIGN; peseta
 14077 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14078 % U+20A9 WON SIGN; won
 14079 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14080 % U+20AB DONG SIGN; dong
 14081 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14082 % U+20AC EURO SIGN; *Euro, euro
 14083 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14084 % U+20B1 PESO SIGN
 14085 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14086 % U+20B2 GUARANI SIGN
 14087 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14088 % U+2103 DEGREE CELSIUS; centigrade
 14089 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14090 % U+2116 NUMERO SIGN; *afii61352, numero
 14091 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14092 % U+2117 SOUND RECORDING COPYRIGHT
 14093 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14094 % U+211E PRESCRIPTION TAKE; prescription
 14095 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14096 % U+2120 SERVICE MARK
 14097 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14098 % U+2122 TRADE MARK SIGN; trademark
 14099 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14100 % U+2126 OHM SIGN; Ohm, Omega
 14101 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14102 % U+2127 INVERTED OHM SIGN
 14103 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14104 % U+212B ANGSTROM SIGN; angstrom
 14105 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14106 % U+212E ESTIMATED SYMBOL; estimated
 14107 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 14108 % U+2135 ALEF SYMBOL; aleph
 14109 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14110 % U+2190 LEFTWARDS ARROW; arrowleft
 14111 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14112 % U+2191 UPWARDS ARROW; arrowup
 14113 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14114 % U+2192 RIGHTWARDS ARROW; arrowright
 14115 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14116 % U+2193 DOWNWARDS ARROW; arrowdown
 14117 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14118 % U+2212 MINUS SIGN; minus
14119 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
14120 % U+221A SQUARE ROOT; radical
14121 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14122 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
14123 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
14124 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
14125 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14126 % U+2422 BLANK SYMBOL
14127 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
14128 % U+2423 OPEN BOX; blank
14129 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14130 % U+2460 CIRCLED DIGIT ONE; onecircle
14131 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
14132 % U+2461 CIRCLED DIGIT TWO; twocircle
14133 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
14134 % U+2462 CIRCLED DIGIT THREE; threecircle
14135 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
14136 % U+2463 CIRCLED DIGIT FOUR; fourcircle
14137 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
14138 % U+2464 CIRCLED DIGIT FIVE; fivecircle
14139 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
14140 % U+2465 CIRCLED DIGIT SIX; sixcircle
14141 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
14142 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
14143 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
14144 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
14145 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
14146 % U+2468 CIRCLED DIGIT NINE; ninecircle
14147 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14148 % U+2469 CIRCLED NUMBER TEN; tencircle
14149 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14150 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14151 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14152 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14153 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14154 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
14155 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
14156 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
14157 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
14158 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
14159 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
14160 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14161 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14162 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14163 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14164 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14165 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14166 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14167 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472

14168 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 14169 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 14170 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 14171 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 14172 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 14173 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 14174 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 14175 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 14176 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 14177 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 14178 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 14179 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 14180 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14181 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14182 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14183 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14184 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14185 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14186 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14187 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14188 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14189 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14190 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14191 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14192 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14193 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14194 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14195 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14196 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14197 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14198 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14199 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14200 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14201 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14202 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14203 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14204 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14205 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14206 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14207 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14208 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14209 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14210 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 14211 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 14212 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 14213 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 14214 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 14215 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 14216 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 14217 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 14218 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 14219 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 14220 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 14221 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 14222 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 14223 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14224 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle

14225 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14226 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14227 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14228 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14229 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14230 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 14231 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14232 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14233 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14234 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14235 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14236 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 14237 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14238 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14239 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14240 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 14241 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14242 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 14243 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14244 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 14245 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14246 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 14247 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14248 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 14249 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14250 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 14251 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14252 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 14253 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14254 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 14255 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14256 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 14257 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14258 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 14259 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14260 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14261 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14262 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14263 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14264 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14265 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14266 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14267 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14268 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14269 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14270 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14271 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14272 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14273 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14274 % U+24EA CIRCLED DIGIT ZERO
 14275 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14276 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14277 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14278 % U+25EF LARGE CIRCLE; largecircle
 14279 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

```
14280 % U+266A EIGHTH NOTE; musicalnote
14281 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
14282 % U+26AD MARRIAGE SYMBOL
14283 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
14284 % U+26AE DIVORCE SYMBOL
14285 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
```

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

```
14286 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
14287 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
14288 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
14289 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7
```

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
14290 % U+FB01 LATIN SMALL LIGATURE FI; fi
14291 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
14292 % U+FB02 LATIN SMALL LIGATURE FL; fl
14293 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
14294 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
14295 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
14296 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
14297 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
14298 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
14299 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
14300 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
14301 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
14302 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
14303 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
14304 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
14305 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
14306 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
14307 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
14308 </puenc>
```

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
14309 <*puvnenc>
14310 \DeclareTextCommand{\abreve}{PU}{\81\003}
14311 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14312 \DeclareTextCommand{\dj}{PU}{\81\021}
14313 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14314 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14315 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14316 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14317 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14318 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
```


14319 \DeclareTextCommand{\DJ}{PU}{\81\020}
14320 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14321 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14322 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14323 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14324 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14325 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14326 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14327 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14328 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14329 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
14330 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14331 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14332 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14333 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14334 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14335 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14336 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14337 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14338 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14339 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14340 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14341 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
14342 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14343 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14344 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14345 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14346 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
14347 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
14348 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
14349 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
14350 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
14351 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14352 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
14353 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
14354 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
14355 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
14356 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
14357 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
14358 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
14359 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
14360 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14361 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14362 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
14363 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14364 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14365 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
14366 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
14367 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
14368 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
14369 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
14370 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14371 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
14372 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
14373 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
14374 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
14375 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}

14376 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
14377 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
14378 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
14379 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
14380 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
14381 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
14382 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
14383 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
14384 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
14385 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
14386 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
14387 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
14388 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
14389 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
14390 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
14391 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
14392 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
14393 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
14394 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
14395 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
14396 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
14397 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
14398 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
14399 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
14400 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
14401 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
14402 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
14403 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
14404 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
14405 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
14406 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
14407 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
14408 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
14409 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
14410 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
14411 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14412 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
14413 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
14414 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
14415 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
14416 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
14417 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
14418 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
14419 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
14420 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
14421 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
14422 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
14423 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
14424 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
14425 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
14426 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
14427 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
14428 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
14429 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
14430 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
14431 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
14432 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}

```

14433 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
14434 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
14435 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
14436 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
14437 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
14438 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
14439 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
14440 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
14441 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
14442 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14443 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
14444 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

14445 <*puarenc>
14446 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14447 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14448 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14449 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA AE
14450 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14451 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14452 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14453 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14454 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14455 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14456 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14457 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14458 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14459 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14460 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14461 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14462 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14463 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14464 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14465 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14466 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14467 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14468 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14469 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14470 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14471 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN
14472 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14473 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14474 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14475 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14476 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14477 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14478 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14479 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14480 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14481 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKSURA
14482 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
14483 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14484 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN

```

```

14485 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14486 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14487 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14488 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14489 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14490 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

```

Farsi

```

14491 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14492 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14493 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
14494 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14495 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14496 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14497 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14498 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14499 </puarenc>

```

51 End of file hycheck.tex

```

14500 < *check>
14501 \typeout{}
14502 \begin{document}
14503 \end{document}
14504 </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	13163, 13165, 13167, 13169, 13171, 13173, 13175, 13177, 13232, 13234, 13236, 13238, 13296, 13299, 13301, 13326, 13345, 13491, 13510, 13859, 13861, 13871, 13873, 13887, 13889, 13919, 13921, 14324, 14329, 14334, 14339, 14344, 14349, 14354, 14359, 14364, 14369, 14374, 14379, 14384, 14389, 14394, 14399, 14404, 14409, 14414, 14419, 14424, 14429, 14434, 14439	\@@PasswordField . 10468, 10474 \@@Radio . . . 10296, 10317, 10517, 10541, 10748, 10769, 11085, <u>11106</u> \@@TextField 10470, 10485 \@@commahyperpage . . 6340, 6341 \@@hyperref 3582, 3583 \@latextohtmlX 2254, 3758 \@writetorep 6287, 6288 \@writetorep 11651, 11657 \@Alph 5124, 5125, 5128, 5129 \@Alph@bul 5128 \@BIBLABEL 5790, 5796, 5802 \@BOOKMARK 11731, 11732 \@CITE 5867, 5875 \@CITEX 5869 \@CheckBox . . . 4413, 8343, 10408, 10438, 10572, 10881, <u>11236</u> \@ChoiceMenu . . 4410, 8346, 10248, 10441, 10507, 10699, <u>11036</u> \@Form . . 4216, 8335, 10035, 10430, 10451, 10624, <u>10961</u> \@Gauge . 4419, 8337, 10217, 10432, 10456, 10593, <u>10958</u> \@Localurlfalse 8290 \@Localurltrue 8287 \@M 839, 1780, 5454 \@MM 5580 \@PushButton . . 4416, 8349, 10338, 10444, 10553, 10803, <u>11147</u> \@Refstar 6640, 6647 \@Reset . 4425, 8352, 10384, 10447, 10569, 10856, <u>11206</u> \@Roman 471 \@SCTR 6387, 6439 \@SetMaxRnhefLabel 5864 \@Submit 4422, 8355, 10366, 10448, 10566, 10833, <u>11182</u> \@TextField . . 4407, 8340, 10220, 10435, 10459, 10670, <u>10999</u> \@addchap 12000 \@addtoreset . . 6204, 6205, 6219, 6384 \@afterheading 12018 \@alph 5131, 5132 \@alph@bul 5131 \@anchorcolor . 7529, 7613, 8399, 9683, 9944 \@arabic 809, 814, 818, 5125, 5129, 5132 \@auxout . 1735, 3617, 4616, 4618, 5187, 5215, 5810, 5825, 5841,
\"	202, 227, 2421, 11738, 12044, 12056, 12068, 12189, 12275, 12289, 12297, 12312, 12324, 12340, 12354, 12365, 12366, 12380, 12392, 12398, 12449, 12477, 12496, 12517, 12644, 12658, 12666, 12680, 12692, 12708, 12722, 12733, 12734, 12748, 12760, 12766, 13013, 13228, 13230, 13240, 13292, 13294, 13322, 13335, 13487, 13500, 13733, 13735, 13749, 13751, 13753, 13755, 13757, 13759, 13769, 13771, 13773, 13775, 13781, 13783, 13785, 13787, 13793, 13795, 13801, 13803, 13809, 13811, 13851, 13853, 13923, 13925, 13935, 13937, 13953	\(. 190, 215, 596, 599, 601, 11802, 12112 \) . 191, 216, 568, 574, 577, 11803, 12114 \+ 200, 225 \- 201, 226 \. . 198, 223, 12047, 12059, 12071, 12131, 12422, 12429, 12447, 12480, 12499, 12523, 12563, 12564, 12788, 12790, 12812, 12814, 12832, 12834, 12868, 12899, 12901, 13019, 13021, 13112, 13114, 13120, 13122, 13819, 13821, 13827, 13829, 13839, 13841, 13847, 13849, 13875, 13877, 13879, 13881, 13891, 13893, 13895, 13897, 13903, 13905, 13927, 13929, 13931, 13933, 13939, 13941, 13959 \/ 194, 219, 510, 511, 512, 579, 1283 \: 189, 214 \; 199, 224, 6528 \< 196, 221 \= 167, 173, 180, 183, 12049, 12061, 12073, 12442, 12484, 12503, 12522, 12768, 12770, 12804, 12806, 12853, 12855, 12856, 12925, 12927, 12985, 12987, 13124, 13126, 13765, 13767, 13789, 13791, 13843, 13845 \> 197, 222 \@ 2412 \@@@ 1741 \@BOOKMARK 11731, 11732, <u>11780</u> , 11829, 11834 \@ListBox . 10311, 10331, 10763, 10794, 11100, <u>11133</u> \@Menu 10519, 10527	
\#	405, 1565, 1566, 3472, 3483, 3485, 3501, 3533, 3548, 3618, 6830, 6832, 7558, 7567, 7594, 8283, 9712, 9721, 9748, 9972, 9981, 10007		
\\$	184, 209, 406, 3474, 3547		
\%	407, 1540, 1541, 3471, 3480, 3482, 3534, 6832		
\&	185, 210, 408, 3475, 3486, 3488, 9758		
\'	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, 11736, 12041, 12053, 12065, 12269, 12285, 12293, 12306, 12320, 12326, 12334, 12350, 12359, 12360, 12374, 12388, 12394, 12417, 12419, 12420, 12421, 12424, 12426, 12427, 12428, 12436, 12474, 12493, 12514, 12638, 12654, 12662, 12674, 12688, 12694, 12702, 12718, 12727, 12728, 12742, 12756, 12762, 12780, 12782, 12887, 12889, 12907, 12909, 12941, 12943, 12953, 12955, 13015, 13017, 13067, 13069, 13075, 13077, 13079, 13081,		

5851, 5881, 5904, 5930, 5936,
5960
\@backslashchar 1460, 1464, 1467,
3496, 6845, 6855
\@baseurl 2695, 2697, 3710, 7265,
7268, 7515, 7517, 7756, 7758,
8210, 8220, 8257, 8259, 8753,
8755, 9097, 9111, 9669, 9671,
9851, 9865, 9931, 9933
\@begintheorem 5422, 5428
\@bibitem 5817, 5848
\@biblabel 5790, 5837
\@bookmarkopenstatus 3310, 3327,
11705
\@bookmarkopenlevel 2658, 2660,
3313
\@bsphack 1728, 3615, 5934
\@capstartfalse 5692
\@caption 5661, 5673, 5707, 5741,
5743
\@capter 1737, 5656, 5660, 5664,
5671, 5678, 5711, 5734, 5738,
5741
\@car 1071, 1087, 1105, 1125, 2637,
3834, 7217, 7228
\@cdr 7218, 7229
\@chapter 11932, 11933
\@cite 5867, 5898, 5995, 6001
\@cite@opt 5996, 6002, 6006, 6016
\@citea 5870, 5877, 5878, 5897,
5900, 5901
\@citeb 5876, 5879, 5881, 5883,
5887, 5890, 5899, 5902, 5904,
5906, 5910, 5913
\@citebordercolor 2937
\@citedata@opt 5997, 6003, 6005
\@citedatax 6012, 6017
\@citedatax@opt 6009, 6015
\@citeseppen 5994, 6000
\@citex 5896
\@clubpenalty 5456
\@commahyperpage 6335, 6340
\@currDisplay 4270, 10260, 10322,
10536, 10550, 10711, 10774,
11048, 11112
\@currValue 4272, 4274, 10326,
10536, 10547, 10781, 11123,
11531
\@currentHlabel 5136, 5138, 5141,
5264, 5275, 5503, 5514, 5517,
5519, 5564, 5591
\@currentHref 1743,
4515, 5095, 5140, 5145, 5227,
5230, 5265, 5276, 5278, 5317,
5328, 5332, 5339, 5363, 5448,
5504, 5515, 5518, 5520, 5565,
5592, 5676, 5698, 5700, 5712,
5714, 5939, 6086, 6109, 6118,
6124, 6175, 6176, 6200, 6201,
11640, 11641, 11925, 11927,
11936, 11938, 11968, 11970,
11977, 11982, 12010, 12012
\@currentlabel 5583, 5932, 5939,
6181, 6188, 6393, 6445
\@currentlabelname . 1733, 5505,
5566, 5593, 5680
\@currentlabstr 1732, 1740
\@curropt 10257, 10258, 10319,
10320, 10525, 10532, 10533,
10535, 10542, 10543, 10545,
10708, 10709, 10771, 10772,
11045, 11046, 11109, 11110
\@dblarg 1833, 5671, 5741
\@definecounter 6160, 6161
\@ehc 2066, 3056, 3674,
3928, 4052, 4247, 4362, 4398,
10348, 10396, 10814, 10868,
11158, 11218
\@ehd 63, 5657, 5735
\@endForm 4217, 8336, 10216,
10431, 10455, 10669, 10985
\@endpary 5418
\@eqncr 5347
\@eqnstarfalse 5323, 5350
\@eqnstartrue 5347
\@eqnswtrue 5293, 5302
\@esphack . 1749, 3620, 5944, 6310
\@extra@b@citeb 5775, 5778, 5795,
5800, 5820, 5868, 5890, 5906,
5913
\@extra@b@info 5774, 5777, 5781
\@fifthoffive 3016, 3425, 3609,
6594, 6709
\@filebordercolor 2935, 7134,
7136, 8074, 8076, 8474, 8476,
9407
\@filecolor 2687, 7154, 7708,
7720, 8086, 8480
\@firstoffive 3421, 3430, 6633,
6714
\@firstofone 423, 424, 425,
426, 427, 428, 429, 430, 431,
432, 433, 463, 919, 923, 927,
2857, 3312, 4183, 4189, 5011,
5122, 5135, 5174, 5669, 5739,
5879, 5902, 6028, 6085, 7425,
11316, 11333, 11350
\@firstoftwo 480, 674, 801, 1199,
4594
\@footnotemark 5464, 5510, 5599,
5601, 5613, 5614, 5644, 5646
\@footnotetext 5463, 5470, 5495,
5600, 5602, 5616, 5617, 5637
\@for 2714, 3824, 5876, 5899, 10257,
10319, 10525, 10532, 10542,
10708, 10771, 11045, 11109
\@fourthoffive 3424, 3610, 6704,
6711
\@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, 2845, 3004,
3006, 3058, 3462, 4168, 4560,
4564, 4580, 4582, 4598, 4599,
4600, 4602, 4603, 4605, 4990,
5005, 5009, 5411, 5658, 5736,
6084, 6768, 7427, 8633, 8636,
10625, 10962, 11697, 11698,
11699, 11828
\@gobblefour 520, 935, 936, 937,
6508
\@gobbleopt 4605, 4607
\@gobbletwo 487, 513, 521, 522, 934,
1106, 1183, 1187, 1887, 3008,
4114, 4584, 4593, 4601, 4605,
6692, 11923
\@harvarditem 5949, 5951
\@hyper@@anchor 3719, 3720
\@hyper@itemfalse 5041, 5057,
5071
\@hyper@itemtrue 5042
\@hyper@launch 3680, 3689, 7158,
8536, 9419
\@hyper@linkfile 3661, 3664,
3668, 3700
\@hyper@readexternallink 3655,
3659
\@hyperdef 3590, 3591
\@hyperpage 6332, 6333
\@hyperref 3571, 3582
\@ifclasslater 12024, 12029
\@ifclassloaded 1720, 4936, 5159,
5196, 5859, 6368, 6372, 7430,
12023, 12028
\@ifnextchar 12, 88, 103, 123, 514,
3541, 3571, 3590, 3628, 4216,
4407, 4410, 4413, 4416, 4419,
4422, 4425, 4605, 4661, 4670,
5603, 5621, 5949, 6007, 9122,
9345, 9359, 11731, 11732
\@ifpackagelater 1751, 3080,
5150, 6229
\@ifpackageloaded 359, 634, 1723,
2118, 2995, 3079, 3168, 5079,
5149, 5162, 5224, 5243, 5247,
5255, 5289, 5403, 5460, 5527,
5572, 5708, 5919, 5992, 6074,

6078, 6172, 6228, 6264, 6265, 6377, 6639, 6781, 6785, 9923	198, 199, 200, 201, 202, 203, 3486, 6817, 11806	\@pdfauthor . . . 2826, 2940, 7323, 7740, 8164, 8792, 9033, 9784
\@ifpackagewith 2996, 6196	\@makeschapterhead 12015, 12017	\@pdfborder . . . 2258, 2740, 2743, 2745, 3393, 7034, 7889, 8388, 8904, 8995, 9337, 9349, 9364, 9385, 9404, 9429, 9457, 9532, 9620, 9763
\@ifstar . . . 66, 3446, 3448, 6647, 6673, 6692	\@menubordercolor . . . 2934, 7485, 7487, 8129, 8131, 8567, 8569	\@pdfborderstyle . . . 2741, 2747, 2749, 3394, 7035, 7890, 8389, 8905, 8996, 9338, 9350, 9365, 9386, 9405, 9430, 9458, 9533, 9621, 9764
\@ifundefined	\@menucolor . . . 7498, 8135, 8573	\@pdfcreationdate . . . 2832, 2943, 7327, 7329, 7732, 7734, 8156, 8158, 9008, 9010, 9776, 9778
. 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, 2635, 2957, 2971, 3073, 3074, 3075, 3923, 4242, 4698, 5021, 5083, 5088, 5109, 5123, 5249, 5258, 5312, 5334, 5352, 5358, 5395, 5662, 5773, 5784, 5867, 5883, 5906, 6169, 6209, 6217, 6218, 6231, 6232, 6239, 6681, 6682, 6726, 6727, 6729, 6730, 6885, 7073, 7082, 7453, 8366, 8420, 8504, 8817, 8818, 8860, 8890, 8977, 9143, 10625, 10962, 11325, 11931, 11942	\@minipagefalse 5434	\@pdfcreator . . . 2828, 2942, 7326, 7731, 8155, 8795, 9032, 9775
\@indexfile . . . 6291, 6299, 6303	\@mkboth 487, 6490, 11923, 12003, 12005	\@pdfdirection 7288, 7794, 8190, 8765, 9077, 9831
\@inlabelfalse 5438	\@mpfn 5467, 5622, 5634	\@pdfduplex . . . 7294, 7800, 8196, 8771, 9083, 9837
\@inmathwarn 399, 400	\@mpfootnotetext . . . 5470, 5483, 5484	\@pdfhighlight 2733, 2938, 7054, 7056, 7101, 7130, 7132, 7166, 7168, 7481, 7483, 8903, 8994, 9336, 9384, 9403, 9428
\@inpenc@undefined@ 1595	\@mymcount 11782, 11792	\@pdfhightlight 7099
\@labels 5451	\@namedef 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 3934, 3935, 3936, 3937, 4258, 4259, 5160, 5346, 5349, 5924, 5925, 5926, 5927	\@pdfkeywords . . . 2842, 2946, 7339, 7729, 8169, 8800, 9034, 9773
\@latex@ 4692, 4693	\@nameuse . 1737, 2138, 3940, 4250	\@pdflang 2924, 2951, 7314, 7316, 7822, 7824, 8230, 8232, 9107, 9109, 9861, 9863
\@latex@error@ . 2201, 2219, 2229, 2236, 5657, 5735	\@ne . . . 808, 2085, 2180, 8014, 8019, 8732, 9526, 10994	\@pdfm@dest . . . 7836, 7892, 7896
\@latex@warning 3604, 5886, 5909, 6569, 6589, 6606, 6720	\@newctr 6165, 6166	\@pdfm@mark 4961, 7835, 7884, 7904, 7918, 7920, 7934, 7936, 7941, 7942, 7972, 7996, 7998, 8003, 8021, 8040, 8068, 8095, 8119, 8151, 8211, 8238, 10964, 10965, 10966, 10983, 11026, 11032, 11118, 11128, 11139, 11145, 11171, 11178, 11197, 11203, 11226, 11232, 11253, 11259, 11263, 11295, 11303, 11854
\@lbibitem 5791, 5836	\@newl@bel 4655, 5777	\@pdfmoddate . . . 2838, 2944, 7331, 7333, 7736, 7738, 8160, 8162, 9012, 9016, 9780, 9782
\@linkbordercolor . . . 2932, 7090, 8390	\@newlistfalse 5435	\@pdfnonfullscreenpagemode . . . 7287, 7793, 8189, 8764, 9076, 9830
\@linkcolor 9144	\@nil 345, 349, 354, 358, 373, 1071, 1089, 1107, 1123, 1125, 1128, 1131, 1134, 1604, 1606, 1622, 1624, 2637, 3518, 3522, 3527, 3834, 4680, 4683, 4690, 4692, 4693, 4778, 4825, 4826, 4828, 4851, 4868, 4916, 4918, 5259, 5269, 5271, 5284, 6319, 6321, 6328, 6351, 6354, 6364, 6573, 6576, 6728, 6758, 6841, 6847, 6851, 6857, 7217, 7218, 7228, 7229, 8599, 8600, 11323, 11336, 11341	\@pdfnumcopies 7303, 7305, 7809, 7811, 8205, 8207, 8780, 8782, 9092, 9094, 9846, 9848
\@linkdim . 326, 7573, 7574, 7579, 7580, 7581, 7641, 7642, 7651, 7652, 7653, 7670, 7671, 7680, 7681, 7682, 7700, 7701, 7710, 7711, 7712, 9727, 9728, 9733, 9734, 9735, 9987, 9988, 9994, 9995, 9996	\@nobreakfalse 4652, 5454	\@pdfpageduration . . . 2703, 7375, 7378, 7383, 8689, 8691, 8694, 8940, 8942, 8950
\@listctr 5826, 5852	\@nocnterr 6218, 6232	\@pdfpagelayout 7313, 7821, 8229, 8785, 8787, 9106, 9860
\@m 822, 5878, 5901, 8680	\@nocounterr 6217, 6231	
\@mainaux . 4614, 4615, 4973, 4981	\@noparitemfalse 5436	
\@makecaption . . . 5693, 5695, 5753	\@number 5122, 5174, 6028	
\@makefnmark 5522, 5649	\@nx 6221, 6235, 6238, 6240	
\@makefntext 5584	\@onelevel@sanitize 1880, 1884, 2100, 2636, 3033, 3063, 3084, 3086, 3924, 4161, 4243, 4878, 4880, 6114, 6619, 7873	
\@makeoother . . . 166, 167, 179, 180, 182, 183, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197,	\@oparg 5422, 5428	
	\@outlinefile 11703, 11815, 11816, 11818, 11881, 11882, 11884	
	\@pagerefstar . . . 3448, 6635, 6663	
	\@pagesetref 6585	
	\@parboxrestore 5582, 5685, 5748	
	\@parcount 11784, 11792	
	\@part 11951, 11958	

\@pdfpagemode . 3156, 3157, 3323, 3324, 3333, 3334, 7267, 7777, 8224, 8752, 9060, 9814	\@pdfviewparams 2849, 2851, 8854, 8872, 9460, 9535, 9623, 9874	10308, 10309, 10707, 10712, 10714, 10752, 10753, 10754, 10758, 10759, 10760, 10761, 11044, 11049, 11051, 11089, 11090, 11091, 11095, 11096, 11097, 11098
\@pdfpagescrop 2878, 2947, 7252, 7256, 7760, 7761, 7782, 7784, 8236, 8238, 8741, 8743, 9065, 9067, 9819, 9821	\@percentchar . . 3481, 3482, 3534	\@tempdimb . 10260, 10261, 10711, 10712, 11048, 11049
\@pdfpagetransition 2701, 7351, 7355, 7360, 8580, 8582, 8584, 8923, 8925, 8933	\@processme . . 4266, 4267, 7357, 7363, 7380, 7386, 7401, 7407, 9125, 9126, 9195, 9196, 9199, 9200	\@tempswafalse 6011
\@pdfpicktraybypdfsize . . 7295, 7297, 7801, 7803, 8197, 8199, 8772, 8774, 9084, 9086, 9838, 9840	\@protected@testopt 517	\@tempswatruetrue . 5981, 5984, 5987, 6008
\@pdfprintarea 7291, 7797, 8193, 8768, 9080, 9834	\@protected@testopt@xargs 518	\@temptokena . . 2528, 2533, 2536, 2538
\@pdfprintclip 7292, 7798, 8194, 8769, 9081, 9835	\@refstar 3446, 6632	\@tfor 5376
\@pdfprintpagerange 2814, 2950, 7299, 7301, 7805, 7807, 8201, 8203, 8776, 8778, 9088, 9090, 9842, 9844	\@runbordercolor . . 2936, 7170, 7172, 8551, 8553, 9432	\@the@H@page 6030, 6032
\@pdfprintscaling . . 7293, 7799, 8195, 8770, 9082, 9836	\@runcolor 7189, 8557	\@thefnmark . . 5468, 5479, 5541, 5542, 5583, 5623, 5635, 5642
\@pdfproducer . 2827, 2941, 7193, 7335, 7337, 7724, 7725, 7741, 7743, 8141, 8142, 8146, 8165, 8167, 8709, 8710, 8714, 8717, 8718, 8796, 8798, 9019, 9023, 9454, 9455, 9525, 9527, 9529, 9617, 9618, 9768, 9769, 9785, 9787	\@safe@activesfalse . 469, 3427	\@thirdofffive 3423
\@pdfstartpage 2866, 2868, 2949, 7273, 7277, 7764, 7769, 8213, 8217, 8745, 8749, 9047, 9052, 9801, 9806	\@safe@activetrue . . 468, 3426	\@thm 5404
\@pdfstartview 2873, 2875, 2948, 7147, 7275, 7277, 7766, 7770, 8081, 8215, 8217, 8747, 9049, 9053, 9413, 9803, 9807	\@schapter 11919, 11920	\@topnewpage 12015
\@pdfsubject . . 2841, 2945, 7325, 7745, 8154, 8794, 9031, 9789	\@secondofffive 3017, 3422, 3435, 6595, 6596, 6636	\@topsep 5417
\@pdftempa 3666, 3667, 3670	\@secondoftwo . 460, 486, 672, 804, 1197, 3016, 3017	\@topsepadd 5418
\@pdftempwordfile . . 3657, 3667	\@sect 11973, 11974	\@undefined 523, 4595, 4619, 4639, 4840, 4858, 4897, 5656, 5710, 5722, 5725, 5734, 6627, 7011, 7197, 7206, 8360, 8720, 8734
\@pdftempwordrun . . 3658, 3670	\@seqncr 5347	\@undottedtocline 6554
\@pdftitle 2825, 2939, 7324, 7730, 8153, 8793, 9030, 9774	\@serial@counter . 11734, 11781, 11782, 11783	\@unprocessedoptions 3278
\@pdfview 2847, 7020, 7027, 7841, 7845, 7849, 7853, 7857, 7861, 7862, 7865, 7866, 7869, 7873, 7874, 7888, 8387, 8396, 8407, 8854, 8872, 9459, 9534, 9622, 9873	\@seteqlabel 6197, 6198	\@urlbordercolor . . 2933, 7103, 7105, 8101, 8103, 8493, 8495, 9387
\@pdfviewarea . 7289, 7795, 8191, 8766, 9078, 9832	\@setminipage 5687, 5750	\@urlcolor 7118, 7578, 7587, 7678, 7690, 8111, 8499, 9732, 9741, 9993, 10001
\@pdfviewclip . 7290, 7796, 8192, 8767, 9079, 9833	\@setref . 3430, 3435, 6564, 6565, 6602	\@urltype 7548, 7552, 8262, 8286, 8415, 8426, 9702, 9706, 9962, 9966
	\@sharp 5259, 5266	\@vpageref 6657
	\@skiphyperreffalse 5058, 5806, 5818	\@whilenum 951
	\@skiphyperreftrue . 5792, 5818	\@wrintex 6270, 6271, 6287
	\@spart 11964, 11965	\@writefile 5937
	\@ssect 11914, 11915	\@x@sf 5512, 5524, 5648, 5650
	\@startlos 6502, 6509, 6558	\@xfootnote 5621
	\@starttoc 4640	\@xfootnotemark 5476, 5639
	\@tempa . . 5421, 5427, 5431, 5529, 5533, 5536, 5552	\@xfootnotenext 5465, 5632
	\@tempb 5375, 5379	\@exp . 6187, 6220, 6221, 6234, 6235, 6237, 6238
	\@tempboxa 7572, 7573, 7579, 7638, 7641, 7644, 7645, 7651, 7656, 7657, 7668, 7670, 7673, 7674, 7680, 7685, 7686, 7698, 7700, 7703, 7704, 7710, 7715, 7716, 9726, 9727, 9733, 9986, 9987, 9994	\[. 192, 217
	\@tempcnta . 11663, 11664, 11665, 11666, 11667, 11669, 11672, 11673, 11674, 11680, 11682, 11684, 11716, 11717, 11718, 11721, 11722, 11723, 11724, 11725, 11903, 11904, 11905	\{ 402
	\@tempdima 1783, 4447, 4448, 4449, 4450, 4451, 4452, 4453, 4454, 7013, 10256, 10261, 10263, 10300, 10301, 10302, 10306, 10307,	\} 403
		\] 193, 218
		\^ 186, 211, 2439, 3469, 3470, 3478, 12042, 12054, 12066, 12271, 12287, 12295, 12308, 12322, 12336, 12352, 12362, 12363, 12376, 12390, 12438, 12475, 12494, 12515, 12640, 12656,

12664, 12676, 12690, 12704,
 12720, 12730, 12731, 12744,
 12758, 12784, 12786, 12824,
 12826, 12840, 12842, 12876,
 12878, 12879, 12957, 12959,
 13005, 13007, 13009, 13011,
 13943, 13945
 _ . 187, 212, 410, 3473, 3490, 3491
 \^ 166, 172, 179, 182,
 2375, 2509, 2512, 2514, 2522,
 12040, 12052, 12064, 12267,
 12283, 12291, 12304, 12318,
 12332, 12348, 12356, 12357,
 12372, 12386, 12434, 12473,
 12492, 12513, 12636, 12652,
 12660, 12672, 12686, 12700,
 12716, 12724, 12725, 12740,
 12754, 13071, 13073, 13319,
 13347, 13484, 13512, 13915,
 13917, 13965, 13967, 14326,
 14331, 14336, 14341, 14346,
 14351, 14356, 14361, 14366,
 14371, 14376, 14381, 14386,
 14391, 14396, 14401, 14406,
 14411, 14416, 14421, 14426,
 14431, 14436, 14441
 \l 188, 213, 1406, 1522, 2321, 2985,
 6267, 6816, 6826
 \~ 409, 953, 1583, 2433,
 2441, 2442, 2443, 3077, 3494,
 12043, 12055, 12067, 12273,
 12302, 12310, 12338, 12370,
 12378, 12440, 12476, 12495,
 12516, 12642, 12670, 12678,
 12706, 12738, 12746, 12848,
 12850, 12851, 12981, 12983,
 13911, 13913, 13961, 13963,
 13969, 13971, 14328, 14333,
 14338, 14343, 14348, 14353,
 14358, 14363, 14368, 14373,
 14378, 14383, 14388, 14393,
 14398, 14403, 14408, 14413,
 14418, 14423, 14428, 14433,
 14438, 14443
Numbers
 \3 387, 995, 996, 997, 998,
 999, 1000, 1001, 1002, 1697,
 11801, 12267, 12269, 12271,
 12273, 12275, 12277, 12279,
 12281, 12283, 12285, 12287,
 12289, 12291, 12293, 12295,
 12297, 12299, 12300, 12302,
 12304, 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, 12357,
 12359, 12360, 12362, 12363,
 12365, 12366, 12368, 12370,
 12372, 12374, 12376, 12378,
 12380, 12382, 12384, 12386,
 12388, 12390, 12392, 12394,
 12396, 12398, 12399, 12472,
 12636, 12638, 12640, 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, 12725, 12727, 12728,
 12730, 12731, 12733, 12734,
 12736, 12738, 12740, 12742,
 12744, 12746, 12748, 12750,
 12752, 12754, 12756, 12758,
 12760, 12762, 12764, 12766,
 13031, 13033, 13035, 13037,
 13038, 13040, 13042, 13044,
 13046, 13048, 13050, 13052,
 13054, 13056, 13058, 13060,
 13062, 13064, 13065, 13067,
 13069, 13071, 13073, 13075,
 13077, 13079, 13081, 13130,
 13132, 13134, 13136, 13138,
 13140, 13142, 13145, 13147,
 13272, 13274, 13276, 13278,
 13280, 13282, 13284, 13286,
 13288, 13290, 13292, 13294,
 13296, 13298, 13299, 13301,
 13303, 13305, 13307, 13309,
 13311, 13313, 13315, 13317,
 13703, 13705, 13707, 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, 13965, 13967, 13969,
 13971, 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, 14287, 14289,
 14311, 14313, 14314, 14318,
 14320, 14321, 14324, 14326,
 14328, 14339, 14341, 14345,
 14346, 14347, 14348, 14349,
 14350, 14351, 14352, 14354,
 14355, 14356, 14357, 14358,
 14359, 14360, 14361, 14362,
 14363, 14364, 14365, 14366,
 14367, 14368, 14369, 14370,
 14371, 14372, 14374, 14375,
 14376, 14377, 14378, 14379,
 14380, 14381, 14382, 14383,
 14384, 14386, 14388, 14399,
 14401, 14405, 14406, 14407,
 14408, 14409, 14410, 14411,
 14412, 14414, 14415, 14416,
 14417, 14418, 14419, 14420,
 14421, 14422, 14423, 14424,
 14425, 14426, 14427, 14428,
 14429, 14430, 14431, 14432,
 14434, 14435, 14436, 14437,
 14438, 14439, 14440, 14441,
 14442, 14443, 14496, 14498
 \9 390, 1625, 1640, 1649, 1677, 1697,
 12472, 13817, 13819, 13821,
 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,
14325, 14327, 14329, 14330,
14331, 14332, 14333, 14334,
14335, 14336, 14337, 14338,
14340, 14342, 14343, 14344,
14345, 14346, 14347, 14348,
14350, 14352, 14355, 14357,
14359, 14360, 14361, 14362,
14363, 14364, 14365, 14366,
14367, 14368, 14370, 14372,
14374, 14375, 14376, 14377,
14378, 14380, 14381, 14382,
14383, 14385, 14387, 14389,
14390, 14391, 14392, 14393,
14394, 14395, 14396, 14397,
14398, 14400, 14402, 14403,
14404, 14405, 14406, 14407,
14408, 14410, 14412, 14415,
14417, 14419, 14420, 14421,
14422, 14423, 14424, 14425,
14426, 14427, 14428, 14430,

14432, 14434, 14435, 14436,
14437, 14438, 14440, 14441,
14442, 14443, 14497

_ ... 502, 2456, 2459, 5878, 5901,
12064, 12065, 12066, 12067,
12068, 12069, 12070, 12071,
12072, 12073, 12074, 12075,
12492, 12493, 12494, 12495,
12496, 12497, 12498, 12499,
12500, 12501, 12502, 12503,
12504, 12505, 12506, 12507,
12508, 12509, 12510

A

\ABREVE ... 14317, 14389, 14390,
14391, 14392, 14393
\abreve ... 14310, 14329, 14330,
14331, 14332, 14333
\AccFancyVerbLineautorefname .
..... 2483
\Accfootnoteautorefname . 2463
\Acctheoremautorefname .. 2487
\ACIRCUMFLEX 14318, 14394, 14395,
14396, 14397, 14398
\acircumflex . 2514, 14311, 14334,
14335, 14336, 14337, 14338
\Acrobatmenu .. 1772, 3013, 4592,
7476, 8116, 8560, 9331
\active 931, 938, 3470, 3471, 3472,
3473, 3474, 3475, 3478, 3480,
3483, 3491, 11805
\add@accent 401
\addcontentsline ... 5681, 5745,
6082, 6088, 6154, 12020
\addtocontents 6123, 6155, 6385,
6437, 12007, 12008
\addtocounter . 5171, 5194, 5203,
5214, 5218, 5397, 8023
\addvspace 12007, 12008
\advance ... 324, 325, 952, 3784,
4113, 4159, 4448, 4449, 4452,
4453, 4795, 7242, 7580, 7652,
7681, 7711, 8716, 9734, 9995,
10263, 10307, 10308, 10714,
10759, 10760, 10994, 11051,
11096, 11097, 11664, 11666,
11667, 11673, 11682, 11724,
11904
\AE 12279, 12648, 13075
\ae 12344, 12712, 13077
\afterassignment ... 1295, 1301,
1307
\AfterBeginDocument 240, 2158,
2212, 3147, 3247, 3451, 4517,
4611, 4979, 9510, 9661
\aftergroup 5587

\alef 14452
\alefhamza 14448
\aleflowerhamza 14450
\alefmadda 14447
\alefmaqsura 14481
\Alph 4844, 5110, 5111
\alph 4845, 5368, 5399
\AMSautorefname 6790
\anchor@spot .. 3724, 3737, 3744,
3750, 7069, 7529, 7613, 8330,
8399, 8851, 9683, 9944
\appendix 5107, 5108
\appendixautorefname 2331, 2349,
2367, 2385, 2403, 2421, 2439,
2471, 2472, 2497, 2515, 6800
\arabic .. 4841, 5016, 5019, 5022,
5023, 5024, 5026, 5027, 5028,
5029, 5031, 5032, 5033, 5034,
5035, 5036, 5039, 5049, 5050,
5089, 5178, 6163, 6169, 6216,
6230, 6373, 6378, 6380
\AtBeginDocument 241, 2057, 2117,
2254, 2607, 3002, 3093, 3153,
3377, 5158, 5920, 6638, 6784,
6980, 7423, 7982, 8382
\AtBeginShipout 4724, 7509, 7969
\AtBeginShipoutBox . 4728, 4731,
7504, 7505, 7970, 7971
\AtBeginShipoutFirst 4735, 8241,
9613
\AtEndDocument 4631, 4939, 10632
\AtEndOfPackage 643, 1721, 2580,
2588, 2595, 3135, 3161, 3167,
3306, 3329
\author 4660, 4670
\autopageref 3155, 6672
\autoref .. 491, 3154, 6691, 10015
\ayn 14470

B

\b ... 635, 639, 645, 12050, 12062,
12074, 12464, 12487, 12506,
13823, 13825, 13831, 13833,
13863, 13865, 13867, 13869,
13883, 13885, 13899, 13901,
13907, 13909, 13947, 13949,
13951
\baa 14453
\back@none 2266, 2276, 2289
\back@page 2268, 2281
\back@section . 2267, 2273, 2279,
2285
\back@slide 2269, 2278
\backcite 5938
\backref 5969, 10019
\baselineskip . 1775, 4461, 4462,
4463, 4464, 4465, 4466, 7630,
8868, 8889, 9493

<code>\bbl@cite@choice</code>	5785	<code>\capitalnewtie</code>	12525	<code>\contentsline</code>	4620, 4621, 4632, 6124, 6128, 6155, 6157
<code>\BeforeTeXIVht</code>	2154	<code>\capitalogonek</code>	12512	<code>\copy</code>	5271, 5280, 6995, 7505, 7971, 7997
<code>\begin</code>	10024, 14502	<code>\capitalring</code>	12519	<code>\count@</code>	950, 951, 952, 953, 1296, 2644, 2645, 2650, 2651, 3783, 3784, 3799, 4096, 4111, 4113, 4137, 4159, 4175, 7237, 7238, 7239, 7240, 7241, 7242, 7245, 8712, 8713, 8714, 8715, 8716, 8719
<code>\belowpdfbookmark</code>	11720	<code>\capitaltie</code>	12524	<code>\CurrentBorderColor</code>	7058, 7060, 7074, 7076, 7083, 7085, 7090, 8390, 8421, 8423, 8432, 8434, 8453, 8455, 8505, 8507, 8524, 8526
<code>\bfseries</code>	438, 5884, 5907, 6568, 6588, 6605, 6719	<code>\capitaltilde</code>	12516	<code>\currentpdfbookmark</code>	11712
<code>\bgroup</code>	511, 3541, 5574, 5586, 8330, 8881, 10463, 10555, 10576	<code>\caption</code>	5655, 5657, 5733, 5735	<code>\curu</code>	13515
<code>\bibcite</code>	5776, 5782, 5786, 5811, 5826, 5842, 5852	<code>\catcode</code>	172, 173, 184, 185, 186, 187, 206, 698, 931, 938, 1406, 1407, 1522, 1523, 3343, 3345, 3469, 3470, 3471, 3472, 3473, 3474, 3475, 3478, 3480, 3483, 3491, 3501, 3547, 3548, 6816, 8916, 8917, 11736, 11738, 11805	<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>	3836, 3969, 3987, 4001, 4014, 4030, 4062, 4087	<code>\cf@encoding</code>	1007	<code>\CYRA</code>	13354, 13729, 13733
<code>\bitsetGetHex</code>	3837	<code>\chapterautorefname</code>	2332, 2350, 2368, 2386, 2404, 2422, 2440, 2469, 2498, 2516, 6801	<code>\cyra</code>	2453, 2460, 2462, 2467, 2470, 2475, 2476, 2482, 2486, 13419, 13731, 13735
<code>\bitsetGetSetBitList</code>	3825	<code>\chapternumberline</code>	11695, 11699	<code>\CYRABHCH</code>	13693, 13698
<code>\bitsetIsEmpty</code>	3966, 3984, 3998, 4011, 4027, 4059, 4084	<code>\char</code>	10659, 11740, 11777	<code>\cyrabhch</code>	13695, 13701
<code>\bitsetReset</code>	3939, 3973, 3992, 4006, 4019, 4035, 4067	<code>\chardef</code>	1973, 1974, 1975, 1976, 2180, 2182	<code>\CYRABHCHDSC</code>	13697
<code>\bitsetSetValue</code>	3805, 3815	<code>\check@bm@number</code>	11839, 11847, 11895, 11903	<code>\cyrabhchdsc</code>	13700
<code>\BOOKMARK</code>	11704, 11731	<code>\CheckBox</code>	4412	<code>\CYRABHDZE</code>	13761
<code>\box</code>	4455, 4731, 6999, 8001, 9178	<code>\CheckCommand</code>	5528	<code>\cyrabhdze</code>	13763
<code>\bullet</code>	6520, 6528, 6538, 6546	<code>\checkcommand</code>	42, 5213, 5632, 5639, 5646, 5733, 5743, 5836, 5848, 6154, 6157, 6216, 6602	<code>\CYRABHHA</code>	13651
C					
<code>\C</code>	12458, 13563, 13565	<code>\checklatex</code>	4, 5631, 5732, 5835, 6153, 6601	<code>\cyrabhha</code>	13653
<code>\c</code>	636, 640, 646, 2433, 2441, 2442, 2443, 4683, 4690, 12048, 12060, 12072, 12281, 12346, 12466, 12481, 12500, 12511, 12650, 12714, 12836, 12838, 12881, 12883, 12891, 12893, 12911, 12913, 12945, 12947, 12961, 12963, 12969, 12971, 13116, 13118, 13618, 13621, 13835, 13837, 13855, 13857	<code>\checkpackage</code>	9, 5212, 6215	<code>\CYRAE</code>	13737
<code>\c@footnote</code>	5478, 5531, 5539, 5641	<code>\ChoiceBox</code>	4163	<code>\cyrae</code>	13739
<code>\c@page</code>	4777, 4795, 4796, 4800, 4812, 4814, 4819, 4826, 4828, 4830, 4859, 6025	<code>\ChoiceMenu</code>	4409	<code>\CYRB</code>	13356
<code>\c@secnumdepth</code>	11941, 11959, 11975, 11980	<code>\citation</code>	5881, 5904, 5930	<code>\cyrb</code>	2467, 13421
<code>\c@slidesection</code>	6386, 6514, 6515	<code>\citeauthoryear</code>	5996, 6002	<code>\CYRBYUS</code>	13539
<code>\c@slidesubsection</code>	6438	<code>\citeN</code>	5993	<code>\cyrbyus</code>	13541
<code>\c@tocdepth</code>	2628, 2633	<code>\CJK@char</code>	934	<code>\CYRC</code>	13399
<code>\calc@bm@number</code>	11829, 11902	<code>\CJK@charx</code>	935	<code>\cyrch</code>	13464
<code>\calculate@pdfview</code>	2843, 2846	<code>\CJK@ignorespaces</code>	933	<code>\CYRCH</code>	13401, 13801
<code>\capitalacute</code>	12514	<code>\CJK@punctchar</code>	936	<code>\cyrch</code>	2459, 2460, 2468, 13466, 13803
<code>\capitalbreve</code>	12521	<code>\CJK@punctcharx</code>	937	<code>\CYRCHLDSC</code>	13721
<code>\capitalcaron</code>	12520	<code>\clear@document</code>	4937	<code>\cyrchldsc</code>	13723
<code>\capitalcedilla</code>	12511	<code>\clearpage</code>	4939	<code>\CYRCHRDSC</code>	13681
<code>\capitalcircumflex</code>	12515	<code>\close@pdflink</code>	7068, 7080, 7088, 7119, 7155, 7190, 7499	<code>\cyrchrdsc</code>	13683
<code>\capitaldieresis</code>	12517	<code>\closeout</code>	4614	<code>\CYRCHVCRS</code>	13685
<code>\capitaldotaccent</code>	12523	<code>\clubpenalty</code>	5454, 5456	<code>\cyrchvcrs</code>	13687
<code>\capitalgrave</code>	12513	<code>\codeof</code>	5960	<code>\CYRD</code>	13362
<code>\capitalhungarumlaut</code>	12518	<code>\color@endbox</code>	6992, 7572, 7638, 7668, 7698, 7994, 9726, 9986	<code>\cyrd</code>	2456, 2459, 2470, 2475, 2476, 13427
<code>\capitalmacron</code>	12522	<code>\color@hbox</code>	6985, 7572, 7638, 7668, 7698, 7987, 9726, 9986	<code>\CYRDJE</code>	13324
		<code>\columnwidth</code>	5581		
		<code>\comma@entry</code>	4154, 4161, 4163		
		<code>\comma@parse</code>	4153		

\cyrdje	13489	\cyrizh	13561, 13565	\cyrotld	13779, 13783
\CYRDZE	13330	\CYRJE	13337	\CYRP	13385
\cyrdze	13495	\cyrje	13502	\cyrp	2456, 2459, 2460, 2464, 2465, 2471, 2473, 2477, 2478, 2479, 2480, 13450
\CYRDZHE	13352	\CYRK	13345, 13375	\CYRpalochka	13703
\cyrdzhe	13517	\cyrk	2462, 2463, 2465, 2479, 2480, 2482, 2483, 2484, 13440, 13510	\CYRPHK	13647
\CYRE	13319, 13322, 13364, 13741	\CYRKBEAK	13635	\cyrphk	13649
\cyre	2453, 2459, 2460, 2473, 2485, 2486, 2487, 13429, 13484, 13487, 13743	\CYRKDSC	13637	\CYRPSI	13551
\cyreref	13787	\cyrkdsc	13623	\cyrpsi	13553
\CYREREV	13413, 13785	\CYRKHCRS	13625	\CYRR	13387
\cyrerev	13478	\cyrkhcrs	13631	\cyrr	2451, 2453, 2456, 2459, 2460, 2466, 2470, 2471, 2473, 2475, 2476, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 13452
\CYRERY	13409, 13809	\CYRKHK	13633	\CYRRTICK	13597
\cyrery	2451, 2453, 13474, 13811	\cyrkhk	13709	\cyrrtick	13599
\CYRF	13395	\CYRKOPPA	13711	\CYRS	13389, 13656
\cyrf	13460	\cyrkoppa	13583	\cyrs	2456, 2459, 2462, 2463, 2466, 2481, 2482, 2483, 2484, 2488, 13454, 13659
\CYRFITA	13555	\CYRKSI	13585	\CYRSCHWA	13745, 13749
\cyrfita	13557	\cyrksi	13547	\cyrschwa	13747, 13751
\CYRG	13326, 13360	\CYRKVCRS	13549	\CYRSDSC	13655, 13656
\cyrg	2469, 13425, 13491	\cyrkvcrs	13627	\cyrsdsc	13658
\CYRGDSC	13805	\CYRL	13629	\CYRSEMISFTSN	13593
\cyrgdsc	13807	\cyrldsc	13377	\cyrsemisftsn	13595
\CYRGHCRS	13605	\cyrldsc	2467, 2469, 2471, 2473, 13442	\CYRSFTSN	13411
\cyrghcrs	13607	\CYRLDSC	13713	\cyrstsn	13476
\CYRGHK	13609	\cyrldsc	13715	\CYRSH	13403
\cyrghk	13611	\CYRLJE	13339	\cyrsh	13468
\CYRGUP	13601	\cyrldsc	13504	\CYRSHCH	13405
\cyrgup	13603	\CYRLYUS	13531	\cyrshch	13470
\CYRH	13397	\cyrlyus	13533	\CYRSHHA	13689
\cyrh	13462	\CYRM	13379	\cyrshha	13691
\CYRHDSC	13673	\cyrldsc	2456, 2460, 2486, 2487, 13444	\CYRT	13391
\cyrhdsc	13675	\CYRMDSC	13725	\cyrt	2456, 2459, 2465, 2467, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 13456
\CYRHHK	13813	\cyrmdsc	13727	\CYRTDSC	13661
\cyrhhk	13815	\CYRN	13381	\cyrtasc	13663
\CYRHRDSN	13407	\cyrn	2453, 2459, 2460, 2462, 2463, 2465, 2473, 2479, 2480, 13446	\CYRTETSE	13677
\cyrhrdsn	13472	\CYRNDSC	13639	\cyrthousands	13587
\CYRI	13347, 13370, 13373, 13765, 13769	\cyrndsc	13641	\CYRTSHE	13343
\cyri	2453, 2456, 2460, 2466, 2471, 2473, 13435, 13438, 13512, 13767, 13771	\CYRNG	13643	\cyrtshe	13508
\CYRIE	13328	\cyrng	13645	\CYRU	13350, 13393, 13789, 13793, 13797
\cyrie	13493	\CYRNHK	13717	\cyru	2463, 2465, 2479, 2480, 2483, 2487, 13458, 13791, 13795, 13799
\CYRII	13332, 13335	\cyrnhk	13719	\CYRUK	13567
\cyrii	13497, 13500	\CYRNJE	13341	\cyruk	13569
\CYRIOTBYUS	13543	\cyrnje	13506	\CYRUSHRT	13349
\cyriotbyus	13545	\CYRO	13383, 13773	\cyrushrt	13514
\CYRIOTE	13527	\cyro	2456, 2459, 2462, 2463, 2473, 2482, 2483, 2485, 2486, 2487, 13448, 13775	\CYRV	13358
\cyriote	13529	\CYROMEGA	13519	\cyrv	2451, 2453, 13423
\CYRIOTLYUS	13535	\cyromega	13521		
\cyriotlyus	13537	\CYROMEGARND	13571		
\CYRISHRT	13372	\cyromegarnd	13573		
\cyrishrt	13437	\CYROMEATITLO	13575		
\CYRISHRTDSC	13589	\cyromegatitlo	13577		
\cyrishrtdsc	13591	\CYROT	13579		
\CYRIZH	13559, 13563	\cyrot	13581		
		\CYROTLD	13777, 13781		

\CYRY	13665	\DeclareTextAccent 12040, 12041,	2741, 2813, 2822, 2825, 2826,
\cyrY	13667	12042, 12043, 12044, 12045,	2827, 2828, 2829, 2835, 2841,
\CYRYA	13417	12046, 12047, 12048, 12049,	2842, 2843, 2844, 2864, 2871,
\cyrYA	13482	12050, 12051	2878, 2879, 2882, 2885, 2888,
\CYRYAT	13523	\DefaultHeightofCheckBox 4461,	2891, 2894, 2897, 2900, 2923,
\cyrYAT	13525	10413, 10886, 11241	2926, 2929, 3777, 3865, 3921,
\CYRYHCRS	13669	\DefaultHeightofChoiceMenu ..	4223, 4228, 4240, 4277, 4280,
\cyrYhcrs	13671	. 4463, 10253, 10704, 11041	4283, 4286, 4289, 4292, 4295,
\CYRYI	13334	\DefaultHeightofReset ... 4459,	4299, 4302, 4305, 4308, 4311,
\cyrYI	13499	10387, 10859, 11209	4314, 4317, 4320, 4323, 4326,
\CYRYO	13321	\DefaultHeightofSubmit .. 4457,	4329, 4332, 4335, 4338, 4341,
\cyrYO	13486	10369, 10836, 11185	4359, 4365, 4379, 4395, 4401,
\CYRYU	13415	\DefaultHeightofText 4465,	9206, 9208, 9211, 9213, 9215,
\cyrYU	13480	10229, 10679, 11008	9224, 9232, 9239, 9241, 9243,
\CYRZ	13368, 13618, 13757	\DefaultHeightofTextMultiline	9245, 9247, 9249, 9258, 9268,
\cyrZ ... 2470, 2475, 2476, 13433,		. 4466, 10227, 10677, 11006	9270, 9272, 9273, 9279, 9288,
13621, 13759		\DefaultOptionsofCheckBox 4471,	9290, 9292, 9294, 9296, 9298,
\CYRZDSC	13617	10416, 10889, 11244	9300, 9302, 9304, 9306, 9308,
\cyrzdsc	13620	\DefaultOptionsofComboBox 4474	9310, 9312, 9314, 9316, 9318,
\CYRZH	13366, 13705, 13753	\DefaultOptionsofListBox 4473	9319, 9320, 9321, 9322, 9323,
\cyrzh .. 2453, 2473, 13431, 13707,		\DefaultOptionsofPopdownBox .	9324, 9325, 9326, 9327, 9328
13755	 4475	\df@tag
\CYRZHDSC	13613	\DefaultOptionsofPushButton .	6179, 6185
\cyrzhdsc	13615	. 4470, 10343, 10808, 11152	\DH
		\DefaultOptionsofRadio .. 4476	12299, 12668
		\DefaultOptionsofReset .. 4469,	\dh
		10390, 10862, 11212	12368, 12736
		\DefaultOptionsofSubmit . 4468,	\dhal
		10372, 10839, 11188	14461
		\DefaultOptionsofText ... 4472,	\dimen@ . 365, 366, 370, 1302, 1370,
		10235, 10685, 11014	1371, 1374, 1376, 2972, 2973,
		\DefaultWidthofCheckBox . 4462,	2975, 2982, 2983, 8679, 8680,
		10412, 10885, 11240	8682, 9169, 9181, 9184
		\DefaultWidthofChoiceMenu 4464,	\dimexpr .. 377, 1601, 1603, 1611,
		10252, 10703, 11040	1616, 1619, 1621, 1635, 1637,
		\DefaultWidthofReset 4460,	1640, 1641, 1648, 1651, 1654,
		10386, 10858, 11208	1655, 1656, 1657, 1667, 1672,
		\DefaultWidthofSubmit ... 4458,	1680, 1684, 1689, 1699, 1702,
		10368, 10835, 11184	1707, 1710, 1715, 1716
		\DefaultWidthofText 4467, 10224,	\DingObject
		10674, 11003	10781
		\define@key .. 1865, 1867, 1910,	\discretionary
		1925, 1928, 1931, 1935, 1939,	513
		1943, 1947, 1951, 1955, 1959,	\divide
		1962, 1965, 1982, 1994, 1996,	7238, 8713
		1999, 2002, 2019, 2023, 2026,	\DJ ... 2523, 12300, 12800, 14319
		2029, 2032, 2035, 2038, 2073,	\dj 2520, 2521, 12802, 14312
		2130, 2150, 2151, 2165, 2168,	\do
		2171, 2174, 2177, 2185, 2188,	951, 1882, 1887, 1892,
		2191, 2194, 2198, 2226, 2242,	2714, 2735, 2736, 2737, 2738,
		2247, 2250, 2253, 2256, 2260,	2753, 2754, 2755, 2756, 2757,
		2263, 2270, 2299, 2318, 2321,	2758, 2761, 2762, 2763, 2764,
		2547, 2578, 2586, 2594, 2601,	2765, 2766, 2769, 2770, 2773,
		2604, 2619, 2622, 2625, 2629,	2774, 2775, 2776, 2777, 2780,
		2657, 2662, 2666, 2669, 2676,	2781, 2782, 2783, 2784, 2787,
		2688, 2696, 2699, 2702, 2704,	2788, 2789, 2790, 2791, 2794,
		2707, 2716, 2726, 2733, 2740,	2795, 2796, 2797, 2798, 2801,
			2802, 2805, 2806, 2807, 2810,
			2811, 2817, 2818, 2819, 2820,
			2916, 2917, 2918, 2919, 2920,
			2921, 3825, 5379, 5876, 5899,
			10257, 10319, 10525, 10532,
			10542, 10708, 10771, 11045,
			11109, 11804
			\documentclass
			2

<code>\dospecials</code>	11809	<code>\everypar</code>	5456	11519, 11521, 11547, 11556,	
<code>\dots</code>	413	<code>\ExecuteOptions</code> 2987, 2988, 2992		11558, 11582, 11590, 11592,	
<code>\dp</code>	4451, 4454, 5579, 7573, 7641, 7670, 7700, 9170, 9173, 9727, 9987, 10989	<code>\ext@figure</code>	6370	11616, 11624, 11626	
<code>\dth@counter</code>	5419, 5420, 5445	<code>\ext@table</code>	6369	<code>\Fld@bordersep</code>	4211, 4318
<code>\dth@everypar</code>	5433	<code>\extra@b@citeb</code>	5883	<code>\Fld@borderstyle</code>	4213, 4315, 11373, 11403, 11480, 11513, 11545, 11580, 11632
<code>\dvipdfm@setdim</code>	10986, 11028, 11120, 11141, 11173, 11199, 11228, 11255	<code>\extrasvietnam</code>	2587	<code>\Fld@borderwidth</code>	4212, 4312, 4445, 4448, 4449, 4452, 4453, 10307, 10308, 10759, 10760, 11096, 11097, 11373, 11403, 11480, 11513, 11545, 11580, 11632
E		<code>\extrasvietnamese</code>	2579		
<code>\ECIRCUMFLEX</code> 14320, 14404, 14405, 14406, 14407, 14408		F		<code>\Fld@calculate@code</code> 4346, 11435, 11437	
<code>\ecircumflex</code> 14313, 14344, 14345, 14346, 14347, 14348		<code>\fa</code>	14473	<code>\Fld@cbsymbol</code>	4214, 4330, 11387
<code>\EdefEscapeString</code>	620	<code>\FancyVerbLineautorefname</code> 2338, 2356, 2374, 2392, 2410, 2428, 2446, 2481, 2484, 2504, 2522, 6807		<code>\Fld@charsize</code>	4204, 4205, 4309, 10306, 10758, 11095, 11389, 11501, 11529, 11566, 11614
<code>\EdefUnescapeString</code>	617	<code>\farsikaf</code>	14494	<code>\Fld@checkedfalse</code>	4200
<code>\egroup</code>	512, 8330, 8912, 10472, 10564, 10589	<code>\farsiya</code>	14496	<code>\Fld@checkequals</code>	4269, 10258, 10320, 10533, 10543, 10709, 10772, 11046, 11110
<code>\em</code>	444	<code>\fatha</code>	14486	<code>\Fld@choices</code>	4093, 4101, 4103, 4107, 4116, 4124, 4129, 4177, 4179, 4187, 4188, 11503
<code>\emph</code>	423	<code>\fbox</code>	10663, 10666	<code>\Fld@color</code>	4208, 4342, 11390, 11502, 11530, 11567
<code>\empty</code>	933, 2632	<code>\Field@addtoks</code> 4265, 4287, 4290, 4380, 4403		<code>\Fld@default</code>	4118, 4121, 4123, 4321, 10222, 10239, 10250, 10291, 10410, 10462, 10480, 10494, 10502, 10509, 10535, 10545, 10575, 10585, 10672, 10690, 10701, 10743, 10883, 11001, 11019, 11038, 11080, 11238, 11531, 11532, 11568
<code>\enc@html</code>	4227, 4230	<code>\Field@boolkey</code> 3778, 3866, 4260, 4281, 4284		<code>\Fld@disabledfalse</code>	4201
<code>\enc@update</code>	398	<code>\Field@toks</code>	4263, 4264, 4266, 10233, 10264, 10341, 10367, 10385, 10414, 10464, 10481, 10492, 10503, 10513, 10530, 10548, 10556, 10561, 10577, 10586, 10683, 10715, 10806, 10834, 10857, 10887, 11012, 11052, 11150, 11183, 11207, 11242	<code>\Fld@export</code> 3930, 3933, 3940, 4232	
<code>\END</code>	1032, 1033, 1058, 1059, 1074, 1075, 1092, 1093, 1110, 1111, 1479, 1485, 1490, 1574, 1576, 7354, 7367, 7371, 7377, 7390, 7394, 7399, 7411, 7415	<code>\figureautorefname</code>	2328, 2346, 2364, 2382, 2400, 2418, 2436, 2466, 2494, 2512, 6797	<code>\Fld@findlength</code>	10512, 10523
<code>\end</code>	14503	<code>\filename@area</code>	3706	<code>\Fld@flags</code>	3999, 4001, 4012, 4014, 4028, 4030, 4060, 4062, 4085, 4087, 11371, 11401, 11478, 11511, 11543, 11578, 11612
<code>\endeqnarray</code>	5325, 5343, 5350	<code>\filename@base</code>	3706	<code>\Fld@format@code</code>	4344, 11427, 11429
<code>\endequation</code>	5288, 5320	<code>\filename@ext</code>	3703, 3704, 3706, 3707	<code>\Fld@getmethodfalse</code>	4251
<code>\endForm</code>	4217	<code>\filename@parse</code>	3702	<code>\Fld@getmethodtrue</code>	4253
<code>\endinput</code>	64, 2162, 2202, 2203, 2216, 2220, 2221, 2230, 2231, 2237, 2238, 3151, 3251, 6562, 8860, 10022, 11910	<code>\find@pdfink</code>	7037, 7078, 7087	<code>\Fld@height</code>	4306, 10225, 10242, 10253, 10309, 10324, 10334, 10369, 10387, 10413, 10422, 10675, 10694, 10704, 10761, 10786, 10799, 10836, 10859, 10886, 10897, 11004, 11021, 11041, 11098, 11108, 11135, 11185, 11209, 11241, 11249
<code>\endlinechar</code>	3468	<code>\Fld@additionalactions</code> 11422, 11465, 11469			
<code>\endNoHyper</code>	4575	<code>\Fld@additionalactions</code>	11422, 11504, 11536, 11570		
<code>\EndPreamble</code>	10025	<code>\Fld@align</code>	4207, 4324, 11372, 11479, 11544		
<code>\endsubeqnarray</code>	5354, 5365	<code>\Fld@annotflags</code>	3985, 3987, 11368, 11398, 11475, 11508, 11540, 11575, 11609		
<code>\eqnarray</code>	5324, 5326, 5347	<code>\Fld@bcolor</code>	4209, 4336, 11383, 11385, 11495, 11497, 11523, 11525, 11548, 11560, 11562		
<code>\equal</code>	5957	<code>\fld@bcolor</code>	11483		
<code>\equation</code>	5287, 5296, 5300, 5309	<code>\Fld@bordercolor</code>	4210, 4339, 11379, 11381, 11405, 11413, 11415, 11482, 11491, 11493,		
<code>\equationautorefname</code> 2325, 2343, 2361, 2379, 2397, 2415, 2433, 2451, 2452, 2491, 2509, 6790, 6794					
<code>\errmessage</code>	2544				
<code>\es@roman</code>	471				
<code>\escapechar</code>	383, 5372, 11827, 11828, 11877				
<code>\eTeX</code>	419, 10030				
<code>\etex@unexpanded</code>	1234, 1241				
<code>\eTeXversion</code>	7197, 7199, 7201				
<code>\evensidemargin</code>	6047				

\Fld@hiddenfalse	3888	\Fld@value 4119, 4126, 4128, 4327,	\g@addto@macro 4738, 4889, 4937,
\Fld@hiddentrue	3889	10223, 10239, 10251, 10290,	5785, 6057, 7418, 8703, 8967,
\Fld@invisiblefalse	3884	10291, 10673, 10690, 10702,	9462, 9536, 9598, 9879, 10036
\Fld@invisibletrue	3885	10742, 10743, 11002, 11019,	\G@refundefinedtrue 3603, 5885,
\Fld@keystroke@code 4347, 11423,		11039, 11079, 11080, 11569	5908, 6567, 6587, 6604, 6718
11425		\Fld@width . . 4296, 10224, 10238,	\gaf 14495
\Fld@listcount . . . 10318, 10321,		10242, 10252, 10289, 10300,	\Gauge 4418
10330, 10770, 10773, 10787,		10302, 10324, 10334, 10355,	\GenericError 520
10793, 11107, 11111, 11115,		10368, 10376, 10386, 10400,	\GenericInfo 522
11119, 11127, 11132		10412, 10419, 10422, 10674,	\GenericWarning 521
\Fld@loc 4278		10689, 10694, 10703, 10741,	\getpagerefnumber 5252
\Fld@maxlen . . 4206, 4300, 11571		10752, 10754, 10786, 10799,	\getrefbykeydefault 5222, 5223
\Fld@menulength . . . 4202, 4303,		10821, 10835, 10843, 10858,	\gexmode 8734, 8735, 8819
10255, 10259, 10306, 10524,		10872, 10885, 10893, 10897,	\ghayn 14471
10525, 10528, 10706, 10710,		11003, 11018, 11021, 11040,	\Gin@setfile 6254, 6255
10758, 11043, 11047, 11095		11078, 11089, 11091, 11108,	\glossary 485
\Fld@name . . . 4293, 10221, 10249,		11135, 11166, 11184, 11192,	\glq 474
10339, 10409, 10461, 10466,		11208, 11222, 11240, 11248,	\glqq 472
10477, 10478, 10489, 10490,		11249	\greek@Alph 5124
10499, 10500, 10508, 10529,		\float@caption 5665, 5716	\Greeknumeral 797
10546, 10554, 10559, 10574,		\float@makebox 5718, 5719	\greeknumeral 796
10583, 10671, 10700, 10804,		\floatingpenalty 5580	\grq 475
10882, 11000, 11037, 11148,		\flq 478	\grqq 473
11237, 11362, 11364, 11369,		\flqq 476	\guill@spacing 726
11399, 11476, 11509, 11541,		\fmtname 7	\guillemotleft 766, 12226, 12406,
11576, 11610		\fmtversion 7	12594, 14299
\Fld@norotatefalse 3901		\fontencoding . . . 391, 395, 10655	\guillemotright 767, 12257,
\Fld@norotatetrue 3900		\fontfamily 10654	12407, 12626, 14300
\Fld@noviewfalse 3904		\fontseries 5412, 10656	\guilsinglleft . . . 12157, 12408,
\Fld@noviewtrue 3905		\fontshape 3409, 10657	14005, 14301
\Fld@nozoomfalse 3897		\footins 5574	\guilsinglright . . . 12159, 12409,
\Fld@nozoomtrue 3896		\footnote 3754	14007, 14302
\Fld@onblur@code . . 4349, 11443,		\footnoteautorefname 2326, 2344,	
11445		2362, 2380, 2398, 2416, 2434,	H
\Fld@onclick 4402, 11419		2455, 2458, 2492, 2510, 6791,	\H . . . 12453, 12485, 12504, 12518,
\Fld@onenter@code . 4352, 11455,		6795	12933, 12935, 12997, 12999,
11457		\footnotesep 5578, 5585	13797, 13799
\Fld@onexit@code . . 4353, 11459,		\footnotesize 449, 5576	\h 2513, 14327, 14332, 14337, 14342,
11461		\footnotetext 5531	14347, 14352, 14357, 14362,
\Fld@onfocus@code . 4348, 11439,		\Form 4216	14367, 14372, 14377, 14382,
11441		\Form@action . 4226, 10453, 11600	14387, 14392, 14397, 14402,
\Fld@onmousedown@code . . . 4350,		\Form@boolkey 4220	14407, 14412, 14417, 14422,
11447, 11449		\Form@htmlfalse 4219, 4237	14427, 14432, 14437, 14442
\Fld@onmouseup@code 4351, 11451,		\Form@htmltrue 4231	\H@@footnotemark . . . 5464, 5481,
11453		\Form@method . . 4249, 4257, 10453	5601, 5613, 5624
\Fld@printfalse 3893		\frq 479	\H@@footnotetext . . . 5463, 5473,
\Fld@printtrue 3892		\frqq 477	5496, 5557, 5602, 5616, 5624
\Fld@rotation . 4215, 4333, 11375,		\futurelet 532, 1026	\H@@mpfootnotetext . 5471, 5483,
11377, 11404, 11409, 11411,		\FV@SetLineNo 5152	5485
11481, 11487, 11489, 11515,		\FV@StepLineNo . 5151, 5153, 5154	\H@definecounter . . . 6160, 6162
11517, 11546, 11552, 11554,			\H@endeqnarray 5325, 5344
11581, 11586, 11588, 11615,			\H@endequation 5288, 5320
11620, 11622			\H@endsubeqnarray . . 5354, 5366
\Fld@submitflags . . . 3967, 3969,			\H@eqnarray 5324, 5329
11602			\H@equation 5287, 5311
\Fld@validate@code 4345, 11431,			\H@item . . . 5037, 5043, 5793, 5818
11433			\H@newctr 6165, 6167
		G	
		\G . . . 12457, 12483, 12502, 13083,	
		13085, 13087, 13089, 13091,	
		13093, 13094, 13096, 13098,	
		13100, 13102, 13104, 13106	

<code>\H@old@part</code>	11951, 11962	<code>\htmlref</code>	3755	<code>7899, 8316, 8332, 8400, 8412,</code>
<code>\H@old@chapter</code> . .	11919, 11921	<code>\Huge</code>	446	<code>8875, 9685, 9699, 9946, 9959</code>
<code>\H@old@sect</code>	11973, 11979	<code>\huge</code>	450	<code>\Hy@activeanchortrue</code> 7070, 7528,
<code>\H@old@spart</code>	11964, 11966	<code>\Hurl</code>	3556, 3558, 3560	<code>7541, 7612, 7620, 7895, 8312,</code>
<code>\H@old@essect</code>	11914, 11916	<code>\hv@pdf@char</code> <u>11735</u> , 11798, 11799,		<code>8329, 8398, 8409, 8865, 9682,</code>
<code>\H@refstepcounter</code> . .	5052, 5062,	<u>11800</u> , 11801		<code>9695, 9943, 9955</code>
<code>5153, 5262, 5310, 5425, 5660,</code>		<code>\hvtex@buffer</code> .	8599, 8602, 8610,	<code>\Hy@ActiveCarriageReturn</code> 3502,
<code>6383, 6436</code>		<code>8613, 8622, 8626, 8642</code>		<code>3505</code>
<code>\H@seteqlabel</code>	6197, 6199	<code>\hvtex@gettoken</code> 8599, 8611, 8615,		<code>\Hy@appendixstring</code> . 5105, 5112
<code>\H@subeqnarray</code>	5353, 5357	<code>8624, 8628</code>		<code>\Hy@author</code> 4672, 4676
<code>\ha</code>	14479	<code>\hvtex@gettoken@</code> . . . 8599, 8600		<code>\Hy@babelnormalise</code> . 3571, 3573
<code>\Haa</code>	14458	<code>\hvtex@par@dimension</code> 8595, 8634		<code>\Hy@backout</code> 3462, 4560, 4564, 5759
<code>\halign</code>	494	<code>\hvtex@par@direction</code> 8596, 8637		<code>\Hy@backreffalse</code> 288, 2290, 2312,
<code>\hamza</code>	14446	<code>\hvtex@par@duration</code> 8597, 8629		<code>3159</code>
<code>\HAR@checkcitations</code>	<u>5973</u>	<code>\hvtex@par@motion</code> . . 8598, 8631		<code>\Hy@backreftrue</code> 2283, 2287, 2309
<code>\HAR@citetoaux</code>	5929	<code>\hvtex@par@motion</code> . . 8598, 8631		<code>\Hy@BeginAnnot</code> 8012, 8027, 8065,
<code>\HAR@tempa</code> 5974, 5975, 5976, 5977,		<code>\hvtex@param@dimension</code> . . 8606,		<code>8093, 8118</code>
<code>5978, 5979</code>		<code>8635, 8653, 8656</code>		<code>\Hy@bibcite</code> 5782, 5786
<code>\harvardcite</code>	5923, 5960	<code>\hvtex@param@direction</code> . . 8607,		<code>\Hy@bookmarksdepth</code> . 2628, 2633,
<code>\harvarditem</code>	5948	<code>8638, 8664, 8672</code>		<code>2645, 2651, 11649</code>
<code>\hbox</code> 1294, 1300, 1306, 1787, 2643,		<code>\hvtex@param@duration</code> . . . 8608,		<code>\Hy@bookmarksnumberedfalse</code> 289
<code>2649, 4297, 4439, 4440, 4441,</code>		<code>8630, 8677, 8679</code>		<code>\Hy@bookmarksopenfalse</code> . . . 290
<code>4442, 5913, 6042, 7504, 7574,</code>		<code>\hvtex@param@motion</code> 8609, 8632,		<code>\Hy@bookmarkstrue</code> 291
<code>7581, 7642, 7653, 7671, 7682,</code>		<code>8653, 8660</code>		<code>\Hy@bookmarkstype</code> . . 2663, 2665,
<code>7701, 7712, 7970, 8881, 9173,</code>		<code>\hvtex@parse@trans</code> . 8584, 8604		<code>6096, 11660</code>
<code>9184, 9728, 9735, 9988, 9996,</code>		<code>\hvtex@produce@trans</code> 8643, 8649		<code>\Hy@boolkey</code> . . <u>1833</u> , 1926, 1929,
<code>10601, 11020, 11108, 11135,</code>		<code>\hvtex@token</code> . . 8601, 8612, 8618,		<code>1932, 1960, 1963, 1966, 1997,</code>
<code>11164, 11193, 11223, 11249</code>		<code>8625, 8630, 8633, 8636, 8638</code>		<code>2000, 2003, 2020, 2024, 2027,</code>
<code>\hc@currentHref</code>	5676	<code>\hvtex@trans@code</code> . . 8588, 8589,		<code>2030, 2033, 2036, 2039, 2261,</code>
<code>\HCode</code> 10453, 10455, 10466, 10475,		<code>8590, 8591, 8592, 8593, 8594,</code>		<code>2264, 2319, 2602, 2605, 2620,</code>
<code>10487, 10495, 10497, 10528,</code>		<code>8605, 8651, 8652, 8654, 8656,</code>		<code>2623, 2626, 2667, 2670, 2708,</code>
<code>10534, 10539, 10544, 10558,</code>		<code>8658, 8660, 8662, 8664, 8666,</code>		<code>2823, 2880, 2883, 2886, 2889,</code>
<code>10563, 10567, 10570, 10579</code>		<code>8667, 8668, 8669, 8670, 8672</code>		<code>2892, 2895, 2898, 2906, 2927,</code>
<code>\headerps@out</code> . 4947, 9452, 9463,		<code>\hvtex@trans@effect@Blinds</code> . .		<code>2930</code>
<code>9523, 9537, 9590, 9599, 9612,</code>		<code>8588</code>		<code>\Hy@BorderArrayPatch</code> 9219, 9222,
<code>9625, 9663, 9766, 9880, 10037</code>		<code>\hvtex@trans@effect@Box</code> . 8589		<code>9461, 9878</code>
<code>\hfill</code> . . . 4439, 4440, 4441, 4442,		<code>\hvtex@trans@effect@Dissolve</code> .		<code>\Hy@breaklinks@unsupported</code> . .
<code>5804, 5837</code>		<code>8590</code>		<code>2008, 8847</code>
<code>\Hfootnoteautorefname</code> . . . 6791		<code>\hvtex@trans@effect@Glitter</code> .		<code>\Hy@breaklinksfalse</code> 292
<code>\hhyperref</code>	3759	<code>8591</code>		<code>\Hy@breaklinksunhbox</code> 9160, 9176
<code>\hoffset</code>	6043	<code>\hvtex@trans@effect@R</code> . . . 8594		<code>\Hy@CatcodeWrapper</code> . 3338, 3397,
<code>\hphantom</code>	459	<code>8592</code>		<code>3441, 3454</code>
<code>\href</code> . 486, 3540, 3753, 3754, 4600		<code>\hvtex@trans@effect@Split</code> 8592		<code>\Hy@centerwindowfalse</code> 293
<code>\href@</code>	3541, 3544, 3549	<code>\hvtex@trans@effect@Wipe</code> 8593		<code>\Hy@chapapp</code> . . 5106, 5112, 5119,
<code>\href@split</code>	3549, 3550	<code>\hvtex@trans@par</code> . . . 8625, 8629,		<code>11925, 11936, 12010</code>
<code>\hsize</code>	5581	<code>8631, 8634, 8637</code>		<code>\Hy@chapterstring</code> . . 5101, 5103,
<code>\hskip</code> . . . 1305, 1383, 1823, 1824,		<code>\hvtex@trans@params</code> 8619, 8621,		<code>5106, 5118</code>
<code>4445, 10601</code>		<code>8645</code>		<code>\Hy@CheckOptionValue</code> <u>1877</u> , 1914
<code>\hspace</code>	482, 5963, 5964	<code>\Hy@@boolkey</code> 1833, 1834		<code>\Hy@CJKbookmarksfalse</code> 294
<code>\hss</code>	6051	<code>\Hy@@DefNameKey</code> 1907, <u>1909</u>		<code>\Hy@cjkpu</code> 944, 946, 965
<code>\ht</code> . 4447, 4450, 7579, 7645, 7651,		<code>\Hy@@escapeform</code> . . 11323, 11336,		<code>\Hy@colorlink</code> . 3401, 3409, 3413,
<code>7657, 7674, 7680, 7686, 7704,</code>		<u>11341</u>		<code>6981, 7063, 7118, 7154, 7189,</code>
<code>7710, 7716, 9169, 9733, 9994,</code>		<code>\Hy@@temp</code> . 2673, 2675, 4355, 4357		<code>7498, 7529, 7550, 7578, 7587,</code>
<code>10987</code>		<code>\Hy@abspage</code> <u>4758</u> , 4823, 4933, 4972		<code>7613, 7627, 7648, 7660, 7678,</code>
<code>\htmladdimg</code>	3752	<code>\Hy@Acrobatmenu</code> 3029, 3070, 7477,		<code>7690, 7708, 7720, 7983, 8056,</code>
<code>\htmladdnormallink</code>	3753	<code>8117, 8561, 9332</code>		<code>8086, 8111, 8135, 8399, 8419,</code>
<code>\htmladdnormallinkfoot</code> . .	3754	<code>\Hy@activeanchorfalse</code> . . . 3466,		<code>8480, 8499, 8530, 8557, 8573,</code>
		<code>7071, 7531, 7545, 7614, 7623,</code>		

8883, 9144, 9146, 9683, 9704, 9732, 9741, 9944, 9964, 9993, 10001	\Hy@DvipdfmxOutlineOpentruer 3286	\Hy@GlobalStepCount 325, 4823, 5144, 5226, 6035, 6174, 6425, 6476, 11639, 11924, 11935, 11967, 11976, 12009
\Hy@ColorList 2713, 2714	\Hy@EndAnnot . . . 8018, 8059, 8089, 8114, 8138	\Hy@gttemp . . . 631, 632, 4123, 4124, 4128, 4129, 4140, 4154, 6865, 6867, 11362, 11364
\Hy@CounterExists . . 5002, 5015, 5018	\Hy@endcolorlink . . . 3405, 3410, 3414, 6990, 7068, 7529, 7564, 7582, 7589, 7613, 7635, 7649, 7661, 7678, 7690, 7708, 7720, 7992, 8020, 8399, 8463, 8480, 8499, 8530, 8557, 8573, 8909, 9153, 9683, 9718, 9736, 9743, 9944, 9978, 9993, 10001	\Hy@href 3541, 3543
\Hy@currentbookmarklevel 11655, 11665, 11666, 11672, 11679, 11713, 11716, 11721, 11725	\Hy@EndWrap 3339, 3341, 3342, 3375	\Hy@hyperfootnotesfalse . 5460
\Hy@defaultdriver . . 3236, 3260, 3266	\Hy@escapeform . . . 10241, 10323, 10333, 10358, 10377, 10401, 10421, 10692, 10776, 10797, 10824, 10845, 10873, 10895, 11025, 11114, 11137, 11170, 11195, 11224, 11252, 11317, 11346, 11353	\Hy@hyperfootnotestruer . . . 298
\Hy@DefFormAction . . 4224, 4226	\Hy@escapeformfalse 295	\Hy@hyperindextrue 299
\Hy@DefNameKey 1906, 2734, 2752, 2760, 2768, 2772, 2779, 2786, 2793, 2800, 2804, 2809, 2816, 2915	\Hy@escapestring . 11314, 11387, 11419, 11425, 11429, 11433, 11437, 11441, 11445, 11449, 11453, 11457, 11461, 11568, 11569, 11600	\Hy@hypertextnamesfalse . . 1725
\Hy@DEST 9161, 9186	\Hy@EveryPageAnchor 6020, 6058	\Hy@hypertextnamestruer 300
\Hy@DestName 7027, 7031	\Hy@EveryPageBoxHook 4722, 4726, 4730, 6057, 8703, 8967	\Hy@implicittrue 301
\Hy@DisableOption . . 1863, 3022, 3023, 3024, 3026, 3140, 3166, 3289, 3290, 3291, 3292, 3293, 3294, 3295, 3296, 3297, 3298, 3299, 3300, 3301, 3302, 3303, 3304, 3305, 3307, 3337, 3390, 3418, 3419, 3464, 3465, 4521, 4522, 4523, 4524, 4525, 4526, 4527, 4528, 4529, 4530, 4531, 4532, 4533, 4534, 4535, 4536, 4537, 4538, 4539, 4540, 4541, 4542, 4543, 4544, 4696, 4891, 5628, 6259, 6315, 6316, 6907, 7008, 7341, 7342, 7343, 7344, 7345, 7346, 7347, 7348, 7474, 7746, 7747, 7748, 7749, 7750, 7751, 7752, 7753, 8010, 8172, 8173, 8174, 8175, 8176, 8177, 8178, 8179, 8248, 8384, 8801, 8802, 8803, 8804, 8805, 8806, 8807, 8808, 9036, 9037, 9038, 9039, 9040, 9041, 9042, 9043, 9516, 9790, 9791, 9792, 9793, 9794, 9795, 9796, 9797	\Hy@ExchangeLeftParenthesis 6841, 6847	\Hy@Info . . . 239, 1852, 3110, 3112, 3115, 3117, 3120, 3122, 3125, 3127, 3130, 3132, 3322, 3328, 3406, 3411, 3415, 3832, 4478, 4480, 4483, 4485, 4488, 4490, 4493, 4495, 4498, 4500, 4503, 4505, 4508, 4510, 5860, 5921, 6101
\Hy@displaydoctitlefalse . 322	\Hy@ExchangeRightParenthesis 6851, 6857	\Hy@LastPage 3043
\Hy@DistillerDestFix 6021, 8812, 8814	\Hy@false . 1769, 1844, 2275, 2311	\Hy@level . . 11661, 11663, 11674, 11679, 11680, 11681, 11705
\Hy@draftfalse 254	\Hy@figuresfalse 296	\Hy@levelcheck . . . 11662, 11677
\Hy@drafttrue 255	\Hy@finalfalse 255	\Hy@linkcounter 329, 331, 5144, 5145, 5226, 5227, 6174, 6175, 6200, 6425, 6426, 6430, 6476, 6477, 6481, 11639, 11640, 11924, 11925, 11935, 11936, 11967, 11968, 11976, 11977, 12009, 12010
\Hy@driver 327, 2013, 2155, 2166, 2169, 2172, 2175, 2186, 2189, 2192, 2195, 2206, 2209, 2234, 2243, 2248, 2251, 2257, 3169, 3172, 3176, 3179, 3183, 3186, 3188, 3192, 3196, 3200, 3203, 3207, 3211, 3215, 3218, 3222, 3225, 3227, 3231, 3235, 3238, 3241, 3244, 3255, 3258, 3260, 3266, 3268, 3273, 3275, 3277	\Hy@finaltrue 254	\Hy@linkfileprefix . 2698, 3691, 3712, 7567, 8283, 9721, 9981
	\Hy@FirstPage 3040	\Hy@linktoc . . 1968, 1970, 1978, 1980, 1990, 6132
	\Hy@FirstPageHook . . 4723, 4736, 4738, 4945, 4946, 9462, 9536, 9598, 9879, 10036	\Hy@linktoc@all 1976
	\Hy@fitwindowfalse 297	\Hy@linktoc@none 1973
	\Hy@FixNotFirstPage 7502, 7503, 7509	\Hy@linktoc@page . . . 1968, 1975, 1978
	\Hy@float@caption . . 5666, 5707, 5709	\Hy@linktoc@section 1970, 1974, 1980
	\Hy@float@currentHref . . . 5710, 5712, 5714, 5722, 5724, 5725	\Hy@linktocpagefalse 302
	\Hy@footnote@currentHlabel 5503, 5517, 5549, 5591	\Hy@LT@currentHlabel 5264, 5275
	\Hy@footnote@currentHref 4516, 5487, 5490, 5498, 5501, 5504, 5518, 5521, 5548, 5589, 5592	\Hy@LT@currentHref . 5265, 5276
	\Hy@Gin@setfile 6254, 6256	\Hy@LT@footnotetext 5546, 5556
		\Hy@make@anchor 6173, 6180, 6186
		\Hy@make@df@tag@@ . . 6178, 6193
		\Hy@make@df@tag@@@ . 6184, 6194
		\Hy@maketitle@end . . 5605, 5610, 5612
		\Hy@maketitle@optarg 5603, 5608
		\Hy@MaybeStopNow . . . 2197, 2202, 2220, 2230, 2237, 2993
		\Hy@menubartrue 303

\Hy@naturalnamesfalse	304	7265, 7839, 8036, 8066, 8067,	\Hy@safe@activetrue <u>338</u> , 3429,
\Hy@nestingfalse	305	8094, 8210, 8418, 8485, 8537,	3434, 3498, 3535, 3575, 3633,
\Hy@newline@author	4715	8538, 9097, 9250, 9259, 9378,	6617, 6696
\Hy@newline@title	4714	9396, 9397, 9421, 9422, 9851,	\Hy@saved@currentHlabel . 5514,
\Hy@newwindowfalse	307	11339, 11837, 11853	5519
\Hy@newwindowsetfalse 306, 2903		\Hy@pstringDest 7026, 7027, 7839,	\Hy@saved@currentHref . . 5515,
\Hy@newwindowsettrue	2905	7884, 9250, 9251, 9255, 9259,	5520
\Hy@next 4839, 4849, 4854, 11934,		9260, 9264	\Hy@saved@footnotemark . . 5599,
11944, 11947		\Hy@pstringF . . 7124, 7143, 7160,	5614
\Hy@nextfalse	3072, 6263	7179, 7184, 8066, 8080, 8537,	\Hy@saved@footnotetext . . 5600,
\Hy@NextPage	3034	8544, 8546, 9396, 9412, 9421,	5617
\Hy@nexttrue . . 3073, 3074, 3075,		9437, 9440	\Hy@saved@hook 4700, 4710
6264, 6265		\Hy@pstringName . . 11837, 11838,	\Hy@SaveLastskip . . . 1791, 7025,
\Hy@number 2856, 2860, 2868		11853, 11867	7521, 7535, 7607, 7618, 7837,
\Hy@newline . . . 11656, 11693,		\Hy@pstringP . . 7161, 7184, 8538,	8305, 8320, 8392, 8404, 8849,
11694, 11695		8546, 9422, 9440	8862, 9676, 9689, 9937, 9950
\Hy@ocgcolor . . 6984, 6998, 7986,		\Hy@pstringURI 7093, 7114, 8094,	\Hy@scanauthor 4670, 4675
8000		8107, 8418, 8428, 8485, 8489,	\Hy@scanoptauthor . . 4670, 4671
\Hy@ocgcolorlinksfalse . . 3385		9378, 9388	\Hy@scanopttitle . . 4661, 4662
\Hy@org@chapter . . 11932, 11948		\Hy@PutCatalog . 4885, <u>4893</u> , <u>4961</u>	\Hy@scantitle 4661, 4666
\Hy@OutlineName . . 11838, 11891		\Hy@raisedlink 1776,	\Hy@secnum@part . . 11954, 11956,
\Hy@pageanchortrue 308		5094, 5229, 5235, 5236, 5237,	11959
\Hy@pagecounter . 330, 332, 5184,		5240, 5277, 5317, 5320, 5447,	\Hy@seminarslidesfalse . . 6375
6035, 6036		5489, 5500, 5561, 5588, 5700,	\Hy@seminarslidestrue . . . 6373
\Hy@pageheight 1937, 1941, 1945,		5770, 5794, 5799, 5819, 6176,	\Hy@setbreaklinks . . 2005, 2009,
1949, 1953, 1957, 2983, 9538,		6201, 9450, 9521, 9762, 9922,	2021, 6873, 7833
9626		11641, 11926, 11937, 11969,	\Hy@SetCatcodes . <u>181</u> , 231, 2991
\Hy@pagelabelsfalse 4745		11981, 12011	\Hy@SetNewWindow . . . 2909, 7145,
\Hy@pagelabelstrue 309		\Hy@raiselinksfalse . 313, 5922	7181, 8082, 8545, 9411, 9436
\Hy@param 5117, 5118, 5119, 5141,		\Hy@RemoveDurPageAttr . . 7377,	\Hy@setouterhbox . . . 9159, 9165
5145		<u>7390</u>	\Hy@setpagesizetrue 314
\Hy@PatchLanguageShorthands .		\Hy@RemoveHidPageAttr . . . 7399,	\Hy@setpdfborder . . . 2742, 7053,
. 3081, 3100		<u>7411</u>	7098, 7129, 7165, 7480, 8045,
\Hy@pdfafalse 323		\Hy@RemovePercentCr 3518, 3522,	8073, 8100, 8128, 8431, 8452,
\Hy@pdfencoding@pdfdoc . . 2112		3527	8473, 8492, 8523, 8550, 8566
\Hy@pdfmarkerrorfalse . . . 9124		\Hy@RemoveTransPageAttr . 7353,	\Hy@setpdfversiontrue . . . 2137
\Hy@pdfmarkerrortrue 9252, 9261		<u>7367</u>	\Hy@setref@link 6573, 6576
\Hy@pdfminorversion 6874, 6880,		\Hy@reserved@a 3627, 5327, 5356,	\Hy@slidetitle 6402, 6404, 6411,
6883, 6891, 6896, 6898, 6901,		10460, 10510, 10573	6419, 6429, 6453, 6455, 6462,
6905		\Hy@RestoreCatcodes <u>205</u> , 2989,	6470, 6480
\Hy@pdfpagehiddenfalse . . . 310		3279	\Hy@StartlinkName . . 7051, 7065
\Hy@pdfstringdef <u>630</u> , 4098, 4106		\Hy@RestoreLastskip <u>1791</u> , 7028,	\Hy@StepCount . <u>324</u> , 4800, 10259,
\Hy@pdfstringfalse . . 311, 4546		7532, 7546, 7615, 7624, 7886,	10321, 10525, 10710, 10773,
\Hy@pdfstringtrue . . . 499, 4518		8317, 8333, 8401, 8413, 8858,	11047, 11111, 11717, 11722,
\Hy@pdfversion 2138, 2149, 4100,		8876, 9686, 9700, 9947, 9960	11783
6896, 6898, 6902, 6905, 11357		\Hy@ReturnAfterElseFi <u>333</u> , 3506	\Hy@temp 527, 534,
\Hy@plainpagesfalse 312		\Hy@ReturnAfterElseFiFiEnd 337,	2672, 2681, 2682, 2683, 2684,
\Hy@PrevPage 3037		1268	2685, 2686, 2687, 2714, 2715,
\Hy@ps@CR <u>9580</u> , 9587, 9592, 9593,		\Hy@ReturnAfterFi <u>333</u> , 353, 1446,	2716, 2719, 2721, 2724, 2901,
9610, 9630, 9631, 9632, 9638,		3510, 3526, 6327, 6363, 6846,	2902, 3061, 3065, 3066, 3067,
9645, 9652, 9659		6856, 11340	3068, 3174, 3176, 3181, 3183,
\Hy@pstringB . . 7265, 7270, 8210,		\Hy@ReturnAfterFiFiEnd . . . 336,	3186, 3198, 3200, 3205, 3207,
8222, 9097, 9113, 9851, 9867		1260, 1274, 1352, 1359	3213, 3215, 3220, 3222, 3225,
\Hy@pstringD . . 7125, 7149, 8067,		\Hy@ReturnEnd 335, 336, 337, 1280,	3267, 3268, 3822, 3826, 3827,
8081, 9397, 9413		1364	3838, 3922, 3923, 3924, 3926,
\Hy@pstringdef <u>6811</u> , 7026, 7047,		\Hy@safe@activesfalse <u>338</u> , 3431,	3930, 4241, 4242, 4243, 4245,
7093, 7124, 7125, 7160, 7161,		3436, 3641, 6707	4249, 4250, 4354, 4370, 4371,

4372, 4373, 4374, 4375, 4376,
 4377, 4378, 4383, 4384, 4385,
 4386, 4387, 4388, 4389, 4390,
 4391, 4392, 4393, 4780, 4783,
 4792, 4794, 4798, 4802, 4846,
 4848, 5178, 5181, 5184, 5190,
 5290, 5296, 6324, 6325, 7280,
 7309, 7311, 7763, 7768, 7774,
 7778, 7781, 7786, 7817, 7819,
 8182, 8225, 8227, 9007, 9010,
 9014, 9015, 9021, 9022, 9028,
 9046, 9051, 9057, 9061, 9064,
 9069, 9102, 9104, 9216, 9217,
 9225, 9226, 9800, 9805, 9811,
 9815, 9818, 9823, 9856, 9858,
 11322, 11323, 11835, 11841,
 11849, 11864
 \Hy@temp@A . 558, 559, 1252, 1254,
 1265, 1267, 1272, 1273, 1276,
 6276, 6277, 6278, 6295, 6296,
 6297
 \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,
 3504, 3505, 3516, 3520, 3576,
 3580, 3632, 3635, 3644, 3646,
 4229, 4230, 4829, 4831, 4869,
 4871, 4972, 4974, 5374, 5376,
 5377, 5380, 5381, 5382, 5661,
 5666, 5671, 6095, 6096, 6113,
 6114, 6117, 6389, 6390, 6441,
 6442, 7551, 7552, 8286, 8425,
 8426, 9705, 9706, 9965, 9966,
 11659, 11660, 11683, 11685,
 11701, 11706, 11999, 12025,
 12030, 12033, 12036
 \Hy@tempb 4830, 4831, 4870, 4871,
 11684, 11685, 11706
 \Hy@tempcolor . 8891, 8893, 8906,
 8978, 8980, 8992
 \Hy@TempPageAnchor . 6025, 6032,
 6036, 6050
 \Hy@testname . . 7039, 7040, 7045,
 7047, 7048, 7062, 8028, 8029,
 8034, 8036, 8037, 8052, 8439,
 8440, 8445, 8449, 8510, 8511,
 8516, 8520, 8983, 8984, 8989,
 9000
 \Hy@texhtfalse 315
 \Hy@texhttrue 2152, 3170
 \Hy@title 4663, 4667
 \Hy@toclevel . . . 6106, 6110, 6119
 \Hy@toolbartrue 316
 \Hy@true . 1768, 1840, 1842, 2305,
 2307
 \Hy@typexmlfalse 317
 \Hy@undefinedname . . 7036, 7043,
 7045, 8025, 8032, 8034, 8416,
 8443, 8445, 8514, 8516, 8975,
 8987, 8989
 \Hy@unicodefalse 318, 622, 2068,
 2069, 2077, 2831, 2837, 5180,
 6029, 11359
 \Hy@unicodetrue 2069
 \Hy@usehidkeyfalse 2706
 \Hy@usehidkeytrue 2710
 \Hy@usemaketitleInfos . . 4716,
 7321, 7728, 8150, 8791, 9006,
 9772
 \Hy@usemaketitleString . . 4697,
 4717, 4718
 \Hy@useNameKey 1919, 7287, 7288,
 7289, 7290, 7291, 7292, 7293,
 7294, 7313, 7793, 7794, 7795,
 7796, 7797, 7798, 7799, 7800,
 7821, 8189, 8190, 8191, 8192,
 8193, 8194, 8195, 8196, 8229,
 8764, 8765, 8766, 8767, 8768,
 8769, 8770, 8771, 9076, 9077,
 9078, 9079, 9080, 9081, 9082,
 9083, 9106, 9830, 9831, 9832,
 9833, 9834, 9835, 9836, 9837,
 9860
 \Hy@usetitlefalse 319
 \Hy@varioref@undefined . . 5246,
 5250, 6702
 \Hy@verbosefalse 320
 \Hy@vt@PutCatalog . . 4916, 4918
 \Hy@VTeXversion 4896, 4908, 8469,
 8577, 8711, 11737
 \Hy@Warning 237, 360, 1192, 1857,
 1872, 1897, 1984, 2096, 2101,
 2611, 2641, 3381, 3647, 3879,
 6087, 6683, 6732, 7041, 7870,
 7874, 8030, 8441, 8512, 8985,
 9253, 9262, 11668, 11686
 \Hy@WarningNoLine . . 238, 2011,
 2122, 2692, 2730, 2976, 3020,
 3178, 3187, 3202, 3217, 3226,
 3722, 4644, 4746, 4910, 4986,
 5165, 6097, 6246, 9132
 \Hy@WarningPageBorderColor . .
 2727, 2729, 2731
 \Hy@WarningPageColor 2689, 2691,
 2693
 \Hy@WarnOptionDisabled . . 1869,
 1871
 \Hy@WarnOptionValue 1850, 1856,
 2292, 2314
 \Hy@windowuitrue 321
 \Hy@writebookmark . . 1773, 6107,
 6409, 6417, 6427, 6460, 6468,
 6478, 11645, 11728
 \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 4336, 4339
 \HyColor@FieldColor 4342
 \HyColor@HyperrefBorderColor .
 2717
 \HyColor@HyperrefColor . . 2677
 \HyColor@UseColor . . 3403, 6987,
 6998, 7989, 8000
 \HyField@@PDFChoices 4118, 4119,
 4134
 \HyField@@SetFlag . . 3812, 3814
 \HyField@@UseFlag . . 3802, 3804
 \HyField@AddToFields . . 10606,
 10613, 10695, 10788, 10801,
 10828, 10853, 10877, 10899

\HyField@AdvanceAnnotCount ..	11198, 11203, 11227, 11232,	\HyOrg@author ..	4660, 4673, 4677
10993, 11023, 11116, 11138,	11254, 11259	\HyOrg@float@makebox	5718, 5720
11167, 11196, 11225, 11250	\HyField@UseFlag ...	\HyOrg@languageshorthands	3090,
\HyField@afields .	3801, 3942,	3097, 3103	
10603, 10614,	3943, 3944, 3945, 3946, 3947,	\HyOrg@make@df@tag@@	6191
10615, 10617, 10635	3948, 3949, 3952, 3953, 3954,	\HyOrg@make@df@tag@@@ ..	6192
\HyField@AnnotCount ...	3955, 3958, 3959, 3960, 3963,	\HyOrg@maketitle ...	5597, 5604,
10991,	3974, 3975, 3976, 3977, 3978,	5609	
10994, 10997	3979, 3980, 3981, 3982, 3993,	\HyOrg@subequations	5391, 5398
\HyField@FlagsAnnot	3994, 3995, 4007, 4008, 4009,	\HyOrg@title ...	4659, 4664, 4668
3972, 3991,	4020, 4021, 4022, 4023, 4025,	\HyOrg@url	3555
4005, 4018, 4034, 4066	4036, 4037, 4038, 4039, 4040,	\hyper@@anchor	3004, 3565, 3567,
\HyField@FlagsCheckBox ..	4041, 4042, 4043, 4054, 4057,	3593, 3595, 3622, 3624, 3719,	
4004,	4068, 4069, 4070, 4071, 4073,	4550, 4565, 4580, 5487, 5490,	
10418, 10892, 11247	4075, 4076, 4079, 4082	5498, 5501, 5559, 5562, 5589,	
\HyField@FlagsChoice	\HyInd@hyperpage ..	5698, 5700, 5724, 6025, 6032,	
4065,	6322, 6332	6036, 6408, 6416, 6426, 6459,	
10299, 10751, 11088	\HyInd@wrindex ...	6467, 6477	
\HyField@FlagsPushButton	6271, 6272	\hyper@@link ..	3538, 3551, 3588,
3990,	\HyInd@EncapChar ...	3607, 3609, 3627, 5778, 5924,	
10354, 10374, 10399, 10820,	2322, 2985,	5925, 5926, 5974, 5976, 5978,	
10841, 10871, 11165, 11190,	6267	6578, 6593, 6692	
11221	\HyInd@hyperpage ...	\hyper@@normalise ..	3507, 3511,
\HyField@FlagsRadioButton	6319, 6321,	3515	
4017,	6328	\hyper@anchor .	3746, 4619, 7069,
10295, 10747, 11084	\HyInd@org@wrindex .	7520, 7606, 7891, 8319, 8391,	
\HyField@FlagsSubmit	6270, 6274,	8848, 9675, 9936	
3938,	6280, 6282	\hyper@anchorend	
10375, 10842, 11191	\HyInd@pagelink	3007, 4545, 4554,	
\HyField@FlagsText	6337, 6343, 6345,	4568, 4583, 5095, 5230, 5278,	
4033, 10237,	6348	5320, 5339, 5363, 5448, 5772,	
10688, 11017	\HyInd@ParenLeft ...	5797, 5800, 5820, 5953, 6176,	
\HyField@NewBitsetFlag ..	6261, 6277,	6201, 7071, 7543, 7622, 7898,	
3770,	6296	8314, 8411, 8867, 9697, 9957,	
3773, 3781	\HyInd@ParenRight ..	11641, 11729, 11927, 11938,	
\HyField@NewFlag ...	6262, 6278,	11970, 11982, 12012	
3768, 3844,	6297	\hyper@anchorstart	
3845, 3846, 3847, 3848, 3849,	\HyInd@removespaces	3006, 4545, 4553,	
3850, 3851, 3852, 3853, 3854,	6351, 6354,	4567, 4582, 5095, 5230, 5278,	
3855, 3856, 3857, 3858, 3859,	6364	5317, 5339, 5363, 5448, 5770,	
3860, 3861, 3862, 3863, 3868,	\HyLang@addto .	5795, 5800, 5820, 5953, 6176,	
3869, 3870, 3871, 3872, 3873,	2526, 2548, 2579,	6201, 7070, 7534, 7617, 7894,	
3874, 3875, 3876, 3909, 3911,	2587	8304, 8403, 8861, 9688, 9949,	
3912, 3914, 3915, 3917, 3918,	\HyLang@afrikaans	11641, 11729, 11927, 11938,	
3919, 3920	2324	11970, 11982, 12012	
\HyField@NewFlagOnly	\HyLang@DeclareLang	\hyper@chars ..	3532, 7094, 7524,
3772, 3910,	2540, 2555,	7537, 7556, 7575, 7585, 7598,	
3913, 3916	2556, 2557, 2558, 2559, 2560,	7666, 7696, 8272, 8292, 8307,	
\HyField@NewOption .	2561, 2562, 2563, 2564, 2565,	8323, 8395, 8406, 8486, 9379,	
3769, 3775	2566, 2567, 2568, 2569, 2570,	9691, 9710, 9729, 9739, 9752,	
\HyField@PDFAFlagWarning	2571, 2572, 2573, 2574, 2575,	9952, 9970, 9990, 9999, 10011	
3878,	2576, 2577	\hyper@currentanchor	8864, 8873,
3886, 3890, 3894, 3898, 3902,	\HyLang@english	8885, 8902	
3906	2342	\hyper@currentlinktype ..	8886,
\HyField@PDFChoices	\HyLang@french	8890, 8894	
4091, 10332,	2360	\hyper@hash ..	3484, 3485, 3533,
10795, 11134	\HyLang@german	3683, 3695, 3712, 3715, 4512,	
\HyField@PrintFlags	2378		
3819, 3965,	\HyLang@italian		
3983, 3997, 4010, 4026, 4058,	2396		
4083	\HyLang@magyar		
\HyField@SetFlag ...	2414		
3811, 3951,	\HyLang@portuges		
3957, 3962, 3996, 4024	2432		
\HyField@SetKeys ..	\HyLang@russian		
4195, 10234,	2450		
10266, 10269, 10288, 10342,	\HyLang@spanish		
10371, 10389, 10415, 10684,	2490		
10717, 10720, 10739, 10807,	\HyLang@vietnamese .		
10838, 10861, 10888, 11013,	2508, 2579,		
11054, 11057, 11076, 11151,	2587		
11187, 11211, 11243	\HyLinguex@OrgB		
\HyField@TheAnnotCount .	635, 639		
10996,	\HyLinguex@OrgC		
11027, 11032, 11119, 11128,	636, 640		
11140, 11145, 11172, 11178,	\HyLinguex@OrgD		
	637, 641		
	\HyLinguex@Restore		
	638, 651, 655,		
	663, 2050		
	\HyOrg@addtoreset ..		
	6204, 6206,		
	6233		
	\HyOrg@appendix		
	5107, 5113		

8266

\hyper@image . . 3561, 3562, 7596, 8533, 8972, 9750, 10009

\hyper@last 4635, 4639

\hyper@link . . 3005, 3636, 4551, 4552, 4566, 4576, 4581, 7081, 7593, 7637, 8060, 8263, 8503, 8976, 9747, 10006

\hyper@link@ . . 3012, 3628, 3630, 4549, 4559, 4563, 4573, 4588

\hyper@linkend 3009, 4556, 4570, 4585, 5523, 5764, 5767, 6136, 6140, 6144, 6146, 7080, 7562, 7634, 8059, 8061, 8297, 8461, 8888, 9716, 9976

\hyper@linkfile 3011, 3708, 4558, 4572, 4587, 7122, 7566, 7694, 8063, 8282, 8465, 9394, 9720, 9980

\hyper@linkstart . . 3008, 4555, 4569, 4584, 5521, 5760, 5767, 6136, 6140, 6144, 6146, 7072, 7549, 7626, 8026, 8061, 8285, 8417, 8878, 9703, 9963

\hyper@linkurl 3010, 3560, 3683, 3690, 3711, 3715, 4557, 4571, 4586, 7091, 7567, 7569, 7594, 7664, 8091, 8270, 8283, 8483, 8534, 8973, 9376, 9721, 9723, 9748, 9981, 9983, 10007

\hyper@livelink . . . 4551, 4576

\hyper@makecurrent . 5091, 5115, 5263, 5316, 5338, 5362, 5426, 5516, 5678, 5711

\hyper@n@rmalise . . 3499, 3503

\hyper@nat@current 5761

\hyper@nat@anchorend . . . 5772

\hyper@nat@anchorstart . . 5769

\hyper@nat@linkbreak . . . 5766

\hyper@nat@linkend 5763

\hyper@nat@linkstart . . . 5758

\hyper@normalise . . 2987, 2992, 3476, 3541, 3544, 3557, 3559, 3561, 3582, 4224

\hyper@pageduration 7374, 7420, 8688, 8705, 8939, 8969

\hyper@pagehidden . . 7397, 7421, 8698, 8706, 8956, 8970

\hyper@pagetransition . . 7350, 7419, 8579, 8704, 8922, 8968

\hyper@quote . . 4514, 7526, 7539, 7553, 7558, 7576, 7586, 7599, 8266, 8276, 8288, 8310, 8327, 9680, 9693, 9707, 9712, 9730, 9740, 9753, 9941, 9953, 9967, 9972, 9990, 10000, 10012

\hyper@readexternallink . 3638, 3654

\hyper@refstepcounter . . . 5070, 5073, 5080

\hyper@tilde . . 3493, 3494, 3495, 4513

\hyperbaseurl . . 2695, 2696, 4599

\hypercalcbp 340, 340

\hypercalcbpdef . . 342, 379, 2875

\hyperdef 3590, 4601

\HyperDestNameFilter 2956, 7026, 7048, 7526, 7539, 7558, 7594, 7839, 8037, 8266, 8276, 8293, 8310, 8327, 8396, 8407, 8448, 8519, 9250, 9259, 9680, 9693, 9712, 9748, 9941, 9953, 9972, 10007, 11792, 11837, 11853

\hypergetpageref 5223

\hypergetref 5222

\hyperimage . . . 3561, 3752, 6256

\hyperlink 3537, 4602, 6360, 6498, 6506, 6521, 6529, 6539, 6547, 6554

\hyperlinkfileprefix 2698, 2699, 2700, 9928

\hyperpage 4608, 6318

\HyperRaiseLinkDefault . . 1775, 1784

\HyperRaiseLinkHook 1774, 1785

\HyperRaiseLinkLength . . 1783, 1784, 1787

\hyperref 3570, 3759, 3760, 4604, 6650, 6654, 6664, 6678

\hypersetup . . 2089, 2564, 2986, 2988, 4598

\hypertarget 3563, 4603

\HyPL@@@CheckThePage 4850, 4868

\HyPL@@CheckThePage 4826, 4828

\HyPL@Alph 4766

\HyPL@alph 4767

\HyPL@arabic 4763

\HyPL@CheckThePage . 4778, 4825

\HyPL@Entry 4974, 4982, 4990, 4992

\HyPL@EveryPage . . . 4768, 4889

\HyPL@Format . . 4841, 4842, 4843, 4844, 4845, 4857

\HyPL@found . . 4840, 4847, 4851, 4858, 4868, 4870

\HyPL@Labels . . 4757, 4880, 4881, 4883, 4885, 4930, 4931, 4985, 4993, 4994

\HyPL@LastNumber . . . 4761, 4796, 4819

\HyPL@LastPrefix . . . 4762, 4790, 4821

\HyPL@LastType . 4760, 4781, 4820

\HyPL@page 4771, 4773, 4778, 4786

\HyPL@Prefix . . 4786, 4788, 4790, 4804, 4807, 4809, 4821, 4835, 4873

\HyPL@Roman 4764

\HyPL@roman 4765

\HyPL@SetPageLabels 4879, 4937, 4939, 4988

\HyPL@StorePageLabel 4804, 4806, 4876, 4928, 4969

\HyPL@thisLabel 4754, 4756, 4770, 4773, 4774

\HyPL@Type 4776, 4781, 4785, 4803, 4811, 4820, 4834, 4872

\HyPL@Useless 4877, 4883

\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 . 6621, 6626
\HyRef@autopageref . 6675, 6677
\HyRef@autopagerefname .. 6674,
6678, 6680
\HyRef@autoref 6692, 6694
\HyRef@autosetref .. 6697, 6700
\HyRef@CaseStar 6760, 6766
\HyRef@currentHtag . 6713, 6731,
6734, 6740, 6746, 6752, 6767
\HyRef@MakeUppercaseFirstOfFive
..... 6641, 6643

\HyRef@name . . . 6729, 6730, 6735, 6741, 6759, 6760, 6761, 6763	8370, 8374, 8377, 9170, 9181, 10261, 10300, 10301, 10712, 10752, 10753, 11049, 11089, 11090	\ifHy@fitwindow 258, 7284, 7790, 8186, 8761, 9073, 9827
\HyRef@Ref 6647, 6649		\ifHy@frenchlinks . . . 259, 3408
\HyRef@ShowKeysInit 6769, 6782, 6786	\ifetex@unexpanded 1196	\ifHy@hyperfootnotes . 260, 5461
\HyRef@ShowKeysRef . 6701, 6768	\IfFileExists 4643, 10022	\ifHy@hyperindex 261, 3119, 4487, 6260
\HyRef@StarSetRef . . 6615, 6633, 6636, 6641	\ifFld@checked 4198, 10580, 11392	\ifHy@hypertextnames 262, 5121, 5176, 6023, 6406, 6457
\HyRef@StripStar . . . 6728, 6758	\ifFld@comb 4044	\ifHy@implicit . 263, 3141, 11908
\HyRef@testreftype . 6706, 6725	\ifFld@combo . . 4072, 4077, 10275, 10304, 10726, 10756, 11063, 11093	\ifHy@linktocpage . . 264, 1967, 1977
\HyRef@thisref 6703, 6706	\ifFld@disabled . . . 4199, 10581	\ifHy@menubar . . . 265, 7282, 7788, 8184, 8759, 9071, 9825
\HyTmp@found . . . 4145, 4155, 4158	\ifFld@edit 4078	\ifHy@naturalnames . 266, 5134, 6407, 6458
\HyTmp@key 4139, 4140	\ifFld@fileselect 4047	\ifHy@nesting . . . 267, 3114, 3564, 3592, 3621, 3728, 4482, 5486, 5497, 5558, 5697
\HyTmp@optitem 4095, 4111, 4138, 4143, 4149, 4170, 4181	\ifFld@hidden 10238, 10289, 10355, 10376, 10400, 10419, 10479, 10491, 10501, 10584, 10689, 10741, 10821, 10843, 10872, 10893, 11018, 11078, 11166, 11192, 11222, 11248	\ifHy@newwindow . 269, 2912, 8469
\HyTmp@optlist 4094, 4109, 4110, 4141, 4142, 4147, 4148, 4156, 4157, 4177, 4179, 4186, 4189	\ifFld@multiline . . 4045, 10226, 10486, 10676, 11005	\ifHy@newwindowset . . 268, 2910
	\ifFld@multiselect 4117	\ifHy@next 706, 3076, 6269
I	\ifFld@password . . . 4046, 10467	\ifHy@ocgcolorlinks 270, 2610, 3378, 3388, 4502, 6890, 6908, 6983, 6991, 7902, 7985, 7993
\i . . . 12194, 12357, 12360, 12363, 12366, 12563, 12725, 12728, 12731, 12734, 12851, 12856, 12861, 12866, 12870, 13037, 13093	\ifFld@popdown 3864, 10276, 10727, 11064	\ifHy@pageanchor 271, 5163, 5175, 5190, 6022
\if . 1054, 1762, 4794, 4802, 5380, 5381, 8651, 8654, 8658, 8662, 8666, 8668, 8670, 11465	\ifFld@radio 10272, 10294, 10516, 10723, 10746, 11060, 11083	\ifHy@pagelabels 272, 4742, 4928, 4968
\if@eqnstar 5322, 5330	\ifFld@readonly . . 10488, 10498, 10582	\ifHy@pdfa 287, 3027, 3380, 3671, 3877, 4358, 4394, 4507, 7052, 7110, 7141, 7177, 7492, 8044, 8072, 8099, 8123, 8430, 8451, 8472, 8491, 8522, 8549, 8565, 9274, 10197, 10345, 10393, 10643, 10811, 10865, 10977, 11155, 11215, 11394, 11467, 11605
\if@files 1730, 3616, 4612, 4648, 4970, 4980, 5172, 5807, 5822, 5838, 5850, 5880, 5903, 5930, 5935, 5954, 6289, 11702, 11814, 11880	\ifForm@html 4218	\ifHy@pdfmarkerror . 9121, 9129
\if@hyper@item 5055, 5068	\ifhmode . 1812, 1821, 5405, 5512, 5524, 5648, 5650	\ifHy@pdfpagehidden 273, 2709, 7400, 8700, 8962
\if@inlabel 5437	\ifHy@activeanchor . . 244, 3743	\ifHy@pdfstring . 274, 671, 5060
\if@Localurl 8254, 8298	\ifHy@backref . . . 245, 3129, 3459, 4492, 5931, 5967	\ifHy@plainpages 275, 3124, 5177, 6024
\if@mid@expandable 480	\ifHy@bookmarks 246, 3321	\ifHy@psize 276
\if@minipage 5686, 5749	\ifHy@bookmarksnumbered . . 247, 6401, 6452, 11692	\ifHy@raiselinks 277, 7571, 7640, 7669, 7699, 9725, 9985
\if@nmbrowse 5042	\ifHy@bookmarksopen . 248, 3311	\ifHy@seminarslides 278
\if@nobreak 5453	\ifHy@breaklinks 249, 2010, 8879, 8910, 9164, 9175	\ifHy@setpagesize . . 279, 7424, 8244, 8364, 9512
\if@skiphyperref . . . 5056, 5066	\ifHy@centerwindow . 250, 7285, 7791, 8187, 8762, 9074, 9828	\ifHy@setpdfversion 2129, 6895
\if@twocolumn 12014	\ifHy@CJKbookmarks . . . 251, 496	\ifHy@texht 280, 3420, 3452, 4545, 6561
\if@twoside 12002	\ifHy@colorlinks 252, 3392, 4497, 9662	\ifHy@toolbar . . . 281, 7281, 7787, 8183, 8758, 9070, 9824
\ifcase 857, 879, 902, 970, 1628, 2079, 2638, 3940, 4045, 4175, 4250, 6132, 6277, 6296, 6513, 6702, 8724, 11404, 11481, 11546, 11581, 11615, 11741	\ifHy@displaydoctitle 286, 7286, 7792, 8188, 8763, 9075, 9829	\ifHy@typexml . . . 243, 3134, 3395, 3439, 4613, 11817, 11883
\ifcat . . . 1290, 1317, 1322, 1327, 1330, 1333, 1336, 3730, 3732	\ifHy@draft 253, 3003	
\ifdim 1040, 1370, 1374, 1382, 1386, 1794, 1813, 2958, 2959, 2964, 2965, 2973, 7434, 7438, 7443, 7447, 7454, 7458, 7463, 7467, 8367,	\ifHy@DvipdfmxOutlineOpen 3281, 11855	
	\ifHy@escapeform . . . 256, 11318, 11347	
	\ifHy@figures . . . 257, 3109, 4477, 6253	

<code>\ifHy@unicode</code> . 282, 388, 555, 567, 595, 603, 612, 807, 943, 1396, 1417, 1430, 1459, 1465, 1660, 2040, 2090, 11358	<code>\input</code> . 654, 662, 2049, 2582, 2590, 2597, 3277, 9453, 9524, 9615, 9767	<code>\label@hyperref</code> 3571, 3598, 3756
<code>\ifHy@useHidKey</code> 2705, 7398, 8699, 8957	<code>\InputIfFileExists</code> 2990, 11810, 11830, 11875, 11877	<code>\labelsep</code> 5964
<code>\ifHy@usetitle</code> 283, 4658	<code>\inputlineno</code> . . . 3735, 6115, 7023	<code>\labelwidth</code> 5963
<code>\ifHy@verbose</code> . . 284, 3820, 6112, 7022	<code>\insert</code> 5574	<code>\lam</code> 14476
<code>\ifHy@windowui</code> . 285, 7283, 7789, 8185, 8760, 9072, 9826	<code>\interfootnotelinepenalty</code> 5577	<code>\language@group</code> 465
<code>\ifmeasuring@</code> 5079, 5092	<code>\interlinepenalty</code> 5577	<code>\languageshorthands</code> 3098, 3099, 3102
<code>\ifnum</code> . . . 808, 811, 822, 823, 827, 835, 839, 842, 852, 874, 897, 1618, 1661, 1664, 1676, 2205, 2208, 2233, 2639, 2640, 3285, 3312, 4100, 4171, 4182, 4777, 4796, 4812, 4908, 6515, 6553, 6891, 6896, 7201, 7208, 7214, 7222, 8014, 8019, 8469, 8577, 8711, 8719, 8721, 8722, 8732, 8735, 8817, 8819, 8919, 9526, 10627, 10787, 11115, 11119, 11127, 11357, 11375, 11404, 11409, 11481, 11487, 11515, 11546, 11552, 11571, 11581, 11586, 11615, 11620, 11649, 11665, 11737, 11805, 11857, 11941, 11959, 11975, 11980	<code>\item</code> 5037, 5040, 5837, 5849, 5952	<code>\LARGE</code> 447
<code>\ifodd</code> 1642, 1647, 6044	<code>\Itemautorefname</code> 6792	<code>\Large</code> 448
<code>\ifpdf</code> 3175, 3237	<code>\itemautorefname</code> . . . 2327, 2345, 2363, 2381, 2399, 2417, 2435, 2464, 2465, 2493, 2511, 6792, 6793, 6796	<code>\large</code> 451, 6518, 6526, 6536, 6544
<code>\ifpdfstringunicode</code> . . 393, 396	<code>\itemindent</code> 5442	<code>\lastbox</code> 5440
<code>\ifportrait</code> 7433	<code>\itshape</code> 440	<code>\lastpage@putlabel</code> 5158
<code>\ifthenelse</code> 5957	J	<code>\lastskip</code> 1794, 1798, 1805, 1813, 1817, 1824
<code>\iftrue</code> . . 1203, 1225, 1489, 11943	<code>\j</code> 12879, 13064, 13128	<code>\LaTeX</code> 417, 418, 10028, 10029
<code>\ifvmode</code> 1777, 1793, 1802	<code>\jarr</code> 14485	<code>\LaTeXe</code> 418, 10029
<code>\ifvoid</code> 5271, 5280, 5441	<code>\jeem</code> 14457	<code>\LayoutCheckField</code> . 4433, 10420, 10894, 11251
<code>\ifvtexhtml</code> 3214, 3243	<code>\jeh</code> 14493	<code>\LayoutChoiceField</code> 4430, 10293, 10745, 11082
<code>\ifvtexpdf</code> 3254	<code>\jobname</code> 4615, 4643, 4650, 10022, 11810, 11816, 11830, 11875, 11877, 11882	<code>\LayoutPushButtonField</code> . . 4436, 10349, 10356, 10815, 10822, 11159, 11168
<code>\ifvtexps</code> 3257	K	<code>\LayoutTextField</code> . . 4427, 10240, 10691, 11024
<code>\ifxetex</code> 3199, 3240	<code>\k</code> . . . 12076, 12416, 12418, 12423, 12425, 12468, 12486, 12505, 12512, 12776, 12778, 12816, 12818, 12863, 12865, 12866, 13001, 13003, 13060, 13062, 13659, 13698, 13701	<code>\lccode</code> 953, 1583, 6267
<code>\ignorespaces</code> . . 495, 5244, 5400, 5594, 5682, 5693, 5696, 5746, 5753, 5815, 5830, 5846, 5855, 5965, 6386, 6438	<code>\kaf</code> 14475	<code>\ldots</code> 412
<code>\IJ</code> 12190, 12872	<code>\kasra</code> 14488	<code>\leavevmode</code> 492, 1772, 3013, 3030, 3070, 3676, 4592, 5511, 5647, 5871, 6653, 6661, 7038, 7095, 7126, 7162, 7570, 7639, 7667, 7697, 8064, 8092, 8264, 8273, 8324, 8466, 8487, 8509, 8539, 8881, 9163, 9380, 9398, 9423, 9724, 9984, 10350, 10357, 10392, 10775, 10796, 10816, 10823, 10844, 10864, 11113, 11136, 11160, 11169, 11194, 11214
<code>\ij</code> 12399, 12874	<code>\keepPDF@SetupDoc</code> . . 9666, 9673	<code>\limits</code> 3524
<code>\immediate</code> . . . 4614, 4615, 4616, 4618, 4650, 4921, 4973, 4981, 5187, 5215, 5810, 5825, 5841, 5851, 5881, 5904, 5930, 5960, 6909, 6924, 6939, 8822, 9523, 10597, 10633, 11791, 11816, 11818, 11882, 11884	<code>\kern</code> 1299, 1371, 1376, 1388, 5442, 6039, 6040, 6041, 6043, 6044, 6049	<code>\listofslides</code> 6487
<code>\incr@eqnum</code> 5291, 5304	<code>\kernel@ifnextchar</code> 515	<code>\listslidenam</code> 6486, 6489, 6491, 6493
<code>\index</code> 484	<code>\kha</code> 14459	<code>\literalps@out</code> 1770, 8811, 8816, 8863, 8868, 8884, 8889, 9139, 9150, 9171, 9173, 9182, 9184, 9451, 9522, 9585, 9765
<code>\indexentry</code> . . . 6292, 6300, 6304	<code>\KV@Hyp@draft</code> 1934	<code>\lower</code> . . . 7574, 7642, 7671, 7701, 9173, 9728, 9988
	<code>\KV@Hyp@nolinks</code> 1934	<code>\lowercase</code> 954, 1584, 1836, 2271, 2301, 3769, 3770, 3773, 3778, 3802, 3812, 3866, 3922, 4241, 4281, 4284, 6268, 8918
	<code>\kv@key</code> . . 4098, 4101, 4103, 4107, 4111	<code>\lslide@flag</code> . . 6513, 6516, 6534, 6553, 6557
	<code>\kv@parse</code> 4097	<code>\LT@array</code> 5257
	<code>\kv@value</code> 4099, 4106, 4107	<code>\LT@firsthead</code> 5271, 5280
	L	
	<code>\L</code> 12183, 12903	
	<code>\l</code> 12196, 12905	
	<code>\l@slide</code> . 6386, 6496, 6501, 6505, 6512	
	<code>\l@subslide</code> 6438, 6501, 6508, 6552	
	<code>\label</code> 483, 6084	
	<code>\label@hyperref</code> . . . 3599, 3601	
	<code>\label@hyperdef</code> 3590, 3613	

<code>\LTp@ftn</code> . 5530, 5533, 5537, 5551	<code>\meem</code> 14477	<code>\newsavebox</code> 7834, 9158
<code>\LTp@ftntext</code> 5528, 5535	<code>\message</code> 6514	<code>\newtie</code> 12078, 12460, 12490, 12509, 12525
<code>\LT@start</code> 5273, 5284	<code>\MessageBreak</code> 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, 2978, 3179, 3180, 3188, 3189, 3203, 3204, 3218, 3219, 3227, 3228, 3382, 3823, 3828, 3837, 3880, 3926, 4050, 4164, 4245, 4747, 5166, 6089, 6248, 7042, 8031, 8442, 8513, 8986, 10608, 10609, 11670, 11688	<code>\newtoks</code> 90, 4263, 9004, 9191, 9192
<code>\luatexrevision</code> 7245	<code>\MF</code> 421, 10031	<code>\newwrite</code> . . . 4649, 11815, 11881
<code>\luatexversion</code> 7237, 7242	<code>\MP</code> 422, 10032	<code>\next</code> 5958, 5959, 5960, 8643, 8645, 8647
M	<code>\multiply</code> 7241, 8680, 8715	<code>\nfss@text</code> 6568, 6588, 6605, 6719
<code>\m@ne</code> 3784, 5203, 5372, 8023, 11877, 11941, 11956	N	<code>\NG</code> 12921
<code>\make@df@tag@%</code> 6191, 6193	<code>\name@of@eq</code> 5053, 5082	<code>\ng</code> 12923
<code>\make@df@tag@%%</code> 6192, 6194	<code>\name@of@slide</code> 5054, 5064	<code>\noboundary</code> 14498
<code>\make@stripped@name</code> 5084, 5313, 5335, 5359, 5370	<code>\nameref</code> 490	<code>\nobreak</code> . 1795, 1803, 1814, 1822, 5512, 5648
<code>\makeatletter</code> 3, 685, 4642	<code>\nasb</code> 14483	<code>\nobreakspace</code> . . 504, 6656, 6685, 6688
<code>\MakeButtonField</code> . . 4443, 10351, 10359, 10378, 10397, 10402, 10817, 10826, 10851, 10869, 10875, 11161, 11164, 11193, 11219, 11223	<code>\netscape</code> 7605	<code>\noexpand</code> 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, 2716, 2717, 2719, 3097, 3098, 3099, 3100, 3102, 3103, 3518, 3578, 3647, 3730, 3732, 3832, 4850, 4851, 4860, 4862, 4865, 4947, 5200, 5201, 5203, 5376, 5531, 5539, 5540, 5541, 5542, 5543, 5545, 5657, 5735, 5809, 5824, 5840, 6208, 6210, 6621, 6622, 6735, 6736, 6741, 6742, 6747, 6748, 6753, 6754, 7244, 7775, 9058, 9125, 9582, 9812, 10268, 10269, 10270, 10271, 10719, 10720, 10721, 10722, 11056, 11057, 11058, 11059, 11320
<code>\MakeCheckField</code> . . . 4440, 10422, 10897, 11249	<code>\new@ifnextchar</code> 516	<code>\nofrenchguillemets</code> . . 523, 525
<code>\MakeChoiceField</code> . . 4442, 10334, 10799, 11135	<code>\new@pdflink</code> . . . 7021, 7069, 7070	<code>\NoHyper</code> 4548
<code>\MakeFieldObject</code> . 10596, 10652, 10662, 10665	<code>\new@refstepcounter</code> 5286, 5318	<code>\nohyperpage</code> . . 4591, 6317, 6319, 6321
<code>\MakeLowercase</code> 462	<code>\newblock</code> 5968	<code>\nolinkurl</code> 3557
<code>\MakeLowercaseIsNotSupportedInPdfStrings</code> 462	<code>\newcommand</code> . 4, 9, 42, 1771, 4596, 5016, 5019, 5022, 5023, 5024, 5026, 5027, 5028, 5029, 5031, 5032, 5033, 5034, 5035, 5036, 5045, 5046, 5047, 5048, 5049, 5050, 5368, 6216, 6373, 6378, 6379, 11712, 11715, 11720	<code>\nolinkurl@</code> 3557, 3558
<code>\MakeRadioField</code> . . . 4439, 10324, 10786, 11108	<code>\newcount</code> . . 329, 330, 4202, 4758, 10330, 10793, 10991, 11132, 11734	<code>\NomFancyVerbLineautorefname</code> 2482
<code>\makeslideheading</code> 6396	<code>\newcounter</code> . . . 5038, 5462, 7901	<code>\Nomfootnoteautorefname</code> . 2462
<code>\makeslidesubheading</code> 6448	<code>\newdimen</code> 326, 4203, 4204	<code>\Nomtheoremautorefname</code> . . 2486
<code>\maketag@%</code> 6180	<code>\newif</code> 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, 2705, 3281, 3776, 3864, 4198, 4199, 4218, 5055, 5056, 5079, 5322, 8254, 9121	<code>\nonumber</code> 5347, 5350
<code>\MakeTextField</code> 4441, 10242, 10694, 11021	<code>\newlabel</code> 1736, 3618, 4625, 4626, 4633, 4655, 5188, 5216	<code>\normalfont</code> 434, 5408
<code>\maketitle</code> 5597, 5598	<code>\newlabelxx</code> 4627, 4628	<code>\normalsize</code> 452, 5689, 5752
<code>\MakeUppercase</code> . 461, 6491, 6493, 6644	<code>\newline</code> 415, 4703	<code>\null</code> 5949, 5957, 6610, 6715
<code>\MakeUppercaseIsNotSupportedInPdfStrings</code> 461	<code>\newname</code> . 5085, 5314, 5336, 5360, 5373, 5382	<code>\number</code> 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,
<code>\MathBSuppress</code> 8274, 8278		
<code>\mathdisplay</code> 5294, 5303		
<code>\mathdisplay@push</code> . . 5292, 5301		
<code>\mathversion</code> 456		
<code>\maxdimen</code> 2660, 10601		
<code>\MaybeStopEarly</code> 328, 2156, 2210, 3145, 3245, 5001		
<code>\mbox</code> . 493, 5884, 5907, 6993, 7995		
<code>\mddefault</code> 5412		
<code>\mdseries</code> 439		
<code>\meaning</code> 62, 153, 159, 1733, 4682, 5141, 5377, 11841, 11849, 11864		
<code>\measuring@false</code> 5079		
<code>\mediaheight</code> . . 8360, 8362, 8368, 8375		
<code>\mediawidth</code> 8371, 8378		

1654, 1655, 1656, 1657, 1666,
1667, 1671, 1672, 1679, 1680,
1684, 1687, 1688, 1689, 1699,
1701, 1702, 1707, 1709, 1710,
1715, 1716, 2857, 3313, 3790,
6902, 6905, 7630, 7644, 7645,
7656, 7657, 7673, 7674, 7685,
7686, 7703, 7704, 7715, 7716
\numberline . . 5682, 5746, 11693,
11697
\numberwithin 6213
\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, 2861
\nun 14478

O

\O 12316, 12684, 13079
\o 12384, 12752, 13081
\obeylines 9581
\OBJ@acroform . . . 10649, 10650
\OBJ@Helv . . 10630, 10639, 10955
\OBJ@OCG@print 6938, 6941, 6949,
6975, 7919, 7921, 7934, 7938,
7947, 7976
\OBJ@OCG@view . 6923, 6941, 6974,
7903, 7905, 7918, 7938, 7975
\OBJ@OCGs 6944, 6947, 6953, 6958,
6963, 7935, 7937, 7941, 7945,
7951, 7956, 7961
\OBJ@pdfdocencoding . . . 10628,
10936, 10952
\OBJ@ZaDb . . 10629, 10638, 10945
\OCIRCUFLEX 14321, 14419, 14420,
14421, 14422, 14423
\ocircumflex 14314, 14359, 14360,
14361, 14362, 14363
\oddsidemargin 6045
\OE 12185, 12937
\oe 12198, 12939
\offinterlineskip 4729
\OHORN 14322, 14424, 14425, 14426,
14427, 14428
\ohorn . . 2509, 2516, 14315, 14364,
14365, 14366, 14367, 14368
\oldb 645
\oldc 646
\oldcontentsline . . . 4620, 4623,
4632
\oldd 647
\oldnewlabel . . . 4625, 4630, 4633
\OMEGA 10027
\openout 4615, 4650, 11816, 11882
\OpMode . . 2205, 2208, 2219, 2233,
2236, 8732, 8819, 9526

\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, 3950, 3956, 3961,
4176, 6134, 6138, 6533, 6542,
8725, 11742, 11743, 11744,
11745, 11746, 11747, 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

P

\P 411
\p@ 1667, 1672,
4205, 4211, 5414, 7580, 7652,
7681, 7711, 8679, 9734, 9995,
10263, 10714, 11051, 12007,
12008
\p@equation 6187
\PackageError 61, 2061, 3054, 3672,
3925, 4049, 4244, 4360, 4396,
10346, 10394, 10812, 10866,
11156, 11216
\PackageInfo . . . 239, 6886, 6900,
10607
\PackageWarning . 237, 2132, 4162
\PackageWarningNoLine . . . 238
\pageautorefname . . . 2340, 2358,
2376, 2394, 2412, 2430, 2448,
2488, 2506, 2524, 6688, 6809
\pagename 6685
\pageref . . 489, 3155, 3447, 5166,
6674, 6678
\paperheight . . 2959, 2960, 2971,
7438, 7440, 7443, 7445, 7458,
7460, 8367, 8368, 8370
\paperwidth . . 2958, 2960, 7434,
7436, 7447, 7449, 7454, 7456,
8371
\par . 5406, 5681, 5704, 5744, 5753,
5951, 5971
\paragraphautorefname . . . 2336,
2354, 2372, 2390, 2408, 2426,
2444, 2477, 2479, 2502, 2520,
6805
\partautorefname . . . 2330, 2348,
2366, 2384, 2402, 2420, 2438,

2468, 2496, 2514, 6799
\partnumberline . . 11694, 11698
\PassOptionsToPackage . . . 2245,
2282, 2286, 2308, 2997, 3270
\pdf@addtoks . . 9194, 9213, 9219,
9228, 9235, 9239, 9241, 9243,
9245, 9247, 9255, 9264, 9268,
9270, 9272, 9275, 9284, 9288,
9290, 9292, 9294, 9296, 9298,
9300, 9302, 9304, 9306, 9308,
9310, 9312, 9314, 9316, 9318,
9319, 9320, 9321, 9322, 9323,
9324, 9325, 9326, 9327, 9328
\pdf@addtoksx . . 9188, 9198, 9211
\pdf@box . 9158, 9165, 9167, 9169,
9170, 9173, 9180
\pdf@defaulttoks . . . 9125, 9192,
9193, 9203
\pdf@docset 9004
\pdf@endanchor . 7030, 7069, 7071
\pdf@escapestring 6865
\PDF@FinishDoc 2159, 2160, 2213,
2214, 2953, 3015, 3148, 3149,
3248, 3249, 4590, 4739, 4740,
7320, 7513, 7727, 8149, 8255,
8790, 9005, 9771, 9929
\pdf@linktype . 9143, 9147, 9208,
9209
\pdf@rect 9135, 9149, 9162
\PDF@SetupDoc . 2952, 3014, 4519,
4520, 4589, 7251, 7514, 7755,
8181, 8256, 8740, 9045, 9668,
9799, 9930
\PDF@SetupDox 7251
\pdf@toks 9125, 9140, 9151, 9191,
9195, 9199
\pdf@type 9127, 9131, 9140, 9151,
9186, 9206
\pdfannotlink 7012
\pdfbookmark . . 1771, 4595, 4596,
11713, 11718, 11723, 11727
\pdfcatalog . . 4893, 6945, 7266,
7308, 10650
\PDFdefaults 9202
\pdfdest 7032
\pdfendlink . 7068, 10694, 10786,
10800, 10827, 10852, 10876,
10898
\pdfescapestring 11348
\pdfform 7014
\PDFForm@Check . . . 10421, 10423,
10895, 10896, 11252, 11256,
11366
\PDFForm@List . . . 10333, 10335,
10797, 10798, 11137, 11142,
11473

\PDFForm@Name	10687, 10740, 10810, 10891, 11016, 11077, 11154, 11246, 11355	
\PDFForm@Push	10358, 10360, 10824, 10825, 11170, 11174, 11394	
\PDFForm@Radio	10323, 10326, 10776, 10778, 11114, 11122, 11506	
\PDFForm@Reset	10401, 10403, 10873, 10874, 11224, 11229, 11605	
\PDFForm@Submit	10377, 10380, 10845, 10847, 11195, 11200, 11573	
\PDFForm@Text	10241, 10243, 10692, 10693, 11025, 11028, 11538	
\pdfhorigin	7431	
\pdfinfo	7322	
\pdflastform	7015	
\pdflastlink	10620	
\pdflastobj	6923, 6938, 6944, 10649, 10936, 10945, 10955	
\pdflastxform	7015, 10599, 10601	
\pdflinkmargin	7010, 7013, 7018	
\pdfliteral	6994, 6996, 7001	
\pdfm@box	7834, 10987, 10988, 10989, 11020, 11031, 11108, 11126, 11135, 11144, 11164, 11177, 11193, 11202, 11223, 11231, 11249, 11258	
\pdfmark	4964, 7775, 7784, 7814, 8851, 8869, 8897, 8929, 8946, 8958, 8991, 9027, 9058, 9067, 9098, 9122, 9333, 9347, 9362, 9374, 9381, 9399, 9424, 9812, 9821, 9852, 10242, 10324, 10334, 10359, 10378, 10402, 10422, 11845	
\pdfmark@	9122, 9123	
\pdfminorversion	6883	
\PDFNextPage	9345	
\PDFNextPage@	9345, 9346	
\pdfobj	6909, 6924, 6939, 10633, 10903, 10937, 10946	
\PDFOpen	9373	
\pdfoptionpdfminorversion	6880	
\pdfoutline	11892	
\pdfpageattr	7354, 7358, 7359, 7369, 7377, 7381, 7382, 7392, 7399, 7402, 7403, 7413	
\pdfpageheight	7440, 7449, 7460, 7469	
\pdfpageresources	6972	
\pdfpagesattr	7255, 7257, 7259	
\pdfpagewidth	7436, 7445, 7456, 7465	
\PDFPreviousPage	9358	
\PDFPreviousPage@	9359, 9361	
\pdfrefform	7016	
\pdfrefobj	10628, 10629, 10630	
\pdfrefxform	7016, 10601	
\pdfstartlink	7011, 7012, 7066, 7096, 7127, 7163, 7478, 10693, 10777, 10798, 10825, 10846, 10874, 10896	
\pdfstringdef	381, 631, 2825, 2826, 2827, 2828, 2832, 2838, 2841, 2842, 4123, 4128, 4154, 4706, 4786, 4788, 5181, 6030, 11362, 11701	
\pdfstringdefDisableCommands	644, 683, 4593, 4701	
\pdfstringdefPostHook	627, 677	
\pdfstringdefPreHook	500, 677, 689, 691, 3095, 3096, 4700, 4710	
\pdfstringdefWarn	414, 415, 494, 694, 1158, 1163, 1182, 1186	
\pdfTeXrevision	7211, 7219, 7230	
\pdfTeXversion	7206, 7208, 7211, 7214, 7217, 7218, 7222, 7228, 7229, 10627	
\pdfvorigin	7432	
\pdfxform	7014, 10597	
\peh	14491	
\penalty	1293, 1780, 5878, 5901	
\phantom	457	
\phantomsection	2954, 4597, 6091, 11638, 11690, 11917, 11960	
\Preamble	10023	
\process@me	4680, 4692, 4693, 7254, 7263	
\ProcessKeyvalOptions	3001	
\protect	1291, 3603, 5682, 5746, 5809, 5824, 5840, 5956, 5963, 5964, 6124, 6155, 6386, 6438, 6567, 6587, 6593, 6604, 6718, 7523, 7609, 8322, 8394, 9678, 9939, 11704, 12007, 12008	
\protected@edef	3632, 4846, 5374, 5394, 7039, 8028, 8439, 8510, 8983	
\protected@write	1735, 3617, 5936, 6291, 6299, 6303, 11703	
\protected@xdef	5540, 5542, 5623	
\providecommand	1752, 1753, 2258, 3236, 3426, 3427, 3532, 3562, 4876, 4895, 4982, 5774, 5775, 5790, 5868, 6075, 6076, 6079, 6080, 6369, 6370, 6486, 6790, 6791, 6792, 6793, 6794, 6795,	6796, 6797, 6798, 6799, 6800, 6801, 6802, 6803, 6804, 6805, 6806, 6807, 6808, 6809, 6872, 7020, 7034, 7035, 7512, 7604, 7605, 7832, 7888, 7889, 7890, 8252, 8365, 8387, 8388, 8389, 8812, 9159, 9160, 9449, 9457, 9458, 9459, 9460, 9520, 9532, 9533, 9534, 9535, 9579, 9620, 9621, 9622, 9623, 9761, 9763, 9764, 9873, 9874, 9921
\PushButton	4415	
\put@me@back	3725, 3738, 3748	
Q		
\qaf	14474	
\quotedblbase	12165, 12402, 13991, 14295	
\quotesinglbase	12175, 12404, 13985, 14297	
R		
\r	12045, 12057, 12069, 12277, 12342, 12451, 12478, 12497, 12519, 12646, 12710, 12993, 12995, 13955, 13957	
\ra	14462	
\raff	14484	
\raise	1787, 7581, 7653, 7682, 7712, 9184, 9735, 9996	
\ReadBookmarks	3000, 3018, 3162, 3330, 3455, 11796, 11825	
\real@setref	6564, 6630	
\realfootnote	5620	
\Ref	6646, 6650, 6655	
\ref	488, 3154, 3446, 3764, 6665, 10015	
\ref@one	3584, 3585	
\rEfLiNk	10016, 10017	
\refstepcounter	5052, 5059, 5239, 5259, 5286, 5310, 5318, 5738	
\rem@ptetc	8919, 8921	
\renewcommand	1727, 5719, 6230, 11727	
\RequirePackage	22, 232, 233, 234, 235, 236, 1195, 1721, 2114, 2994, 3136, 3137, 3398, 3442, 3460, 3554, 3767, 4090, 4720, 6812, 8253, 9926	
\Reset	4424	
\reset@font	5884, 5907, 6568, 6588, 6605, 6719	
\revtex@checking	5861	
\Rightarrow	6520	
\rlap	6995, 7997	
\rm	445	
\rmfamily	435	
\Roman	4842	

\roman 4843
 \romannumeral 701, 702
 \rule 5585

S

\sad 14466
 \sbox 4444, 9159, 9167, 10596
 \scr@LT@array 5258
 \scriptsize 453
 \scriptstyle 5874
 \scrollmode .. 1210, 1235, 1245,
 1258, 1350, 1482
 \scshape 441
 \section 6488
 \sectionautorefname 2333, 2351,
 2369, 2387, 2405, 2423, 2441,
 2470, 2499, 2517, 6802
 \seen 14464
 \selectfont 3409, 10658
 \setbox 1294, 1300, 1306,
 2643, 2649, 4297, 4728, 5440,
 6985, 7504, 7572, 7638, 7668,
 7698, 7970, 7987, 9726, 9986,
 11020, 11108, 11135, 11164,
 11193, 11223, 11249
 \setkeys . 2153, 2244, 2986, 3028,
 3269, 3379, 4196, 6892, 9128,
 10214, 10452, 10465, 10514,
 10557, 10578, 10626, 10963
 \setlength . 365, 366, 1784, 7431,
 7432, 7436, 7440, 7445, 7449,
 7456, 7460, 7465, 7469, 8368,
 8371, 8375, 8378, 8679
 \setpdflinkmargin .. 2844, 2845,
 7010
 \settowidth 10260, 10711, 11048
 \sffamily 436
 \shadda 14489
 \sheen 14465
 \shortciteN 5999
 \SK@ 6776
 \SK@ref 6776
 \SK@ref 6773
 \skip@ ... 1308, 1382, 1383, 1386,
 1388, 1798, 1804, 1817, 1823
 \slide@cline .. 6506, 6519, 6527,
 6537, 6545
 \Slide@contents 6511
 \slide@contents 6504
 \slide@heading 6382
 \slide@subheading 6435
 \slide@undottedcline 6497
 \slidenumberline ... 6498, 6506,
 6520, 6528, 6538, 6546
 \SliTeX 420
 \slshape 442
 \small 454

\smash 1781
 \spacefactor .. 5512, 5524, 5648,
 5650
 \special@paper 1936, 1940, 1944,
 1948, 1952, 1956, 2955, 2960,
 2966, 8242, 8245, 9511, 9513
 \SpecialDvipdfmxOutlineOpen .
 2180, 2182, 3285
 \splitmaxdepth 5579
 \splittopskip 5578
 \SS 12400, 14294
 \ss ... 2380, 12330, 12415, 12698
 \st@rredfalse 5293, 5302
 \stepcounter .. 5069, 5201, 5393,
 5513, 5622, 8013
 \stockheight .. 2965, 2966, 2971,
 7467, 7469, 8374, 8375
 \stockwidth .. 2964, 2966, 7463,
 7465, 8377, 8378
 \stop@hyper 4562
 \StringEncodingConvertTest 618
 \strip@period 1740
 \strip@prefix 62, 1733, 4682, 5141,
 5377, 11841, 11849, 11864
 \strip@pt 370, 377, 2983,
 7436, 7440, 7445, 7449, 8682,
 11389, 11501, 11529, 11566,
 11614
 \strip@pt@and@otherjunk . 8868,
 8889, 8921
 \strutbox 5579
 \sub@label 1727
 \subeqnarray 5353, 5355
 \subequations 5391, 5392
 \subfig@oldlabel 1729
 \Submit 4421
 \SubmitObject 10848
 \SubmitPObject 10848
 \subparagraphautorefname 2337,
 2355, 2373, 2391, 2409, 2427,
 2445, 2478, 2480, 2503, 2521,
 6806
 \subpdfbookmark 11715
 \subsection 9757
 \subsectionautorefname .. 2334,
 2352, 2370, 2388, 2406, 2424,
 2442, 2475, 2500, 2518, 6803
 \subsubsectionautorefname 2335,
 2353, 2371, 2389, 2407, 2425,
 2443, 2476, 2501, 2519, 6804
 \sukun 14490
 \surd 6528

T

\T 14454
 \t ... 12077, 12470, 12489, 12508,
 12524

\T@pageref 3433, 3448, 6663
 \T@ref 3428, 3446
 \T@temp 5862, 5865
 \Ta 14468
 \taa 14455
 \tableautorefname .. 2329, 2347,
 2365, 2383, 2401, 2419, 2437,
 2467, 2495, 2513, 6798
 \tagform@ 6186
 \tatweel 14472
 \tcheh 14492
 \TeX 416, 417, 419, 420, 10026,
 10028, 10030
 \texorpdfstring 670, 4594
 \textacute . 12041, 12053, 12065,
 12243, 12474, 12493, 12611
 \textacutedbl 13143
 \textaleph 14109
 \textAlpha ... 859, 13163, 13179
 \textalpha ... 859, 13232, 13242
 \textampersand 408, 12110, 12541
 \textangstrom 14105
 \textasciicute 12612
 \textasciibreve .. 12086, 12482,
 12501, 13132
 \textasciicaron .. 12046, 12058,
 12070, 12088, 12479, 12498,
 13130
 \textasciicircum . 12042, 12054,
 12066, 12124, 12475, 12494,
 12557
 \textasciidieresis 12044, 12056,
 12068, 12220, 12477, 12496,
 12588
 \textasciigrave .. 12040, 12052,
 12064, 12129, 12473, 12492,
 12561
 \textasciimacron . 12049, 12061,
 12073, 12233, 12484, 12503,
 12601
 \textasciitilde 409, 3495, 12139,
 12572
 \textasteriskcentered .. 12549
 \textbackslash . 404, 554, 12122,
 12555
 \textbaht 13817
 \textbar 12135, 12568
 \textbardbl 13979
 \textBeta 860, 13181
 \textbeta 860, 12415, 13244
 \textbf 428
 \textbigcircle ... 12491, 12510,
 14279
 \textblank 14127
 \textbraceleft 402, 12133, 12566
 \textbraceright 403, 12137, 12570
 \textbrokenbar ... 12216, 12584

<code>\textbullet</code>	12141, 13997	<code>\textdoublegrave</code> .	12483, 12502, 13149	<code>\textkra</code>	12885
<code>\textcdot</code>	12414, 14307	<code>\textdownarrow</code>	14117	<code>\textLambda</code>	883, 13199
<code>\textcedilla</code> 12048, 12060, 12072, 12251, 12481, 12500, 12620		<code>\texteightinferior</code>	14063	<code>\textlambda</code>	883, 13262
<code>\textcelsius</code>	12401, 14089	<code>\teightsuperior</code>	14031	<code>\textlatin</code>	463, 5135, 6085
<code>\textcent</code>	12208, 12576	<code>\textellipsis</code>	412, 413, 12147, 13999	<code>\textlbrackdbl</code>	14287
<code>\textChi</code>	909, 13221	<code>\textemdash</code>	588, 12149, 13977	<code>\textleftarrow</code>	14111
<code>\textchi</code>	909, 13286	<code>\textendash</code>	589, 12151, 13975	<code>\textless</code>	12118, 12551
<code>\textcircled</code> 12472, 12491, 12510, 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		<code>\textEpsilon</code>	863, 13165, 13187	<code>\textLF</code>	12082, 12529
<code>\textcircledP</code>	14093	<code>\textepsilon</code>	863, 13234, 13250	<code>\textlira</code>	14073
<code>\textcircumflex</code>	12090	<code>\textequalsuperior</code>	14039	<code>\textlnot</code>	12229, 12597
<code>\textcolonmonetary</code>	14071	<code>\textestimated</code>	14107	<code>\textlogicalnot</code>	12228, 12410, 12596, 14303
<code>\textcolor</code>	460, 10625, 10663, 10666, 10962	<code>\textEta</code>	866, 13167, 13191	<code>\textlongs</code>	13027, 13959
<code>\textcompwordmark</code>	13973	<code>\texteta</code>	866, 13236, 13254	<code>\textlquill</code>	14015
<code>\textcopyright</code>	12222, 12590	<code>\texteuro</code>	12204, 14083	<code>\textmacronbelow</code>	12050, 12062, 12074, 12127, 12487, 12506, 13155
<code>\textCR</code>	12084, 12531	<code>\textexclamdown</code> 592, 770, 12206, 12574		<code>\textmarried</code>	14283
<code>\textcurrency</code>	12212, 12580	<code>\textfi</code>	590, 12179, 14291	<code>\textmd</code>	429
<code>\textdagger</code>	12143, 13993	<code>\TextField</code>	4406	<code>\textmho</code>	14103
<code>\textdaggerdbl</code>	12145, 13995	<code>\textfiveinferior</code>	14057	<code>\textminus</code>	12161, 14119
<code>\textdegree</code> 12235, 12401, 12603		<code>\textfivesuperior</code>	14025	<code>\textminussuperior</code>	14037
<code>\textDelta</code>	862, 13185	<code>\textfl</code>	591, 12181, 14293	<code>\textMu</code>	884, 13201
<code>\textdelta</code>	862, 13248	<code>\textflorin</code>	12153, 13029	<code>\textmu</code>	884, 12245, 12614
<code>\textDigammagreek</code>	13307	<code>\textflq</code>	478, 12408, 14301	<code>\textmugreek</code>	13264
<code>\textdigammagreek</code>	13309	<code>\textflqq</code>	476, 12406, 14299	<code>\textmultiply</code>	12314, 12411, 12682, 14304
<code>\textdiscount</code>	14019	<code>\textfourinferior</code>	14055	<code>\textmusicalnote</code>	14281
<code>\textdiv</code>	12412, 14305	<code>\textfoursuperior</code>	14023	<code>\textnaira</code>	14075
<code>\textdivide</code> 12382, 12412, 12750, 14305		<code>\textfractionsolidus</code>	12155, 14013	<code>\textnapostrophe</code>	12919
<code>\textdivorced</code>	14285	<code>\textfrq</code>	479, 12409, 14302	<code>\textneg</code>	12410, 14303
<code>\textdollar</code>	406, 12106, 12537	<code>\textfrqq</code>	477, 12407, 14300	<code>\textnewtie</code> 12490, 12509, 13151	
<code>\textdong</code>	14081	<code>\textGamma</code>	861, 13183	<code>\textnineinferior</code>	14065
<code>\textdotaccent</code>	12047, 12059, 12071, 12092, 12480, 12499, 13134	<code>\textgamma</code>	861, 13246	<code>\textninesuperior</code>	14033
<code>\textdotbelow</code>	12051, 12063, 12075, 12116, 12488, 12507, 13153	<code>\textglq</code>	474, 12404, 14297	<code>\textnormal</code>	424
		<code>\textglqq</code>	472, 12402, 14295	<code>\textnsuperior</code>	14045
		<code>\textgravedbl</code>	13145	<code>\textNu</code>	885, 13203
		<code>\textgreater</code>	12120, 12553	<code>\textnu</code>	885, 13266
		<code>\textgrq</code>	475, 12405, 14298	<code>\textnumbersign</code> 405, 12104, 12535	
		<code>\textgrqq</code>	473, 12403, 14296	<code>\textnumeralsigngreek</code>	836, 13159
		<code>\textgslash</code>	13048	<code>\textnumeralsignlowergreek</code> 853, 875, 898, 13161	
		<code>\textgslash</code>	13050	<code>\textnumero</code>	14091
		<code>\textguarani</code>	14087	<code>\textogonek</code> 12096, 12486, 12505, 13138	
		<code>\textHslash</code>	12844	<code>\textohm</code>	14101
		<code>\textthslash</code>	12846	<code>\textOmega</code>	911, 13175, 13225
		<code>\textHT</code>	12080, 12527	<code>\textomega</code>	911, 13290, 13301
		<code>\texthungarumlaut</code> 12094, 12485, 12504, 13142, 13143		<code>\textOmicron</code>	887, 13171, 13207
		<code>\textinterrobang</code>	14011	<code>\textomicron</code>	887, 13270, 13296
		<code>\textIota</code> 881, 13169, 13195, 13228		<code>\textonehalf</code>	12261, 12630
		<code>\textiota</code> 881, 13238, 13258, 13292		<code>\textoneinferior</code>	14049
		<code>\textIotadieresis</code> 13177, 13227		<code>\textonequarter</code>	12259, 12628
		<code>\textit</code>	430	<code>\textonesuperior</code>	12253, 12622
		<code>\textKappa</code>	882, 13197	<code>\textopenbullet</code>	14277
		<code>\textkappa</code>	882, 13260		
		<code>\textKoppagreek</code>	889, 13311		
		<code>\textkoppagreek</code>	889, 13313		

<code>\textordfeminine</code> .	12224, 12592	<code>\textSigma</code>	905, 13213	<code>\theHenumi</code>	5045
<code>\textordmasculine</code>	12255, 12624	<code>\textsigma</code>	905, 13278	<code>\theHenumii</code>	5046
<code>\textparagraph</code>	411, 12247, 12616	<code>\textsixinferior</code>	14059	<code>\theHenumiii</code>	5047
<code>\textparenleft</code> .	596, 597, 12112, 12545	<code>\textsixsuperior</code>	14027	<code>\theHenumiv</code>	5048
<code>\textparenleftinferior</code> .	14067	<code>\textsl</code>	432	<code>\theHequation</code> .	5016, 5085, 5314, 5336, 5360, 5368, 5395, 5399
<code>\textparenleftsuperior</code> .	14041	<code>\textsterling</code>	12210, 12578	<code>\theHfigure</code>	5023, 5027
<code>\textparenright</code> . .	12114, 12547	<code>\textStigmagreek</code> . . .	864, 13303	<code>\theHHfootnote</code>	5049, 5051
<code>\textparenrightinferior</code>	14069	<code>\textstigmagreek</code> . . .	864, 13305	<code>\theHHmpfootnote</code>	5051
<code>\textparenrightsuperior</code>	14043	<code>\textsurd</code>	14121	<code>\theHItem</code> .	5039, 5045, 5046, 5047, 5048
<code>\textpercent</code> . .	407, 12108, 12539	<code>\TextSymbolUnavailable</code> .	12076, 12077, 12078	<code>\theHlisting</code>	6079
<code>\textperiodcentered</code> . . .	12249, 12414, 12618, 14307	<code>\textTau</code>	906, 13215	<code>\theHlstlisting</code>	6075
<code>\textpertenthousand</code> . . .	14003	<code>\texttau</code>	906, 13280	<code>\theHmpfootnote</code>	5050
<code>\textperthousand</code> .	12163, 14001	<code>\textTheta</code>	867, 13193	<code>\theHparagraph</code>	5033, 5034
<code>\textpeseta</code>	14077	<code>\texttheta</code>	867, 13256	<code>\theHparentequation</code>	5394, 5399
<code>\textpeso</code>	14085	<code>\textthreeinferior</code>	14053	<code>\theHpart</code>	5019
<code>\textPhi</code>	908, 13219	<code>\textthreequarters</code>	12263, 12632	<code>\theHsection</code> . .	5016, 5022, 5029, 5031, 5035, 5036, 5110
<code>\textphi</code>	908, 13284	<code>\textthreesuperior</code>	12241, 12609	<code>\theHslide</code>	6373
<code>\textPi</code>	888, 13209	<code>\texttie</code> . .	12489, 12508, 13157	<code>\theHslidesection</code> . .	6378, 6380, 6416, 6420
<code>\textpi</code>	888, 13272	<code>\texttilde</code> . .	3077, 12043, 12055, 12067, 12100, 12476, 12495, 13140	<code>\theHslidesubsection</code>	6379, 6467, 6471
<code>\textplusminus</code> . .	12237, 12413, 12605, 14306	<code>\texttildelow</code>	13147	<code>\theHsubequation</code>	5368
<code>\textplussuperior</code>	14035	<code>\texttimes</code>	12411, 14304	<code>\theHsubparagraph</code>	5034
<code>\textpm</code>	12413, 14306	<code>\texttrademark</code> . . .	12177, 14099	<code>\theHsubsection</code>	5031, 5032
<code>\textPsi</code>	910, 13223	<code>\textTslash</code>	12977	<code>\theHsubsubsection</code> .	5032, 5033
<code>\textpsi</code>	910, 13288	<code>\texttslash</code>	12979	<code>\theHtable</code>	5024, 5028
<code>\textquestiondown</code> . . .	593, 771, 12265, 12634	<code>\texttt</code>	427	<code>\theHtheorem</code>	5035
<code>\textquotedbl</code> . . .	12102, 12533	<code>\texttwoinferior</code>	14051	<code>\theHthm</code>	5036
<code>\textquotedblleft</code>	12167, 12403, 13987, 14296	<code>\texttwosuperior</code> .	12239, 12607	<code>\thelisting</code>	6079
<code>\textquotedblright</code>	12169, 13989	<code>\textunderscore</code>	410, 3489, 3490, 3492, 12126, 12559	<code>\thelstlisting</code>	6075
<code>\textquoteleft</code> . .	12171, 12405, 13981, 14298	<code>\textup</code>	433	<code>\thempfn</code> .	5468, 5541, 5543, 5623, 5635
<code>\textquoteright</code> . .	12173, 13983	<code>\textuparrow</code>	14113	<code>\theoremautorefname</code>	2339, 2357, 2375, 2393, 2411, 2429, 2447, 2485, 2505, 2523, 6808
<code>\textquotesingle</code>	12543	<code>\textUpsilon</code> . .	907, 13173, 13217, 13230	<code>\thepage</code> .	1738, 3605, 4748, 4771, 5181, 5189, 5216, 5887, 5910, 5939, 6030, 6124, 6155, 6292, 6300, 6304, 6570, 6590, 6607, 6721
<code>\texttriangle</code>	14125	<code>\textupsilon</code> . .	907, 13282, 13294, 13299	<code>\theslideheading</code>	6399
<code>\texttrbrackdbl</code>	14289	<code>\textupsilonacute</code>	13240, 13298	<code>\theslidesection</code> . .	6387, 6394, 6402, 6408, 6410, 6412, 6418, 6428
<code>\textrecipe</code>	14095	<code>\textvarsigma</code>	13276	<code>\theslidesubheading</code>	6400, 6451
<code>\textreferencemark</code>	14009	<code>\textvisiblespace</code>	14129	<code>\theslidesubsection</code>	6439, 6446, 6453, 6459, 6461, 6463, 6469, 6479
<code>\textregistered</code> . .	12231, 12599	<code>\textwon</code>	14079	<code>\This@name</code>	5063, 5064, 5081, 5082
<code>\textRho</code>	904, 13211	<code>\textXi</code>	886, 13205	<code>\thispdfpagelabel</code>	4753
<code>\textrho</code>	904, 13274	<code>\textxi</code>	886, 13268	<code>\ThisShouldNotHappen</code> . . .	11327
<code>\textrightarrow</code>	14115	<code>\textyen</code>	12214, 12582	<code>\thm@headpunct</code>	5413
<code>\textring</code> . .	12045, 12057, 12069, 12098, 12478, 12497, 13136	<code>\textzeroinferior</code>	14047	<code>\thm@headsep</code>	5414
<code>\textrm</code>	425	<code>\textzerosuperior</code>	14021	<code>\thm@notefont</code>	5412
<code>\textrquill</code>	14017	<code>\textZeta</code>	865, 13189		
<code>\textSampigreek</code>	912, 13315	<code>\textzeta</code>	865, 13252		
<code>\textsampigreek</code>	912, 13317	<code>\TH</code>	12328, 12696		
<code>\textsc</code>	431	<code>\th</code>	12396, 12764		
<code>\textsection</code>	12218, 12586	<code>\thaa</code>	14456		
<code>\textservicemark</code>	14097	<code>\theequation</code> . .	5084, 5313, 5335, 5359, 5395		
<code>\textseveninferior</code>	14061	<code>\thefootnote</code>	5479, 5642		
<code>\textsevensuperior</code>	14029	<code>\theHchapter</code> . .	5026, 5027, 5028, 5029, 5111		
<code>\textsf</code>	426, 10663, 10666				

10267, 10287, 10718, 10738,
 11055, 11075
 \XeTeXrevision 8146
 \XeTeXversion 8146
 \XR@dURL 1759, 1760
 \XR@addURL 1759
 \XR@ext .. 1994, 1995, 3704, 3707,
 4895, 6872, 7512, 7604, 7832,
 8252, 9449, 9520, 9579, 9761,
 9921
 \XR@URL 1764
 \xspace 506, 508

Y
 \y .. 1881, 1886, 1891, 2637, 2638,
 2639, 2640, 3035, 3038, 3041,
 3044, 3046, 3052, 3085, 3086,
 3088, 4682, 4690, 5257, 5258,
 5261, 5269
 \ya 14482
 \yahamza 14451
Z
 \z 1883, 1884, 1885
 \z@ 835, 852, 874,
 897, 1040, 1294, 1300, 1306,
 1370, 1374, 1382, 1386, 1794,

1813, 2080, 2083, 2182
 2649, 2958, 2959, 2964
 2973, 3285, 4898, 4901
 5441, 5585, 7434, 7438
 7447, 7454, 7458, 7463
 8711, 8735, 8919, 9170
 10256, 10707, 10992,
 11375, 11404, 11409,
 11487, 11515, 11546,
 11571, 11581, 11586,
 11620, 11857, 11954
 \za
 \zay
 \ZWNJ