

Hypertext marks in L^AT_EX

Sebastian Rahtz

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

Heiko Oberdiek

Email: `heiko.oberdiek at gmail.com`

2010/04/15 v6.80v

1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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


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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

nameref.dtx “Section name references in L^AT_EX”

2 Contents

1	Documentation overview for hyperref	1
2	Contents	2
3	File hycheck.tex	7
4	Package options and setup	10
4.1	Save catcodes	10
4.2	Compatibility with format dumps	12
4.3	Switches	13
5	Common help macros	14
5.1	Macros for recursions	15
5.2	Babel's protection of shorthand characters	15
5.3	Coordinate transformations	15
6	Dealing with PDF strings	16
6.1	Description of PDF strings	16
6.2	Definition of <code>\pdfstringdef</code>	17
6.2.1	Preprocessing	17
6.2.2	Expansion	22
6.2.3	Postprocessing	24
6.3	Encodings	28
6.3.1	XeTeX	28
6.3.2	Workaround for package linguex	29
6.3.3	PD1 encoding	29
6.3.4	PU encoding	30
6.4	Additional user commands	30
6.4.1	<code>\texorpdfstring</code>	30
6.4.2	Hooks for <code>\pdfstringdef</code>	30
6.5	Help macros for expansion	31
6.5.1	<code>\ignorespaces</code>	31
6.5.2	Babel languages	32
6.5.3	CJK patch	37
6.5.4	CJK bookmarks	37
6.5.5	CJK unicode	39
6.5.6	<code>\@inmathwarn-Patch</code>	43
6.5.7	Unexpandable spaces	45
6.5.8	Marker for commands	45
6.5.9	<code>\hspace fix</code>	45
6.5.10	Fix for AMS classes	45
6.5.11	Reference commands	46
6.5.12	Redefining the defining commands	48
6.5.13	<code>\ifnextchar</code>	49
6.5.14	<code>\@protected@testoptifnextchar</code>	49
6.6	Help macros for postprocessing	50
6.6.1	Generic warning.	50
6.6.2	Protecting spaces	50
6.6.3	Remove grouping braces	51
6.6.4	Catcode check	52
6.6.5	Check for wrong glyphs	55
6.6.6	Replacing tokens	56

6.6.7	Support for package <code>xspace</code>	57
6.6.8	Converting to Unicode	57
6.6.9	Support for UTF-8 input encoding	60
7	Support of other packages	63
7.1	Class memoir	63
7.2	Package subfigure	63
7.3	Package xr and xr-hyper	64
8	Help macros for links	64
9	Options	66
9.1	Help macros	66
9.2	Defining the options	68
10	Options for different drivers	72
11	Options to add extra features	74
12	Language options	75
13	Options to change appearance of links	82
14	Bookmarking	82
15	PDF-specific options	84
15.1	PDF/A	94
15.2	Patch for babel's <code>\texttilde</code>	95
15.2.1	Driver loading	96
15.2.2	Bookmarks	98
16	User hypertext macros	102
17	Underlying basic hypertext macros	106
18	Compatibility with the <i>BT_EX2html</i> package	109
19	Forms creation	110
19.1	Field flags	110
19.1.1	Declarations of field flags	112
19.1.2	Set submit flags	114
19.1.3	Set annot flags in fields	114
19.1.4	Pushbutton field	115
19.1.5	Check box field	115
19.1.6	Radio button field	115
19.1.7	Text fields	116
19.1.8	Choice fields	116
19.2	Choice field	117
19.3	Forms	119
20	Setup	125
21	Low-level utility macros	125
22	Localized nullifying of package	126

23 Package nohyperref	127
24 The Mangling Of Aux and Toc Files	128
25 Title strings	129
26 Page numbers	131
27 Every page	131
27.1 PDF /PageLabels	131
27.1.1 pdfTeX and VTeX	135
27.1.2 xetex	136
27.1.3 pdfmarkbase, dvipdfm, xetex	136
28 Automated L^AT_EX hypertext cross-references	138
29 Package lastpage support	142
30 Package ifthen support	143
31 Package titlesec and titletoc support	143
32 Package varioref support	144
33 Package longtable support	145
34 Equations	145
35 Footnotes	149
36 Float captions	153
37 Bibliographic references	155
37.1 Package harvard	159
37.2 Package chicago	160
38 Page numbers	161
39 Table of contents	162
40 New counters	163
41 AMSL^AT_EX compatibility	164
41.1 \@addtoreset and \numberwithin patches	165
42 Included figures	166
43 hyperindex entries	166
44 Compatibility with foiltex	169
45 Compatibility with seminar slide package	169

46 Configuration files	177
46.1 PS/PDF strings	177
46.2 pdftex	178
46.2.1 Fix for problem with different nesting levels	191
46.3 hypertex	192
46.4 dviwindo	194
46.5 dvipdfm/xetex dvi to PDF converter	198
46.6 VTeX typesetting system	206
46.7 Fix for Adobe bug number 466320	218
46.8 Direct pdfmark support	219
46.9 Rokicki's dvips	231
46.10 VTeX's vtexpdfmark driver	233
46.11 Textures	235
46.12 dvipsone	239
46.13 TeX4ht	242
47 Driver-specific form support	244
47.1 pdfmarks	244
47.2 HyperTeX	251
47.3 TeX4ht	251
47.4 pdfTeX	254
47.5 dvipdfm, xetex	261
47.6 Common forms part	268
48 Bookmarks in the PDF file	274
48.1 Bookmarks	275
48.1.1 Rerun warning	278
48.1.2 Driver stuff	278
49 Compatibility with koma-script classes	284
50 Encoding definition files for encodings of PDF strings	285
50.1 PD1 encoding	285
50.2 PU encoding	293
50.2.1 NFSS2 accents	293
50.2.2 Basic Latin: U+0000 to U+007F	295
50.2.3 Latin-1 Supplement: U+0080 to U+00FF	296
50.2.4 Latin Extended-A: U+0080 to U+017F	300
50.2.5 Latin Extended-B: U+0180 to U+024F	305
50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF	306
50.2.7 Combining Diacritical Marks: U+0300 to U+036F	307
50.2.8 Greek and Coptic: U+0370 to U+03FF	307
50.2.9 Cyrillic: U+0400 to U+04FF	310
50.2.10 Thai: U+0E00 to U+0E7F	320
50.2.11 Latin Extended Additional: U+1E00 to U+1EFF	320
50.2.12 General Punctuation: U+2000 to U+206F	323
50.2.13 Superscripts and Subscripts: U+2070 to U+209F	324
50.2.14 Currency Symbols: U+20A0 to U+20CF	325
50.2.15 Letterlike Symbols: U+2100 to U+214F	325
50.2.16 Arrows: U+2190 to U+21FF	326
50.2.17 Mathematical Operators: U+2200 to U+22FF	326
50.2.18 Miscellaneous Technical: U+2300 to U+23FF	326
50.2.19 Control Pictures: U+2400 to U+243F	326

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF	326
50.2.21 Box Drawing: U+2500 to U+257F	329
50.2.22 Miscellaneous Symbols: U+2600 to U+26FF	329
50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF	329
50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F	329
50.2.25 Miscellaneous	329
50.2.26 Aliases	329
50.3 PU encoding, additions for VnT _E X	330
50.4 PU encoding, additions for Arabi	332
51 End of file hycheck.tex	333
52 Index	334

3 File hyccheck.tex

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

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

`\checklatex` Optional argument: release date of \LaTeX .

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

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

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

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

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

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19  \typeout{}%
20  \begingroup
21  \edef\x{\endgroup
22    \noexpand\RequirePackage{\HyC@package}%
23    \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi%
24  }%
25  \x
26  \typeout{}%
27  \typeout{%
28    * Package '\HyC@package'%
29    \ifx\HyC@date\@empty
30      \else
31        \space\HyC@date
32      \fi
33  }%
34  \@ifundefined{ver@\HyC@package.sty}{%
35  }{%
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 \LaTeX definition (number of arguments).

```

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

```

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

```

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

```

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

```

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

```

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

```

\HyC@edef
125 \def\HyC@def#1#1{%
126   \HyC@Toks={#1}%

```

```

127 \HyC@nc@noopt
128 }
129 \let\HyC@edef\HyC@def

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```
231 \Hy@SetCatcodes
```

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

```

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

```

4.2 Compatibility with format dumps

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

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

```

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

```

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

```

247 \def\Hy@AtBeginDocument{%
248   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
249 }

```

`\Hy@AtEndOfPackage`

```
250 \def\Hy@AtEndOfPackage{%
```

```

251 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
252 }

```

\Hy@AtBeginDocumentHook

```

253 \def\Hy@AtBeginDocumentHook{}

```

\Hy@AtEndOfPackageHook

```

254 \def\Hy@AtEndOfPackageHook{}

```

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

```

255 \AtEndOfPackage{%
256   \Hy@AtEndOfPackageHook
257   \let\Hy@AtEndOfPackageHook\@undefined
258   \AfterBeginDocument{%
259     \Hy@AtBeginDocumentHook}%
260   \let\Hy@AtBeginDocumentHook\@undefined
261   }%
262 }

```

4.3 Switches

```

263 \newif\ifHy@typexml
264 \newif\ifHy@activeanchor
265 \newif\ifHy@backref
266 \newif\ifHy@bookmarks
267 \newif\ifHy@bookmarksnumbered
268 \newif\ifHy@bookmarksopen
269 \newif\ifHy@breaklinks
270 \newif\ifHy@centerwindow
271 \newif\ifHy@CJKbookmarks
272 \newif\ifHy@colorlinks
273 \newif\ifHy@draft
274 \let\Hy@finaltrue\Hy@draftfalse
275 \let\Hy@finalfalse\Hy@drafttrue
276 \newif\ifHy@escapeform
277 \newif\ifHy@figures
278 \newif\ifHy@fitwindow
279 \newif\ifHy@frenchlinks
280 \newif\ifHy@hyperfootnotes
281 \newif\ifHy@hyperindex
282 \newif\ifHy@hypertextnames
283 \newif\ifHy@implicit
284 \newif\ifHy@linktocpage
285 \newif\ifHy@localanchorname
286 \newif\ifHy@menubar
287 \newif\ifHy@naturalnames
288 \newif\ifHy@nesting
289 \newif\ifHy@newwindowset
290 \newif\ifHy@newwindow
291 \newif\ifHy@ocgcolorlinks
292 \newif\ifHy@pageanchor
293 \newif\ifHy@pagelabels
294 \newif\ifHy@pdfpagehidden
295 \newif\ifHy@pdfstring
296 \newif\ifHy@plainpages
297 \newif\ifHy@psize
298 \newif\ifHy@raiselinks

```

```

299 \newif\ifHy@seminarslides
300 \newif\ifHy@setpagesize
301 \newif\ifHy@texht
302 \newif\ifHy@toolbar
303 \newif\ifHy@unicode
304 \newif\ifHy@usetitle
305 \newif\ifHy@verbose
306 \newif\ifHy>windowui
307 \newif\ifHy@displaydoctitle
308 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

309 \Hy@backreffalse
310 \Hy@bookmarksnumberedfalse
311 \Hy@bookmarksopenfalse
312 \Hy@bookmarkstrue
313 \Hy@breaklinksfalse
314 \Hy@centerwindowfalse
315 \Hy@CJKbookmarksfalse
316 \Hy@escapeformfalse
317 \Hy@figuresfalse
318 \Hy@fitwindowfalse
319 \Hy@hyperfootnotetrue
320 \Hy@hyperindextrue
321 \Hy@hypertextnamestrue
322 \Hy@implicittrue
323 \Hy@linktocpagefalse
324 \Hy@localanchornamefalse
325 \Hy@menubartrue
326 \Hy@naturalnamesfalse
327 \Hy@nestingfalse
328 \Hy@newwindowsetfalse
329 \Hy@newwindowfalse
330 \Hy@pageanchortrue
331 \Hy@pagelabelstrue
332 \Hy@pdfpagehiddenfalse
333 \Hy@pdfstringfalse
334 \Hy@plainpagesfalse
335 \Hy@raiselinksfalse
336 \Hy@setpagesizetrue
337 \Hy@texhtfalse
338 \Hy@toolbartrue
339 \Hy@typexmlfalse
340 \Hy@unicodefalse
341 \Hy@usetitlefalse
342 \Hy@verbosefalse
343 \Hy>windowuitrue
344 \Hy@displaydoctitlefalse
345 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

348 \newdimen\@linkdim
349 \let\Hy@driver\@empty
350 \let\MaybeStopEarly\relax
351 \newcount\Hy@linkcounter
352 \newcount\Hy@pagecounter
353 \Hy@linkcounter0
354 \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.

```

355 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
356 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

357 \let\Hy@ReturnEnd\@empty
358 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
359 \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@activetrue` babel is not loaded.

```

360 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
361 \def\Hy@safe@activetruefalse{\csname @safe@activetruefalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

```
362 \begingroup\expandafter\expandafter\expandafter\endgroup
363 \expandafter\ifx\csname dimexpr\endcsname\relax
364 \def\hypercalcbpdef#1#2{%
365   \begingroup
366     \toks@{%
367       \HyCal@scan#2\hypercalcbp\@nil
368     }\expandafter\endgroup
369     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
370   }%
371 \def\HyCal@scan#1\hypercalcbp#2\@nil{%
372   \toks@\expandafter{\the\toks@ #1}%
373   \ifx\#2\%
374     \else
375       \Hy@ReturnAfterFi{%
376         \HyCal@do#2\@nil
377       }%
378     \fi
379   }%
380 \def\HyCal@do#1#2\@nil{%
381   \ifpackageloaded{calc}{}%
382   \Hy@Warning{%
383     For calculations \string\hypercalcbp\space needs\MessageBreak
384     package calc or e-TeX%
385   }%
386   }%
387   \setlength{\dimen@}{#1}%
388   \setlength{\dimen@}{0.99626401\dimen@}%
389   \edef\x{%
390     \toks@{%
391       \the\toks@
392       \strip@pt\dimen@
393     }%
394   }\x
395   \HyCal@scan#2\@nil
396   }%
397 \else
398 \def\hypercalcbp#1{%
399   \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
400   }%
401 \def\hypercalcbpdef{\def}%
402 \fi
```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

- They are surrounded by parentheses. The hexadecimal form is not supported.

- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in PDFDocEncoding, which is a superset of ISO Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
404 \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.

```
405 \escapechar'\%
```

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

```
406 \edef\0{\string\0}%
407 \edef\1{\string\1}%
408 \edef\2{\string\2}%
409 \edef\3{\string\3}%
```

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

The encoding is set by $\backslash \text{enc@update}$ for optimizing reasons.

```
410 \ifHy@unicode
411 \edef\8{\string\8}%
412 \edef\9{\string\9}%
413 \fontencoding{PU}%
414 \HyPsd@UTFviii
415 \def\ifpdfstringunicode##1##2{##1}%
416 \else
417 \fontencoding{PD1}%
418 \def\ifpdfstringunicode##1##2{##2}%
419 \fi
420 \enc@update
```

Internal encoding commands. $\backslash \text{pdfstringdef}$ 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 $\backslash \text{@inmathwarn}$ will be disabled (see below).

```
421 \@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 ($\backslash \text{edef}$), so that the assignments of $\backslash \text{@changed@cmd}$ don't take place. To patch this behaviour I only found $\backslash \text{@inmathwarn}$ as a usable hook. While an $\backslash \text{edef}$ a warning message by $\backslash \text{@inmathwarn}$ or $\backslash \text{TextSymbolUnavailable}$ cannot be give out, so $\backslash \text{@inmathwarn}$ should be disabled. And with the help of it the assignments in $\backslash \text{@changed@cmd}$ can easily be caught (see below).

```
422 \let\@inmathwarn\HyPsd@inmathwarn
```

Unknown composite characters are built with $\backslash \text{add@accent}$, so it is redefined to provide a warning.

```
423 \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.

```
424 \let\{\textbraceleft
425 \let\}\textbraceright
426 \let\%\textbackslash
427 \let\#\textnumbersign
428 \let\$\textdollar
```

```

429 \let%\textpercent
430 \let\&\textampersand
431 % \let\~\textasciitilde
432 \let\_ \textunderscore
433 \let\P\textparagraph
434 \let\ldots\textellipsis
435 \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.

```

436 \def\{\pdfstringdefWarn\}%
437 \def\newline{\pdfstringdefWarn\newline}%

```

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

```

438 \def\TeX{\TeX}%
439 \def\LaTeX{\LaTeX}%
440 \def\LaTeXe{\LaTeX2e}%
441 \def\TeXe{\TeX}%
442 \def\SLiTeX{\SLiTeX}%
443 \def\MF{Metafont}%
444 \def\MP{Metapost}%

```

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

```

445 \let\fontencoding\@gobble
446 \let\fontfamily\@gobble
447 \let\fontseries\@gobble
448 \let\fontshape\@gobble
449 \let\fontsize\@gobbletwo
450 \let\selectfont\@empty
451 \let\usefont\@gobblefour
452 \let\emph\@firstofone
453 \let\textnormal\@firstofone
454 \let\textrm\@firstofone
455 \let\textsf\@firstofone
456 \let\texttt\@firstofone
457 \let\textbf\@firstofone
458 \let\textmd\@firstofone
459 \let\textit\@firstofone
460 \let\textsc\@firstofone
461 \let\textsl\@firstofone
462 \let\textup\@firstofone
463 \let\normalfont\@empty
464 \let\rmfamily\@empty
465 \let\sfamily\@empty

```

```

466 \let\ttfamily\@empty
467 \let\bfseries\@empty
468 \let\mdseries\@empty
469 \let\itshape\@empty
470 \let\scshape\@empty
471 \let\slshape\@empty
472 \let\upshape\@empty
473 \let\em\@empty
474 \let\rm\@empty
475 \let\Huge\@empty
476 \let\LARGE\@empty
477 \let\Large\@empty
478 \let\footnotesize\@empty
479 \let\huge\@empty
480 \let\large\@empty
481 \let\normalsize\@empty
482 \let\scriptsize\@empty
483 \let\small\@empty
484 \let\tiny\@empty
485 \let\mathversion\@gobble
486 \let\phantom\@gobble
487 \let\vphantom\@gobble
488 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

490 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
491 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

492 \let\textlatin\@firstofone
493 \ltx@ifundefined{language@group}{\@firstofone}%
494 \csname HyPsd@babel@language@group\endcsname
495 }%
496 \HyPsd@GreekPatch
497 \HyPsd@SpanishPatch
498 \HyPsd@RussianPatch
499 \HyPsd@BabelPatch
500 \let\@safe@activetrue\relax
501 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

502 \let\cyr\relax

```

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

```

503 \let\es@roman\@Roman

```

Package german.

```

504 \let\glqq\textglqq
505 \let\grqq\textgrqq
506 \let\glq\textglq

```

```

507 \let\grq\textgrq
508 \let\flqq\textflqq
509 \let\frqq\textfrqq
510 \let\flq\textflq
511 \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}

512 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

513 \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.

```

514 \let\hspace\HyPsd@hspace

```

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

```

515 \let\label\@gobble
516 \let\index\@gobble
517 \let\glossary\@gobble
518 \let\href\@secondoftwo
519 \let\@mkboth\@gobbletwo

```

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

```

520 \let\ref\HyPsd@ref
521 \let\pageref\HyPsd@pageref
522 \let\nameref\HyPsd@nameref
523 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

524 \let\leavevmode\@empty
525 \let\mbox\@empty

```

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

```

526 \def\halign{\pdfstringdefWarn\halign\@gobble}%
527 \let\ignorespaces\HyPsd@ignorespaces
528 \let\Hy@SectionAnchorHref\@gobble

```

Patch for cjk bookmarks.

```

529 \HyPsd@CJKhook

```

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

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

```
530 \Hy@pdfstringtrue
531 \pdfstringdefPreHook
```

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

```
532 \HyPsd@LetUnexpandableSpace\space
533 \HyPsd@LetUnexpandableSpace\ %
534 \HyPsd@LetUnexpandableSpace~%
535 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
536 \ltx@ifundefined{@xspace}{%
537   \let\xspace\HyPsd@ITALCORR
538 }{%
539   \let\xspace\HyPsd@XSPACE
540 }%
541 \let\/\HyPsd@ITALCORR
542 \let\bgroup\/%
543 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
544 \let\discretionary\@gobbletwo
    \@ifstar is defined in  $\LaTeX$  as follows:
```

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

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

A mimicry of `\@ifnextchar` only with 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:

```
545 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
546 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
547 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
548 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

```

550 \begingroup
551   \let\GenericError\@gobblefour
552   \let\GenericWarning\@gobbletwo
553   \let\GenericInfo\@gobbletwo

```

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

```

554 \ifx\nofrenchguillemets\@undefined
555   \else
556     \nofrenchguillemets
557   \fi

```

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

```

558 \let\Hy@temp\xdef
559 \let\def\HyPsd@DefCommand
560 \let\gdef\HyPsd@DefCommand
561 \let\edef\HyPsd@DefCommand
562 \let\xdef\HyPsd@DefCommand
563 \let\futurelet\HyPsd@LetCommand
564 \let\let\HyPsd@LetCommand
565 \Hy@temp#1{#2}%
566 \endgroup

```

6.2.3 Postprocessing

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

```
567 \ifx#1\@empty
568 \else
```

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

- T_EX 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 T_EX'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.
- T_EX 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.

```
569 \HyPsd@ProtectSpaces#1%
570 \let\HyPsd@String\@empty
571 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
572 \global\let#1\HyPsd@String
```

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

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

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

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

```
573 \let\HyPsd@SPACEOPTI\relax
574 {%
575 \let\HyPsd@String\@empty
576 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
577 \global\let#1\HyPsd@String
578 }%
579 \expandafter\HyPsd@RemoveMask\expandafter
580 \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.

```
581 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
582 \let\HyPsd@String\@empty
583 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
584 \global\let#1\HyPsd@String
```

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

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

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

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

```
586 \ifHy@unicode
587 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
588 \HyPsd@SPACEOPTI#1%
589 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
590 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
591 {\HyPsd@SPACEOPTI\80\273}#1%
592 \else
593 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
594 \expandafter\HyPsd@Subst\expandafter{%
595 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
596 \string\273}{\HyPsd@SPACEOPTI\273}#1%
597 \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.

```
598 \ifHy@unicode
599 \HyPsd@StringSubst{\)}{\80\051}#1%
600 \HyPsd@Subst){\80\051}#1%
601 \let\HyPsd@empty\relax
602 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
603 {\HyPsd@empty\80\051}#1%
604 \else
605 \HyPsd@StringSubst{\)}{\051}#1%
606 \HyPsd@Subst){\051}#1%
607 \let\HyPsd@empty\relax
```

```

608      \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
609      \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`.

```

610      \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
611      \ltx@ifundefined{@xspace}{%
612      }{%
613          \let\HyPsd@xspace\relax
614          \expandafter\HyPsd@Subst\expandafter
615          {\HyPsd@XSPACE}\HyPsd@xspace#1%
616          \let\HyPsd@xspace\HyPsd@doxspace
617      }%
618      \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.

```

619      \HyPsd@Subst{---}\textemdash#1%
620      \HyPsd@Subst{--}\textendash#1%
621 %      \HyPsd@Subst{fi}\textfi#1%
622 %      \HyPsd@Subst{fl}\textfl#1%
623      \HyPsd@Subst{!'}\textexclamdown#1%
624      \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

625      \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.

```

626      \ifHy@unicode
627      \HyPsd@StringSubst{\textparenleft#1%
628      \HyPsd@Subst(\textparenleft#1%
629      \else

```

```

630 \HyPsd@StringSubst\({\050}#1%
631 \HyPsd@Subst({\050}#1%
632 \HyPsd@StringSubst{\050}{\string\{ }#1%
633 \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.

```

634 \ifHy@unicode
635 \edef\HyPsd@SPACEOPTI{\80\040}%
636 \else
637 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
638 \fi
639 \xdef#1{#1\@empty}%
640 \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.

```

641 \endgroup
642 \begingroup
643 \ifHy@unicode
644 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

645 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
646 \ltx@ifundefined{StringEncodingConvertTest}{%
647 }{%
648 \EdefUnescapeString\HyPsd@temp#1%
649 \ifxetex
650 \let\HyPsd@UnescapedString\HyPsd@temp
651 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
652 {utf16be}{ascii-print}{%
653 \EdefEscapeString\HyPsd@temp\HyPsd@temp
654 \global\let#1\HyPsd@temp
655 \Hy@unicodedefalse
656 }{%
657 \HyPsd@ToBigChars#1%
658 }%
659 \else
660 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
661 {utf16be}{pdfdoc}{%
662 \EdefEscapeString\HyPsd@temp\HyPsd@temp
663 \global\let#1\HyPsd@temp
664 \Hy@unicodedefalse
665 }{%
666 \fi
667 }%
668 \fi
669 \fi
670 \HyPsd@XeTeXBigCharsfalse

```

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

```
671 \pdfstringdefPostHook#1%
672 \endgroup
673 }
```

`\Hy@pdfstringdef`

```
674 \def\Hy@pdfstringdef#1#2{%
675 \pdfstringdef\Hy@gtemp{#2}%
676 \let#1\Hy@gtemp
677 }
```

6.3 Encodings

6.3.1 Xe_{TeX}

```
678 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
679 \catcode\z@=12 %
680 \ifxetex
681 \expandafter\@firstofone
682 \else
683 \let\HyPsd@XeTeXBigCharstrue\@empty
684 \let\HyPsd@XeTeXBigCharsfalse\@empty
685 \expandafter\@gobble
686 \fi
687 {%
688 \newif\ifHyPsd@XeTeXBigChars
689 \def\HyPsd@XeTeXBigCharsfalse{%
690 \global\let\ifHyPsd@XeTeXBigChars\iffalse
691 }%
692 \def\HyPsd@XeTeXBigCharstrue{%
693 \global\let\ifHyPsd@XeTeXBigChars\iftrue
694 }%
695 \def\HyPsd@ToBigChars#1{%
696 \ifHyPsd@XeTeXBigChars
697 \EdefEscapeHex\HyPsd@UnescapedString{%
698 \expandafter\@gobbletwo\HyPsd@UnescapedString
699 }%
700 \begingroup
701 \toks@{%
702 \escapechar=92\relax
703 \let\x\HyPsd@ToBigChar
704 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
705 \relax\relax\relax\relax\relax\relax
706 \edef\x{%
707 \endgroup
708 \gdef\noexpand#1{\the\toks@}%
709 }%
710 \x
711 \fi
712 }%
713 \def\HyPsd@ToBigChar#1#2#3#4{%
714 \ifx\relax#1\relax
715 \let\x\relax
716 \else
717 \count@=#1#2#3#4\relax
718 \let\y\@empty
```

```

719 \lccode\z@=\count@
720 \ifnum\count@=40 % (
721 \let\y\@backslashchar
722 \else
723 \ifnum\count@=41 % )
724 \let\y\@backslashchar
725 \else
726 \ifnum\count@=92 % backslash
727 \let\y\@backslashchar
728 \else
729 \ifnum\count@=10 % newline
730 \edef\y###1{\string\n}%
731 \else
732 \ifnum\count@=13 % carriage return
733 \edef\y###1{\string\r}%
734 \fi
735 \fi
736 \fi
737 \fi
738 \fi
739 \lowercase{%
740 \toks@\expandafter{%
741 \the\expandafter\toks@
742 \y
743 ^^@%
744 }%
745 }%
746 \fi
747 \x
748 }%
749 }
750 \Hy@temp

```

6.3.2 Workaround for package linguex

```

751 \@ifpackageloaded{linguex}{%
752 \let\HyLinguex@OrgB\b
753 \let\HyLinguex@OrgC\c
754 \let\HyLinguex@OrgD\d
755 \def\HyLinguex@Restore{%
756 \let\b\HyLinguex@OrgB
757 \let\c\HyLinguex@OrgC
758 \let\d\HyLinguex@OrgD
759 }%
760 \Hy@AtEndOfPackage{%
761 \pdfstringdefDisableCommands{%
762 \ltx@ifundefined{oldb}{\let\b\oldb}%
763 \ltx@ifundefined{oldc}{\let\c\oldc}%
764 \ltx@ifundefined{oldd}{\let\d\oldd}%
765 }%
766 }%
767 }{%
768 \let\HyLinguex@Restore\relax
769 }%

```

6.3.3 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with L^AT_EX 2_ε's NFSS. Because the informational strings are not set by T_EX's typesetting mechanism but for inter-

preting 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.

```

770 \ifundefined{T@PD1}{%
771   \input{pdlenc.def}%
772   \HyLinguex@Restore
773 }{}
774 \DeclareFontFamily{PD1}{pdf}{}
775 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
776 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.4 PU encoding

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

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

```

777 \def\HyPsd@InitUnicode{%
778   \ifundefined{T@PU}{%
779     \input{puenc.def}%
780     \HyLinguex@Restore
781   }{}%
782   \DeclareFontFamily{PU}{pdf}{}%
783   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
784   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
785   \let\HyPsd@InitUnicode\relax
786 }

```

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.

```

787 \def\texorpdfstring{%
788   \ifHy@pdfstring
789     \expandafter\@secondoftwo
790   \else
791     \expandafter\@firstoftwo
792   \fi
793 }

```

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`.

```

794 \ifundefined{pdfstringdefPreHook}{%
795   \let\pdfstringdefPreHook\@empty
796 }{}

```

```

797 \@ifundefined{pdfstringdefPostHook}{%
798   \let\pdfstringdefPostHook\@gobble
799 }{}

```

`\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`.

```

800 \def\pdfstringdefDisableCommands{%
801   \begingroup
802   \makeatletter
803   \HyPsd@DisableCommands
804 }

```

`\HyPsd@DisableCommands`

```

805 \long\def\HyPsd@DisableCommands#1{%
806   \toks0=\expandafter{\pdfstringdefPreHook}%
807   \toks1={#1}%
808   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
809 \endgroup
810 }

```

`\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`.

```

811 \def\pdfstringdefWarn#1{%
812   \expandafter\noexpand\csname<>-string#1\endcsname
813 }

```

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.

```

814 \begingroup

```

```

815 \catcode0=12 %
816 \def\x{\endgroup
817 \def\HyPsd@ignorespaces{%
818 \romannumeral\expandafter'\expandafter^^@%
819 \romannumeral'^^@%
820 }%
821 }%
822 \x

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

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

```

823 \def\HyPsd@BabelPatch{%
824 \let\HyOrg@languageshorthands\languageshorthands
825 \let\languageshorthands\HyPsd@LanguageShorthands
826 }
827 \RequirePackage{pdfcmds}[2009/04/10]
828 \begingroup\expandafter\expandafter\expandafter\endgroup
829 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
830 \let\HyPsd@langshort@system\@empty
831 \def\HyPsd@LanguageShorthands#1{%
832 \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
833 \HyPsd@langshort@system
834 \expandafter\@gobble
835 \else
836 \expandafter\@firstofone
837 \fi
838 {%
839 \HyOrg@languageshorthands{#1}%
840 }%
841 }%
842 \else
843 \def\HyPsd@LanguageShorthands#1{%
844 \ifnum\pdf@strcmp{#1}{system}=\z@
845 \expandafter\@gobble
846 \else
847 \expandafter\@firstofone
848 \fi
849 {%
850 \HyOrg@languageshorthands{#1}%
851 }%
852 }%
853 \fi
854 \def\Hy@temp{%
855 \@ifpackageloaded{babel}{%
856 \@ifpackagelater{babel}{2008/03/16}{%
857 \let\Hy@temp\@empty
858 }{%

```



```

859 \def\HyPsd@BabelPatch{%
860 \let\HyOrg@languageshorthands\languageshorthands
861 }%
862 }%
863 }{}%
864 }
865 \Hy@temp
866 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
867 \newif\ifHy@next

Nothing to do for english.
868 \ltx@ifundefined{danish@sh@.sel}{}{}%
869 \def\HyPsd@babel@danish{%
870 \declare@shorthand{danish}{"}{}%
871 \declare@shorthand{danish}{"}~{}{}%
872 }%
873 }
874 \ltx@ifundefined{dutch@sh@.sel}{}{}%
875 \def\HyPsd@babel@dutch{%
876 \declare@shorthand{dutch}{"}{}%
877 \declare@shorthand{dutch}{"}~{}{}%
878 }%
879 }
880 \ltx@ifundefined{finnish@sh@.sel}{}{}%
881 \def\HyPsd@babel@finnish{%
882 \declare@shorthand{finnish}{"}{}%
883 }%
884 }
885 \ltx@ifundefined{french@sh@.sel}{}{}%
886 \def\HyPsd@babel@frenchb{%
887 \def\guill@spacing{ }%
888 }%
889 }
890 \ltx@ifundefined{german@sh@.sel}{}{}%
891 \def\HyPsd@babel@german{%
892 \declare@shorthand{german}{"}f{}f{}%
893 \declare@shorthand{german}{"}|{}{}%
894 \declare@shorthand{german}{"}~{}{}%
895 }%
896 }
897 \ltx@ifundefined{macedonian@sh@.sel}{}{}%
898 \def\HyPsd@babel@macedonian{%
899 \declare@shorthand{macedonian}{"}|{}{}%
900 \declare@shorthand{macedonian}{"}~{}{}%
901 }%
902 }{}
903 \ltx@ifundefined{ngerman@sh@.sel}{}{}%
904 \def\HyPsd@babel@ngerman{%
905 \declare@shorthand{ngerman}{"}|{}{}%
906 \declare@shorthand{ngerman}{"}~{}{}%
907 }%
908 }
909 \ltx@ifundefined{portuges@sh@.sel}{}{}%
910 \def\HyPsd@babel@portuges{%
911 \declare@shorthand{portuges}{"}|{}{}%
912 }%
913 }

```

```

914 \ltx@ifundefined{russian@sh@"@sel}{-}{%
915   \def\HyPsd@babel@russian{%
916     \declare@shorthand{russian}{-}{-}%
917     \declare@shorthand{russian}{-}{-}%
918   }%
919 }
920 \ltx@ifundefined{slovene@sh@"@sel}{-}{%
921   \def\HyPsd@babel@slovene{%
922     \declare@shorthand{slovene}{-}{-}%
923   }%
924 }

```

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

```

925 \ltx@ifundefined{spanish@sh@>@sel}{-}{%
926   \def\HyPsd@babel@spanish{%
927     \declare@shorthand{spanish}{<<}{\guillemotleft}%
928     \declare@shorthand{spanish}{>>}{\guillemotright}%
929     \declare@shorthand{spanish}{=}{}-%
930     \declare@shorthand{spanish}{-}{-}%
931     \declare@shorthand{spanish}{!}{\textexclamdown}%
932     \declare@shorthand{spanish}{?}{\textquestiondown}%
933   }%
934 }
935 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
936   \def\HyPsd@babel@swedish{%
937     \declare@shorthand{swedish}{-}{-}%
938     \declare@shorthand{swedish}{-}{-}%
939   }%
940 }
941 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
942   \def\HyPsd@babel@ukrainian{%
943     \declare@shorthand{ukrainian}{-}{-}%
944     \declare@shorthand{ukrainian}{-}{-}%
945   }%
946 }
947 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
948   \def\HyPsd@babel@usorbian{%
949     \declare@shorthand{usorbian}{f}{f}%
950     \declare@shorthand{usorbian}{-}{-}%
951   }%
952 }
953 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
954   \let\HyPsd@GreekPatch\@empty
955 }{%
956   \def\HyPsd@GreekPatch{%
957     \let\greeknumeral\HyPsd@greeknumeral
958     \let\Greeknatural\HyPsd@greeknumeral
959   }%
960 }
961 \def\HyPsd@greeknumeral#1{%
962   \HyPsd@GreekNum\@firstoftwo{#1}%
963 }
964 \def\HyPsd@Greeknumeral#1{%
965   \HyPsd@GreekNum\@secondoftwo{#1}%
966 }
967 \def\HyPsd@GreekNum#1#2{%
968   \ifHy@unicode
969     \ifnum#2<\@ne

```

```

970 \@arabic{#2}%
971 \else
972 \ifnum#2<1000000 %
973 \HyPsd@@GreekNum#1{#2}%
974 \else
975 \@arabic{#2}%
976 \fi
977 \fi
978 \else
979 \@arabic{#2}%
980 \fi
981 }
982 \def\HyPsd@@GreekNum#1#2{%
983 \ifnum#2<\@m
984 \ifnum#2<10 %
985 \expandafter\HyPsd@GreekNumI
986 \expandafter\@gobble\expandafter#1\number#2%
987 \else
988 \ifnum#2<100 %
989 \expandafter\HyPsd@GreekNumII
990 \expandafter\@gobble\expandafter#1\number#2%
991 \else
992 \expandafter\HyPsd@GreekNumIII
993 \expandafter\@gobble\expandafter#1\number#2%
994 \fi
995 \fi
996 \ifnum#2>\z@
997 \textnumeralsigngreek
998 \fi
999 \else
1000 \ifnum#2<\@M
1001 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1002 \else
1003 \ifnum#2<100000 %
1004 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1005 \else
1006 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1007 \fi
1008 \fi
1009 \fi
1010 }
1011 \def\HyPsd@GreekNumI#1#2#3{%
1012 #1{%
1013 \ifnum#3>\z@
1014 \textnumeralsignlowergreek
1015 \fi
1016 }%
1017 \expandafter#2%
1018 \ifcase#3 %
1019 {}{}%
1020 \or\textalpha\textAlpha
1021 \or\textbeta\textBeta
1022 \or\textgamma\textGamma
1023 \or\textdelta\textDelta
1024 \or\textepsilon\textEpsilon
1025 \or\textstigmagreek\textStigmagreek
1026 \or\textzeta\textZeta

```

```

1027 \or\texteta\textEta
1028 \or\texttheta\textTheta
1029 \else
1030   {}{}%
1031 \fi
1032 }
1033 \def\HyPsd@GreekNumII#1#2#3#4{%
1034   #1{%
1035     \ifnum#3>\z@
1036       \textnumeralsignlowergreek
1037     \fi
1038   }%
1039   \expandafter#2%
1040   \ifcase#3 %
1041     {}{}%
1042     \or\textiota\textIota
1043     \or\textkappa\textKappa
1044     \or\textlambda\textLambda
1045     \or\textmu\textMu
1046     \or\textnu\textNu
1047     \or\textxi\textXi
1048     \or\textomicron\textOmicron
1049     \or\textpi\textPi
1050     \or\textkoppagreek\textKoppagreek
1051     \else
1052       {}{}%
1053     \fi
1054   \HyPsd@GreekNumI#1#2#4%
1055 }
1056 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1057   #1{%
1058     \ifnum#3>\z@
1059       \textnumeralsignlowergreek
1060     \fi
1061   }%
1062   \expandafter#2%
1063   \ifcase#3 %
1064     {}{}%
1065     \or\textrho\textRho
1066     \or\textsigma\textSigma
1067     \or\texttau\textTau
1068     \or\textupsilon\textUpsilon
1069     \or\textphi\textPhi
1070     \or\textchi\textChi
1071     \or\textpsi\textPsi
1072     \or\textomega\textOmega
1073     \or\textsampigreek\textSampigreek
1074     \else
1075       {}{}%
1076     \fi
1077   \HyPsd@GreekNumII#1#2#4#5%
1078 }
1079 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1080   \HyPsd@GreekNumI\@firstofone#1#2%
1081   \HyPsd@@GreekNum#1{#3#4#5}%
1082 }
1083 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%

```

```

1084 \HyPsd@GreekNumII\@firstofone#1#2#3%
1085 \HyPsd@@GreekNum#1{#4#5#6}%
1086 }
1087 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1088 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1089 \HyPsd@@GreekNum#1{#5#6#7}%
1090 }

1091 \def\HyPsd@SpanishPatch{%
1092 \ltx@ifundefined{es@save@dot}{%
1093 }{%
1094 \let\.\es@save@dot
1095 }%
1096 }

```

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

```

1097 \def\HyPsd@RussianPatch{%
1098 \ltx@ifundefined{russian@sh@"@-@}{%
1099 }{%
1100 \@namedef{russian@sh@"@-@}{-}%
1101 }%
1102 }

```

6.5.3 CJK patch

```

1103 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1104 \def\HyPsd@CJKhook{%
1105 \ltx@ifpackageloaded{CJK}{%
1106 \let\CJK@kern\relax
1107 \let\CJKkern\relax
1108 \let\CJK@CJK\relax
1109 \ifHy@CJKbookmarks
1110 \HyPsd@CJKhook@bookmarks
1111 \fi
1112 \HyPsd@CJKhook@unicode
1113 }{%
1114 }

```

6.5.4 CJK bookmarks

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

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

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

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

```

1115 \begingroup
1116 \catcode"7F=\active
1117 \toks@{%
1118 \let\CJK@ignorespaces\empty
1119 \def\CJK@char#1{\@gobbletwo}%

```

```

1120 \let\CJK@charx\@gobblefour
1121 \let\CJK@punctchar\@gobblefour
1122 \def\CJK@punctcharx#1{\@gobblefour}%
1123 \catcode"7F=\active
1124 \def^^7f#1^^7f#2^^7f{%
1125   \string #1\HyPsd@DecimalToOctal{#2}%
1126 }%
1127 % ... ?
1128 \ifHy@unicode
1129   \def\Hy@cjku{\80}%
1130 \else
1131   \let\Hy@cjku\@empty
1132 \fi
1133 \HyPsd@CJKActiveChars
1134 }%
1135 \count@=127 %
1136 \@whilenum\count@<255 \do{%
1137   \advance\count@ by 1 %
1138   \lccode'\~=\count@
1139   \lowercase{%
1140     \toks@\expandafter{\the\toks@ ~}%
1141   }%
1142 }%
1143 \toks@\expandafter{\the\toks@ !}%
1144 \xdef\HyPsd@CJKhook@bookmarks{%
1145   \the\toks@
1146 }%
1147 \endgroup

```

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

```

1148 \def\HyPsd@CJKActiveChars#1{%
1149   \ifx#1!%
1150     \let\HyPsd@CJKActiveChars\relax
1151   \else
1152     \edef#1{\noexpand\Hy@cjku\string#1}%
1153   \fi
1154   \HyPsd@CJKActiveChars
1155 }

```

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

```

1156 \def\HyPsd@DecimalToOctal#1{%
1157   \ifcase #1 %
1158     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1159     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1160     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1161     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1162     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1163     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1164     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1165     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1166     \or @\or A\or B\or C\or D\or E\or F\or G%
1167     \or H\or I\or J\or K\or L\or M\or N\or O%
1168     \or P\or Q\or R\or S\or T\or U\or V\or W%
1169     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1170     \or \140\or a\or b\or c\or d\or e\or f\or g%
1171     \or h\or i\or j\or k\or l\or m\or n\or o%

```

```

1172 \or p\or q\or r\or s\or t\or u\or v\or w%
1173 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1174 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1175 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1176 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1177 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1178 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1179 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1180 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1181 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1182 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1183 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1184 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1185 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1186 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1187 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1188 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1189 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1190 \fi
1191 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1192 \def\HyPsd@CJKhook@unicode{%
1193 \let\Unicode\HyPsd@CJK@Unicode
1194 \let\CJKnumber\HyPsd@CJKnumber
1195 \let\CJKdigits\HyPsd@CJKdigits
1196 }

```

\HyPsd@CJK@Unicode

```

1197 \def\HyPsd@CJK@Unicode#1#2{%
1198 \ifnum#1<256 %
1199 \HyPsd@DecimalToOctalFirst{#1}%
1200 \HyPsd@DecimalToOctalSecond{#2}%
1201 \else
1202 \933%
1203 \expandafter\expandafter\expandafter\HyPsd@HighA
1204 \intcalcDiv{#1}{4}!%
1205 \933%
1206 \ifcase\intcalcMod{#1}{4} %
1207 4\or 5\or 6\or 7%
1208 \fi
1209 \HyPsd@DecimalToOctalSecond{#2}%
1210 \fi
1211 }

1212 \def\HyPsd@HighA#1!{%
1213 \expandafter\expandafter\expandafter\HyPsd@HighB
1214 \IntCalcDiv#1!64!!%
1215 \expandafter\expandafter\expandafter\HyPsd@HighD
1216 \IntCalcMod#1!64!!%
1217 }

1218 \def\HyPsd@HighB#1!{%
1219 \expandafter\expandafter\expandafter\HyPsd@HighC
1220 \IntCalcDec#1!!%
1221 }

```

```

1222 \def\HyPsd@HighC#1!{%
1223   \IntCalcDiv#1!4!%
1224   \@backslashchar
1225   \IntCalcMod#1!4!%
1226 }
1227 \def\HyPsd@HighD#1!{%
1228   \ifcase\IntCalcDiv#1!8! %
1229     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1230   \fi
1231   \ifcase\IntCalcMod#1!8! %
1232     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1233   \fi
1234 }
1235 \def\HyPsd@DecimalToOctalFirst#1{%
1236   \9%
1237   \ifcase#1 %
1238     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1239     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1240     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1241     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1242     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1243     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1244     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1245     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1246     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1247     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1248     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1249     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1250     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1251     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1252     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1253     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1254     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1255     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1256     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1257     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1258     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1259     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1260     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1261     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1262     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1263     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1264     \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1265     \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1266     \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1267     \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1268     \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1269     \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1270   \fi
1271 }
1272 \def\HyPsd@DecimalToOctalSecond#1{%
1273   \ifcase #1 %
1274     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1275     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1276     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1277     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1278     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%

```



```

1279 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1280 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1281 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1282 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1283 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1284 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1285 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1286 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1287 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1288 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1289 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1290 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1291 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1292 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1293 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1294 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1295 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1296 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1297 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1298 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1299 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1300 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1301 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1302 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1303 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1304 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1305 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1306 \fi
1307 }

1308 \def\HyPsd@CJKNnumber#1{%
1309 \ifnum#1<\z@
1310 \CJk@minus
1311 \expandafter\HyPsd@@CJKNnumber\expandafter{\number-\number#1}%
1312 \else
1313 \expandafter\HyPsd@@CJKNnumber\expandafter{\number#1}%
1314 \fi
1315 }

1316 \def\HyPsd@@CJKNnumber#1{%
1317 \ifcase#1 %
1318 \CJk@zero\or\CJk@one\or\CJk@two\or\CJk@three\or\CJk@four\or
1319 \CJk@five\or\CJk@six\or\CJk@seven\or\CJk@eight\or\CJk@nine\or
1320 \CJk@ten\or\CJk@ten\CJk@one\or\CJk@ten\CJk@two\or
1321 \CJk@ten\CJk@three\or\CJk@ten\CJk@four\or\CJk@ten\CJk@five\or
1322 \CJk@ten\CJk@six\or\CJk@ten\CJk@seven\or\CJk@ten\CJk@eight\or
1323 \CJk@ten\CJk@nine
1324 \else
1325 \ifnum#1<10000 %
1326 \HyPsd@CJKNnumberFour#1!\@empty{20}%
1327 \@empty
1328 \else
1329 \ifnum#1<100000000 %
1330 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1331 \IntCalcDiv#1!10000!%
1332 !\{20}%
1333 \CJk@tenthousand
1334 \expandafter\expandafter\expandafter\HyPsd@CJKNnumberFour
1335 \IntCalcMod#1!10000!%

```

```

1336      !\CJK@zero{10}%
1337      \@empty
1338    \else
1339      \expandafter\HyPsd@CJKnumberLarge
1340      \number\IntCalcDiv#1!100000000!\expandafter!%
1341      \number\IntCalcMod#1!100000000!!%
1342    \fi
1343  \fi
1344 \fi
1345 }
1346 \def\HyPsd@CJKnumberLarge#1!#2!{%
1347   \HyPsd@CJKnumberFour#1!{}{20}%
1348   \CJK@hundredmillion
1349   \ifnum#2=\z@
1350 \else
1351   \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1352     \IntCalcDiv#2!10000!%
1353   !\CJK@zero{10}%
1354   \CJK@tenthousand
1355   \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1356     \IntCalcMod#2!10000!%
1357   !\CJK@zero{10}%
1358   \@empty
1359 \fi
1360 }
1361 \def\HyPsd@CJKnumberFour#1!#2#3{%
1362   \ifnum#1=\z@
1363     \expandafter\@gobble
1364   \else
1365     \ifnum#1<1000 %
1366       #2%
1367       \HyPsd@CJKnumberThree#1!{}{#3}%
1368     \else
1369       \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1370       \CJK@thousand
1371       \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1372         \IntCalcMod#1!1000!%
1373       !\CJK@zero{10}%
1374     \fi
1375   \fi
1376 }
1377 \def\HyPsd@CJKnumberThree#1!#2#3{%
1378   \ifnum#1=\z@
1379 \else
1380   \ifnum#1<100 %
1381     #2%
1382     \HyPsd@CJKnumberTwo#1!{}{#3}%
1383   \else
1384     \HyPsd@@@CJKnumber{\IntCalcDiv#1!100!}%
1385     \CJK@hundred
1386     \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1387       \IntCalcMod#1!100!%
1388     !\CJK@zero{10}%
1389   \fi
1390 \fi
1391 }
1392 \def\HyPsd@CJKnumberTwo#1!#2#3{%

```

```

1393 \ifnum#1=\z@
1394 \else
1395 \ifnum#1<#3 %
1396   #2%
1397   \HyPsd@@CJKnumber{#1}%
1398 \else
1399 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1400 \CJK@ten
1401 \ifnum\IntCalcMod#1!10!=\z@
1402 \else
1403 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1404 \fi
1405 \fi
1406 \fi
1407 }

1408 \def\HyPsd@CJKdigits#1{%
1409 \ifx*#1\relax
1410 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1411 \else
1412 \HyPsd@@CJKdigits\CJK@null{#1}%
1413 \fi
1414 }

1415 \def\HyPsd@@CJKdigits#1#2{%
1416 \ifx\#2\%
1417 \else
1418 \HyPsd@@@CJKdigits#1#2\@nil
1419 \fi
1420 }%
1421 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1422 \HyPsd@CJKdigit#1{#2}%
1423 \ifx\#3\%
1424 \expandafter\@gobble
1425 \else
1426 \expandafter\@firstofone
1427 \fi
1428 {%
1429 \HyPsd@@@CJKdigits#1#3\@nil
1430 }%
1431 }

1432 \def\HyPsd@CJKdigit#1#2{%
1433 \ifcase#2 %
1434   #1\or
1435   \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1436   \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1437 \fi
1438 }

```

6.5.6 \@inmathwarn-Patch

`\HyPsd@inmathwarn` The patch of `\@inmathwarn` is needed to get rid of the infinite error loop with glyphs of other encodings (see the explanation above). Potentially the patch is dangerous, if the code in `ltoutenc.dtx` changes. Checked with $\text{\LaTeX} 2_{\epsilon}$ 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 ($\text{\LaTeX} 2_{\epsilon}$ release [1998/12/01]). In the normal case `\pdfstringdef` is executed in a context where `\protect` has the meaning of `\@typesetprotect` (`=\relax`).

```

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

1439 \def\HyPsd@inmathwarn#1#2{%
1440   \ifx#2\expandafter
1441     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1442       \HyPsd@GLYPHERR
1443       \expandafter\@gobble\string#1%
1444       >%
1445       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1446     \else
1447       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1448     \fi
1449   \else
1450     \expandafter#2%
1451   \fi
1452 }
1453 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1454 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1455 \def\HyPsd@add@accent#1#2{%
1456   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1457   #2%
1458 }%

```

6.5.7 Unexpandable spaces

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

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

These properties are used in `\HyPsd@CheckCatcodes`.

```
1459 \def\HyPsd@LetUnexpandableSpace#1{%
1460   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1461 }
```

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

```
1462 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.8 Marker for commands

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

```
1463 \edef\HyPsd@XSPACE{\string#\string X}
1464 \edef\HyPsd@ITALCORR{\string#\string I}
1465 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1466 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1467 \def\HyPsd@@hspace#1*#2\END{%
1468   \ifx\#2\%
1469     \HyPsd@hspacetest{#1}%
1470   \else
1471     \expandafter\HyPsd@hspacetest
1472   \fi
1473 }
```

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

```
1474 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1475 \ltx@ifundefined{tocsection}{%
1476   \let\HyPsd@AMSclassfix\relax
1477 }{%
1478   \def\HyPsd@AMSclassfix{%
1479     \let\tocpart\HyPsd@tocsection
1480     \let\tocchapter\HyPsd@tocsection
1481     \let\tocappendix\HyPsd@tocsection
```

```

1482 \let\tocsection\HyPsd@tocsection
1483 \let\tocsubsection\HyPsd@tocsection
1484 \let\tocsubsubsection\HyPsd@tocsection
1485 \let\tocparagraph\HyPsd@tocsection
1486 }%
1487 \def\HyPsd@tocsection#1#2#3{%
1488 \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1489 #3%
1490 }%
1491 }

```

6.5.11 Reference commands

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

```

1492 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1493 \def\HyPsd@@ref#1*#2\END{%
1494 \ifx\#2\%
1495 \HyPsd@@@ref{#1}%
1496 \else
1497 \expandafter\HyPsd@@@ref
1498 \fi
1499 }%

```

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

```

1500 \def\HyPsd@@@ref#1{%
1501 \expandafter\ifx\csname r@#1\endcsname\relax
1502 ??%
1503 \else
1504 \expandafter\expandafter\expandafter
1505 \@car\csname r@#1\endcsname\@nil
1506 \fi
1507 }

```

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

```

1508 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1509 \def\HyPsd@@pageref#1*#2\END{%
1510 \ifx\#2\%
1511 \HyPsd@@@pageref{#1}%
1512 \else
1513 \expandafter\HyPsd@@@pageref
1514 \fi
1515 }

```

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

```

1516 \def\HyPsd@@@pageref#1{%
1517 \expandafter\ifx\csname r@#1\endcsname\relax
1518 ??%
1519 \else
1520 \expandafter\expandafter\expandafter\expandafter
1521 \expandafter\expandafter\expandafter\@car
1522 \expandafter\expandafter\expandafter\@gobble

```

```

1523 \csname r@#1\endcsname{}\@nil
1524 \fi
1525 }

```

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

```

1526 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1527 \def\HyPsd@@nameref#1*#2\END{%
1528 \ifx\#2\%
1529 \HyPsd@@@nameref{#1}%
1530 \else
1531 \expandafter\HyPsd@@@nameref
1532 \fi
1533 }

```

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

```

1534 \def\HyPsd@@@nameref#1{%
1535 \expandafter\ifx\csname r@#1\endcsname\relax
1536 ??%
1537 \else
1538 \expandafter\expandafter\expandafter\expandafter
1539 \expandafter\expandafter\expandafter\@car
1540 \expandafter\expandafter\expandafter\@gobbletwo
1541 \csname r@#1\endcsname{}\@nil
1542 \fi
1543 }

```

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

```

1544 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1545 \def\HyPsd@@autoref#1*#2\END{%
1546 \ifx\#2\%
1547 \HyPsd@@@autoref{#1}%
1548 \else
1549 \expandafter\HyPsd@@@autoref
1550 \fi
1551 }

```

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

```

1552 \def\HyPsd@@@autoref#1{%
1553 \expandafter\ifx\csname r@#1\endcsname\relax
1554 ??%
1555 \else
1556 \expandafter\expandafter\expandafter\HyPsd@autorefname
1557 \csname r@#1\endcsname{}\@nil
1558 \expandafter\expandafter\expandafter
1559 \@car\csname r@#1\endcsname\@nil
1560 \fi
1561 }

```

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

```

1562 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%

```

```

1563 \ifx\#4\%
1564 \else
1565 \HyPsd@@autorefname#4.\@nil
1566 \fi
1567 }

```

\HyPsd@@autorefname

```

1568 \def\HyPsd@@autorefname#1.#2\@nil{%
1569 \ltx@ifundefined{#1autorefname}{%
1570 \ltx@ifundefined{#1name}{%
1571 }{%
1572 \csname#1name\endcsname\space
1573 }%
1574 }{%
1575 \csname#1autorefname\endcsname\space
1576 }%
1577 }

```

6.5.12 Redefining the defining commands

Definitions aren't allowed, because they aren't executed in an only expanding context. So the command to be defined isn't defined and can perhaps be undefined. This would cause 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 doesn'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 unbalanced \if... tokens, the cases \let\if...\iftrue and \let\if...\iffalse are checked and ignored.

\HyPsd@DefCommand

\HyPsd@LetCommand

```

1578 \begingroup
1579 \def\x#1#2{%
1580 \endgroup
1581 \let#1\def
1582 \def\HyPsd@DefCommand##1##2##3{%
1583 #1%
1584 \expandafter\noexpand

```



```

1585     \csname\expandafter\@gobble\string##1\@empty\endcsname
1586     \@gobble
1587 }%
1588 \let#2\let
1589 \def\HyPsd@@LetCommand##1{%
1590     \expandafter\ifx\csname##1\expandafter\endcsname
1591         \csname iftrue\endcsname
1592         \pdfstringdefWarn\let
1593         \expandafter\@gobble
1594     \else
1595         \expandafter\ifx\csname##1\expandafter\endcsname
1596             \csname iffalse\endcsname
1597             \pdfstringdefWarn\let
1598             \expandafter\expandafter\expandafter\@gobble
1599         \else
1600             #2%
1601             \expandafter\noexpand
1602             \csname##1\expandafter\expandafter\expandafter\endcsname
1603         \fi
1604     \fi
1605 }%
1606 }%
1607 \expandafter\x\csname <def>-command\expandafter\endcsname
1608     \csname <let>-command\endcsname
1609 \def\HyPsd@LetCommand#1{%
1610     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1611     \expandafter\expandafter\expandafter{%
1612     \expandafter\@gobble\string#1\@empty
1613 }%
1614 }

```

6.5.13 \ifnextchar

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

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

```

1615 \def\HyPsd@ifnextchar#1{%
1616     \pdfstringdefWarn#1%
1617     \expandafter\@gobbletwo\@gobble
1618 }

```

6.5.14 \@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`.

```

1619 \def\HyPsd@protected@testopt#1{%

```

```

1620 \pdfstringdefWarn#1%
1621 \@gobbletwo
1622 }

```

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:

```

1623 \def\HyPsd@Warning#1{%
1624   \begingroup
1625   \def\space{ }%
1626   \Hy@Warning{#1}%
1627   \endgroup
1628 }

```

6.6.2 Protecting spaces

```

1629 \RequirePackage{etexcmds}[2007/09/09]
1630 \ifetex@unexpanded
1631   \expandafter\@secondoftwo
1632 \else
1633   \expandafter\@firstoftwo
1634 \fi
1635 {%

```

`\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`.

```

1636 \def\HyPsd@ProtectSpaces#1{%
1637   \iftrue
1638     \expandafter\HyPsd@@ProtectSpacesFi
1639     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1640   \fi
1641 }%

```

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

```

1642 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1643   \fi
1644   \ifx\scrollmode#2\scrollmode
1645     \HyPsd@RemoveMask#1\HyPsd@End#3%
1646   \else
1647     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1648     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1649   \fi
1650 }%

```

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.

```

1651 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1652   \toks@\expandafter{#1}%
1653   \xdef#2{\the\toks@}%
1654 }%

```

```

1655 }{%
1656   \let\HyPsd@fi\fi
1657   \def\HyPsd@ProtectSpaces#1{%
1658     \xdef#1{%
1659       \iftrue
1660         \expandafter\HyPsd@@ProtectSpacesFi
1661         \expandafter|\expandafter\@empty#1| %
1662       \HyPsd@fi
1663     }%
1664     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1665   }%
1666   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1667     \fi
1668     \etex@unexpanded{#1}%
1669     \ifx\scrollmode#2\scrollmode
1670     \else
1671       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1672     \HyPsd@fi
1673   }%
1674   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1675     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1676   }%
1677 }

```

6.6.3 Remove grouping braces

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

```

1678 \def\HyPsd@RemoveBraces#1{%
1679   \ifx\scrollmode#1\scrollmode
1680   \else
1681     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1682   \fi
1683 }

```

`\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`.

```

1684 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1685   \fi
1686   \def\Hy@temp@A{#1#2}%
1687   \def\Hy@temp@B{#3}%
1688   \ifx\Hy@temp@A\Hy@temp@B
1689     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1690       \HyPsd@String#1%
1691     }%
1692     \ifx\scrollmode#2\scrollmode
1693     \else
1694       \Hy@ReturnAfterFiFiEnd{%
1695         \HyPsd@RemoveBraces{#2}%
1696       }%

```

```

1697 \fi
1698 \else
1699 \def\Hy@temp@A{#1}%
1700 \HyPsd@AppendItalcrr\HyPsd@String
1701 \ifx\Hy@temp@A\@empty
1702 \Hy@ReturnAfterElseFiFiEnd{%
1703 \HyPsd@RemoveBraces{#2}%
1704 }%
1705 \else
1706 \HyPsd@ProtectSpaces\Hy@temp@A
1707 \HyPsd@AppendItalcrr\Hy@temp@A
1708 \Hy@ReturnAfterFiFiEnd{%
1709 \expandafter\HyPsd@RemoveBraces\expandafter
1710 {\Hy@temp@A#2}%
1711 }%
1712 \fi
1713 \fi
1714 \Hy@ReturnEnd
1715 }

```

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

```

1716 \def\HyPsd@AppendItalcrr#1{%
1717 \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1}%
1718 }
1719 \def\HyPsd@@AppendItalcrr#1#2{%
1720 \expandafter\def\expandafter#2\expandafter{#2#1}%
1721 }

```

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).

```

1722 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1723 \global\let\HyPsd@Rest\relax
1724 \ifcat\relax\noexpand#1\relax
1725 \ifx#1\protect
1726 \else
1727 \ifx#1\penalty
1728 \setbox\z@=\hbox{%
1729 \afterassignment\HyPsd@AfterCountRemove
1730 \count@=#2\HyPsd@End
1731 }%
1732 \else
1733 \ifx#1\kern
1734 \setbox\z@=\hbox{%
1735 \afterassignment\HyPsd@AfterDimenRemove

```

```

1736         \dimen@=#2\HyPsd@End
1737     }%
1738 \else
1739     \ifx#1\hskip
1740         \setbox\z@=\hbox{%
1741             \afterassignment\HyPsd@AfterSkipRemove
1742             \skip@=#2\HyPsd@End
1743         }%
1744     \else
1745         \HyPsd@CatcodeWarning{#1}%
1746     \fi
1747 \fi
1748 \fi
1749 \fi
1750 \else
1751     \ifcat#1A% letter
1752         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1753             \HyPsd@String#1%
1754         }%
1755     \else
1756         \ifcat#1 % SPACE
1757             \expandafter\def\expandafter\HyPsd@String\expandafter{%
1758                 \HyPsd@String\HyPsd@SPACEOPTI
1759             }%
1760         \else
1761             \ifcat$#1%
1762                 \HyPsd@CatcodeWarning{math shift}%
1763             \else
1764                 \ifcat&#1%
1765                     \HyPsd@CatcodeWarning{alignment tab}%
1766                 \else
1767                     \ifcat^#1%
1768                         \HyPsd@CatcodeWarning{superscript}%
1769                     \else
1770                         \ifcat_#1%
1771                             \HyPsd@CatcodeWarning{subscript}%
1772                         \else
1773                             \expandafter\def\expandafter\HyPsd@String\expandafter{%
1774                                 \HyPsd@String#1%
1775                             }%
1776                         \fi
1777                     \fi
1778                 \fi
1779             \fi
1780         \fi
1781     \fi
1782 \fi
1783 \ifx\HyPsd@Rest\relax
1784     \ifx\scrollmode#2\scrollmode
1785     \else
1786         \Hy@ReturnAfterFiFiEnd{%
1787             \HyPsd@CheckCatcodes#2\HyPsd@End
1788         }%
1789     \fi
1790 \else
1791     \ifx\HyPsd@Rest\@empty
1792     \else

```

```

1793 \Hy@ReturnAfterFiFiEnd{%
1794 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1795 }%
1796 \fi
1797 \fi
1798 \Hy@ReturnEnd
1799 }

```

Remove counts, dimens, skips.

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

```

1800 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1801 \gdef\HyPsd@Rest{#1}%
1802 }

```

`\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.

```

1803 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1804 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1805 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1806 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1807 \else
1808 \ifdim\dimen@=\z@
1809 \else
1810 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1811 \fi
1812 \gdef\HyPsd@Rest{#1}%
1813 \fi
1814 }

```

`\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).

```

1815 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1816 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@\fi>1ex %
1817 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1818 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1819 \else
1820 \ifdim\skip@=\z@
1821 \else
1822 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1823 \fi
1824 \gdef\HyPsd@Rest{#1}%
1825 \fi
1826 }

```

Catcode warnings.

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

```

1827 \def\HyPsd@CatcodeWarning#1{%
1828 \HyPsd@Warning{%
1829 Token not allowed in a PDF string (%
1830 \ifHy@unicode
1831 Unicode%
1832 \else

```

```

1833     PDFDocEncoding%
1834     \fi
1835   ):%
1836   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1837 }%
1838 }
1839 \begingroup
1840 \catcode'\|=0 %
1841 \catcode'\|=12 %
1842 |gdef|HyPsd@RemoveCmdPrefix#1{%
1843   |expandafter|HyPsd@@RemoveCmdPrefix
1844   |string#1|@empty\<>-|@empty|@empty
1845 }%
1846 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1847 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1848 \def\HyPsd@RemoveSpaceWarning#1{%
1849   \HyPsd@Warning{%
1850     Token not allowed in a PDF string (%)
1851     \ifHy@unicode
1852       Unicode%
1853     \else
1854       PDFDocEncoding%
1855     \fi
1856   ):%
1857   \MessageBreak #1\MessageBreak
1858   removed%
1859 }%
1860 }

```

\HyPsd@ReplaceSpaceWarning

```

1861 \def\HyPsd@ReplaceSpaceWarning#1{%
1862   \HyPsd@Warning{%
1863     Token not allowed in a PDF string (%)
1864     \ifHy@unicode
1865       Unicode%
1866     \else
1867       PDFDocEncoding%
1868     \fi
1869   ):%
1870   \MessageBreak #1\MessageBreak
1871   replaced by space%
1872 }%
1873 }

```

6.6.5 Check for wrong glyphs

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

```

1874 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1875   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1876     \HyPsd@String#1%
1877   }%
1878   \ifx\|#2\%
1879   \else
1880     \Hy@ReturnAfterFi{%

```

```

1881 \HyPsd@GlyphProcessWarning#2\@empty
1882 }%
1883 \fi
1884 }
1885 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1886 \HyPsd@@GlyphProcessWarning#1++>%
1887 \HyPsd@GlyphProcess#2\@empty
1888 }
1889 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1890 \ifx\#2\%
1891 \HyPsd@Warning{%
1892 Glyph not defined in %
1893 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1894 removing '@backslashchar#1'%
1895 }%
1896 \else
1897 \HyPsd@Warning{%
1898 Composite letter '@backslashchar#1+#2'\MessageBreak
1899 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1900 \MessageBreak
1901 removing '@backslashchar#1'%
1902 }%
1903 \fi
1904 }

```

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`.

```

1905 \def\HyPsd@spaceopti#1{ % first space
1906 \ifx\HyPsd@spaceopti#1%
1907 \040%
1908 \else
1909 #1%
1910 \fi
1911 }%

```

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.

1912 \def\HyPsd@Subst#1#2#3{%
1913 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1914 \fi
1915 ##1%
1916 \ifx\scrollmode##2\scrollmode
1917 \else
1918 #2%
1919 \HyPsd@@ReplaceFi##2\END
1920 \fi
1921 }%

```



```

1922 \xdef#3{%
1923   \iftrue
1924     \expandafter\HyPsd@@ReplaceFi#3#1\END
1925   \fi
1926 }%
1927 }

```

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

```

1928 \def\HyPsd@StringSubst#1{%
1929   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1930 }

```

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.

```

1931 \def\HyPsd@doxspace#1{%
1932   \ifx#1\relax\else
1933     \ifx#1.\else
1934       \ifx#1:\else
1935         \ifx#1,\else
1936           \ifx#1;\else
1937             \ifx#1!\else
1938               \ifx#1?\else
1939                 \ifx#1/\else
1940                   \ifx#1-\else
1941                     \ifx#1'\else
1942                       \HyPsd@SPACEOPTI
1943                     \fi
1944                   \fi
1945                 \fi
1946               \fi
1947             \fi
1948           \fi
1949         \fi
1950       \fi
1951     \fi
1952   \fi
1953   #1%
1954 }%

```

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.

```

1955 \begingroup
1956   \catcode'\|=0 %
1957   \catcode'\|=12 %

```

`\HyPsd@ConvertToUnicode`

```

1958 |gdef|HyPsd@ConvertToUnicode#1{%
1959   |xdef#1{%
1960     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty

```

```

1961 }%
1962 |ifx#1|@empty
1963 |else
1964 |xdef#1{%
1965     \376\377%
1966     #1%
1967 }%
1968 |fi
1969 }%

```

\HyPsd@DoConvert

```

1970 |gdef|HyPsd@DoConvert#1{%
1971 |ifx#1|@empty
1972 |else
1973 |Hy@ReturnAfterFi{%
1974 |ifx#1\%%
1975 \%%
1976 |expandafter|HyPsd@DoEscape
1977 |else
1978 |HyPsd@Char{#1}%
1979 |expandafter|HyPsd@DoConvert
1980 |fi
1981 }%
1982 |fi
1983 }%

```

\HyPsd@DoEscape

```

1984 |gdef|HyPsd@DoEscape#1{%
1985 |ifx#19%
1986 |expandafter|HyPsd@GetTwoBytes
1987 |else
1988 |Hy@ReturnAfterFi{%
1989 |ifx#18%
1990 00%
1991 |expandafter|HyPsd@GetTwoBytes
1992 |else
1993 #1%
1994 |expandafter|HyPsd@GetOneByte
1995 |fi
1996 }%
1997 |fi
1998 }%

```

\HyPsd@GetTwoBytes

```

1999 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2000 #1\#2#3#4%
2001 |HyPsd@DoConvert
2002 }%

```

\HyPsd@GetOneByte

```

2003 |gdef|HyPsd@GetOneByte#1#2{%
2004 #1#2%
2005 |HyPsd@DoConvert
2006 }%
2007 |endgroup

```

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

```

2008 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2009   \xdef#4{#4#1#2}%
2010   \HyPsd@@ConvertToUnicode#3\END#4%
2011 }

```

\HyPsd@Char

```

2012 \begingroup
2013   \catcode0=9 %
2014   \catcode'\^=7 %
2015   \catcode'\^^=12 %
2016   \def\x{^^^0000}%
2017 \expandafter\endgroup
2018 \ifx\x\@empty
2019   \def\HyPsd@Char#1{%
2020     \ifnum'#1<128 %
2021       \@backslashchar 000#1%
2022     \else
2023       \ifnum'#1<65536 %
2024         \expandafter\HyPsd@CharTwoByte\number'#1!%
2025       \else
2026         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2027         \intcalcSub{'#1}{65536}!%
2028       \fi
2029     \fi
2030   }%
2031 \def\HyPsd@CharTwoByte#1!{%
2032   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2033   \IntCalcDiv#1!256!!%
2034   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2035   \IntCalcMod#1!256!!%
2036 }%
2037 \def\HyPsd@CharOctByte#1!{%
2038   \@backslashchar
2039   \IntCalcDiv#1!64!%
2040   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2041   \IntCalcMod#1!8!%
2042 }%
2043 \def\HyPsd@CharSurrogate#1!{%
2044   \@backslashchar 33%
2045   \IntCalcDiv#1!262144!%
2046   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2047   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2048   \@backslashchar 33%
2049   \expandafter\expandafter\expandafter\IntCalcAdd
2050   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2051   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2052   \IntCalcMod#1!256!!%
2053 }%
2054 \else
2055   \def\HyPsd@Char#1{%
2056     \@backslashchar 000#1%
2057   }%
2058 \fi

```

6.6.9 Support for UTF-8 input encoding

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

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

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

```

2059 \begingroup\expandafter\expandafter\expandafter\endgroup
2060 \expandafter\ifx\csname numexpr\endcsname\relax
2061   \let\HyPsd@UTFviii\relax
2062 \else
2063   \begingroup
2064     \lccode'\~='^f4\relax
2065   \lowercase{\endgroup
2066     \def\HyPsd@UTFviii{%
2067       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2068       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2069       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2070       \ifx~\HyPsd@UTFviii@ccxliv@undef
2071         \let~\HyPsd@UTFviii@ccxliv@def
2072       \fi
2073       \let\unichar\HyPsd@unichar
2074     }%
2075   }%
2076   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2077   \edef\HyPsd@UTFviii@ccxliv@def{%
2078     \noexpand\UTFviii@four@octets\string ^f4%
2079   }%

```

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.

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

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

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

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

$$(5)$$

```

2080 \def\HyPsd@UTFviii@two#1#2{%
2081   \expandafter\HyPsd@UTFviii@@two
2082   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2083   \number'#1\expandafter| %
2084   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2085   \number'#2 \@nil
2086 }%
2087 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2088   \expandafter\8%
2089   \number\numexpr #1-48\expandafter\relax
2090   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2091   \number\numexpr #3-8*%

```

```

2092 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2093 \number\dimexpr #4-8*#3\relax
2094 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2095 \def\HyPsd@UTFviii@three#1#2#3{%
2096 \expandafter\HyPsd@UTFviii@three
2097 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2098 \number'#1\expandafter| %
2099 \number\ifnum\dimexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2100 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2101 \number'#2\expandafter| %
2102 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2103 \number'#3 \@nil
2104 }%
2105 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2106 \expandafter\9%
2107 \number\dimexpr #1-56\expandafter\relax
2108 \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2109 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2110 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2111 \number\dimexpr #6-16\expandafter\relax
2112 \number\dimexpr #7-8*#6\relax
2113 }%

```

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

```

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

```

```

2114 \def\HyPsd@UTFviii@four#1#2{%
2115 \expandafter\HyPsd@UTFviii@four\number
2116 \dimexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2117 \expandafter|\number
2118 \dimexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2119 }%
2120 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2121 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2122 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2123 \ifodd#2 %
2124 \number\dimexpr(#2-1)/2\relax
2125 \else
2126 \number\dimexpr#2/2\relax
2127 \fi

```

```

2128 \number\numexpr\ifodd#2 4+\fi
2129 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2130 \933%
2131 \expandafter\HyPsd@@@UTFviii@four\number
2132 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2133 }%
2134 \def\HyPsd@@@UTFviii@four#1|#2{%
2135 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2136 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2137 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2138 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2139 }%

```

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

```

2140 \def\HyPsd@unichar#1{%
2141 \ifHy@unicode
2142 \ifnum#1>"10FFFF %
2143 \HyPsd@UnicodeReplacementCharacter % illegal
2144 \else
2145 \ifnum#1>"FFFF %

```

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

```

2146 \expandafter\HyPsd@unichar\expandafter{%
2147 \number\numexpr 55296+%
2148 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2149 \relax\relax\relax
2150 }%

```

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

```

2151 \expandafter\HyPsd@unichar\expandafter{%
2152 \number\numexpr#1-9216%
2153 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2154 \relax\relax\relax
2155 }%
2156 \else
2157 \ifnum#1>"7FF %
2158 \9%
2159 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2160 \number
2161 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2162 }%
2163 \else
2164 \8%
2165 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2166 \fi
2167 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2168 \number
2169 \numexpr#1-256*\number
2170 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2171 }%
2172 \fi
2173 \fi
2174 \else
2175 .% unsupported (Unicode -> PDF Doc Encoding)
2176 \fi
2177 }%
2178 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2179 \def\HyPsd@unichar@first@byte#1{%
2180 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2181 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2182 \number
2183 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2184 \relax\relax\relax
2185 }%
2186 }%
2187 \def\HyPsd@unichar@second@byte#1{%
2188 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2189 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2190 \number
2191 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2192 \relax\relax\relax
2193 }%
2194 }%
2195 \def\HyPsd@unichar@octtwo#1{%
2196 \number\dimexpr.125\dimexpr#1sp\relax\relax
2197 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2198 \relax\relax\relax
2199 }%
2200 \fi

```

7 Support of other packages

7.1 Class memoir

```

2201 \@ifclassloaded{memoir}{%
2202 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2203 }{}

```

7.2 Package subfigure

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

```

2204 \@ifpackageloaded{subfigure}{%
2205 \ltx@ifundefined{sub@label}{%
2206 \Hy@hypertexnamesfalse
2207 }{%
2208 \renewcommand*{\sub@label}[1]{%
2209 \@bsphack
2210 \subfig@oldlabel{#1}%
2211 \if@filesw
2212 \begingroup
2213 \edef\@currentlabstr{%
2214 \expandafter\strip@prefix\meaning\@currentlabelname
2215 }%
2216 \protected@write\@auxout{}{%
2217 \string\newlabel{sub@#1}{%
2218 {\@nameuse{\@thesub\@cptype}}%
2219 {\thepage}%
2220 }%
2221 \expandafter\strip@period\@currentlabstr
2222 \relax.\relax\@@@%
2223 }%
2224 {\@currentHref}%
2225 }%
2226 }%

```

```

2227     }%
2228     \endgroup
2229     \fi
2230     \@esphack
2231 }%
2232 \@ifpackagelater{subfigure}{2002/03/26}{\%
2233     \providecommand*{\toclevel@subfigure}{1}%
2234     \providecommand*{\toclevel@subtable}{1}%
2235 }%
2236 }%
2237 }{}

```

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:

```

2238 \ltx@ifundefined{XR@addURL}{%
2239 }{}%

```

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.

```

2240 \def\xr@addURL#1{\xr@dURL#1{}{}{}\\}%
2241 \def\xr@dURL#1#2#3#4#5\\{%
2242   {#1}{#2}%
2243   \if!#4!%
2244   \else
2245     {#3}{#4}{\xr@URL}%
2246   \fi
2247 }%
2248 }

2249 \def\Hy@true{true}
2250 \def\Hy@false{false}

```

Providing dummy definitions.

```

2251 \let\literalps@out\@gobble
2252 \newcommand\pdfbookmark[3]{}{}
2253 \def\Acrobatmenu#1#2{\leavevmode#2}
2254 \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

```

2255 \let\HyperRaiseLinkHook\@empty
2256 \def\HyperRaiseLinkDefault{\baselineskip}

```


\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.

```

2257 \def\Hy@raisedlink#1{%
2258   \ifvmode
2259     #1%
2260   \else
2261     \penalty\@M
2262     \smash{%
2263       \begingroup
2264         \let\HyperRaiseLinkLength\@tempdima
2265         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2266         \HyperRaiseLinkHook
2267       \expandafter\endgroup
2268     \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2269   }%
2270 \fi
2271 }

```

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

```

2272 \def\Hy@SaveLastskip{%
2273   \let\Hy@RestoreLastskip\relax
2274   \ifvmode
2275     \ifdim\lastskip=\z@
2276       \let\Hy@RestoreLastskip\nobreak
2277     \else
2278       \begingroup
2279       \skip@=-\lastskip
2280       \edef\x{%
2281         \endgroup
2282         \def\noexpand\Hy@RestoreLastskip{%
2283           \noexpand\ifvmode
2284             \noexpand\nobreak
2285             \vskip\the\skip@
2286             \vskip\the\lastskip\relax
2287           \noexpand\fi
2288         }%
2289       }%
2290       \x
2291     \fi
2292   \else
2293     \ifhmode
2294       \ifdim\lastskip=\z@
2295         \let\Hy@RestoreLastskip\nobreak
2296       \else
2297         \begingroup
2298         \skip@=-\lastskip
2299         \edef\x{%
2300           \endgroup
2301           \def\noexpand\Hy@RestoreLastskip{%
2302             \noexpand\ifhmode
2303               \noexpand\nobreak
2304               \hskip\the\skip@
2305               \hskip\the\lastskip\relax
2306             \noexpand\fi
2307           }%
2308         }%
2309         \x
2310       \fi

```

```

2311 \fi
2312 \fi
2313 }%

```

9 Options

9.1 Help macros

`\Hy@boolkey`

```

2314 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2315 \def\Hy@@boolkey[#1]#2#3{%
2316 \edef\Hy@tempa{#3}%
2317 \lowercase\expandafter{%
2318 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2319 }%
2320 \ifx\Hy@tempa\@empty
2321 \let\Hy@tempa\Hy@true
2322 \fi
2323 \ifx\Hy@tempa\Hy@true
2324 \else
2325 \ifx\Hy@tempa\Hy@false
2326 \else
2327 \let\Hy@tempa\relax
2328 \fi
2329 \fi
2330 \ifx\Hy@tempa\relax
2331 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2332 \else
2333 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2334 \csname Hy@#2\Hy@tempa\endcsname
2335 \fi
2336 }

```

`\Hy@WarnOptionValue`

```

2337 \def\Hy@WarnOptionValue#1#2#3{%
2338 \Hy@Warning{%
2339 Unexpected value ‘#1’\MessageBreak
2340 of option ‘#2’ instead of\MessageBreak
2341 #3%
2342 }%
2343 }

```

`\Hy@DisableOption`

```

2344 \def\Hy@DisableOption#1{%
2345 \@ifundefined{KV@Hyp@#1@default}{%
2346 \define@key{Hyp}{#1}%
2347 }{%
2348 \define@key{Hyp}{#1}[]%
2349 }%
2350 {\Hy@WarnOptionDisabled{#1}}%
2351 }

```

`\Hy@WarnOptionDisabled`

```

2352 \def\Hy@WarnOptionDisabled#1{%
2353 \Hy@Warning{%

```

```

2354 Option '#1' has already been used,\MessageBreak
2355 setting the option has no effect%
2356 }%
2357 }

```

`\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`.

```

2358 \def\Hy@CheckOptionValue#1#2#3{%
2359 \begingroup
2360 \edef\x{#1}%
2361 \@onelevel@sanitize\x
2362 \let\y=y%
2363 \def\do##1#2#2{%
2364 \def\z{##1}%
2365 \@onelevel@sanitize\z
2366 \ifx\x\z
2367 \let\y=n%
2368 \let\do\@gobbletwo
2369 \fi
2370 }%
2371 #3%
2372 \ifx\y y%
2373 \def\do##1#2#2{%
2374 *'##1'%
2375 \ifx\##2\\\else\space(##2)\fi
2376 \MessageBreak
2377 }%
2378 \Hy@Warning{%
2379 Values of option '#2':\MessageBreak
2380 #3%
2381 * An empty value disables the option.\MessageBreak
2382 Unknown value '\x'%
2383 }%
2384 \fi
2385 \endgroup
2386 }

```

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

```

2387 \def\Hy@DefNameKey#1{%
2388 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2389 }

```

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

```

2390 \def\Hy@@DefNameKey#1#2#3{%
2391 \define@key{Hyp}{#2}{%
2392 \edef#1{##1}%
2393 \ifx#1\@empty
2394 \else
2395 \Hy@CheckOptionValue{##1}{#2}{#3}%
2396 \fi
2397 }%
2398 \let#1\@empty
2399 }

```

\Hy@UseNameKey

```
2400 \def\Hy@UseNameKey#1#2{%
2401   \ifx#2\@empty
2402   \else
2403     /#1/#2%
2404   \fi
2405 }
```

9.2 Defining the options

```
2406 \define@key{Hyp}{implicit}[true]{%
2407   \Hy@boolkey{implicit}{#1}%
2408 }
2409 \define@key{Hyp}{draft}[true]{%
2410   \Hy@boolkey{draft}{#1}%
2411 }
2412 \define@key{Hyp}{final}[true]{%
2413   \Hy@boolkey{final}{#1}%
2414 }
2415 \let\KV@Hyp@nolinks\KV@Hyp@draft

2416 \def\Hy@ObsoletePaperOption#1{%
2417   \Hy@WarningNoLine{%
2418     Option ‘#1’ is no longer used%
2419   }%
2420   \define@key{Hyp}{#1}[true]{}%
2421 }
2422 \def\Hy@temp#1{%
2423   \define@key{Hyp}{#1}[true]{%
2424     \Hy@ObsoletePaperOption{#1}%
2425   }%
2426 }
2427 \Hy@temp{a4paper}
2428 \Hy@temp{a5paper}
2429 \Hy@temp{b5paper}
2430 \Hy@temp{letterpaper}
2431 \Hy@temp{legalpaper}
2432 \Hy@temp{executivepaper}

2433 \define@key{Hyp}{setpagesize}[true]{%
2434   \Hy@boolkey{setpagesize}{#1}%
2435 }
2436 \define@key{Hyp}{debug}[true]{%
2437   \Hy@boolkey[debug]{verbose}{#1}%
2438 }
2439 \define@key{Hyp}{linktocpage}[true]{%
2440   \Hy@boolkey{linktocpage}{#1}%
2441   \ifHy@linktocpage
2442     \let\Hy@linktoc\Hy@linktoc@page
2443   \else
2444     \let\Hy@linktoc\Hy@linktoc@section
2445   \fi
2446 }
2447 \chardef\Hy@linktoc@none=0 %
2448 \chardef\Hy@linktoc@section=1 %
2449 \chardef\Hy@linktoc@page=2 %
2450 \chardef\Hy@linktoc@all=3 %
2451 \ifHy@linktocpage
```

```

2452 \let\Hy@linktoc\Hy@linktoc@page
2453 \else
2454 \let\Hy@linktoc\Hy@linktoc@section
2455 \fi
2456 \define@key{Hyp}{linktoc}{%
2457 \@ifundefined{Hy@linktoc@#1}{%
2458 \Hy@Warning{%
2459 Unexpected value ‘#1’ of\MessageBreak
2460 option ‘linktoc’ instead of ‘none’,\MessageBreak
2461 ‘section’, ‘page’ or ‘all’%
2462 }%
2463 }{%
2464 \expandafter\let\expandafter\Hy@linktoc
2465 \csname Hy@linktoc@#1\endcsname
2466 }%
2467 }
2468 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2469 \let\XR@ext\relax
2470 \define@key{Hyp}{verbose}[true]{%
2471 \Hy@boolkey{verbose}{#1}%
2472 }
2473 \define@key{Hyp}{typexml}[true]{%
2474 \Hy@boolkey{typexml}{#1}%
2475 }

```

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.

```

2476 \define@key{Hyp}{raiselinks}[true]{%
2477 \Hy@boolkey{raiselinks}{#1}%
2478 }

```

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

```

2479 \def\Hy@setbreaklinks#1{%
2480 \csname breaklinks#1\endcsname
2481 }
2482 \def\Hy@breaklinks@unsupported{%
2483 \ifx\Hy@setbreaklinks\@gobble
2484 \ifHy@breaklinks
2485 \Hy@WarningNoLine{%
2486 You have enabled option ‘breaklinks’.\MessageBreak
2487 But driver ‘\Hy@driver.def’ does not support this.\MessageBreak
2488 Expect trouble with the link areas of broken links%
2489 }%
2490 \fi
2491 \fi
2492 }
2493 \define@key{Hyp}{breaklinks}[true]{%
2494 \Hy@boolkey{breaklinks}{#1}%
2495 \let\Hy@setbreaklinks\@gobble
2496 }
2497 \define@key{Hyp}{localanchorname}[true]{%
2498 \Hy@boolkey{localanchorname}{#1}%
2499 }

```

Determines whether an automatic anchor is put on each page

```

2500 \define@key{Hyp}{pageanchor}[true]{%

```

```

2501 \Hy@boolkey{pageanchor}{#1}%
2502 }

```

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.

```

2503 \define@key{Hyp}{plainpages}[true]{%
2504   \Hy@boolkey{plainpages}{#1}%
2505 }

```

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

```

2506 \define@key{Hyp}{naturalnames}[true]{%
2507   \Hy@boolkey{naturalnames}{#1}%
2508 }

```

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

```

2509 \define@key{Hyp}{hypertextnames}[true]{%
2510   \Hy@boolkey{hypertextnames}{#1}%
2511 }

```

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

```

2512 \define@key{Hyp}{nesting}[true]{%
2513   \Hy@boolkey{nesting}{#1}%
2514 }

```

```

2515 \define@key{Hyp}{unicode}[true]{%
2516   \Hy@boolkey{unicode}{#1}%
2517   \ifHy@unicode
2518     \def\HyPsd@pdfencoding{unicode}%
2519     \HyPsd@LoadUnicode
2520   \else
2521     \def\HyPsd@pdfencoding{pdfdoc}%
2522   \fi
2523 }
2524 \def\HyPsd@LoadUnicode{%
2525   \@ifundefined{T@PU}{%
2526     \input{puenc.def}%
2527     \HyLinguex@Restore
2528   }{}%
2529   \DeclareFontFamily{PU}{pdf}{}%
2530   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2531   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2532   \global\let\HyPsd@LoadUnicode\relax
2533 }
2534 \Hy@AtBeginDocument{%
2535   \ifx\HyPsd@LoadUnicode\relax
2536   \else
2537     \def\HyPsd@LoadUnicode{%
2538       \PackageError{hyperref}{%
2539         Unicode support for bookmarks is not available.\MessageBreak
2540         Activate unicode support by using one of the options\MessageBreak
2541         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2542         in the preamble%
2543       }\@ehc
2544       \global\let\HyPsd@LoadUnicode\relax
2545       \global\Hy@unicodetrue
2546       \global\let\Hy@unicodetrue\Hy@unicodetrue
2547     }%
2548   \fi
2549 }

```

```

2550 \define@key{Hyp}{pdfencoding}{%
2551   \edef\HyPsd@temp{#1}%
2552   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2553     \let\HyPsd@pdfencoding\HyPsd@temp
2554     \Hy@unicodfalse
2555   \else
2556     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2557       \z@
2558     \else
2559       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2560         \z@
2561       \else
2562         \@ne
2563       \fi
2564     \fi
2565     \let\HyPsd@pdfencoding\HyPsd@temp
2566     \hypersetup{unicode}%
2567     \ifHy@unicode
2568       \def\HyPsd@pdfencoding{#1}%
2569       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2570         \HyPsd@LoadStringEnc
2571       \fi
2572     \else
2573       \Hy@Warning{Cannot switch to unicode bookmarks}%
2574       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2575     \fi
2576   \else
2577     \@onelevel@sanitize\HyPsd@temp
2578     \Hy@Warning{%
2579       Values of option 'pdfencoding':\MessageBreak
2580       'pdfdoc', 'unicode', 'auto'.\MessageBreak
2581       Ignoring unknown value '\HyPsd@temp'%
2582     }%
2583   \fi
2584 \fi
2585 }
2586 \def\HyPsd@pdfencoding@auto{auto}
2587 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2588 \def\HyPsd@pdfencoding@unicode{unicode}
2589 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2590 \def\HyPsd@LoadStringEnc{%
2591   \RequirePackage{stringenc}[2009/12/15]%
2592   \let\HyPsd@LoadStringEnc\relax
2593 }
2594 \Hy@AtBeginDocument{%
2595   \@ifpackageloaded{stringenc}{%
2596     \let\HyPsd@LoadStringEnc\relax
2597   }{%
2598     \def\HyPsd@LoadStringEnc{%
2599       \Hy@WarningNoLine{%
2600         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2601         in the preamble or load the package there%
2602       }%
2603     }%
2604   }%
2605 }
2606 \newif\ifHy@setpdfversion

```

```

2607 \define@key{Hyp}{pdfversion}{%
2608   \@ifundefined{Hy@pdfversion@#1}{%
2609     \PackageWarning{hyperref}{%
2610       Unsupported PDF version '#1'.\MessageBreak
2611       Valid values: 1.2 until 1.9%
2612   }%
2613 }{%
2614   \Hy@setpdfversiontrue
2615   \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2616 }%
2617 }
2618 \@namedef{Hy@pdfversion@1.2}{2}%
2619 \@namedef{Hy@pdfversion@1.3}{3}%
2620 \@namedef{Hy@pdfversion@1.4}{4}%
2621 \@namedef{Hy@pdfversion@1.5}{5}%
2622 \@namedef{Hy@pdfversion@1.6}{6}%
2623 \@namedef{Hy@pdfversion@1.7}{7}%
2624 \@namedef{Hy@pdfversion@1.8}{8}%
2625 \@namedef{Hy@pdfversion@1.9}{9}%
2626 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2627 \define@key{Hyp}{hyperref}[true]{%
2628 \define@key{Hyp}{tex4ht}[true]{%
2629   \Hy@texhttrue
2630   \setkeys{Hyp}{colorlinks=true}%
2631   \def\BeforeTeXIVht{\usepackage{color}}}%
2632 \def\Hy@driver{htex4ht}%
2633 \def\MaybeStopEarly{%
2634   \typeout{Hyperref stopped early}%
2635   \Hy@AtBeginDocument{%
2636     \PDF@FinishDoc
2637     \gdef\PDF@FinishDoc{}%
2638   }%
2639   \endinput
2640 }%
2641 }
2642 \define@key{Hyp}{pdftex}[true]{%
2643 \def\Hy@driver{hpdftex}%
2644 }
2645 \define@key{Hyp}{nativepdf}[true]{%
2646 \def\Hy@driver{hdvips}%
2647 }
2648 \define@key{Hyp}{dvipdfm}[true]{%
2649 \def\Hy@driver{hdvipdfm}%
2650 }
2651 \define@key{Hyp}{dvipdfmx}[true]{%
2652 \def\Hy@driver{hdvipdfm}%
2653 }
2654 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2655   \expandafter\ifx\csname if#1\expandafter\endcsname
2656     \csname iftrue\endcsname
2657     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2658   \else
2659     \chardef\SpecialDvipdfmxOutlineOpen\z@
2660   \fi

```



```

2661 }
2662 \define@key{Hyp}{xetex}[true]{%
2663   \def\Hy@driver{hxetex}%
2664 }
2665 \define@key{Hyp}{pdfmark}[true]{%
2666   \def\Hy@driver{hdvips}%
2667 }
2668 \define@key{Hyp}{dvips}[true]{%
2669   \def\Hy@driver{hdvips}%
2670 }
2671 \define@key{Hyp}{hypertex}[true]{%
2672   \def\Hy@driver{hypertex}%
2673 }
2674 \let\Hy@MaybeStopNow\relax
2675 \define@key{Hyp}{vtex}[true]{%
2676   \begingroup\expandafter\expandafter\expandafter\endgroup
2677   \expandafter\ifx\csname OpMode\endcsname\relax
2678     \latexerror{Non-VTeX processor}{}%
2679     \global\let\Hy@MaybeStopNow\endinput
2680   \endinput
2681   \else
2682     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2683       \def\Hy@driver{hvtex}%
2684       \else
2685         \ifnum\OpMode=10\relax
2686           \def\Hy@driver{hvtexhtm}%
2687           \def\MaybeStopEarly{%
2688             \typeout{Hyperref stopped early}%
2689             \Hy@AtBeginDocument{%
2690               \PDF@FinishDoc
2691               \gdef\PDF@FinishDoc{}}%
2692             }%
2693           \endinput
2694         }%
2695       \else
2696         \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2697         \global\let\Hy@MaybeStopNow\endinput
2698       \endinput
2699     \fi
2700   \fi
2701 \fi
2702 }
2703 \define@key{Hyp}{vtexpdfmark}[true]{%
2704   \begingroup\expandafter\expandafter\expandafter\endgroup
2705   \expandafter\ifx\csname OpMode\endcsname\relax
2706     \latexerror{Non-VTeX processor}{}%
2707     \let\Hy@MaybeStopNow\endinput
2708   \endinput
2709   \else
2710     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2711       \def\Hy@driver{hvtexmrk}%
2712       \else
2713         \latexerror{Mode (\the\OpMode) has no hyperref driver}{}%
2714         \let\Hy@MaybeStopNow\endinput
2715       \endinput
2716     \fi
2717   \fi

```

```

2718 }
2719 \define@key{Hyp}{dviwindo}[true]{%
2720   \def\Hy@driver{hdvwind}%
2721   \setkeys{Hyp}{colorlinks}%
2722   \ifpdf
2723   \else
2724     \ifxetex
2725     \else
2726       \PassOptionsToPackage{dviwindo}{color}%
2727     \fi
2728   \fi
2729 }
2730 \define@key{Hyp}{dvipsone}[true]{%
2731   \def\Hy@driver{hdvipson}%
2732 }
2733 \define@key{Hyp}{textures}[true]{%
2734   \def\Hy@driver{htexture}%
2735 }
2736 \define@key{Hyp}{latex2html}[true]{%
2737   \Hy@AtBeginDocument{\@@latextohtmlX}%
2738 }

```

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

```

2739 \define@key{Hyp}{ps2pdf}[true]{%
2740   \def\Hy@driver{hdvips}%
2741   \providecommand*\@pdfborder{0 0 1}%
2742 }

```

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.

```

2743 \define@key{Hyp}{hyperfigures}[true]{%
2744   \Hy@boolkey[hyperfigures]{figures}{#1}%
2745 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2746 \define@key{Hyp}{hyperfootnotes}[true]{%
2747   \Hy@boolkey[hyperfootnotes]{#1}%
2748 }

```

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

```

2749 \def\back@none{none}
2750 \def\back@section{section}
2751 \def\back@page{page}
2752 \def\back@slide{slide}
2753 \define@key{Hyp}{backref}[section]{%
2754   \lowercase{\def\Hy@tempa{#1}}%
2755   \ifx\Hy@tempa\@empty
2756     \let\Hy@tempa\back@section
2757   \fi
2758   \ifx\Hy@tempa\Hy@false
2759     \let\Hy@tempa\back@none
2760   \fi
2761   \ifx\Hy@tempa\back@slide
2762     \let\Hy@tempa\back@section
2763   \fi
2764   \ifx\Hy@tempa\back@page

```

```

2765 \PassOptionsToPackage{hyperpageref}{backref}%
2766 \Hy@backreftrue
2767 \else
2768 \ifx\Hy@tempa\back@section
2769 \PassOptionsToPackage{hyperref}{backref}%
2770 \Hy@backreftrue
2771 \else
2772 \ifx\Hy@tempa\back@none
2773 \Hy@backreffalse
2774 \else
2775 \Hy@WarnOptionValue{#1}{backref}{%
2776 'section', 'slide', 'page', 'none',\MessageBreak
2777 or 'false'}%
2778 \fi
2779 \fi
2780 \fi
2781 }
2782 \define@key{Hyp}{pagebackref}[true]{%
2783 \edef\Hy@tempa{#1}%
2784 \lowercase\expandafter{%
2785 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2786 }%
2787 \ifx\Hy@tempa\@empty
2788 \let\Hy@tempa\Hy@true
2789 \fi
2790 \ifx\Hy@tempa\Hy@true
2791 \PassOptionsToPackage{hyperpageref}{backref}%
2792 \Hy@backreftrue
2793 \else
2794 \ifx\Hy@tempa\Hy@false
2795 \Hy@backreffalse
2796 \else
2797 \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2798 \fi
2799 \fi
2800 }

```

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

```

2801 \define@key{Hyp}{hyperindex}[true]{%
2802 \Hy@boolkey{hyperindex}{#1}%
2803 }

```

Configuration of encap char.

```

2804 \define@key{Hyp}{encap}[||]{%
2805 \def\HyInd@EncapChar{#1}%
2806 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2807 \def\HyLang@afrikaans{%
2808 \def\equationautorefname{Vergelyking}%
2809 \def\footnoteautorefname{Voetnota}%
2810 \def\itemautorefname{Item}%
2811 \def\figureautorefname{Figuur}%
2812 \def\tableautorefname{Tabel}%

```

```

2813 \def\partautorefname{Deel}%
2814 \def\appendixautorefname{Bylae}%
2815 \def\chapterautorefname{Hoofstuk}%
2816 \def\sectionautorefname{Afdeling}%
2817 \def\subsectionautorefname{Subafdeling}%
2818 \def\subsubsectionautorefname{Subsubafdeling}%
2819 \def\paragraphautorefname{Paragraaf}%
2820 \def\subparagraphautorefname{Subparagraaf}%
2821 \def\FancyVerbLineautorefname{Lyn}%
2822 \def\theoremautorefname{Teorema}%
2823 \def\pageautorefname{Bladsy}%
2824 }
2825 \def\HyLang@english{%
2826 \def\equationautorefname{Equation}%
2827 \def\footnoteautorefname{footnote}%
2828 \def\itemautorefname{item}%
2829 \def\figureautorefname{Figure}%
2830 \def\tableautorefname{Table}%
2831 \def\partautorefname{Part}%
2832 \def\appendixautorefname{Appendix}%
2833 \def\chapterautorefname{chapter}%
2834 \def\sectionautorefname{section}%
2835 \def\subsectionautorefname{subsection}%
2836 \def\subsubsectionautorefname{subsubsection}%
2837 \def\paragraphautorefname{paragraph}%
2838 \def\subparagraphautorefname{subparagraph}%
2839 \def\FancyVerbLineautorefname{line}%
2840 \def\theoremautorefname{Theorem}%
2841 \def\pageautorefname{page}%
2842 }
2843 \def\HyLang@french{%
2844 \def\equationautorefname{'Equation}%
2845 \def\footnoteautorefname{note}%
2846 \def\itemautorefname{item}%
2847 \def\figureautorefname{Figure}%
2848 \def\tableautorefname{Tableau}%
2849 \def\partautorefname{Partie}%
2850 \def\appendixautorefname{Appendice}%
2851 \def\chapterautorefname{chapitre}%
2852 \def\sectionautorefname{section}%
2853 \def\subsectionautorefname{sous-section}%
2854 \def\subsubsectionautorefname{sous-sous-section}%
2855 \def\paragraphautorefname{paragraphe}%
2856 \def\subparagraphautorefname{sous-paragraphe}%
2857 \def\FancyVerbLineautorefname{ligne}%
2858 \def\theoremautorefname{Th\'eor\`eme}%
2859 \def\pageautorefname{page}%
2860 }
2861 \def\HyLang@german{%
2862 \def\equationautorefname{Gleichung}%
2863 \def\footnoteautorefname{Fu\ss note}%
2864 \def\itemautorefname{Punkt}%
2865 \def\figureautorefname{Abbildung}%
2866 \def\tableautorefname{Tabelle}%
2867 \def\partautorefname{Teil}%
2868 \def\appendixautorefname{Anhang}%
2869 \def\chapterautorefname{Kapitel}%

```

```

2870 \def\sectionautorefname{Abschnitt}%
2871 \def\subsectionautorefname{Unterabschnitt}%
2872 \def\subsubsectionautorefname{Unterunterabschnitt}%
2873 \def\paragraphautorefname{Absatz}%
2874 \def\subparagraphautorefname{Unterabsatz}%
2875 \def\FancyVerbLineautorefname{Zeile}%
2876 \def\theoremautorefname{Theorem}%
2877 \def\pageautorefname{Seite}%
2878 }
2879 \def\HyLang@italian{%
2880 \def\equationautorefname{Equazione}%
2881 \def\footnoteautorefname{nota}%
2882 \def\itemautorefname{punto}%
2883 \def\figureautorefname{Figura}%
2884 \def\tableautorefname{Tabella}%
2885 \def\partautorefname{Parte}%
2886 \def\appendixautorefname{Appendice}%
2887 \def\chapterautorefname{Capitolo}%
2888 \def\sectionautorefname{sezione}%
2889 \def\subsectionautorefname{sottosezione}%
2890 \def\subsubsectionautorefname{sottosottosezione}%
2891 \def\paragraphautorefname{paragrafo}%
2892 \def\subparagraphautorefname{sottoparagrafo}%
2893 \def\FancyVerbLineautorefname{linea}%
2894 \def\theoremautorefname{Teorema}%
2895 \def\pageautorefname{Pag.\@}%
2896 }
2897 \def\HyLang@magyar{%
2898 \def\equationautorefname{Egyenlet}%
2899 \def\footnoteautorefname{!\'abjegyzet}%
2900 \def\itemautorefname{Elem}%
2901 \def\figureautorefname{\'Abra}%
2902 \def\tableautorefname{T\'abl\'azat}%
2903 \def\partautorefname{R\'esz}%
2904 \def\appendixautorefname{F\'uggel\'ek}%
2905 \def\chapterautorefname{fejezet}%
2906 \def\sectionautorefname{szakasz}%
2907 \def\subsectionautorefname{alszakasz}%
2908 \def\subsubsectionautorefname{alalszakasz}%
2909 \def\paragraphautorefname{bekezd\'es}%
2910 \def\subparagraphautorefname{albekezd\'es}%
2911 \def\FancyVerbLineautorefname{sor}%
2912 \def\theoremautorefname{T\'étel}%
2913 \def\pageautorefname{oldal}%
2914 }
2915 \def\HyLang@portuges{%
2916 \def\equationautorefname{Equa\c c\~ao}%
2917 \def\footnoteautorefname{Nota de rodap\'e}%
2918 \def\itemautorefname{Item}%
2919 \def\figureautorefname{Figura}%
2920 \def\tableautorefname{Tabela}%
2921 \def\partautorefname{Parte}%
2922 \def\appendixautorefname{Ap\^endice}%
2923 \def\chapterautorefname{Cap\'itulo}%
2924 \def\sectionautorefname{Se\c c\~ao}%
2925 \def\subsectionautorefname{Subse\c c\~ao}%
2926 \def\subsubsectionautorefname{Subsubse\c c\~ao}%

```


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

```
2951 \def\partautorefname{\cyr\cyrch.}%
2952 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2953 \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.

```
2954 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2955 % \def\appendixautorefname{%
2956 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrzh\cyre\cyrn\cyri\cyre
2957 % }%
```

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.

```
2958 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2959 \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.

```
2960 \def\paragraphautorefname{\cyr\cyrp.}%
2961 \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.

```
2962 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt.}%
2963 % \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.

```
2964 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2965 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2966 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2967 % \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 . . .

```
2968 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2969 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
2970 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2971 \def\pageautorefname{\cyr\cyrs.}%
2972 }
```

```

2973 \def\HyLang@spanish{%
2974   \def\equationautorefname{Ecuaci\`on}%
2975   \def\footnoteautorefname{Nota a pie de p\`agina}%
2976   \def\itemautorefname{Elemento}%
2977   \def\figureautorefname{Figura}%
2978   \def\tableautorefname{Tabla}%
2979   \def\partautorefname{Parte}%
2980   \def\appendixautorefname{Ap\`endice}%
2981   \def\chapterautorefname{Cap\`itulo}%
2982   \def\sectionautorefname{Secci\`on}%
2983   \def\subsectionautorefname{Subsecci\`on}%
2984   \def\subsubsectionautorefname{Subsubsecci\`on}%
2985   \def\paragraphautorefname{P\`arrafo}%
2986   \def\subparagraphautorefname{Subp\`arrafo}%
2987   \def\FancyVerbLineautorefname{L\`inea}%
2988   \def\theoremautorefname{Teorema}%
2989   \def\pageautorefname{P\`agina}%
2990 }
2991 \def\HyLang@vietnamese{%
2992   \def\equationautorefname{Ph\`uhorn{}}\ohorn{}ng tr\`inh}%
2993   \def\footnoteautorefname{Ch\`u th\`ich}%
2994   \def\itemautorefname{m\`d{u}c}%
2995   \def\figureautorefname{H\`inh}%
2996   \def\tableautorefname{B\`h{a}ng}%
2997   \def\partautorefname{Ph\`'\acircumflex{}n}%
2998   \def\appendixautorefname{Ph\`d{u} l\`d{u}c}%
2999   \def\chapterautorefname{ch\`uhorn{}}\ohorn{}ng}%
3000   \def\sectionautorefname{m\`d{u}c}%
3001   \def\subsectionautorefname{m\`d{u}c}%
3002   \def\subsubsectionautorefname{m\`d{u}c}%
3003   \def\paragraphautorefname{\dj{}}o\`d{a}n}%
3004   \def\subparagraphautorefname{\dj{}}o\`d{a}n}%
3005   \def\FancyVerbLineautorefname{d\`ong}%
3006   \def\theoremautorefname{DJ{}}d{i}nh l\`y}%
3007   \def\pageautorefname{Trang}%
3008 }

```

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

```

3009 \def\HyLang@addto#1#2{%
3010   #2%
3011   \@temptokena{#2}%
3012   \ifx#1\relax
3013     \let#1\@empty
3014   \fi
3015   \ifx#1\@undefined
3016     \edef#1{\the\@temptokena}%
3017   \else
3018     \toks@\expandafter{#1}%
3019     \edef#1{\the\toks@\the\@temptokena}%
3020   \fi
3021   \@temptokena{}\toks@\@temptokena
3022 }
3023 \def\HyLang@DeclareLang#1#2#3{%
3024   \begingroup
3025   \edef\x##1#2{%
3026     \noexpand\ifx##2\relax

```



```

3027 \errmessage{No definitions for language #2' found!}%
3028 \noexpand\fi
3029 \endgroup
3030 \noexpand\define@key{Hyp}{#1}[]{}%
3031 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3032 #3%
3033 }%
3034 }%
3035 \expandafter\x\csname extras#1\expandafter\endcsname
3036 \csname HyLang@#2\endcsname
3037 }
3038 \HyLang@DeclareLang{english}{english}{}
3039 \HyLang@DeclareLang{UKenglish}{english}{}
3040 \HyLang@DeclareLang{british}{english}{}
3041 \HyLang@DeclareLang{USenglish}{english}{}
3042 \HyLang@DeclareLang{american}{english}{}
3043 \HyLang@DeclareLang{german}{german}{}
3044 \HyLang@DeclareLang{austrian}{german}{}
3045 \HyLang@DeclareLang{ngerman}{german}{}
3046 \HyLang@DeclareLang{naustrian}{german}{}
3047 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3048 \HyLang@DeclareLang{brazil}{portuges}{}
3049 \HyLang@DeclareLang{brazilian}{portuges}{}
3050 \HyLang@DeclareLang{portuguese}{portuges}{}
3051 \HyLang@DeclareLang{spanish}{spanish}{}
3052 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3053 \HyLang@DeclareLang{french}{french}{}
3054 \HyLang@DeclareLang{frenchb}{french}{}
3055 \HyLang@DeclareLang{français}{french}{}
3056 \HyLang@DeclareLang{acadian}{french}{}
3057 \HyLang@DeclareLang{canadien}{french}{}
3058 \HyLang@DeclareLang{italian}{italian}{}
3059 \HyLang@DeclareLang{magyar}{magyar}{}
3060 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3061 \define@key{Hyp}{vietnamese}[]{}%
3062 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3063 \Hy@AtEndOfPackage{%
3064 \ifundefined{T@PU}{}{}%
3065 \input{puvnenc.def}%
3066 }%
3067 }%
3068 }
3069 \define@key{Hyp}{vietnam}[]{}%
3070 \HyLang@addto\extrasvietnam\HyLang@vietnamese
3071 \Hy@AtEndOfPackage{%
3072 \ifundefined{T@PU}{}{}%
3073 \input{puvnenc.def}%
3074 }%
3075 }%
3076 }

```

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

```

3077 \define@key{Hyp}{arabic}[]{}%
3078 \Hy@AtEndOfPackage{%
3079 \ifundefined{T@PU}{}{}%
3080 \input{puarenc.def}%

```

```

3081 }%
3082 }%
3083 }

```

13 Options to change appearance of links

Colouring links at the \LaTeX level is useful for debugging, perhaps.

```

3084 \define@key{Hyp}{colorlinks}[true]{%
3085   \Hy@boolkey{colorlinks}{#1}%
3086 }
3087 \define@key{Hyp}{ocgcolorlinks}[true]{%
3088   \Hy@boolkey{ocgcolorlinks}{#1}%
3089 }
3090 \Hy@AtBeginDocument{%
3091   \begingroup
3092     \ifundefined{OBJ@OCG@view}{%
3093       \ifHy@ocgcolorlinks
3094         \Hy@Warning{%
3095           Driver does not support ‘ocgcolorlinks’,\MessageBreak
3096           using ‘colorlinks’ instead%
3097         }%
3098       \fi
3099     }{}%
3100   \endgroup
3101 }
3102 \define@key{Hyp}{frenchlinks}[true]{%
3103   \Hy@boolkey{frenchlinks}{#1}%
3104 }

```

14 Bookmarking

```

3105 \begingroup\expandafter\expandafter\expandafter\endgroup
3106 \expandafter\ifx\csname chapter\endcsname\relax
3107   \def\toclevel@part{0}%
3108 \else
3109   \def\toclevel@part{-1}%
3110 \fi
3111 \def\toclevel@chapter{0}
3112 \def\toclevel@section{1}
3113 \def\toclevel@subsection{2}
3114 \def\toclevel@subsubsection{3}
3115 \def\toclevel@paragraph{4}
3116 \def\toclevel@subparagraph{5}
3117 \def\toclevel@figure{0}
3118 \def\toclevel@table{0}
3119 \ifpackageloaded{listings}{%
3120   \providecommand*\theHlstlisting{\thelstlisting}%
3121   \providecommand*\toclevel@lstlisting{0}%
3122 }{}
3123 \ifpackageloaded{listing}{%
3124   \providecommand*\theHlisting{\thelisting}%
3125   \providecommand*\toclevel@listing{0}%
3126 }{}
3127 \define@key{Hyp}{bookmarks}[true]{%
3128   \Hy@boolkey{bookmarks}{#1}%

```

```

3129 }
3130 \define@key{Hyp}{bookmarksopen}[true]{%
3131   \Hy@boolkey{bookmarksopen}{#1}%
3132 }

```

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.

```

3133 \let\Hy@bookmarksdepth\c@tocdepth
3134 \define@key{Hyp}{bookmarksdepth}[]{%
3135   \begingroup
3136     \edef\x{#1}%
3137     \ifx\x\empty
3138       \global\let\Hy@bookmarksdepth\c@tocdepth
3139     \else
3140       \ifundefined{toclevel@\x}{%
3141         \@onelevel@sanitize\x
3142         \edef\y{\expandafter\@car\x\@nil}%
3143         \ifcase 0\expandafter\ifx\y-1\fi
3144           \expandafter\ifnum\expandafter\y>47 %
3145             \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
3146           \Hy@Warning{Unknown document division name (\x)}%
3147         \else
3148           \setbox\z@=\hbox{%
3149             \count@=\x
3150             \xdef\Hy@bookmarksdepth{\the\count@}%
3151           }%
3152         \fi
3153       }{%
3154         \setbox\z@=\hbox{%
3155           \count@=\csname toclevel@\x\endcsname
3156           \xdef\Hy@bookmarksdepth{\the\count@}%
3157         }%
3158       }%
3159     \fi
3160   \endgroup
3161 }

```

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

```

3162 \define@key{Hyp}{bookmarksopenlevel}{%
3163   \def\@bookmarksopenlevel{#1}%
3164 }
3165 \def\@bookmarksopenlevel{\maxdimen}
3166 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3167 \define@key{Hyp}{bookmarkstype}{%
3168   \def\Hy@bookmarkstype{#1}%
3169 }
3170 \def\Hy@bookmarkstype{toc}

```

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

```

3171 \define@key{Hyp}{bookmarksnumbered}[true]{%
3172   \Hy@boolkey{bookmarksnumbered}{#1}%
3173 }

Option CJKbookmarks enables the patch for CJK bookmarks.

3174 \define@key{Hyp}{CJKbookmarks}[true]{%
3175   \Hy@boolkey{CJKbookmarks}{#1}%
3176 }

3177 \def\Hy@temp#1{%
3178   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3179 }
3180 \def\Hy@@temp#1#2#3{%
3181   \define@key{Hyp}{#2color}{%
3182     \HyColor@HyperrefColor{##1}#1%
3183   }%
3184   \def#1{#3}%
3185 }
3186 \Hy@temp{link}{red}
3187 \Hy@temp{anchor}{black}
3188 \Hy@temp{cite}{green}
3189 \Hy@temp{file}{cyan}
3190 \Hy@temp{url}{magenta}
3191 \Hy@temp{menu}{red}
3192 \Hy@temp{run}{\@filecolor}
3193 \define@key{Hyp}{pagecolor}{%
3194   \Hy@WarningPageColor
3195 }
3196 \def\Hy@WarningPageColor{%
3197   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3198   \global\let\Hy@WarningPageColor\relax
3199 }

3200 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3201 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3202 \let\@baseurl\@empty
3203 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3204 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3205 \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.

```

3206 \let\@pdfpagetransition\relax
3207 \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.

```

3208 \let\@pdfpageduration\relax
3209 \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.

```

3210 \newif\ifHy@useHidKey
3211 \Hy@useHidKeyfalse
3212 \define@key{Hyp}{pdfpagehidden}[true]{%
3213   \Hy@boolkey{pdfpagehidden}{#1}%
3214   \ifHy@pdfpagehidden
3215     \global\Hy@useHidKeytrue
3216   \fi
3217 }

```

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).

```

3218 \def\Hy@ColorList{cite,file,link,menu,run,url}
3219 \@for\Hy@temp:=\Hy@ColorList\do{%
3220   \edef\Hy@temp{%
3221     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3222       \noexpand\HyColor@HyperrefBorderColor
3223       {##1}%
3224       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3225       {hyperref}%
3226       {\Hy@temp bordercolor}%
3227     }%
3228   }%
3229   \Hy@temp
3230 }
3231 \define@key{Hyp}{pagebordercolor}{%
3232   \Hy@WarningPageBorderColor
3233 }
3234 \def\Hy@WarningPageBorderColor{%
3235   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3236   \global\let\Hy@WarningPageBorderColor\relax
3237 }
3238 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3239 \Hy@DefNameKey{pdfhighlight}{%
3240   \do{/I}{Invert}%
3241   \do{/N}{None}%
3242   \do{/O}{Outline}%
3243   \do{/P}{Push}%
3244 }
3245 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3246 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3247 \def\Hy@setpdfborder{%
3248   \ifx\@pdfborder\@empty
3249     \else
3250       /Border[\@pdfborder]%
3251     \fi
3252   \ifx\@pdfborderstyle\@empty
3253     \else
3254       /BS<<\@pdfborderstyle>>%
3255     \fi
3256 }
3257 \Hy@DefNameKey{pdfpagemode}{%
3258   \do{UseNone}{%

```

```

3259 \do{UseOutlines}{}%
3260 \do{UseThumbs}{}%
3261 \do{FullScreen}{}%
3262 \do{UseOC}{PDF 1.5}%
3263 \do{UseAttachments}{PDF 1.6}%
3264 }
3265 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3266 \do{UseNone}{}%
3267 \do{UseOutlines}{}%
3268 \do{UseThumbs}{}%
3269 \do{FullScreen}{}%
3270 \do{UseOC}{PDF 1.5}%
3271 \do{UseAttachments}{PDF 1.6}%
3272 }
3273 \Hy@DefNameKey{pdfdirection}{%
3274 \do{L2R}{Left to right}%
3275 \do{R2L}{Right to left}%
3276 }
3277 \Hy@DefNameKey{pdfviewarea}{%
3278 \do{MediaBox}{}%
3279 \do{CropBox}{}%
3280 \do{BleedBox}{}%
3281 \do{TrimBox}{}%
3282 \do{ArtBox}{}%
3283 }
3284 \Hy@DefNameKey{pdfviewclip}{%
3285 \do{MediaBox}{}%
3286 \do{CropBox}{}%
3287 \do{BleedBox}{}%
3288 \do{TrimBox}{}%
3289 \do{ArtBox}{}%
3290 }
3291 \Hy@DefNameKey{pdfprintarea}{%
3292 \do{MediaBox}{}%
3293 \do{CropBox}{}%
3294 \do{BleedBox}{}%
3295 \do{TrimBox}{}%
3296 \do{ArtBox}{}%
3297 }
3298 \Hy@DefNameKey{pdfprintclip}{%
3299 \do{MediaBox}{}%
3300 \do{CropBox}{}%
3301 \do{BleedBox}{}%
3302 \do{TrimBox}{}%
3303 \do{ArtBox}{}%
3304 }
3305 \Hy@DefNameKey{pdfprintscaling}{%
3306 \do{AppDefault}{}%
3307 \do{None}{}%
3308 }
3309 \Hy@DefNameKey{pdfduplex}{%
3310 \do{Simplex}{}%
3311 \do{DuplexFlipShortEdge}{}%
3312 \do{DuplexFlipLongEdge}{}%
3313 }
3314 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3315 \do{true}{}%

```

```

3316 \do{false}{}%
3317 }
3318 \define@key{Hyp}{pdfprintpagerange}{%
3319 \def\@pdfprintpagerange{#1}%
3320 }
3321 \Hy@DefNameKey{pdfnumcopies}{%
3322 \do{2}{two copies}%
3323 \do{3}{three copies}%
3324 \do{4}{four copies}%
3325 \do{5}{five copies}%
3326 }

3327 \define@key{Hyp}{pdfusetitle}[true]{%
3328 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3329 }
3330 \def\HyXeTeX@CheckUnicode{%
3331 \ifxetex
3332 \ifHy@unicode
3333 \else
3334 \Hy@WarningNoLine{%
3335 XeTeX driver only supports unicode.\MessageBreak
3336 Enabling option 'unicode'%
3337 }%
3338 \setkeys{Hyp}{unicode}%
3339 \fi
3340 \else
3341 \let\HyXeTeX@CheckUnicode\relax
3342 \fi
3343 }
3344 \def\HyPsd@PrerenderUnicode#1{%
3345 \begingroup
3346 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3347 \else
3348 \sbox0{%
3349 \let\GenericInfo\@gobbletwo
3350 \let\GenericWarning\@gobbletwo
3351 \let\GenericError\@gobblefour
3352 \PrerenderUnicode{#1}%
3353 }%
3354 \fi
3355 \endgroup
3356 }
3357 \define@key{Hyp}{pdftitle}{%
3358 \HyXeTeX@CheckUnicode
3359 \HyPsd@XeTeXBigCharstrue
3360 \HyPsd@PrerenderUnicode{#1}%
3361 \pdfstringdef\@pdftitle{#1}%
3362 }
3363 \define@key{Hyp}{pdfauthor}{%
3364 \HyXeTeX@CheckUnicode
3365 \HyPsd@XeTeXBigCharstrue
3366 \HyPsd@PrerenderUnicode{#1}%
3367 \pdfstringdef\@pdfauthor{#1}%
3368 }
3369 \define@key{Hyp}{pdfproducer}{%
3370 \HyXeTeX@CheckUnicode
3371 \HyPsd@XeTeXBigCharstrue
3372 \HyPsd@PrerenderUnicode{#1}%

```

```

3373 \pdfstringdef\@pdfproducer{#1}%
3374 }
3375 \define@key{Hyp}{pdfcreator}{%
3376 \HyXeTeX@CheckUnicode
3377 \HyPsd@XeTeXBigCharstrue
3378 \HyPsd@PrerenderUnicode{#1}%
3379 \pdfstringdef\@pdfcreator{#1}%
3380 }
3381 \define@key{Hyp}{pdfcreationdate}{%
3382 \begingroup
3383 \Hy@unicodedefalse
3384 \pdfstringdef\@pdfcreationdate{#1}%
3385 \endgroup
3386 }
3387 \define@key{Hyp}{pdfmoddate}{%
3388 \begingroup
3389 \Hy@unicodedefalse
3390 \pdfstringdef\@pdfmoddate{#1}%
3391 \endgroup
3392 }
3393 \define@key{Hyp}{pdfsubject}{%
3394 \HyXeTeX@CheckUnicode
3395 \HyPsd@XeTeXBigCharstrue
3396 \HyPsd@PrerenderUnicode{#1}%
3397 \pdfstringdef\@pdfsubject{#1}%
3398 }
3399 \define@key{Hyp}{pdfkeywords}{%
3400 \HyXeTeX@CheckUnicode
3401 \HyPsd@XeTeXBigCharstrue
3402 \HyPsd@PrerenderUnicode{#1}%
3403 \pdfstringdef\@pdfkeywords{#1}%
3404 }
3405 \define@key{Hyp}{pdftrapped}{%
3406 \lowercase{\edef\Hy@temp{#1}}%
3407 \ifx\Hy@temp\HyInfo@trapped@true
3408 \def\@pdftrapped{True}%
3409 \else
3410 \ifx\Hy@temp\HyInfo@trapped@false
3411 \def\@pdftrapped{False}%
3412 \else
3413 \ifx\Hy@temp\HyInfo@trapped@unknown
3414 \def\@pdftrapped{Unknown}%
3415 \else
3416 \ifx\Hy@temp\@empty
3417 \else
3418 \Hy@Warning{%
3419     Unsupported value '#1'\MessageBreak
3420     for option 'pdftrapped'%
3421     }%
3422 \fi
3423 \def\@pdftrapped{}%
3424 \fi
3425 \fi
3426 \fi
3427 }
3428 \def\HyInfo@trapped@true{true}
3429 \def\HyInfo@trapped@false{false}

```



```

3430 \def\HyInfo@trapped@unknown{unknown}
3431 \def\HyInfo@TrappedUnsupported{%
3432   \ifx\@pdftrapped\@empty
3433   \else
3434     \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3435     \gdef\HyInfo@TrappedUnsupported{}%
3436   \fi
3437 }
3438 \define@key{Hyp}{pdfinfo}{%
3439   \kvsetkeys{pdfinfo}{#1}%
3440 }
3441 \def\Hy@temp#1{%
3442   \lowercase{\Hy@temp@A{#1}}{#1}%
3443 }
3444 \def\Hy@temp@A#1#2{%
3445   \define@key{pdfinfo}{#2}{%
3446     \hypersetup{pdf#1={##1}}%
3447   }%
3448 }
3449 \Hy@temp{Title}
3450 \Hy@temp{Author}
3451 \Hy@temp{Keywords}
3452 \Hy@temp{Subject}
3453 \Hy@temp{Creator}
3454 \Hy@temp{Producer}
3455 \Hy@temp{CreationDate}
3456 \Hy@temp{ModDate}
3457 \Hy@temp{Trapped}
3458 \newif\ifHyInfo@AddonUnsupported
3459 \kv@set@family@handler{pdfinfo}{%
3460   \HyInfo@AddonHandler{#1}{#2}%
3461 }
3462 \let\HyInfo@do\relax
3463 \def\HyInfo@AddonHandler#1#2{%
3464   \ifx\kv@value\relax
3465     \Hy@Warning{%
3466       Option 'pdfinfo': ignoring key '\kv@key' without value%
3467     }%
3468   \else
3469     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3470     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3471     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3472       \ifHyInfo@AddonUnsupported
3473         \Hy@Warning{%
3474           This driver does not support additional\MessageBreak
3475           information entries, therefore\MessageBreak
3476           '\kv@key' is ignored%
3477         }%
3478       \else
3479         \define@key{pdfinfo}{\HyInfo@Key}{%
3480           \HyXeTeX@CheckUnicode
3481           \HyPsd@XeTeXBigCharstrue
3482           \HyPsd@PrerenderUnicode{##1}%
3483           \pdfstringdef\HyInfo@Value{##1}%
3484           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3485             \HyInfo@Value
3486         }%

```

```

3487 \edef\HyInfo@AddonList{%
3488 \HyInfo@AddonList
3489 \HyInfo@do{\HyInfo@Key}%
3490 }%
3491 \kv@parse@normalized{%
3492 \HyInfo@Key={#2}%
3493 }{%
3494 \kv@processor@default{pdfinfo}%
3495 }%
3496 \fi
3497 \else
3498 \kv@parse@normalized{%
3499 \HyInfo@Key={#2}%
3500 }{%
3501 \kv@processor@default{pdfinfo}%
3502 }%
3503 \fi
3504 \fi
3505 }
3506 \def\HyInfo@GenerateAddons{%
3507 \ifHyInfo@AddonUnsupported
3508 \def\HyInfo@Addons{}%
3509 \else
3510 \begingroup
3511 \toks@{}%
3512 \def\HyInfo@do##1{%
3513 \EdefEscapeName\HyInfo@Key{##1}%
3514 \edef\x{%
3515 \toks@{%
3516 \the\toks@
3517 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3518 }%
3519 }%
3520 \x
3521 }%
3522 \HyInfo@AddonList
3523 \edef\x{\endgroup
3524 \def\noexpand\HyInfo@Addons{\the\toks@}%
3525 }%
3526 \x
3527 \fi
3528 }
3529 \def\HyInfo@AddonList{}

3530 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3531 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3532 \let\setpdfinkmargin\@gobble
3533 \def\calculate@pdfview#1 #2\{%
3534 \def\@pdfview{#1}%
3535 \ifx\#2\%
3536 \def\@pdfviewparams{-32768}%
3537 \else
3538 \def\@pdfviewparams{#2}%
3539 \fi
3540 }
3541 \begingroup\expandafter\expandafter\expandafter\endgroup
3542 \expandafter\ifx\csname numexpr\endcsname\relax
3543 \def\Hy@number#1{%

```

```

3544 \expandafter\@firstofone\expandafter{\number#1}%
3545 }%
3546 \else
3547 \def\Hy@number#1{%
3548 \the\numexpr#1\relax
3549 }%
3550 \fi
3551 \define@key{Hyp}{pdfstartpage}{%
3552 \ifx\#1\%
3553 \def\@pdfstartpage{%
3554 \else
3555 \edef\@pdfstartpage{\Hy@number{#1}}%
3556 \fi
3557 }%
3558 \define@key{Hyp}{pdfstartview}{%
3559 \ifx\#1\%
3560 \def\@pdfstartview{%
3561 \else
3562 \hypercalcbpdef\@pdfstartview{ /#1 }%
3563 \fi
3564 }
3565 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3566 \define@key{Hyp}{pdftoolbar}[true]{%
3567 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3568 }
3569 \define@key{Hyp}{pdfmenubar}[true]{%
3570 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3571 }
3572 \define@key{Hyp}{pdfwindowui}[true]{%
3573 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3574 }
3575 \define@key{Hyp}{pdffitwindow}[true]{%
3576 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3577 }
3578 \define@key{Hyp}{pdfcenterwindow}[true]{%
3579 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3580 }
3581 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3582 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3583 }
3584 \define@key{Hyp}{pdfa}[true]{%
3585 \Hy@boolkey{pdfa}{#1}%
3586 }
3587 \define@key{Hyp}{pdfnewwindow}[true]{%
3588 \def\Hy@temp{#1}%
3589 \ifx\Hy@temp\@empty
3590 \Hy@newwindowsetfalse
3591 \else
3592 \Hy@newwindowsettrue
3593 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3594 \fi
3595 }
3596 \def\Hy@SetNewWindow{%
3597 \ifHy@newwindowset
3598 /NewWindow %
3599 \ifHy@newwindow true\else false\fi
3600 \fi

```

```

3601 }
3602 \Hy@DefNameKey{pdfpagelayout}{%
3603   \do{SinglePage}{}%
3604   \do{OneColumn}{}%
3605   \do{TwoColumnLeft}{}%
3606   \do{TwoColumnRight}{}%
3607   \do{TwoPageLeft}{PDF 1.5}%
3608   \do{TwoPageRight}{PDF 1.5}%
3609 }
3610 \define@key{Hyp}{pdflang}{%
3611   \def\@pdflang{#1}%
3612 }
3613 \define@key{Hyp}{pdfpagelabels}[true]{%
3614   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3615 }
3616 \define@key{Hyp}{pdfescapeform}[true]{%
3617   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3618 }

```

Default values:

```

3619 \def\@linkbordercolor{1 0 0}
3620 \def\@urlbordercolor{0 1 1}
3621 \def\@menubordercolor{1 0 0}
3622 \def\@filebordercolor{0 .5 .5}
3623 \def\@runbordercolor{0 .7 .7}
3624 \def\@citebordercolor{0 1 0}
3625 \def\@pdfhighlight{/I}
3626 \def\@pdftitle{}
3627 \def\@pdfauthor{}
3628 \let\@pdfproducer\relax
3629 \def\@pdfcreator{LaTeX with hyperref package}
3630 \def\@pdfcreationdate{}
3631 \def\@pdfmoddate{}
3632 \def\@pdfsubject{}
3633 \def\@pdfkeywords{}
3634 \def\@pdftrapped{}
3635 \def\@pdfpagescrop{}
3636 \def\@pdfstartview{/Fit }
3637 \def\@pdfstartpage{1}
3638 \def\@pdfprintpagerange{}
3639 \def\@pdflang{}
3640 \let\PDF@SetupDoc\@empty
3641 \let\PDF@FinishDoc\@empty
3642 \let\phantomsection\@empty
3643 \let\special@paper\@empty
3644 \def\HyperDestNameFilter#1{#1}
3645 \Hy@AtBeginDocument{%
3646   \begingroup
3647     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3648     \dimen@=\x\relax
3649     \ifdim\dimen@>\z@
3650       \else
3651         \dimen@=11in\relax
3652         \Hy@WarningNoLine{%
3653           Height of page (\expandafter\string\x) %
3654           is invalid (\the\x),\MessageBreak
3655           using 11in%
3656         }%

```

```

3657 \fi
3658 \dimen@=0.99626401\dimen@
3659 \xdef\Hy@pageheight{\strip@pt\dimen@}%
3660 \endgroup
3661 }
3662 \def\HyInd@EncapChar{\|}
3663 \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.

```

3664 \let\hyper@normalise\ExecuteOptions
3665 \let\ExecuteOptions\hypersetup
3666 \Hy@RestoreCatcodes
3667 \InputIfFileExists{hyperref.cfg}{\{}}{}
3668 \Hy@SetCatcodes
3669 \let\ExecuteOptions\hyper@normalise
3670 \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`.

```

3671 \RequirePackage{kvoptions}[2009/07/21]
3672 \SetupKeyvalOptions{family=Hyp}
3673 \DeclareLocalOptions{%
3674   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3675 }

```

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

```

3676 \@ifpackageloaded{tex4ht}{\%
3677   \ifpackagewith{hyperref}{tex4ht}{\{}}{\%
3678     \PassOptionsToPackage{tex4ht}{hyperref}%
3679   }%
3680 }{}

3681 \let\ReadBookmarks\relax
3682 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3683 \Hy@AtBeginDocument{%
3684   \ifHy@draft
3685     \let\hyper@@anchor\@gobble
3686     \gdef\hyper@link#1#2#3{#3}%
3687     \let\hyper@anchorstart\@gobble
3688     \let\hyper@anchorend\@empty
3689     \let\hyper@linkstart\@gobbletwo
3690     \let\hyper@linkend\@empty
3691     \def\hyper@linkurl#1#2{#1}%
3692     \def\hyper@linkfile#1#2#3{#1}%
3693     \def\hyper@link@{#1}#2#3{}%
3694     \def\Acrobatmenu#1#2{\leavevmode#2}%
3695     \let\PDF@SetupDoc\@empty
3696     \let\PDF@FinishDoc\@empty
3697     \let\@fifthoffive\@secondoftwo
3698     \let\@secondoffive\@secondoftwo
3699     \let\ReadBookmarks\relax
3700     \let\WriteBookmarks\relax

```

```

3701 \Hy@WarningNoLine{ draft mode on}%
3702 \fi
3703 \Hy@DisableOption{draft}%
3704 \Hy@DisableOption{nolinks}%
3705 \Hy@DisableOption{final}%
3706 }

```

15.1 PDF/A

```

3707 \Hy@DisableOption{pdfa}

3708 \ifHy@pdfa
3709 \setkeys{Hyp}{pdfversion=1.4}%
3710 \def\Hy@Acrobatmenu#1#2{%
3711 \leavevmode
3712 \begingroup
3713 \edef\x{#1}%
3714 \@onelevel@sanitize\x
3715 \ifx\x\Hy@NextPage
3716 \let\y=Y%
3717 \else
3718 \ifx\x\Hy@PrevPage
3719 \let\y=Y%
3720 \else
3721 \ifx\x\Hy@FirstPage
3722 \let\y=Y%
3723 \else
3724 \ifx\x\Hy@LastPage
3725 \let\y=Y%
3726 \else
3727 \let\y=N%
3728 \fi
3729 \fi
3730 \fi
3731 \fi
3732 \expandafter\endgroup
3733 \ifx\y Y%
3734 \else
3735 \PackageError{hyperref}{%
3736 PDF/A: Named action ‘#1’ is not permitted%
3737 }\@ehc
3738 {#2}%
3739 \expandafter\@gobble
3740 \fi
3741 }%
3742 \def\Hy@temp#1{%
3743 \expandafter\def\csname Hy@#1\endcsname{#1}%
3744 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3745 }%
3746 \Hy@temp{NextPage}%
3747 \Hy@temp{PrevPage}%
3748 \Hy@temp{FirstPage}%
3749 \Hy@temp{LastPage}%
3750 \else
3751 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3752 \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.

```
3753 \Hy@nextfalse
3754 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3755 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3756 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3757 \ifHy@next
3758   \let\texttilde\~%
3759 \fi

3760 \ifHy@figures
3761   \Hy@Info{Hyper figures ON}%
3762 \else
3763   \Hy@Info{Hyper figures OFF}%
3764 \fi

3765 \ifHy@nesting
3766   \Hy@Info{Link nesting ON}%
3767 \else
3768   \Hy@Info{Link nesting OFF}%
3769 \fi

3770 \ifHy@hyperindex
3771   \Hy@Info{Hyper index ON}%
3772 \else
3773   \Hy@Info{Hyper index OFF}%
3774 \fi

3775 \ifHy@plainpages
3776   \Hy@Info{Plain pages ON}%
3777 \else
3778   \Hy@Info{Plain pages OFF}%
3779 \fi

3780 \ifHy@backref
3781   \Hy@Info{Backreferencing ON}%
3782 \else
3783   \Hy@Info{Backreferencing OFF}%
3784 \fi

3785 \ifHy@typexml
3786   \Hy@AtEndOfPackage{%
3787     \RequirePackage{color}%
3788     \RequirePackage{nameref}%
3789   }%
3790 \fi

3791 \Hy@DisableOption{typexml}
3792 \ifHy@implicit
3793   \typeout{Implicit mode ON; LaTeX internals redefined}%
3794 \else
3795   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3796   \def\MaybeStopEarly{%
3797     \typeout{Hyperref stopped early}%
3798     \Hy@AtBeginDocument{%
3799       \PDF@FinishDoc
3800       \gdef\PDF@FinishDoc{}%
3801     }%
3802     \endinput
3803   }%
3804   \Hy@AtBeginDocument{%
3805     \let\autoref\ref
```

```

3806 \let\autopageref\pageref
3807 \ifx\@pdfpagemode\@empty
3808 \gdef\@pdfpagemode{UseNone}%
3809 \fi
3810 \global\Hy@backreffalse
3811 }%
3812 \Hy@AtEndOfPackage{%
3813 \global\let\ReadBookmarks\relax
3814 \global\let\WriteBookmarks\relax
3815 }%
3816 \fi
3817 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3818 \Hy@AtEndOfPackage{%
3819 \@ifpackageloaded{tex4ht}{%
3820 \def\Hy@driver{htex4ht}%
3821 \Hy@texhttrue
3822 }{}%

```

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.

```

3823 \ifx\Hy@driver\@empty
3824 \else
3825 \def\Hy@temp{hpdfTeX}%
3826 \ifpdf
3827 \ifx\Hy@driver\Hy@temp
3828 \else
3829 \Hy@WarningNoLine{%
3830 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3831 pdfTeX is running in PDF mode.\MessageBreak
3832 Forcing driver ‘\Hy@temp.def’%
3833 }%
3834 \let\Hy@driver\Hy@temp
3835 \fi
3836 \else
3837 \ifx\Hy@driver\Hy@temp
3838 \Hy@WarningNoLine{%
3839 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3840 pdfTeX is not running in PDF mode.\MessageBreak
3841 Using default driver%
3842 }%
3843 \let\Hy@driver\@empty
3844 \fi
3845 \fi
3846 \fi
3847 \ifx\Hy@driver\@empty
3848 \else
3849 \def\Hy@temp{hXeTeX}%
3850 \ifXeTeX
3851 \ifx\Hy@driver\Hy@temp
3852 \else
3853 \Hy@WarningNoLine{%
3854 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3855 XeTeX is running.\MessageBreak
3856 Forcing driver ‘\Hy@temp.def’ for XeTeX%
3857 }%

```



```

3858     \let\Hy@driver\Hy@temp
3859     \fi
3860   \fi
3861 \fi
3862 \ifx\Hy@driver\@empty
3863 \else
3864   \def\Hy@temp{hvtexhtm}%
3865   \ifvtexhtml
3866     \ifx\Hy@driver\Hy@temp
3867     \else
3868       \Hy@WarningNoLine{%
3869         Wrong driver '\Hy@driver.def';\MessageBreak
3870         VTeX is running in HTML mode.\MessageBreak
3871         Forcing driver '\Hy@temp.def'%
3872       }%
3873     \let\Hy@driver\Hy@temp
3874     \fi
3875   \else
3876     \ifx\Hy@driver\Hy@temp
3877     \Hy@WarningNoLine{%
3878       Wrong driver '\Hy@driver.def';\MessageBreak
3879       VTeX is not running in HTML mode.\MessageBreak
3880       Using default driver%
3881     }%
3882     \let\Hy@driver\@empty
3883   \fi
3884 \fi
3885 \fi

```

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

```

3886 \ifx\Hy@driver\@empty
3887   \providecommand*{\Hy@defaultdriver}{hypertex}%
3888   \ifpdf
3889     \def\Hy@driver{hpdfTeX}%
3890   \else
3891     \ifxetex
3892       \def\Hy@driver{hxetex}%
3893     \else
3894       \ifvtexhtml
3895         \def\Hy@driver{hvtexhtm}%
3896       \def\MaybeStopEarly{%
3897         \typeout{Hyperref stopped early}%
3898         \Hy@AtBeginDocument{%
3899           \PDF@FinishDoc
3900           \gdef\PDF@FinishDoc{}%
3901         }%
3902       \endinput
3903     }%
3904   \else
3905     \ifvtexpdf
3906       \def\Hy@driver{hvtex}%
3907     \else
3908       \ifvtexps
3909         \def\Hy@driver{hvtex}%
3910       \else
3911         \let\Hy@driver\Hy@defaultdriver
3912       \fi
3913     \fi

```

```

3914     \fi
3915     \fi
3916   \fi
3917   \ifx\Hy@driver\Hy@defaultdriver
3918     \def\Hy@temp{hdvwind}%
3919     \ifx\Hy@temp\Hy@driver
3920       \setkeys{Hyp}{colorlinks}%
3921       \PassOptionsToPackage{dviwindo}{color}%
3922     \fi
3923   \fi
3924   \typeout{* hyperref using default driver \Hy@driver\ltx@space*}%
3925 \else
3926   \typeout{* hyperref using driver \Hy@driver\ltx@space*}%
3927 \fi
3928 \input{\Hy@driver.def}%
3929 \let\@unprocessedoptions\relax
3930 \Hy@RestoreCatcodes
3931 }

```

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

```

3932 \newif\ifHy@DvipdfmxOutlineOpen
3933 \ifxetex
3934   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3935   \else
3936     \Hy@DvipdfmxOutlineOpentrue
3937   \fi
3938 \fi
3939 \begingroup\expandafter\expandafter\expandafter\endgroup
3940 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3941 \else
3942   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3943     \Hy@DvipdfmxOutlineOpentrue
3944   \fi
3945 \fi
3946 \Hy@DisableOption{tex4ht}
3947 \Hy@DisableOption{pdftex}
3948 \Hy@DisableOption{nativepdf}
3949 \Hy@DisableOption{dvipdfm}
3950 \Hy@DisableOption{dvipdfmx}
3951 \Hy@DisableOption{dvipdfmx-outline-open}
3952 \Hy@DisableOption{pdfmark}
3953 \Hy@DisableOption{dvips}
3954 \Hy@DisableOption{hypertex}
3955 \Hy@DisableOption{vtex}
3956 \Hy@DisableOption{vtexpdfmark}
3957 \Hy@DisableOption{dviwindo}
3958 \Hy@DisableOption{dvipsone}
3959 \Hy@DisableOption{textures}
3960 \Hy@DisableOption{latex2html}
3961 \Hy@DisableOption{ps2pdf}
3962 \Hy@DisableOption{xetex}
3963 \Hy@AtEndOfPackage{%
3964   \Hy@DisableOption{pdfversion}%
3965 }

```

15.2.2 Bookmarks

```

3966 \def\WriteBookmarks{0}
3967 \def\@bookmarkopenstatus#1{%
3968   \ifHy@bookmarksopen

```

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

```

3969   \ifnum#1<\expandafter\@firstofone\expandafter
3970     {\number\@bookmarkopenlevel} % explicit space
3971   \else
3972     -%
3973   \fi
3974 \else
3975   -%
3976 \fi
3977 }
3978 \ifHy@bookmarks
3979   \Hy@Info{Bookmarks ON}%
3980   \ifx\@pdfpagemode\@empty
3981     \def\@pdfpagemode{UseOutlines}%
3982   \fi
3983 \else
3984   \def\@bookmarkopenstatus#1{%
3985     \Hy@Info{Bookmarks OFF}%
3986     \Hy@AtEndOfPackage{%
3987       \global\let\ReadBookmarks\relax
3988       \global\let\WriteBookmarks\relax
3989     }%
3990     \ifx\@pdfpagemode\@empty
3991       \def\@pdfpagemode{UseNone}%
3992     \fi
3993   \fi
3994 \Hy@DisableOption{bookmarks}

```

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

```

3995 \def\Hy@CatcodeWrapper#1{%
3996   \def\Hy@EndWrap{}%
3997   \def\TMP@EnsureCode##1##2{%
3998     \edef\Hy@EndWrap{%
3999       \Hy@EndWrap
4000       \catcode##1 \the\catcode##1\relax
4001     }%
4002     \catcode##1 ##2\relax
4003   }%
4004   \TMP@EnsureCode{10}{12}% ^^J
4005   \TMP@EnsureCode{33}{12}% !
4006   \TMP@EnsureCode{34}{12}% "
4007   \TMP@EnsureCode{36}{3}% $ (math)
4008   \TMP@EnsureCode{38}{4}% & (alignment)
4009   \TMP@EnsureCode{39}{12}% '
4010   \TMP@EnsureCode{40}{12}% (
4011   \TMP@EnsureCode{41}{12}% )
4012   \TMP@EnsureCode{42}{12}% *
4013   \TMP@EnsureCode{43}{12}% +
4014   \TMP@EnsureCode{44}{12}% ,
4015   \TMP@EnsureCode{45}{12}% -
4016   \TMP@EnsureCode{46}{12}% .
4017   \TMP@EnsureCode{47}{12}% /
4018   \TMP@EnsureCode{58}{12}% :
4019   \TMP@EnsureCode{59}{12}% ;

```

```

4020 \TMP@EnsureCode{60}{12}% <
4021 \TMP@EnsureCode{61}{12}% =
4022 \TMP@EnsureCode{62}{12}% >
4023 \TMP@EnsureCode{63}{12}% ?
4024 \TMP@EnsureCode{91}{12}% [
4025 \TMP@EnsureCode{93}{12}% ]
4026 \TMP@EnsureCode{94}{7}% ^ (superscript)
4027 \TMP@EnsureCode{95}{8}% _ (subscript)
4028 \TMP@EnsureCode{96}{12}% ‘
4029 \TMP@EnsureCode{124}{12}% |
4030 \TMP@EnsureCode{126}{13}% ~ (active)
4031 #1\relax
4032 \Hy@endWrap
4033 }

```

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

```

4034 \Hy@AtBeginDocument{%
4035   \ifHy@ocgcolorlinks
4036     \setkeys{Hyp}{colorlinks}%
4037     \ifHy@pdfa
4038       \Hy@Warning{%
4039         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4040         using ‘colorlinks’ instead of ‘ocgcolorlinks’%
4041       }%
4042     \Hy@ocgcolorlinksfalse
4043   \fi
4044 \fi
4045 \ifHy@ocgcolorlinks
4046 \else
4047   \Hy@DisableOption{ocgcolorlinks}%
4048 \fi
4049 \ifHy@colorlinks
4050   \def\@pdfborder{0 0 0}%
4051   \let\@pdfborderstyle\@empty
4052   \ifHy@typexml
4053   \else
4054     \Hy@CatcodeWrapper{%
4055       \RequirePackage{color}%
4056     }%
4057   \fi
4058   \def\Hy@colorlink#1{%
4059     \begingroup
4060     \HyColor@UseColor#1%
4061   }%
4062   \def\Hy@endcolorlink{\endgroup}%
4063   \Hy@Info{Link coloring ON}%
4064 \else
4065   \ifHy@frenchlinks
4066     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4067     \def\Hy@endcolorlink{\endgroup}%
4068     \Hy@Info{French linking ON}%
4069   \else

```

for grouping consistency:

```

4070   \def\Hy@colorlink#1{\begingroup}%
4071   \def\Hy@endcolorlink{\endgroup}%
4072   \Hy@Info{Link coloring OFF}%
4073 \fi

```

```

4074 \fi
4075 \Hy@DisableOption{colorlinks}%
4076 \Hy@DisableOption{frenchlinks}%
4077 \ifHy@texht
4078 \long\def\@firstoffive#1#2#3#4#5{#1}%
4079 \long\def\@secondoffive#1#2#3#4#5{#2}%
4080 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4081 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4082 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4083 \providecommand*\@safe@activestruet{}%
4084 \providecommand*\@safe@activesfalse{}%
4085 \def\T@ref#1{%
4086   \Hy@safe@activestruet
4087   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4088   \Hy@safe@activesfalse
4089 }%
4090 \def\T@pageref#1{%
4091   \Hy@safe@activestruet
4092   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4093   \Hy@safe@activesfalse
4094 }%
4095 \else
4096 \ifHy@typexml
4097 \else
4098   \Hy@CatcodeWrapper{%
4099     \RequirePackage{nameref}%
4100   }%
4101 \fi
4102 \fi
4103 \DeclareRobustCommand\ref{%
4104   \@ifstar\@refstar\T@ref
4105 }%
4106 \DeclareRobustCommand\pageref{%
4107   \@ifstar\@pagerefstar\T@pageref
4108 }%
4109 \DeclareRobustCommand\nameref{%
4110   \@ifstar\@namerefstar\T@nameref
4111 }%
4112 }
4113 \Hy@AtBeginDocument{%
4114 \ifHy@texht
4115 \else
4116   \Hy@CatcodeWrapper{%
4117     \ReadBookmarks
4118   }%
4119 \fi
4120 }
4121 \ifHy@backref
4122 \RequirePackage{backref}%
4123 \else
4124 \let\Hy@backout\@gobble
4125 \fi
4126 \Hy@DisableOption{backref}
4127 \Hy@DisableOption{pagebackref}
4128 \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.

```

4129 \begingroup
4130   \endlinechar=-1 %
4131   \catcode'\^^A=14 %
4132   \catcode'\^^M\active
4133   \catcode'\%\active
4134   \catcode'\#\active
4135   \catcode'\_\active
4136   \catcode'\$\active
4137   \catcode'\&\active
4138   \gdef\hyper@normalise{^^A
4139     \begingroup
4140       \catcode'\^^M\active
4141       \def^^M{ }^^A
4142       \catcode'\%\active
4143       \let%\@percentchar
4144       \let%\@percentchar
4145       \catcode'\#\active
4146       \def#{\hyper@hash}^^A
4147       \def\#{\hyper@hash}^^A
4148       \@makeother\&^^A
4149       \edef&{\string&}^^A
4150       \edef\&{\string&}^^A
4151       \edef\textunderscore{\string_}^^A
4152       \let\_ \textunderscore
4153       \catcode'\_\active
4154       \let\_ \textunderscore
4155       \let~\hyper@tilde
4156       \let~\hyper@tilde
4157       \let\textasciitilde\hyper@tilde
4158       \let\\ \@backslashchar
4159       \edef${\string$}^^A
4160       \Hy@safe@activetrue
4161       \hyper@n@rmalise
4162     }^^A
4163     \catcode'\#=6 ^^A
4164     \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4165     \gdef\hyper@n@rmalise#1#2{^^A
4166       \def\Hy@tempa{#2}^^A
4167       \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4168         \Hy@ReturnAfterElseFi{^^A
4169           \hyper@@normalise{#1}^^A
4170         }^^A
4171       \else
4172         \Hy@ReturnAfterFi{^^A
4173           \hyper@@normalise{#1}{#2}^^A
4174         }^^A
4175       \fi
4176     }^^A
4177   \gdef\hyper@@normalise#1#2{^^A

```

```

4178 \edef\Hy@tempa{^^A
4179 \endgroup
4180 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4181 }^^A
4182 \Hy@tempa
4183 }^^A
4184 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4185 #1^^A
4186 \ifx\limits#2\limits
4187 \else
4188 \Hy@ReturnAfterFi{^^A
4189 \Hy@RemovePercentCr #2\@nil
4190 }^^A
4191 \fi
4192 }^^A
4193 \endgroup
4194 \providecommand*\hyper@chars{%
4195 \let\#\hyper@hash
4196 \let\%\@percentchar
4197 \Hy@safe@activetrue
4198 }

4199 \def\hyperlink#1#2{%
4200 \hyper@@link#{#1}{#2}%
4201 }

4202 \def\Hy@VerboseLinkStart#1#2{%
4203 \ifHy@verbose
4204 \begingroup
4205 \Hy@safe@activetrue
4206 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4207 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4208 \xdef\Hy@VerboseGlobalTemp{%
4209 \Hy@VerboseGlobalTemp, %
4210 line \the\inputlineno
4211 }%
4212 \endgroup
4213 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4214 \@onelevel@sanitize\Hy@VerboseLinkInfo
4215 \fi
4216 }

4217 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4218 \def\Hy@VerboseLinkStop{%
4219 \ifHy@verbose
4220 \begingroup
4221 \edef\x{\endgroup
4222 \write\m@ne{%
4223 Package 'hyperref' Info: %
4224 End of reference \Hy@VerboseLinkInfo.%
4225 }%
4226 }%
4227 \x
4228 \fi
4229 }

4230 \def\Hy@VerboseAnchor#1{%
4231 \ifHy@verbose
4232 \begingroup
4233 \Hy@safe@activetrue

```

```

4234 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4235 \endgroup
4236 \fi
4237 }

4238 \def\Hy@AllowHyphens{%
4239 \relax
4240 \ifhmode
4241 \penalty\@M
4242 \hskip\z@skip
4243 \fi
4244 }

4245 \DeclareRobustCommand*\href{%
4246 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4247 }
4248 \def\Hy@href#{%
4249 \hyper@normalise\href@
4250 }
4251 \begingroup
4252 \catcode'\$=6 %
4253 \catcode'\#=12 %
4254 \gdef\href$1{\expandafter\href@split$1##\}%
4255 \gdef\href@split$1#$2#$3\{%
4256 \hyper@link{$1}{$2}%
4257 }%
4258 \endgroup

```

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

```

4259 \RequirePackage{url}
4260 \let\HyOrg@url\url
4261 \def\Hurl{\begingroup \Url}
4262 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4263 \def\nolinkurl@#1{\Hurl{#1}}
4264 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4265 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4266 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4267 \providecommand\hyper@image[2]{#2}

4268 \def\hypertarget#1#2{%
4269 \ifHy@nesting
4270 \hyper@@anchor{#1}{#2}%
4271 \else
4272 \hyper@@anchor{#1}{\relax}#2%
4273 \fi
4274 }

```

\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.

```

4275 \DeclareRobustCommand*\hyperref{%
4276 \@ifnextchar[\Hy@babelnormalise\label@hyperref]\@hyperref
4277 }
4278 \def\Hy@babelnormalise#1[#2]{%
4279 \begingroup
4280 \Hy@safe@activetrue

```



```

4281 \edef\Hy@tempa{%
4282 \endgroup
4283 \noexpand#1[{\#2}]%
4284 }%
4285 \Hy@tempa
4286 }
4287 \def\@hyperref{\hyper@normalise\@hyperref}
4288 \def\@hyperref#1#2#3{%
4289 \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4290 \expandafter\tryhyper@link\ref@one\{\#1}%
4291 }
4292 \def\tryhyper@link#1\#2{%
4293 \hyper@@link{\#2}{\#1}%
4294 }
4295 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4296 \def\@hyperdef#1#2#3{%, category, name, text
4297 \ifx\#1\\%
4298 \def\Hy@AnchorName{\#2}%
4299 \else
4300 \def\Hy@AnchorName{\#1.\#2}%
4301 \fi
4302 \ifHy@nesting
4303 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\#3}%
4304 \else
4305 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{\#3}%
4306 \fi
4307 }

```

```

4308 \def\label@hyperref{#1}{%
4309 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4310 }%
4311 \def\label@@hyperref#1#2#3{%
4312 \ifx#1\relax
4313 \protect\G@refundefinedtrue
4314 \@latex@warning{%
4315 Hyper reference ‘#2’ on page \thepage \space undefined%
4316 }%
4317 \hyper@@link{}{??}{#3}%
4318 \else
4319 \hyper@@link{\expandafter\@fifthoffive#1}%
4320 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4321 \fi
4322 }
4323 \def\label@hyperdef{#1}#2#3#4{% label name, category, name,
4324 % anchor text
4325 \@bsphack
4326 \ifx\\#2\\%
4327 \def\Hy@AnchorName{#3}%
4328 \else
4329 \def\Hy@AnchorName{#2.#3}%
4330 \fi
4331 \if@filesw
4332 \protected@write\@auxout{}{%
4333 \string\newlabel{#1}{-}{-}{-}{\Hy@AnchorName}{-}}%
4334 }%

```

```

4335 \fi
4336 \@esphack
4337 \ifHy@nesting
4338 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4339 \else
4340 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4341 \fi
4342 }

```

17 Underlying basic hypertext macros

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

```

4343 \def\hyper@link{\let\Hy@reserved@a\relax
4344 \ifnextchar{\hyper@link@}{\hyper@link@[link]}}%
4345 }
4346 \def\hyper@link@[#1]#2#3#4{%
4347 \begingroup
4348 \protected@edef\Hy@tempa{#2}%
4349 \Hy@safe@activetrue
4350 \edef\x{#3}%
4351 \ifx\Hy@tempa\@empty
4352 \toks0{\hyper@link{#1}}%
4353 \else
4354 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4355 \fi
4356 \toks2{%
4357 \Hy@safe@activesfalse
4358 #4%
4359 }%
4360 \edef\Hy@tempa{\the\toks2}%
4361 \edef\x{\endgroup
4362 \ifx\Hy@tempa\@empty
4363 \noexpand\Hy@Warning{Suppressing empty link}%
4364 \else
4365 \the\toks0 {\x}{\the\toks2}}%
4366 \fi
4367 }%
4368 \x
4369 }

```

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.

```

4370 \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.

```
4371 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4372 }
```

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

```
4373 \def\@pdftempwordfile{file}%
4374 \def\@pdftempwordrun{run}%
4375 \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:

```
4376 \ifx\\#6\\%
4377 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4378 \else
4379 \ifx\\#4\\%
4380 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4381 \else
```

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

```
4382 \def\@pdftempa{#4}%
4383 \ifx\@pdftempa\@pdftempwordfile
4384 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
4385 \else
```

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

```
4386 \ifx\@pdftempa\@pdftempwordrun
4387 \ifHy@pdfa
4388 \PackageError{hyperref}{%
4389 PDF/A: Launch action is prohibited%
4390 }\@ehc
4391 \begingroup
4392 \leavevmode
4393 #2%
4394 \endgroup
4395 \else
4396 \expandafter\@hyper@launch#7\\{#3}{#2}%
4397 \fi
4398 \else
```

otherwise its a URL

```
4399 \hyper@linkurl{#3}{#7\ifx\\#2\\%
4400 \fi
4401 \fi
4402 \fi
4403 \fi
4404 }
```

By default, turn run: into file:

```
4405 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
4406 \hyper@linkurl{#2}{%
4407 \Hy@linkfileprefix
4408 #1%
```

```

4409 \ifx\\#3\\%
4410 \else
4411 \hyper@hash
4412 #3%
4413 \fi
4414 }%
4415 }

```

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

```

4416 \def\@hyper@linkfile file:#1\\#2#3{%
4417 %file url,link string, name
4418 \filename@parse{#1}%
4419 \ifx\filename@ext\relax
4420 \edef\filename@ext{\XR@ext}%
4421 \fi
4422 \def\use@file{\filename@area\filename@base.\filename@ext}%
4423 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
4424 \hyper@linkfile{#2}{\use@file}{#3}%
4425 }{%
4426 \ifx\@baseurl\@empty
4427 \hyper@linkurl{#2}{%
4428 \Hy@linkfileprefix\use@file\ifx\\#3\\else\hyper@hash#3\fi
4429 }%
4430 \else
4431 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4432 \fi
4433 }%
4434 }

4435 \def\Hy@IfStringEndsWith#1#2{%
4436 \begingroup
4437 \edef\x{#1}%
4438 \@onelevel@sanitize\x
4439 \edef\x{.\x$}%
4440 \edef\y{#2}%
4441 \@onelevel@sanitize\y
4442 \edef\y{.\y$}%
4443 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4444 \endgroup
4445 \ifx\relax##2\relax
4446 \expandafter\ltx@secondoftwo
4447 \else
4448 \expandafter\ltx@firstoftwo
4449 \fi
4450 }%
4451 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4452 }

```

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.

```

4453 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4454 \long\def\@hyper@@anchor#1\relax#2#3\relax{%

```

```

4455 \ifx\#1\%
4456   #2\Hy@Warning{Ignoring empty anchor}%
4457 \else
4458   \def\anchor@spot{#2#3}%
4459   \let\put@me@back\@empty
4460   \ifx\relax#2\relax
4461   \else
4462     \ifHy@nesting
4463     \else
4464       \ifcat a\noexpand#2\relax
4465       \else
4466         \ifcat 0\noexpand#2 \relax
4467         \else
4468           \typeout{Anchor start is not alphanumeric %
4469           on input line\the\inputlineno%
4470           }%
4471           \let\anchor@spot\@empty
4472           \def\put@me@back{#2#3}%
4473         \fi
4474       \fi
4475     \fi
4476   \fi
4477   \ifHy@activeanchor
4478   \anchor@spot
4479   \else
4480   \hyper@anchor{#1}%
4481   \fi
4482   \expandafter\put@me@back
4483 \fi
4484 \let\anchor@spot\@empty
4485 }

```

18 Compatibility with the *ETEX2html* 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.

```

4486 \let\htmladding\hyperimage
4487 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4488 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4489 \def\htmlref#1#2{% anchor text, label
4490   \label@hyperref[{#2}]{#1}%
4491 }

```

This is really too much. The *ETEX2html* 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.

```

4492 \def\@latex2htmlX{%
4493   \let\hhyperref\hyperref
4494   \def\hyperref##1##2##3##4{% anchor text for HTML
4495     % text to print before label in print
4496     % label

```

```

4497          % post-label text in print
4498      ##2\ref{##4}##3%
4499  }%
4500 }

```

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.

```

4501 \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
4502 \def\HyField@NewFlag#1#2{%
4503   \lowercase{\HyField@NewOption{#2}}%
4504   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4505 }

```

```

\HyField@NewFlagOnly
4506 \def\HyField@NewFlagOnly#1#2{%
4507   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4508 }

```

```

\HyField@NewOption #1: option name
4509 \def\HyField@NewOption#1{%
4510   \expandafter\newif\csname ifFld@#1\endcsname
4511   \define@key{Field}{#1}[true]{%
4512     \lowercase{\Field@boolkey{##1}}{#1}%
4513   }%
4514 }

```

\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
4515 \def\HyField@NewBitsetFlag#1#2#3#4{%
4516   \begingroup
4517   \count@=#4\relax
4518   \advance\count@\m@ne
4519   \def\x##1{%
4520     \endgroup
4521     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%

```

```

4522 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4523 \expandafter\edef\csname HyField@#3@##1\endcsname{%
4524 (\number#4) #2%
4525 }%
4526 \else
4527 \expandafter\edef\csname HyField@#3@##1\endcsname{%
4528 \csname HyField@#3@##1\endcsname
4529 /#2%
4530 }%
4531 \fi
4532 }%
4533 \expandafter\x\expandafter{\the\count@}%
4534 }

```

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

```

4535 \def\HyField@UseFlag#1#2{%
4536 \lowercase{\HyField@@UseFlag{#2}}{#1}%
4537 }

```

\HyField@@UseFlag

```

4538 \def\HyField@@UseFlag#1#2{%
4539 \bitsetSetValue{HyField@#2}{%
4540 \csname HyField@#2@#1\endcsname
4541 }{%
4542 \csname ifFld@#1\endcsname 1\else 0\fi
4543 }%
4544 }

```

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

```

4545 \def\HyField@SetFlag#1#2{%
4546 \lowercase{\HyField@@SetFlag{#2}}{#1}%
4547 }

```

\HyField@@SetFlag

```

4548 \def\HyField@@SetFlag#1#2{%
4549 \bitsetSetValue{HyField@#2}{%
4550 \csname HyField@#2@#1\endcsname
4551 }{1}%
4552 }

```

\HyField@PrintFlags

```

4553 \def\HyField@PrintFlags#1#2{%
4554 \ifHy@verbose
4555 \begingroup
4556 \let\Hy@temp\empty
4557 \let\MessageBreak\relax
4558 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4559 \bitsetGetSetBitList{HyField@#1}\do{%
4560 \edef\Hy@temp{%
4561 \Hy@temp
4562 \csname HyField@#1@\x\endcsname\MessageBreak
4563 }%
4564 }%
4565 \edef\x{\endgroup
4566 \noexpand\Hy@Info{%
4567 Field flags: %

```

```

4568 \expandafter\ifx\@car#1\@nil S\else/\fi
4569 #1 %
4570 \bitsetGetDec{HyField@#1} %
4571 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4572 \Hy@temp
4573 for #2%
4574 }%
4575 }\x
4576 \fi
4577 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4578 \HyField@NewFlag{Ff}{ReadOnly}{1}
4579 \HyField@NewFlag{Ff}{Required}{2}
4580 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4581 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4582 \HyField@NewFlag{Ff}{Radio}{16}
4583 \HyField@NewFlag{Ff}{Pushbutton}{17}
4584 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4585 \HyField@NewFlag{Ff}{Multiline}{13}
4586 \HyField@NewFlag{Ff}{Password}{14}
4587 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4588 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4589 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4590 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4591 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4592 \HyField@NewFlag{Ff}{Combo}{18}
4593 \HyField@NewFlag{Ff}{Edit}{19}
4594 \HyField@NewFlag{Ff}{Sort}{20}
4595 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4596 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4597 \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.

```

4598 \newif\ifFld@popdown
4599 \define@key{Field}{popdown}[true]{%
4600 \lowercase{\Field@boolkey{#1}}{popdown}%
4601 }

```

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.

```

4602 \HyField@NewFlag{F}{Invisible}{1}
4603 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4604 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4605 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2

```



```

4606 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4607 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4608 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4609 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4610 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4611 \ifHy@pdfa
4612 \def\HyField@PDFAFflagWarning#1#2{%
4613   \Hy@Warning{%
4614     PDF/A: Annotation flag '#1' must\MessageBreak
4615     be set to '#2'%
4616   }%
4617 }%
4618 \Fld@invisiblefalse
4619 \def\Fld@invisibletrue{%
4620   \HyField@PDFAFflagWarning{invisible}{false}%
4621 }%
4622 \Fld@hiddenfalse
4623 \def\Fld@hiddentrue{%
4624   \HyField@PDFAFflagWarning{hidden}{false}%
4625 }%
4626 \Fld@printtrue
4627 \def\Fld@printfalse{%
4628   \HyField@PDFAFflagWarning{print}{true}%
4629 }%
4630 \Fld@nozoomtrue
4631 \def\Fld@nozoomfalse{%
4632   \HyField@PDFAFflagWarning{nozoom}{true}%
4633 }%
4634 \Fld@norotatetrue
4635 \def\Fld@norotatefalse{%
4636   \HyField@PDFAFflagWarning{norotate}{true}%
4637 }%
4638 \Fld@noviewfalse
4639 \def\Fld@noviewtrue{%
4640   \HyField@PDFAFflagWarning{noview}{false}%
4641 }%
4642 \fi

```

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

```

4643 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4644 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4645 \HyField@NewFlag{Submit}{GetMethod}{4}
4646 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4647 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4648 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4649 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4650 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4651 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4652 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4653 \HyField@NewFlag{Submit}{ExclFKey}{12}
4654 \HyField@NewFlag{Submit}{EmbedForm}{14}

4655 \define@key{Field}{export}{%
4656   \lowercase{\def\Hy@temp{#1}}%
4657   \@ifundefined{Fld@export@\Hy@temp}{%
4658     \@onelevel@sanitize\Hy@temp
4659     \PackageError{hyperref}{%
4660       Unknown export format '\Hy@temp'\MessageBreak

```

```

4661     Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4662   }\@ehc
4663 }\{%
4664   \let\Fld@export\Hy@temp
4665 }\%
4666 }
4667 \def\Fld@export{fdf}
4668 \@namedef{Fld@export@fdf}{0}%
4669 \@namedef{Fld@export@html}{1}%
4670 \@namedef{Fld@export@xfdf}{2}%
4671 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4672 \def\HyField@FlagsSubmit{%
4673   \bitsetReset{HyField@Submit}%
4674   \ifcase\@nameuse{Fld@export@\Fld@export} %
4675     % FDF
4676     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4677     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4678     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4679     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4680     \HyField@UseFlag{Submit}{CanonicalFormat}%
4681     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4682     \HyField@UseFlag{Submit}{ExclFKey}%
4683     \HyField@UseFlag{Submit}{EmbedForm}%
4684   \or % HTML
4685     \HyField@SetFlag{Submit}{ExportFormat}%
4686     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4687     \HyField@UseFlag{Submit}{GetMethod}%
4688     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4689     \HyField@UseFlag{Submit}{CanonicalFormat}%
4690   \or % XFDF
4691     \HyField@SetFlag{Submit}{XFDF}%
4692     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4693     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4694     \HyField@UseFlag{Submit}{CanonicalFormat}%
4695   \or % PDF
4696     \HyField@SetFlag{Submit}{SubmitPDF}%
4697     \HyField@UseFlag{Submit}{GetMethod}%
4698   \fi
4699   \HyField@PrintFlags{Submit}{submit button field}%
4700   \bitsetIsEmpty{HyField@Submit}{%
4701     \def\Fld@submitflags{%
4702     }\{%
4703     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4704   }\%
4705 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4706 \def\HyField@FlagsAnnot#1{%
4707   \bitsetReset{HyField@F}%
4708   \HyField@UseFlag{F}{Invisible}%

```

```

4709 \HyField@UseFlag{F}{Hidden}%
4710 \HyField@UseFlag{F}{Print}%
4711 \HyField@UseFlag{F}{NoZoom}%
4712 \HyField@UseFlag{F}{NoRotate}%
4713 \HyField@UseFlag{F}{NoView}%
4714 \HyField@UseFlag{F}{Locked}%
4715 \HyField@UseFlag{F}{ToggleNoView}%
4716 \HyField@UseFlag{F}{LockedContents}%
4717 \HyField@PrintFlags{F}{#1}%
4718 \bitsetIsEmpty{HyField@F}{%
4719   \def\Fld@annotflags{%
4720   }{%
4721     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4722   }%
4723 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4724 \def\HyField@FlagsPushButton{%
4725   \HyField@FlagsAnnot{push button field}%
4726   \bitsetReset{HyField@Ff}%
4727   \HyField@UseFlag{Ff}{ReadOnly}%
4728   \HyField@UseFlag{Ff}{Required}%
4729   \HyField@UseFlag{Ff}{NoExport}%
4730   \HyField@SetFlag{Ff}{PushButton}%
4731   \HyField@PrintFlags{Ff}{push button field}%
4732   \bitsetIsEmpty{HyField@Ff}{%
4733     \def\Fld@flags{%
4734     }{%
4735       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4736     }%
4737 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4738 \def\HyField@FlagsCheckBox{%
4739   \HyField@FlagsAnnot{check box field}%
4740   \bitsetReset{HyField@Ff}%
4741   \HyField@UseFlag{Ff}{ReadOnly}%
4742   \HyField@UseFlag{Ff}{Required}%
4743   \HyField@UseFlag{Ff}{NoExport}%
4744   \HyField@PrintFlags{Ff}{check box field}%
4745   \bitsetIsEmpty{HyField@Ff}{%
4746     \def\Fld@flags{%
4747     }{%
4748       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4749     }%
4750 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4751 \def\HyField@FlagsRadioButton{%
4752   \HyField@FlagsAnnot{radio button field}%

```

```

4753 \bitsetReset{HyField@Ff}%
4754 \HyField@UseFlag{Ff}{ReadOnly}%
4755 \HyField@UseFlag{Ff}{Required}%
4756 \HyField@UseFlag{Ff}{NoExport}%
4757 \HyField@UseFlag{Ff}{NoToggleToOff}%
4758 \HyField@SetFlag{Ff}{Radio}%
4759 \HyField@UseFlag{Ff}{RadiosInUnison}%
4760 \HyField@PrintFlags{Ff}{radio button field}%
4761 \bitsetIsEmpty{HyField@Ff}{%
4762   \def\Fld@flags{%
4763   }{%
4764   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4765   }%
4766 }

```

19.1.7 Text fields

\HyField@FlagsText

```

4767 \def\HyField@FlagsText{%
4768   \HyField@FlagsAnnot{text field}%
4769   \bitsetReset{HyField@Ff}%
4770   \HyField@UseFlag{Ff}{ReadOnly}%
4771   \HyField@UseFlag{Ff}{Required}%
4772   \HyField@UseFlag{Ff}{NoExport}%
4773   \HyField@UseFlag{Ff}{Multiline}%
4774   \HyField@UseFlag{Ff}{Password}%
4775   \HyField@UseFlag{Ff}{FileSelect}%
4776   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4777   \HyField@UseFlag{Ff}{DoNotScroll}%
4778   \ifFld@comb
4779     \ifcase0\ifFld@multiline
4780       \else\ifFld@password
4781       \else\ifFld@fileselect
4782       \else 1\fi\fi\fi\relax
4783     \PackageError{hyperref}{%
4784       Field option ‘comb’ cannot used together with\MessageBreak
4785       ‘multiline’, ‘password’, or ‘fileselect’%
4786     }\@ehc
4787   \else
4788     \HyField@UseFlag{Ff}{Comb}%
4789   \fi
4790 \fi
4791 \HyField@UseFlag{Ff}{RichText}%
4792 \HyField@PrintFlags{Ff}{text field}%
4793 \bitsetIsEmpty{HyField@Ff}{%
4794   \def\Fld@flags{%
4795   }{%
4796   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4797   }%
4798 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4799 \def\HyField@FlagsChoice{%
4800   \HyField@FlagsAnnot{choice field}%

```

```

4801 \bitsetReset{HyField@Ff}%
4802 \HyField@UseFlag{Ff}{ReadOnly}%
4803 \HyField@UseFlag{Ff}{Required}%
4804 \HyField@UseFlag{Ff}{NoExport}%
4805 \HyField@UseFlag{Ff}{Combo}%
4806 \ifFld@combo
4807   \HyField@UseFlag{Ff}{Edit}%
4808 \fi
4809 \HyField@UseFlag{Ff}{Sort}%
4810 \HyField@UseFlag{Ff}{MultiSelect}%
4811 \ifFld@combo
4812   \ifFld@edit
4813     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4814   \fi
4815 \fi
4816 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4817 \HyField@PrintFlags{Ff}{choice field}%
4818 \bitsetIsEmpty{HyField@Ff}{%
4819   \def\Fld@flags{%
4820 }{%
4821   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4822 }%
4823 }

```

19.2 Choice field

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

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

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

```

4824 \def\HyField@PDFChoices#1{%
4825   \begingroup
4826   \gdef\Fld@choices{%
4827     \def\HyTmp@optlist{%
4828       \let\HyTmp@optitem\relax
4829       \count@=0 %
4830       \kv@parse{#1}{%
4831         \Hy@pdfstringdef\kv@key\kv@key
4832         \ifx\kv@value\relax
4833           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4834             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4835           \else
4836             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4837           \fi
4838         \else
4839           \Hy@pdfstringdef\kv@value\kv@value
4840           \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4841         \fi
4842       \edef\HyTmp@optlist{%
4843         \HyTmp@optlist
4844         \HyTmp@optitem{\the\count@}{\kv@key}0%
4845       }%
4846       \advance\count@ by 1 %
4847       \@gobbletwo
4848     }%
4849     \xdef\Fld@choices{/Opt[\Fld@choices]}%
4850   \ifFld@multiselect
4851     \HyField@@PDFChoices{DV}\Fld@default

```

```

4852 \HyField@@PDFChoices{V}\Fld@value
4853 \else
4854 \ifx\Fld@default\relax
4855 \else
4856 \pdfstringdef\Hy@gtemp\Fld@default
4857 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4858 \fi
4859 \ifx\Fld@value\relax
4860 \else
4861 \pdfstringdef\Hy@gtemp\Fld@value
4862 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4863 \fi
4864 \fi
4865 \endgroup
4866 }

```

\HyField@@PDFChoices

```

4867 \def\HyField@@PDFChoices#1#2{%
4868 \ifx#2\relax
4869 \else
4870 \count@=0 %
4871 \def\HyTmp@optitem##1##2##3{%
4872 \def\HyTmp@key{##2}%
4873 \ifx\HyTmp@key\Hy@gtemp
4874 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4875 \HyTmp@optlist
4876 \HyTmp@optitem{##1}{##2}1%
4877 }%
4878 \let\HyTmp@found=Y%
4879 \else
4880 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4881 \HyTmp@optlist
4882 \HyTmp@optitem{##1}{##2}##3%
4883 }%
4884 \fi
4885 }%
4886 \expandafter\comma@parse\expandafter{#2}{%
4887 \pdfstringdef\Hy@gtemp\comma@entry
4888 \let\HyTmp@found=N %
4889 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4890 \HyTmp@optlist
4891 \ifx\HyTmp@found Y%
4892 \advance\count@ by 1 %
4893 \else
4894 \@onelevel@sanitize\comma@entry
4895 \PackageWarning{hyperref}{%
4896 \string\ChoiceBox: Ignoring value '\comma@entry',%
4897 \MessageBreak
4898 it cannot be found in the choices%
4899 }%
4900 \fi
4901 \@gobble
4902 }%
4903 \def\HyTmp@optitem##1##2##3{%
4904 \ifnum##3=1 %
4905 (##2)%
4906 \fi

```

```

4907 }%
4908 \ifcase\count@
4909 \or
4910 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4911 \else
4912 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4913 \ifx#1V%
4914 \def\HyTmp@optitem##1##2##3{%
4915 \ifnum##3=1 %
4916 \@firstofone{ ##1}%
4917 \fi
4918 }%
4919 \edef\HyTmp@optlist{\HyTmp@optlist}%
4920 \xdef\Fld@choices{%
4921 \Fld@choices
4922 /I[\expandafter\@firstofone\HyTmp@optlist]%
4923 }%
4924 \fi
4925 \fi
4926 \fi
4927 }

```

19.3 Forms

\HyField@SetKeys

```

4928 \def\HyField@SetKeys{%
4929 \setkeys{Field}%
4930 }

4931 \newif\ifFld@checked
4932 \newif\ifFld@disabled
4933 \Fld@checkedfalse
4934 \Fld@disabledfalse
4935 \newcount\Fld@menulength
4936 \newdimen\Fld@Width
4937 \newdimen\Fld@charsize
4938 \Fld@charsize=10\p@
4939 \def\Fld@maxlen{0}
4940 \def\Fld@align{0}
4941 \def\Fld@color{0 0 0 rg}
4942 \def\Fld@bcolor{1 1 1}
4943 \def\Fld@bordercolor{1 0 0}
4944 \def\Fld@bordersep{1\p@}
4945 \def\Fld@borderwidth{1}
4946 \def\Fld@borderstyle{S}
4947 \def\Fld@cbsymbol{4}
4948 \def\Fld@radiosymbol{H}
4949 \def\Fld@rotation{0}
4950 \def\Fld@Form{\ifnextchar[{\@Form}{\@Form[]}}
4951 \def\Fld@endForm{\@endForm}
4952 \newif\ifForm@html
4953 \Form@htmlfalse
4954 \def\Fld@Form@boolkey#1#2{%
4955 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4956 }
4957 \define@key{Form}{action}{%
4958 \hyper@normalise\Hy@DefFormAction{#1}%

```

```

4959 }
4960 \def\Hy@DefFormAction{\def\Form@action}
4961 \def\enc@html{html}
4962 \define@key{Form}{encoding}{%
4963   \def\Hy@tempa{#1}%
4964   \ifx\Hy@tempa\enc@html
4965     \Form@htmltrue
4966     \def\Fld@export{html}%
4967   \else
4968     \Hy@Warning{%
4969       Form 'encoding' key with \MessageBreak
4970       unknown value '#1'%
4971     }%
4972     \Form@htmlfalse
4973   \fi
4974 }
4975 \define@key{Form}{method}{%
4976   \lowercase{\def\Hy@temp{#1}}%
4977   \@ifundefined{Form@method@\Hy@temp}{%
4978     \@onelevel@sanitize\Hy@temp
4979     \PackageError{hyperref}{%
4980       Unknown method '\Hy@temp'.\MessageBreak
4981       Known values are 'post' and 'get'%
4982     }\@ehc
4983   }{%
4984     \let\Form@method\Hy@temp
4985     \ifcase\@nameuse{Form@method@\Hy@temp} %
4986       \Fld@getmethodfalse
4987     \else
4988       \Fld@getmethodtrue
4989     \fi
4990   }%
4991 }
4992 \def\Form@method{}
4993 \@namedef{Form@method@post}{0}
4994 \@namedef{Form@method@get}{1}
4995 \def\Fld@boolkey#1#2{%
4996   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4997 }
4998 \newtoks\Fld@toks
4999 \Fld@toks={ }%
5000 \def\Fld@addtoks#1#2{%
5001   \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5002   \@processme
5003 }
5004 \def\Fld@checkequals#1=#2=#3\{\{%
5005   \def\@currDisplay{#1}%
5006   \ifx\@currDisplay#2\%
5007     \def\@currValue{#1}%
5008   \else
5009     \def\@currValue{#2}%
5010   \fi
5011 }
5012 \define@key{Field}{loc}{%
5013   \def\Fld@loc{#1}%
5014 }
5015 \define@key{Field}{checked}[true]{%

```



```

5016 \lowercase{\Field@boolkey{#1}}{checked}%
5017 }
5018 \define@key{Field}{disabled}[true]{%
5019 \lowercase{\Field@boolkey{#1}}{disabled}%
5020 }
5021 \define@key{Field}{accesskey}{%
5022 \Field@addtoks{accesskey}{#1}%
5023 }
5024 \define@key{Field}{tabkey}{%
5025 \Field@addtoks{tabkey}{#1}%
5026 }
5027 \define@key{Field}{name}{%
5028 \def\Fld@name{#1}%
5029 }
5030 \define@key{Field}{width}{%
5031 \def\Fld@width{#1}%
5032 \Field@Width#1\setbox0=\hbox{m}%
5033 }
5034 \define@key{Field}{maxlen}{%
5035 \def\Fld@maxlen{#1}%
5036 }
5037 \define@key{Field}{menulength}{%
5038 \Fld@menulength=#1\relax
5039 }
5040 \define@key{Field}{height}{%
5041 \def\Fld@height{#1}%
5042 }
5043 \define@key{Field}{charsize}{%
5044 \Fld@charsize#1%
5045 }
5046 \define@key{Field}{borderwidth}{%
5047 \def\Fld@borderwidth{#1}%
5048 }
5049 \define@key{Field}{borderstyle}{%
5050 \def\Fld@borderstyle{#1}%
5051 }
5052 \define@key{Field}{bordersep}{%
5053 \def\Fld@bordersep{#1}%
5054 }
5055 \define@key{Field}{default}{%
5056 \def\Fld@default{#1}%
5057 }
5058 \define@key{Field}{align}{%
5059 \def\Fld@align{#1}%
5060 }
5061 \define@key{Field}{value}{%
5062 \def\Fld@value{#1}%
5063 }
5064 \define@key{Field}{checkboxsymbol}{%
5065 \Fld@DingDef\Fld@cbsymbol{#1}%
5066 }
5067 \define@key{Field}{radiosymbol}{%
5068 \Fld@DingDef\Fld@radiosymbol{#1}%
5069 }
5070 \def\Fld@DingDef#1#2{%
5071 \def\Fld@temp{}%
5072 \Fld@@@DingDef#2\ding{}}\@nil

```

```

5073 \let#1\Fld@temp
5074 }
5075 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5076 \expandafter\def\expandafter\Fld@temp\expandafter{%
5077 \Fld@temp
5078 #1%
5079 }%
5080 \ifx\#3\%
5081 \expandafter\@gobble
5082 \else
5083 \begingroup
5084 \lccode'0=#2\relax
5085 \lowercase{\endgroup
5086 \expandafter\def\expandafter\Fld@temp\expandafter{%
5087 \Fld@temp
5088 0%
5089 }%
5090 }%
5091 \expandafter\@firstofone
5092 \fi
5093 {%
5094 \Fld@@DingDef#3\@nil
5095 }%
5096 }

5097 \define@key{Field}{rotation}{%
5098 \def\Fld@rotation{#1}%
5099 }

5100 \define@key{Field}{backgroundcolor}{%
5101 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5102 }
5103 \define@key{Field}{bordercolor}{%
5104 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5105 }
5106 \define@key{Field}{color}{%
5107 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5108 }

5109 \def\Fld@onclick@code{}
5110 \def\Fld@format@code{}
5111 \def\Fld@validate@code{}
5112 \def\Fld@calculate@code{}
5113 \def\Fld@keystroke@code{}
5114 \def\Fld@onfocus@code{}
5115 \def\Fld@onblur@code{}
5116 \def\Fld@onmousedown@code{}
5117 \def\Fld@onmouseup@code{}
5118 \def\Fld@onenter@code{}
5119 \def\Fld@onexit@code{}
5120 \def\Hy@temp#1{%
5121 \expandafter\Hy@@temp\cename Fld@#1@code\endcsname{#1}%
5122 }
5123 \def\Hy@@temp#1#2{%
5124 \ifHy@pdfa
5125 \define@key{Field}{#2}{%
5126 \PackageError{hyperref}{%
5127 PDF/A: Additional action '#2' is prohibited%
5128 }\@ehc

```

```

5129 }%
5130 \else
5131 \define@key{Field}{#2}{%
5132 \def#1{##1}%
5133 }%
5134 \fi
5135 }
5136 \Hy@temp{keystroke}
5137 \Hy@temp{format}
5138 \Hy@temp{validate}
5139 \Hy@temp{calculate}
5140 \Hy@temp{onfocus}
5141 \Hy@temp{onblur}
5142 \Hy@temp{onenter}
5143 \Hy@temp{onexit}
5144 \def\Hy@temp#1{%
5145 \define@key{Field}{#1}{%
5146 \Field@addtoks{#1}{##1}%
5147 }%
5148 }
5149 \Hy@temp{onselect}
5150 \Hy@temp{onchange}
5151 \Hy@temp{ondblclick}
5152 \Hy@temp{onmousedown}
5153 \Hy@temp{onmouseup}
5154 \Hy@temp{onmouseover}
5155 \Hy@temp{onmousemove}
5156 \Hy@temp{onmouseout}
5157 \Hy@temp{onkeypress}
5158 \Hy@temp{onkeydown}
5159 \Hy@temp{onkeyup}
5160 \ifHy@pdfa
5161 \define@key{Field}{onclick}{%
5162 \PackageError{hyperref}{%
5163 PDF/A: Action ‘onclick’ is prohibited%
5164 }\@ehc
5165 }%
5166 \else
5167 \define@key{Field}{onclick}{%
5168 \def\Fld@onclick@code{#1}%
5169 \Field@addtoks{onclick}{#1}%
5170 }%
5171 \fi

5172 \DeclareRobustCommand\TextField{%
5173 \@ifnextchar[{\@TextField}{\@TextField[]}%
5174 }
5175 \DeclareRobustCommand\ChoiceMenu{%
5176 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5177 }
5178 \DeclareRobustCommand\CheckBox{%
5179 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5180 }
5181 \DeclareRobustCommand\PushButton{%
5182 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5183 }
5184 \DeclareRobustCommand\Gauge{%
5185 \@ifnextchar[{\@Gauge}{\@Gauge[]}%

```

```

5186 }
5187 \DeclareRobustCommand\Submit{%
5188   \ifnextchar[{\@Submit}{\@Submit[]}%
5189 }
5190 \DeclareRobustCommand\Reset{%
5191   \ifnextchar[{\@Reset}{\@Reset[]}%
5192 }
5193 \def\LayoutTextField#1#2{% label, field
5194   #1 #2%
5195 }
5196 \def\LayoutChoiceField#1#2{% label, field
5197   #1 #2%
5198 }
5199 \def\LayoutCheckField#1#2{% label, field
5200   #1 #2%
5201 }
5202 \def\LayoutPushButtonField#1{% button
5203   #1%
5204 }
5205 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5206 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5207 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5208 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5209 \def\MakeButtonField#1{%
5210   \sbox0{%
5211     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5212   }%
5213   \@tempdima\ht0 %
5214   \advance\@tempdima by \Fld@borderwidth bp %
5215   \advance\@tempdima by \Fld@borderwidth bp %
5216   \ht0\@tempdima
5217   \@tempdima\dp0 %
5218   \advance\@tempdima by \Fld@borderwidth bp %
5219   \advance\@tempdima by \Fld@borderwidth bp %
5220   \dp0\@tempdima
5221   \box0\relax
5222 }
5223 \def\DefaultHeightofSubmit{14pt}
5224 \def\DefaultWidthofSubmit{2cm}
5225 \def\DefaultHeightofReset{14pt}
5226 \def\DefaultWidthofReset{2cm}
5227 \def\DefaultHeightofCheckBox{\baselineskip}
5228 \def\DefaultWidthofCheckBox{\baselineskip}
5229 \def\DefaultHeightofChoiceMenu{\baselineskip}
5230 \def\DefaultWidthofChoiceMenu{\baselineskip}
5231 \def\DefaultHeightofText{\baselineskip}
5232 \def\DefaultHeightofTextMultiline{4\baselineskip}
5233 \def\DefaultWidthofText{3cm}
5234 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5235 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5236 \def\DefaultOptionsofPushButton{print}
5237 \def\DefaultOptionsofCheckBox{print}
5238 \def\DefaultOptionsofText{print}

Default options for the types of \ChoiceMenu.
5239 \def\DefaultOptionsofListBox{print}
5240 \def\DefaultOptionsofComboBox{print,edit,sort}
5241 \def\DefaultOptionsofPopdownBox{print}

```

```
5242 \def\DefaultOptionsofRadio{print,notoggletooff}
```

20 Setup

```
5243 \ifHy@figures
5244 \Hy@Info{Hyper figures ON}%
5245 \else
5246 \Hy@Info{Hyper figures OFF}%
5247 \fi
5248 \ifHy@nesting
5249 \Hy@Info{Link nesting ON}%
5250 \else
5251 \Hy@Info{Link nesting OFF}%
5252 \fi
5253 \ifHy@hyperindex
5254 \Hy@Info{Hyper index ON}%
5255 \else
5256 \Hy@Info{Hyper index OFF}%
5257 \fi
5258 \ifHy@backref
5259 \Hy@Info{backreferencing ON}%
5260 \else
5261 \Hy@Info{backreferencing OFF}%
5262 \fi
5263 \ifHy@colorlinks
5264 \Hy@Info{Link coloring ON}%
5265 \else
5266 \Hy@Info{Link coloring OFF}%
5267 \fi
5268 \ifHy@ocgcolorlinks
5269 \Hy@Info{Link coloring with OCG ON}%
5270 \else
5271 \Hy@Info{Link coloring with OCG OFF}%
5272 \fi
5273 \ifHy@pdfa
5274 \Hy@Info{PDF/A mode ON}%
5275 \else
5276 \Hy@Info{PDF/A mode OFF}%
5277 \fi
```

21 Low-level utility macros

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

```
5278 \edef\hyper@hash{\string#}
5279 \edef\hyper@tilde{\string~}
5280 \edef\hyper@quote{\string"}
5281 \let\@currentHref\@empty
5282 \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.

```
5283 \Hy@AtBeginDocument{%
5284 \Hy@pdfstringtrue
5285 \PDF@SetupDoc
5286 \let\PDF@SetupDoc\@empty
5287 \Hy@DisableOption{pdfpagescrop}%
```

```

5288 \Hy@DisableOption{pdfpagemode}%
5289 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5290 \Hy@DisableOption{pdfdirection}%
5291 \Hy@DisableOption{pdfviewarea}%
5292 \Hy@DisableOption{pdfviewclip}%
5293 \Hy@DisableOption{pdfprintarea}%
5294 \Hy@DisableOption{pdfprintclip}%
5295 \Hy@DisableOption{pdfprintscaling}%
5296 \Hy@DisableOption{pdfduplex}%
5297 \Hy@DisableOption{pdfpicktraybypdfsize}%
5298 \Hy@DisableOption{pdfprintpagerange}%
5299 \Hy@DisableOption{pdfnumcopies}%
5300 \Hy@DisableOption{pdfstartview}%
5301 \Hy@DisableOption{pdfstartpage}%
5302 \Hy@DisableOption{pdftoolbar}%
5303 \Hy@DisableOption{pdfmenubar}%
5304 \Hy@DisableOption{pdfwindowui}%
5305 \Hy@DisableOption{pdfitwindow}%
5306 \Hy@DisableOption{pdfcenterwindow}%
5307 \Hy@DisableOption{pdfdisplaydoctitle}%
5308 \Hy@DisableOption{pdfpagelayout}%
5309 \Hy@DisableOption{pdflang}%
5310 \Hy@DisableOption{baseurl}%
5311 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5312 \Hy@pdfstringfalse
5313 }

```

Ignore star from referencing macros:

```

5314 \LetLtxMacro\NoHy@OrgRef\ref
5315 \DeclareRobustCommand*{\ref}{-%
5316 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5317 }
5318 \LetLtxMacro\NoHy@OrgPageRef\pageref
5319 \DeclareRobustCommand*{\pageref}{-%
5320 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5321 }

```

22 Localized nullifying of package

Sometimes we just don't want the wretched package interfering with us. Define an environment we can put in manually, or include in a style file, which stops the hypertext functions doing anything. This is used, for instance, in the Elsevier classes, to stop hyperref playing havoc in the front matter.

```

5322 \def\NoHyper{%
5323 \def\hyper@link@[##1]##2##3##4{##4}%
5324 \def\hyper@anchor##1{}%
5325 \global\let\hyper@livelink\hyper@link
5326 \gdef\hyper@link##1##2##3{##3}%
5327 \def\hyper@anchor##1{}%
5328 \def\hyper@anchorstart##1{}%
5329 \let\hyper@anchorend\@empty
5330 \def\hyper@linkstart##1##2{}%
5331 \let\hyper@linkend\@empty
5332 \def\hyper@linkurl##1##2{##1}%
5333 \def\hyper@linkfile##1##2##3{##1}%
5334 \def\hyper@link@[##1]##2##3{}%

```

```

5335 \let\Hy@backout\@gobble
5336 }
5337 \def\stop@hyper{%
5338 \def\hyper@link@{##1}##2##3##4{##4}%
5339 \let\Hy@backout\@gobble
5340 \def\hyper@@anchor##1{%
5341 \def\hyper@link##1##2##3{##3}%
5342 \def\hyper@anchor##1{%
5343 \def\hyper@anchorstart##1{%
5344 \let\hyper@anchorend\@empty
5345 \def\hyper@linkstart##1##2{%
5346 \let\hyper@linkend\@empty
5347 \def\hyper@linkurl##1##2{##1}%
5348 \def\hyper@linkfile##1##2##3{##1}%
5349 \def\hyper@link@{##1}##2##3}%
5350 }
5351 \def\endNoHyper{%
5352 \global\let\hyper@link\hyper@livelink
5353 }
5354 \end{package}

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package nohyperref is a dummy package that defines some low level and some top-level commands. It is done for jadetex, which calls hyperref low-level commands, but it would also be useful with people using normal hyperref, who really do not want the package loaded at all.

Some low-level commands:

```

5355 \*nohyperref
5356 \RequirePackage{letltxmacro}[2008/06/13]
5357 \let\hyper@@anchor\@gobble
5358 \def\hyper@link##1##2##3{##3}%
5359 \let\hyper@anchorstart\@gobble
5360 \let\hyper@anchorend\@empty
5361 \let\hyper@linkstart\@gobbletwo
5362 \let\hyper@linkend\@empty
5363 \def\hyper@linkurl##1##2{##1}%
5364 \def\hyper@linkfile##1##2##3{##1}%
5365 \def\hyper@link@{##1}##2##3}%
5366 \let\PDF@SetupDoc\@empty
5367 \let\PDF@FinishDoc\@empty
5368 \def\nohyperpage##1{##1}

```

Some top-level commands:

```

5369 \def\Acrobatmenu##1##2{\leavevmode##2}
5370 \let\pdfstringdefDisableCommands\@gobbletwo
5371 \let\texorpdfstring\@firstoftwo
5372 \let\pdfbookmark\@undefined
5373 \newcommand\pdfbookmark[3]{}{}
5374 \let\phantomsection\@empty
5375 \let\hypersetup\@gobble
5376 \let\hyperbaseurl\@gobble
5377 \let\href\@gobble
5378 \let\hyperdef\@gobbletwo
5379 \let\hyperlink\@gobble

```

```

5380 \let\hypertarget\@gobble
5381 \def\hyperref{%
5382   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5383 }
5384 \long\def\@gobbleopt[#1]{%
5385 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5386 \LetLtxMacro\NoHy@OrgRef\ref
5387 \DeclareRobustCommand*{\ref}{%
5388   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5389 }
5390 \LetLtxMacro\NoHy@OrgPageRef\pageref
5391 \DeclareRobustCommand*{\pageref}{%
5392   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5393 }
5394 \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}`

```

5395 \package
5396 \Hy@AtBeginDocument{%

```

First the code to deal with removing the hyperref package from a document.

Write some stuff into the aux file so if the next run is done without hyperref, then `\contentsline` and `\newlabel` are defined to cope with the extra arguments.

```

5397 \if@filesw
5398   \ifHy@typexml
5399     \immediate\closeout\@mainaux
5400     \immediate\openout\@mainaux\jobname.aux\relax
5401     \immediate\write\@auxout{<relaxxml>\relax}%
5402   \fi
5403   \immediate\write\@auxout{%
5404     \string\providecommand\string\HyperFirstAtBeginDocument{%
5405       \string\AtBeginDocument}^^J%
5406     \string\HyperFirstAtBeginDocument{%
5407       \string\ifx\string\hyper@anchor\string\@undefined^^J%
5408       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5409       \string\gdef\string\contentsline%
5410         \string#1\string#2\string#3\string#4{%
5411         \string\oldcontentsline%
5412         {\string#1}{\string#2}{\string#3}}^^J%
5413       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5414       \string\gdef\string\newlabel\string#1\string#2{%
5415       \string\newlabelxx{\string#1}\string#2}^^J%
5416       \string\gdef\string\newlabelxx%
5417         \string#1\string#2\string#3\string#4\string#5\string#6{%
5418         \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.

```

5419   \string\AtEndDocument{%
5420     \string\ifx\string\hyper@anchor\string\@undefined^^J%
5421     \string\let\string\contentsline\string\oldcontentsline^^J%

```



```

5422         \string\let\string\newlabel\string\oldnewlabel^^J%
5423         \string\fi%
5424     }^^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.

```

5425     \string\fi%
5426 }^^J%
5427 \string\global\string\let\string\hyper@last\relax^^J%
5428 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5429 }%
5430 \fi
5431 \def\HyperFirstAtBeginDocument#1{#1}%

```

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.

```

5432 \ifx\hyper@last\@undefined
5433 \def\@starttoc#1{%
5434     \begingroup
5435     \makeatletter
5436     \IfFileExists{\jobname.#1}{%
5437         \Hy@WarningNoLine{%
5438             old #1 file detected, not used; run LaTeX again%
5439         }%
5440     }{}%
5441     \if@filesw
5442         \expandafter\newwrite\csname tf@#1\endcsname
5443         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5444     \fi
5445     \@nobreakfalse
5446     \endgroup
5447 }%
5448 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{\}{\}{\}}}%
5449 \fi
5450 }

```

25 Title strings

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

```

5451 \ifHy@usetitle
5452 \let\HyOrg@title\title
5453 \let\HyOrg@author\author
5454 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5455 \def\Hy@scanopttitle[#1]{%
5456     \gdef\Hy@title{#1}%
5457     \HyOrg@title{#1}%
5458 }%
5459 \def\Hy@scantitle#1{%
5460     \gdef\Hy@title{#1}%
5461     \HyOrg@title{#1}%
5462 }%
5463 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%

```

```

5464 \def\Hy@scanoptauthor[#1]{%
5465   \gdef\Hy@author{#1}%
5466   \HyOrg@author{#1}%
5467 }%
5468 \def\Hy@scanauthor#1{%
5469   \gdef\Hy@author{#1}%
5470   \HyOrg@author{#1}%
5471 }%

```

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.

```

5472 \begingroup
5473   \def\process@me#1\@nil#2{%
5474     \expandafter\let\expandafter\x\csname @#2\endcsname
5475     \edef\y{\expandafter\strip@prefix\meaning\x}%
5476     \def\c##1#1##2\@nil{%
5477       \ifx\\##1\\%
5478       \else
5479         \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5480           \expandafter{\x}%
5481       \fi
5482     }%
5483     \expandafter\c\y\relax#1\@nil
5484   }%
5485   \expandafter\process@me\string\@latex@\@nil{title}%
5486   \expandafter\process@me\string\@latex@\@nil{author}%
5487 \endgroup
5488 \fi
5489 \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.

```

5490 \def\Hy@UseMaketitleString#1{%
5491   \ltx@ifundefined{Hy@#1}{-}{%
5492     \begingroup
5493       \let\Hy@saved@hook\pdfstringdefPreHook
5494       \pdfstringdefDisableCommands{%
5495         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
5496         \let\newline\\%
5497       }%
5498       \expandafter\ifx\csname @pdf#1\endcsname\@empty
5499         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5500           \csname Hy@#1\endcsname\@empty
5501         }%
5502       \fi
5503       \global\let\pdfstringdefPreHook\Hy@saved@hook
5504     \endgroup
5505   }%
5506 }
5507 \def\Hy@newline@title#1{ #1}

```

```

5508 \def\Hy@newline@author#1{, #1}
5509 \def\Hy@UseMaketitleInfos{%
5510   \Hy@UseMaketitleString{title}%
5511   \Hy@UseMaketitleString{author}%
5512 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5513 \RequirePackage{atbegshi}[2007/09/09]
5514 \def\Hy@EveryPageHook{}
5515 \def\Hy@EveryPageBoxHook{}
5516 \def\Hy@FirstPageHook{}
5517 \AtBeginShipout{%
5518   \Hy@EveryPageHook
5519   \ifx\Hy@EveryPageBoxHook\@empty
5520   \else
5521     \setbox\AtBeginShipoutBox=\vbox{%
5522       \offinterlineskip
5523       \Hy@EveryPageBoxHook
5524       \box\AtBeginShipoutBox
5525     }%
5526   \fi
5527 }
5528 \AtBeginShipoutFirst{%
5529   \Hy@FirstPageHook
5530 }
5531 \g@addto@macro\Hy@FirstPageHook{%
5532   \PDF@FinishDoc
5533   \gdef\PDF@FinishDoc{}}%
5534 }

```

27.1 PDF /PageLabels

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

```

5535 \ifHy@pagelabels
5536   \begingroup\expandafter\expandafter\expandafter\endgroup
5537   \expandafter\ifx\csname thepage\endcsname\relax
5538     \Hy@pagelabelsfalse
5539     \Hy@WarningNoLine{%
5540       Option 'pdfpagelabels' is turned off\MessageBreak
5541       because \string\thepage\space is undefined%
5542     }%
5543     \csname fi\endcsname
5544     \csname iffalse\expandafter\endcsname
5545   \fi

```

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

```

5546 \def\thispdfpagelabel#1{%
5547   \gdef\HyPL@thisLabel{#1}%
5548 }%
5549 \global\let\HyPL@thisLabel\relax

```

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

```
5550 \def\HyPL@Labels{}%
```

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

```
5551 \newcount\Hy@abspage
```

```
5552 \Hy@abspage=0 %
```

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

```
5553 \def\HyPL@LastType{init}%
```

```
5554 \def\HyPL@LastNumber{0}%
```

```
5555 \def\HyPL@LastPrefix{}%
```

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

```
5556 \def\HyPL@arabic{D}%
```

```
5557 \def\HyPL@Roman{R}%
```

```
5558 \def\HyPL@roman{r}%
```

```
5559 \def\HyPL@Alph{A}%
```

```
5560 \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.

```
5561 \def\HyPL@EveryPage{%
```

```
5562 \begingroup
```

```
5563 \ifx\HyPL@thisLabel\relax
```

```
5564 \let\HyPL@page\thepage
```

```
5565 \else
```

```
5566 \let\HyPL@page\HyPL@thisLabel
```

```
5567 \global\let\HyPL@thisLabel\relax
```

```
5568 \fi
```

```
5569 \let\HyPL@Type\relax
```

```
5570 \ifnum\the\c@page>0 %
```

```
5571 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
```

```
5572 \fi
```

```
5573 \let\Hy@temp Y%
```

```
5574 \ifx\HyPL@Type\HyPL@LastType
```

```
5575 \else
```

```
5576 \let\Hy@temp N%
```

```
5577 \fi
```

```
5578 \ifx\HyPL@Type\relax
```

```
5579 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
```

```
5580 \else
```

```
5581 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
```

```
5582 \fi
```

```
5583 \ifx\HyPL@Prefix\HyPL@LastPrefix
```

```
5584 \else
```

```
5585 \let\Hy@temp N%
```

```
5586 \fi
```

```
5587 \if Y\Hy@temp
```

```
5588 \advance\c@page by -1 %
```

```
5589 \ifnum\HyPL@LastNumber=\the\c@page\relax
```

```
5590 \else
```

```
5591 \let\Hy@temp N%
```

```
5592 \fi
```

```
5593 \Hy@StepCount\c@page
```

```
5594 \fi
```

```
5595 \if N\Hy@temp
```

```
5596 \ifx\HyPL@Type\relax
```

```

5597 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5598 \else
5599 \HyPL@StorePageLabel{%
5600 \ifx\HyPL@Prefix\@empty
5601 \else
5602 /P(\HyPL@Prefix)%
5603 \fi
5604 /S/\csname HyPL\HyPL@Type\endcsname
5605 \ifnum\the\c@page=1 %
5606 \else
5607 \space/St \the\c@page
5608 \fi
5609 }%
5610 \fi
5611 \fi
5612 \xdef\HyPL@LastNumber{\the\c@page}%
5613 \global\let\HyPL@LastType\HyPL@Type
5614 \global\let\HyPL@LastPrefix\HyPL@Prefix
5615 \endgroup
5616 \Hy@GlobalStepCount\Hy@abspage
5617 }%

```

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

```

5618 \def\HyPL@CheckThePage#1\@nil{%
5619 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5620 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in \LaTeX , 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`.

```

5621 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5622 \def\Hy@tempa{#4}%
5623 \def\Hy@tempb{\csname\endcsname\c@page}%
5624 \ifx\Hy@tempa\Hy@tempb
5625 \expandafter\ifx\csname HyPL#3\endcsname\relax
5626 \else
5627 \def\HyPL@Type{#3}%
5628 \def\HyPL@Prefix{#2}%
5629 \fi
5630 \else
5631 \begingroup
5632 \let\Hy@next\endgroup
5633 \let\HyPL@found\@undefined
5634 \def\arabic{\HyPL@Format{arabic}}%
5635 \def\Roman{\HyPL@Format{Roman}}%
5636 \def\roman{\HyPL@Format{roman}}%
5637 \def\Alph{\HyPL@Format{Alph}}%
5638 \def\alph{\HyPL@Format{alph}}%
5639 \protected@edef\Hy@temp{#1}%
5640 \ifx\HyPL@found\relax
5641 \toks@{\expandafter{\Hy@temp}}%
5642 \edef\Hy@next{\endgroup
5643 \noexpand\HyPL@@@CheckThePage\the\toks@
5644 \noexpand\HyPL@found\relax\noexpand\@nil
5645 }%

```

```

5646     \fi
5647     \Hy@next
5648     \fi
5649 }%

```

`\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`.

```

5650 \def\HyPL@Format#1#2{%
5651   \ifx\HyPL@found\@undefined
5652     \expandafter\ifx\csname c@#2\endcsname\c@page
5653       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5654     \else
5655       \expandafter\noexpand\csname#1\endcsname{#2}%
5656     \fi
5657   \else
5658     \expandafter\noexpand\csname#1\endcsname{#2}%
5659   \fi
5660 }%

```

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

```

5661 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5662   \def\Hy@tempa{#3}%
5663   \def\Hy@tempb{\HyPL@found\relax}%
5664   \ifx\Hy@tempa\Hy@tempb
5665     \def\HyPL@Type{#2}%
5666     \def\HyPL@Prefix{#1}%
5667   \fi
5668 }%

```

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

```

5669 \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`.

```

5670 \def\HyPL@Useless{0<</S/D>>}%
5671 \@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.

```

5672 \def\HyPL@SetPageLabels{%
5673   \@onelevel@sanitize\HyPL@Labels
5674   \ifx\HyPL@Labels\@empty
5675   \else
5676     \ifx\HyPL@Labels\HyPL@Useless
5677     \else
5678       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5679     \fi
5680   \fi
5681 }%

```

```

5682 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5683 \fi

```

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

```

5684 \Hy@DisableOption{pdfpagelabels}
5685 </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`

```
5686 <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.

```
5687 <*vTeX>
5688 \providecommand*{\XR@ext}{pdf}
5689 \edef\Hy@VTeXversion{%
5690   \ifx\VTeXversion\@undefined
5691     \z@
5692   \else
5693     \ifx\VTeXversion\relax
5694       \z@
5695     \else
5696       \VTeXversion
5697     \fi
5698   \fi
5699 }
5700 \begingroup
5701   \ifnum\Hy@VTeXversion<660 %
5702     \gdef\Hy@PutCatalog#1{%
5703       \Hy@WarningNoLine{%
5704         VTeX 6.59g or above required for pdfpagelabels%
5705       }%
5706     }%
5707   \else
5708     \gdef\Hy@PutCatalog#1{%
5709       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5710     }%
5711     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5712       \ifx\\#2\\%
5713         \else
5714           \immediate\special{!pdfpagelabels #2}%
5715         \fi
5716       }%
5717     \fi
5718 \endgroup
5719 </vTeX>

5720 <*pdfTeX | vTeX>
```

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

```
5721 \ifHy@pagelabels
5722   \def\HyPL@StorePageLabel#1{%
5723     \toks@\expandafter{\HyPL@Labels}%
5724     \xdef\HyPL@Labels{%
5725       \the\toks@
5726       \the\Hy@abspage<<#1>>%
5727     }%
5728   }%
```

Package `atveryend` is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

5729 \RequirePackage{atveryend}[2009/12/07]%
5730 \AtVeryEndDocument{%
5731   \HyPL@SetPageLabels
5732 }%

5733 \fi
5734 \</pdfTeX | vTeX>

```

27.1.2 xetex

```

5735 <*xetex>
5736 \HyPsd@LoadUnicode
5737 \Hy@unicodetrue
5738 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5739 \else
5740   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5741 \fi
5742 \HyPsd@LoadStringEncoding
5743 \define@key{Hyp}{unicode}[true]{%
5744   \Hy@boolkey{unicode}{#1}%
5745   \ifHy@unicode
5746     \else
5747       \Hy@Warning{%
5748         XeTeX driver only supports 'unicode=true'.\MessageBreak
5749         Ignoring option setting 'unicode=false'%
5750       }%
5751     \Hy@unicodetrue
5752   \fi
5753 }
5754 \define@key{Hyp}{pdfencoding}{%
5755   \edef\HyPsd@temp{#1}%
5756   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5757     \let\HyPsd@pdfencoding\HyPsd@temp
5758   \else
5759     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5760       \let\HyPsd@pdfencoding\HyPsd@temp
5761     \else
5762       \Hy@Warning{%
5763         XeTeX driver only supports\MessageBreak
5764         'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5765         setting 'pdfencoding=\HyPsd@temp'%
5766       }%
5767     \fi
5768   \fi
5769 }
5770 \let\HyXeTeX@CheckUnicode\relax
5771 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5772 <*pdfmarkbase>
5773 \begingroup
5774 \@ifundefined{headerps@out}{}{%
5775   \toks@\expandafter{\Hy@FirstPageHook}%
5776   \xdef\Hy@FirstPageHook{%

```



```

5777 \noexpand\headerps@out{%
5778 systemdict /pdfmark known%
5779 {%
5780 userdict /?pdfmark systemdict /exec get put%
5781 }{%
5782 userdict /?pdfmark systemdict /pop get put %
5783 userdict /pdfmark systemdict /cleartomark get put%
5784 }%
5785 ifelse%
5786 }%
5787 \the\toks@
5788 }%
5789 }%
5790 \endgroup
5791 \</pdfmarkbase>

```

\Hy@PutCatalog

```

5792 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5793 <*pdfmarkbase>
5794 \def\Hy@PutCatalog#1{%
5795 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5796 }
5797 \</pdfmarkbase>

5798 <*pdfmarkbase | dvipdfm | xetex>
5799 \ifHy@pagelabels

```

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

```

5800 \def\HyPL@StorePageLabel#1{%
5801 \if@filesw
5802 \begingroup
5803 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5804 \immediate\write\@mainaux{%
5805 \string\HyPL@Entry{\Hy@tempa}%
5806 }%
5807 \endgroup
5808 \fi
5809 }%

```

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.

```

5810 \Hy@AtBeginDocument{%
5811 \if@filesw
5812 \immediate\write\@mainaux{%
5813 \string\providecommand\string*\string\HyPL@Entry[1]{}%
5814 }%
5815 \fi
5816 \ifx\HyPL@Labels\@empty
5817 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5818 \else
5819 \HyPL@SetPageLabels
5820 \fi
5821 \let\HyPL@Entry\@gobble
5822 }%

```

\HyPL@Entry

```

5823 \def\HyPL@Entry#1{%

```

```

5824 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5825 \HyPL@Labels
5826 #1%
5827 }%
5828 }%

5829 \fi
5830 </pdfmarkbase | dvipdfm | xetex>

5831 <*package>

5832 \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

```

5833 \def\Hy@CounterExists#1{%
5834 \begingroup\expandafter\expandafter\expandafter\endgroup
5835 \expandafter\ifx\csname c@#1\endcsname\relax
5836 \expandafter\@gobble
5837 \else
5838 \begingroup\expandafter\expandafter\expandafter\endgroup
5839 \expandafter\ifx\csname the#1\endcsname\relax
5840 \expandafter\expandafter\expandafter\@gobble
5841 \else
5842 \expandafter\expandafter\expandafter\@firstofone
5843 \fi
5844 \fi
5845 }
5846 \Hy@CounterExists{section}{%
5847 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5848 }
5849 \Hy@CounterExists{part}{%
5850 \newcommand\theHpart{\arabic{part}}}%
5851 }
5852 \ltx@ifundefined{thechapter}{%
5853 \newcommand\theHsection {\arabic{section}}}%
5854 \newcommand\theHfigure {\arabic{figure}}}%
5855 \newcommand\theHtable {\arabic{table}}}%
5856 }{%
5857 \newcommand\theHchapter {\arabic{chapter}}}%

```

```

5858 \newcommand\theHfigure    {\theHchapter.\arabic{figure}}%
5859 \newcommand\theHtable     {\theHchapter.\arabic{table}}%
5860 \newcommand\theHsection    {\theHchapter.\arabic{section}}%
5861 }
5862 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5863 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5864 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
5865 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}
5866 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
5867 \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.

```

5868 \let\H@item\item
5869 \newcounter{Item}
5870 \def\theHItem{\arabic{Item}}
5871 \def\item{%
5872   \@hyper@itemfalse
5873   \if@nmbrlist\@hyper@itemtrue\fi
5874   \H@item
5875 }
5876 \newcommand\theHenumi      {\theHItem}
5877 \newcommand\theHenumii     {\theHItem}
5878 \newcommand\theHenumiii    {\theHItem}
5879 \newcommand\theHenumiv     {\theHItem}
5880 \newcommand\theHHfootnote  {\arabic{Hfootnote}}
5881 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5882 \let\theHHmpfootnote\theHHfootnote

```

Tanmoy asked for this default handling of undefined \theH<name> situations. It really isn't clear what would be ideal, whether to turn off hyperizing of unknown elements, to pick up the textual definition of the counter, or to default it to something like \arabic{name}. We take the latter course, slightly worriedly.

```

5883 \let\H@refstepcounter\refstepcounter
5884 \edef\name@of@eq{equation}%
5885 \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.

```

5886 \newif\if@hyper@item
5887 \newif\if@skiphyperref
5888 \@hyper@itemfalse
5889 \@skiphyperreffalse
5890 \def\refstepcounter#1{%
5891   \ifHy@pdfstring
5892   \else
5893     \H@refstepcounter{#1}%
5894     \edef\This@name{#1}%
5895     \ifx\This@name\name@of@slide
5896     \else
5897       \if@skiphyperref
5898       \else
5899         \if@hyper@item
5900         \stepcounter{Item}%
5901         \hyper@refstepcounter{Item}%
5902         \@hyper@itemfalse
5903       \else

```

```

5904     \hyper@refstepcounter{#1}%
5905     \fi
5906   \fi
5907   \fi
5908   \fi
5909 }

```

AMS \LaTeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

5910 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5911 \def\hyper@refstepcounter#1{%
5912   \edef\This@name{#1}%
5913   \ifx\This@name\name@of@eq
5914     \ifundefined{theHequation}{%
5915       \make@stripped@name{\theequation}%
5916       \let\theHequation\newname
5917     }{}%
5918   \fi
5919   \ifundefined{theH#1}{%
5920     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5921   }{}%
5922   \hyper@makecurrent{#1}%
5923   \ifmeasuring@
5924   \else
5925     \Hy@raisedlink{%
5926       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5927     }%
5928   \fi
5929 }

```

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`.

```

5930 \begingroup\expandafter\expandafter\expandafter\endgroup
5931 \expandafter\ifx\csname chapter\endcsname\relax
5932   \def\Hy@chapterstring{section}%
5933 \else
5934   \def\Hy@chapterstring{chapter}%
5935 \fi
5936 \def\Hy@appendixstring{appendix}
5937 \def\Hy@chapapp{\Hy@chapterstring}
5938 \let\HyOrg@appendix\appendix
5939 \def\appendix{%
5940   \ltx@ifundefined{chapter}%
5941     {\gdef\theHsection{\Alph{section}}}%
5942     {\gdef\theHchapter{\Alph{chapter}}}%
5943   \xdef\Hy@chapapp{\Hy@appendixstring}%
5944   \HyOrg@appendix
5945 }

```

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

```

5946 \def\hyper@makecurrent#1{%
5947   \begingroup
5948   \edef\Hy@param{#1}%
5949   \ifx\Hy@param\Hy@chapterstring
5950     \let\Hy@param\Hy@chapapp
5951   \fi
5952   \ifHy@hypertextnames
5953     \let\@number\@firstofone
5954     \@ifundefined{latin@Alph}{}{%
5955       \ifx\@Alph\greek@Alph
5956         \def\@Alph{Alph\@arabic}%
5957       \fi
5958     }%
5959     \ifx\@Alph\@Alph@bul
5960       \def\@Alph{Alph\@arabic}%
5961     \fi
5962     \ifx\@alph\@alph@bul
5963       \def\@alph{alph\@arabic}%
5964     \fi
5965     \ifHy@naturalnames
5966       \let\textlatin\@firstofone
5967       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
5968     \else
5969       \xdef\HyperGlobalCurrentHref{%
5970         \csname
5971           the%
5972           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5973           #1%
5974         \endcsname
5975       }%
5976     \fi
5977     \xdef\HyperGlobalCurrentHref{%
5978       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
5979     }%
5980   \else
5981     \Hy@GlobalStepCount\Hy@linkcounter
5982     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
5983   \fi
5984 \endgroup
5985 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
5986 \ifHy@localanchorname
5987   \let\@currentHref\HyperLocalCurrentHref
5988 \else
5989   \global\let\@currentHref\HyperGlobalCurrentHref
5990 \fi
5991 }

```

\Hy@MakeCurrentHref

```

5992 \def\Hy@MakeCurrentHref#1{%
5993   \edef\HyperLocalCurrentHref{#1}%
5994   \@onelevel@sanitize\HyperLocalCurrentHref
5995   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
5996   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
5997   \ifHy@localanchorname
5998     \let\@currentHref\HyperLocalCurrentHref
5999   \else
6000     \global\let\@currentHref\HyperGlobalCurrentHref

```

```

6001 \fi
6002 }

```

`\Hy@MakeCurrentHrefAuto`

```

6003 \def\Hy@MakeCurrentHrefAuto#1{%
6004   \Hy@GlobalStepCount\Hy@linkcounter
6005   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6006 }

```

`\@currentHlabel` `\@currentHlabel` is only defined for compatibility with package ‘hypdvips’.

```

6007 \def\@currentHlabel{\@currentHref}

6008 \@ifpackageloaded{fancyvrb}{%
6009   \@ifpackagelater{fancyvrb}{1998/05/20}{%
6010     \def\FV@StepLineNo{%
6011       \FV@SetLineNo
6012       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6013       \FV@StepLineNo
6014     }%
6015   }%
6016 }{}

```

29 Package lastpage support

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

`\lastpage@putlabel`

```

6017 \Hy@AtBeginDocument{%
6018   \@ifclassloaded{revtex4}{%
6019     \@namedef{ver@lastpage.sty}{1994/06/25}%
6020   }{}%
6021   \@ifpackageloaded{lastpage}{%
6022     \ifHy@pageanchor
6023     \else
6024       \Hy@WarningNoLine{%
6025         The \string\pageref{LastPage} link doesn't work\MessageBreak
6026         with disabled option 'pageanchor'%
6027       }%
6028     \fi
6029     \def\lastpage@putlabel{%
6030       \addtocounter{page}{-1}%
6031       \if@filesn
6032         \begingroup
6033         \let\@number\@firstofone
6034         \ifHy@pageanchor
6035           \ifHy@hypertextnames
6036           \ifHy@plainpages
6037             \def\Hy@temp{\arabic{page}}%
6038           \else

```

```

6039         \Hy@unicodedefalse
6040         \pdfstringdef\Hy@temp{\thepage}%
6041     \fi
6042 \else
6043     \def\Hy@temp{\the\Hy@pagecounter}%
6044 \fi
6045 \fi
6046 \immediate\write\@auxout{%
6047     \string\newlabel
6048     {LastPage}{\thepage}{\thepage}%
6049     \ifHy@pageanchor page.\Hy@temp\fi}{}}%
6050 }%
6051 \endgroup
6052 \fi
6053 \addtocounter{page}{1}%
6054 }%
6055 \@ifclassloaded{revtex4}{%
6056     \begingroup
6057     \toks@{\expandafter{\lastpage@putlabel}%
6058     \edef\x{\endgroup
6059     \def\noexpand\lastpage@putlabel{%
6060     \noexpand\stepcounter{page}%
6061     \the\toks@
6062     \noexpand\addtocounter{page}\noexpand\m@ne
6063     }%
6064     }%
6065     \x
6066     }{}%
6067     }{}%
6068 }
6069 \end{package}
6070 \check
6071 \checkpackage{lastpage}[1994/06/25]
6072 \checkcommand\def\lastpage@putlabel{%
6073     \addtocounter{page}{-1}%
6074     \immediate\write\@auxout{%
6075         \string\newlabel{LastPage}{\thepage}{\thepage}%
6076     }%
6077     \addtocounter{page}{1}%
6078 }
6079 \end{check}
6080 \end{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.

```

6081 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
6082 \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:

```

6083 \ifpackageloaded{titlesec}{%
6084   \def\ttl@Hy@steplink#1{%
6085     \Hy@MakeCurrentHrefAuto{#1*}%
6086     \edef\ttl@Hy@saveanchor{%
6087       \noexpand\Hy@raisedlink{%
6088         \noexpand\hyper@anchorstart{\@currentHref}%
6089         \noexpand\hyper@anchorend
6090         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6091         \noexpand\ttl@Hy@PatchSaveWrite
6092       }%
6093     }%
6094   }%
6095   \def\ttl@Hy@PatchSaveWrite{%
6096     \begingroup
6097     \toks@{\expandafter{\ttl@savewrite}%
6098     \edef\x{\endgroup
6099       \def\noexpand\ttl@savewrite{%
6100         \let\noexpand\@currentHref
6101         \noexpand\ttl@Hy@SavedCurrentHref
6102         \the\toks@
6103       }%
6104     }%
6105     \x
6106   }%
6107   \def\ttl@Hy@refstepcounter#1{%
6108     \let\ttl@b\Hy@raisedlink
6109     \def\Hy@raisedlink##1{%
6110       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6111     }%
6112     \refstepcounter{#1}%
6113     \let\Hy@raisedlink\ttl@b
6114   }%
6115 }{}

```

Package titletoc support:

```

6116 \ifpackageloaded{titletoc}{%
6117   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6118 }{}

```

32 Package varioref support

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

```

6119 \def\Hy@varioref@undefined{{?}{?}{-}{-}}
6120 \ifpackageloaded{varioref}{%
6121   \def\vref@pagenum#1#2{%
6122     \ifundefined{r@#2}{%
6123       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6124     }{}%
6125     \edef#1{\getpagerefnumber{#2}}%
6126   }%
6127 }{}

```


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

```

6128 \ifpackageloaded{longtable}{%
6129   \begingroup
6130   \def\y{\LT@array}%
6131   \ifundefined{scr@LT@array}{\def\y{\scr@LT@array}}%
6132   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6133     \expandafter\endgroup
6134     \expandafter\def\y[#1]##2{%
6135       \H@refstepcounter{#1}%
6136       \hyper@makecurrent{table}%
6137       \let\Hy@LT@currentHref\@currentHref
6138       #2\@sharp###4%
6139     }%
6140   }%
6141   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6142 \begingroup
6143 \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
6144   \endgroup
6145   \def\LT@start{%
6146     #1%
6147     \let\@currentHref\Hy@LT@currentHref
6148     \Hy@raisedlink{%
6149       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6150     }%
6151     \ifvoid\LT@firsthead\copy
6152       #2%
6153     }%
6154   }%
6155   \expandafter\x\LT@start\@nil
6156 }{}

```

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.

```

6157 \let\new@refstepcounter\refstepcounter
6158 \let\H@equation\equation
6159 \let\H@endequation\endequation

6160 \ifpackageloaded{amsmath}{%
6161   \long\def\Hy@temp{%
6162     \incr@eqnum
6163     \mathdisplay@push
6164     \st@rredfalse \global\@eqnswtrue
6165     \mathdisplay{equation}%

```

```

6166 }%
6167 \ifx\Hy@temp\equation
6168 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6169 \csname iftrue\endcsname
6170 \else
6171 \long\def\equation{%
6172 \mathdisplay@push
6173 \st@rredfalse \global\@eqnswtrue
6174 \mathdisplay{equation}%
6175 \incr@eqnum
6176 }%
6177 \fi
6178 \fi
6179 }{%
6180 \def\equation{%
6181 \let\refstepcounter\H@refstepcounter
6182 \H@equation
6183 \@ifundefined{theHequation}{%
6184 \make@stripped@name{\theequation}%
6185 \let\theHequation\newname
6186 }{}%
6187 \hyper@makecurrent{equation}%
6188 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6189 \let\refstepcounter\new@refstepcounter
6190 }%
6191 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6192 }

```

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.

```

6193 \newif\if@eqnstar
6194 \@eqnstarfalse
6195 \let\H@eqnarray\eqnarray
6196 \let\H@endeqnarray\endeqnarray
6197 \def\eqnarray{%
6198 \let\Hy@reserved@a\relax
6199 \def\@currentHref{}%
6200 \H@eqnarray
6201 \if@eqnstar
6202 \else
6203 \ifx\\ \@currentHref\\%
6204 \else
6205 \@ifundefined{theHequation}{%
6206 \make@stripped@name{\theequation}%
6207 \let\theHequation\newname
6208 }{}%
6209 \hyper@makecurrent{equation}%
6210 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6211 \fi
6212 \fi
6213 }
6214 \def\endeqnarray{%
6215 \H@endeqnarray
6216 }

```

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.

```
6217 \@namedef{eqnarray*}{%
6218   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
6219 }
6220 \@namedef{endeqnarray*}{%
6221   \nonumber\endeqnarray\@eqnstarfalse
6222 }
```

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

```
6223 \ltx@ifundefined{subeqnarray}{}{%
6224   \let\H@subeqnarray\subeqnarray
6225   \let\H@endsubeqnarray\endsubeqnarray
6226   \def\subeqnarray{%
6227     \let\Hy@reserved@a\relax
6228     \H@subeqnarray
6229     \@ifundefined{theHequation}{%
6230       \make@stripped@name{\theequation}%
6231       \let\theHequation\newname
6232     }{}%
6233     \hyper@makecurrent{equation}%
6234     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6235   }%
6236   \def\endsubeqnarray{%
6237     \H@endsubeqnarray
6238   }%
6239   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6240 }
```

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

```
6241 \def\make@stripped@name#1{%
6242   \begingroup
6243   \escapechar\m@ne
6244   \global\let\newname\@empty
6245   \protected@edef\Hy@tempa{#1}%
6246   \edef\@tempb{%
6247     \noexpand\@tfor\noexpand\Hy@tempa:=%
6248     \expandafter\strip@prefix\meaning\Hy@tempa
6249   }%
6250   \@tempb\do{%
6251     \if{\Hy@tempa\else
6252     \if}\Hy@tempa\else
6253       \xdef\newname{\newname\Hy@tempa}%
6254     \fi
6255   }%
6256   \endgroup
6257 }
```

Support for amsmath's subequations:

```
6259 \begingroup\expandafter\expandafter\expandafter\endgroup
6260 \expandafter\ifx\csname subequations\endcsname\relax
6261 \else
6262   \let\HyOrg@subequations\subequations
6263   \def\subequations{%
6264     \stepcounter{equation}%
6265     \protected@edef\theHparentequation{%
```

```

6266 \ifundefined{theHequation}\theequation\theHequation
6267 }%
6268 \addtocounter{equation}{-1}%
6269 \HyOrg@subequations
6270 \def\theHequation{\theHparentequation\alph{equation}}%
6271 \ignorespaces
6272 }%
6273 \fi

Support for package amsthm (Daniel Müllner):
6274 \ifpackageloaded{amsthm}{%
6275 \def\@thm#1#2#3{%
6276 \ifhmode
6277 \unskip\unskip\par
6278 \fi
6279 \normalfont
6280 \trivlist
6281 \let\thmheadnl\relax
6282 \let\thm@swap\@gobble
6283 \thm@notefont{\fontseries\mddefault\upshape}%
6284 \thm@headpunct{.}% add period after heading
6285 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6286 \thm@space@setup
6287 #1% style overrides
6288 \@topsep \thm@preskip % used by thm head
6289 \@topsepadd \thm@postskip % used by \@endparenv
6290 \def\dth@counter{#2}%
6291 \ifx\@empty\dth@counter
6292 \def\@tempa{%
6293 \@oparg{\@begintheorem{#3}{}}[]%
6294 }%
6295 \else
6296 \H@refstepcounter{#2}%
6297 \hyper@makecurrent{#2}%
6298 \let\Hy@dth@currentHref\@currentHref
6299 \def\@tempa{%
6300 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
6301 }%
6302 \fi
6303 \@tempa
6304 }%
6305 \dth@everypar={%
6306 \@minipagefalse
6307 \global\@newlistfalse
6308 \@noparitemfalse
6309 \if@inlabel
6310 \global\@inlabelfalse
6311 \begingroup
6312 \setbox\z@\lastbox
6313 \ifvoid\z@
6314 \kern-\itemindent
6315 \fi
6316 \endgroup
6317 \ifx\@empty\dth@counter
6318 \else
6319 \Hy@raisedlink{%
6320 \hyper@anchorstart{%
6321 \ltx@ifundefined{Hy@dth@currentHref}%

```

```

6322         \@currentHref\Hy@dth@currentHref
6323     }\hyper@anchorend
6324 }%
6325 \fi
6326 \unhbox\@labels
6327 \fi
6328 \if@nobreak
6329     \@nobreakfalse \clubpenalty\@M
6330 \else
6331     \clubpenalty\@clubpenalty \everypar{}\%
6332 \fi
6333 }%
6334 }{}

```

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.

```

6335 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6336 \ifHy@hyperfootnotes
6337     \newcounter{Hfootnote}%
6338     \let\H@@@footnotetext\@footnotetext
6339     \let\H@@@footnotemark\@footnotemark
6340     \def\@xfootnotenext[#1]{%
6341         \begingroup
6342             \csname c@\@mpfn\endcsname #1\relax
6343         \unrestored@protected@xdef\@thefnmark{\thempfn}%
6344         \endgroup
6345         \ifx\@footnotetext\@mpfootnotetext
6346             \expandafter\H@@@mpfootnotetext
6347         \else
6348             \expandafter\H@@@footnotetext
6349         \fi
6350     }%
6351     \def\@xfootnotemark[#1]{%
6352         \begingroup
6353             \c@footnote #1\relax
6354         \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6355         \endgroup
6356         \H@@@footnotemark
6357     }%
6358     \let\H@@@mpfootnotetext\@mpfootnotetext
6359     \long\def\@mpfootnotetext#1{%
6360         \H@@@mpfootnotetext{%
6361             \ifHy@nesting
6362                 \expandafter\hyper@@@anchor\expandafter{%
6363                     \Hy@footnote@currentHref
6364                 }\{#1}%
6365             \else
6366                 \Hy@raisedlink{%
6367                     \expandafter\hyper@@@anchor\expandafter{%
6368                         \Hy@footnote@currentHref
6369                     }\{relax}%

```

```

6370     }#1%
6371     \fi
6372   }%
6373 }%
6374 \long\def\@footnotetext#1{%
6375   \H@@footnotetext{%
6376     \ifHy@nesting
6377       \expandafter\hyper@@anchor\expandafter{%
6378         \Hy@footnote@currentHref
6379       }{#1}%
6380     \else
6381       \Hy@raisedlink{%
6382         \expandafter\hyper@@anchor\expandafter{%
6383           \Hy@footnote@currentHref
6384         }{\relax}%
6385       }%
6386       \let\@currentHref\Hy@footnote@currentHref
6387       \let\@currentlabelname\@empty
6388       #1%
6389     \fi
6390   }%
6391 }%

```

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.

```

6392 \def\@footnotemark{%
6393   \leavevmode
6394   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6395   \stepcounter{Hfootnote}%
6396   \global\let\Hy@saved@currentHref\@currentHref
6397   \hyper@makecurrent{Hfootnote}%
6398   \global\let\Hy@footnote@currentHref\@currentHref
6399   \global\let\@currentHref\Hy@saved@currentHref
6400   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6401   \@makefnmark
6402   \hyper@linkend
6403   \ifhmode\spacefactor\@x@sf\fi
6404   \relax
6405 }%

```

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

```

6406 \ifpackageloaded{longtable}{%
6407   \CheckCommand*\LT@p@ftntext}[1]{%
6408     \edef\@tempa{%
6409       \the\LT@p@ftn
6410       \noexpand\footnotetext[\the\c@footnote]%
6411     }%
6412     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6413   }%
6414   \long\def\LT@p@ftntext#1{%
6415     \edef\@tempa{%
6416       \the\LT@p@ftn
6417       \begingroup

```

```

6418 \noexpand\c@footnote=\the\c@footnote\relax
6419 \noexpand\protected@xdef
6420 \noexpand\@thefnmark{\noexpand\thempfn}%
6421 \noexpand\protected@xdef\noexpand\@thefnmark{%
6422 \noexpand\thempfn
6423 }%
6424 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6425 \expandafter{%
6426 \Hy@footnote@currentHref
6427 }%
6428 }%
6429 \global\LT@p@ftn\expandafter{%
6430 \@tempa{#1}%
6431 \endgroup
6432 }%
6433 }%
6434 \long\def\Hy@LT@footnotetext#1#2{%
6435 \H@@@footnotetext{%
6436 \ifHy@nesting
6437 \hyper@@@anchor{#1}{#2}%
6438 \else
6439 \Hy@raisedlink{%
6440 \hyper@@@anchor{#1}{\relax}%
6441 }%
6442 \def\@currentHref{#1}%
6443 \let\@currentlabelname\@empty
6444 #2%
6445 \fi
6446 }%
6447 }%
6448 }{}%

```

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

```

6449 \@ifpackageloaded{fancyvrb}{%
6450 \def\V@@@footnotetext{%
6451 \insert\footins\bgroup
6452 \csname reset@font\endcsname
6453 \footnotesize
6454 \interlinepenalty\interfootnotelinepenalty
6455 \splittopskip\footnotesep
6456 \splitmaxdepth\dp\strutbox
6457 \floatingpenalty \@MM
6458 \hsize\columnwidth
6459 \@parboxrestore
6460 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6461 \@makefnmark{}%
6462 \rule{\z@}{\footnotesep}%
6463 \bgroup
6464 \aftergroup\V@@@footnotetext
6465 \Hy@raisedlink{%
6466 \expandafter\hyper@@@anchor\expandafter{%
6467 \Hy@footnote@currentHref
6468 }{\relax}%
6469 }%
6470 \let\@currentHref\Hy@footnote@currentHref
6471 \let\@currentlabelname\@empty
6472 \ignorespaces
6473 }%

```

```
6474 }{}%
```

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

```
6475 \def\Hy@temp#1{%
6476   \begingroup
6477   \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6478   \endgroup
6479   \@footnotemark
6480 }%
6481 \ifx\Hy@temp\footref
6482   \def\footref#1{%
6483     \begingroup
6484     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6485     \endgroup
6486     \H@@@footnotemark
6487   }%
6488   \fi
```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```
6489 \let\HyOrg@maketitle\maketitle
6490 \def\maketitle{%
6491   \let\Hy@saved@footnotemark\@footnotemark
6492   \let\Hy@saved@footnotetext\@footnotetext
6493   \let\@footnotemark\H@@@footnotemark
6494   \let\@footnotetext\H@@@footnotetext
6495   \@ifnextchar[\Hy@maketitle@optarg{% ]
6496     \HyOrg@maketitle
6497     \Hy@maketitle@end
6498   }%
6499 }%
6500 \def\Hy@maketitle@optarg[#1]{%
6501   \HyOrg@maketitle[{#1}]%
6502   \Hy@maketitle@end
6503 }%
6504 \def\Hy@maketitle@end{%
6505   \ifx\@footnotemark\H@@@footnotemark
6506     \let\@footnotemark\Hy@saved@footnotemark
6507   \fi
6508   \ifx\@footnotetext\H@@@footnotetext
6509     \let\@footnotetext\Hy@saved@footnotetext
6510   \fi
6511 }%
```

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

```
6512 \def\realfootnote{%
6513   \@ifnextchar[\@xfootnote{%
6514     \stepcounter{\@mpfn}%
6515     \protected@xdef\@thefnmark{\thempfn}%
6516     \H@@@footnotemark\H@@@footnotetext
6517   }%
6518 }%
6519 \fi
6520 \Hy@DisableOption{hyperfootnotes}
6521 \</package>
6522 \< *check>
```



```

6523 \checklatex
6524 \checkcommand\def\@xfootnotenext[#1]{%
6525   \begingroup
6526     \csname c@\@mpfn\endcsname #1\relax
6527     \unrestored@protected@xdef\@thefnmark{\thempfn}%
6528   \endgroup
6529   \@footnotetext
6530 }
6531 \checkcommand\def\@xfootnotemark[#1]{%
6532   \begingroup
6533     \c@footnote #1\relax
6534     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6535   \endgroup
6536   \@footnotemark
6537 }
6538 \checkcommand\def\@footnotemark{%
6539   \leavevmode
6540   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6541   \@makefnmark
6542   \ifhmode\spacefactor\@x@sf\fi
6543   \relax
6544 }
6545 \end{check}
6546 \end{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.

```

6547 \def\caption{%
6548   \ifx\@capttype\@undefined
6549     \@latex@error{\noexpand\caption outside float}\@ehd
6550     \expandafter\@gobble
6551   \else
6552     \H@refstepcounter\@capttype
6553     \let\Hy@tempa\@caption
6554     \ifundefined{float@caption}{%
6555       }{%
6556         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6557           \float@caption
6558         \let\Hy@tempa\Hy@float@caption
6559       \fi
6560     }%
6561     \expandafter\@firstofone
6562   \fi
6563   {\@dblarg{\Hy@tempa\@capttype}}%
6564 }
6565 \long\def\@caption#1[#2]#3{%
6566   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6567     \csname iftrue\endcsname
6568     \global\let\@currentHref\hc@currentHref
6569   \else
6570     \hyper@makecurrent{\@capttype}%
6571   \fi
6572   \@ifundefined{NR@gettitle}{%
6573     \def\@currentlabelname{#2}%

```

```

6574 }{%
6575   \NR@gettitle{#2}%
6576 }%
6577 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6578   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6579 }%
6580 \begingroup
6581   \@parboxrestore
6582   \if@minipage
6583     \setminipage
6584   \fi
6585   \normalsize
6586   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6587     \csname iftrue\endcsname
6588     \global\@capstartfalse
6589     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6590   \else
6591     \makecaption{\csname fnum@#1\endcsname}{%
6592       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6593   \ifHy@nesting
6594     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6595   \else
6596     \Hy@raisedlink{%
6597       \expandafter\hyper@@anchor\expandafter{%
6598         \@currentHref
6599       }\relax}%
6600   }%
6601   #3%
6602 \fi
6603 }%
6604 \fi
6605 \par
6606 \endgroup
6607 }

```

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.

```

6608 \let\Hy@float@caption\@caption
6609 \ifpackageloaded{float}{%
6610   \def\Hy@float@caption{%
6611     \ifx\Hy@float@currentHref\@undefined
6612       \hyper@makecurrent{\@capytype}%
6613       \global\let\Hy@float@currentHref\@currentHref
6614     \else
6615       \let\@currentHref\Hy@float@currentHref
6616     \fi
6617     \float@caption
6618   }%
6619   \let\HyOrg@float@makebox\float@makebox
6620   \renewcommand{\float@makebox}[1]{%
6621     \HyOrg@float@makebox{%
6622       #1\relax
6623     \ifx\Hy@float@currentHref\@undefined
6624     \else
6625       \expandafter\hyper@@anchor\expandafter{%
6626         \Hy@float@currentHref

```

```

6627     }\relax}%
6628     \global\let\Hy@float@currentHref\@undefined
6629     \fi
6630   }%
6631 }%
6632 }{}

6633 \end{package}
6634 \ifcheck
6635 \checklatex[1999/06/01 - 2000/06/01]
6636 \checkcommand\def\caption{%
6637   \ifx\@capytype\@undefined
6638     \latexerror{\noexpand\caption outside float}\@ehd
6639     \expandafter\@gobble
6640   \else
6641     \refstepcounter\@capytype
6642     \expandafter\@firstofone
6643   \fi
6644   {\@dblarg{\@caption\@capytype}}%
6645 }
6646 \checkcommand\long\def\@caption#1[#2]#3{%
6647   \par
6648   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6649     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6650   }%
6651   \begingroup
6652     \@parboxrestore
6653     \if@minipage
6654       \setminipage
6655     \fi
6656     \normalize
6657     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6658   \endgroup
6659 }
6660 \end{check}
6661 \end{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.

```

6662 \def\hyper@natlinkstart#1{%
6663   \Hy@backout{#1}%
6664   \hyper@linkstart{cite}{cite.#1}%
6665   \def\hyper@nat@current{#1}%
6666 }
6667 \def\hyper@natlinkend{%
6668   \hyper@linkend
6669 }
6670 \def\hyper@natlinkbreak#1#2{%

```

```

6671 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6672 }
6673 \def\hyper@natanchorstart#1{%
6674 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6675 }
6676 \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.

```

6677 \ltx@ifundefined{NAT@parse}{%
6678 \providecommand*\@extra@binfo{%
6679 \providecommand*\@extra@b@citeb{%
6680 \def\bibcite#1#2{%
6681 \@newl@bel{b}{#1\@extra@binfo}{%
6682 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6683 }%
6684 }%
6685 \gdef\@extra@binfo{%

```

Package babel redefines \bibcite with macro \bbl@cite@choice. It needs to be over-written to avoid the warning “Label(s) may have changed.”.

```

6686 \let\Hy@bibcite\bibcite
6687 \begingroup
6688 \@ifundefined{bbl@cite@choice}{%
6689 \g@addto@macro\bbl@cite@choice{%
6690 \let\bibcite\Hy@bibcite
6691 }%
6692 }%
6693 \endgroup

```

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

```

6694 \providecommand*\@BIBLABEL{\@biblabel}%
6695 \def\@bibitem[#1]#2{%
6696 \@skiphyperrtrue
6697 \H@item{%
6698 \ifx\Hy@raisedlink\@empty
6699 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6700 \@BIBLABEL{#1}%
6701 \hyper@anchorend
6702 \else
6703 \Hy@raisedlink{%
6704 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6705 }%
6706 \@BIBLABEL{#1}%
6707 \fi
6708 \hfill
6709 ]%
6710 \@skiphyperrfalse
6711 \if@filesw
6712 \begingroup
6713 \let\protect\noexpand
6714 \immediate\write\@auxout{%
6715 \string\bibcite{#2}{#1}%
6716 }%
6717 \endgroup
6718 \fi

```

```

6719 \ignorespaces
6720 }%

```

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

```

6721 \def\@bibitem#1{%
6722   \@skiphyperreftrue\H@item\@skiphyperreffalse
6723   \Hy@raisedlink{%
6724     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6725   }%
6726   \if@filesw
6727     \begingroup
6728       \let\protect\noexpand
6729       \immediate\write\@auxout{%
6730         \string\bibcite{#1}{\the\value{\@listctr}}}%
6731       }%
6732     \endgroup
6733   \fi
6734   \ignorespaces
6735 }%
6736 }{}

6737 </package>
6738 <*check>
6739 \checklatex
6740 \checkcommand\def\@lbibitem[#1]#2{%
6741   \item[\@biblabel{#1}\hfill]%
6742   \if@filesw
6743     {%
6744       \let\protect\noexpand
6745       \immediate\write\@auxout{%
6746         \string\bibcite{#2}{#1}%
6747       }%
6748     }%
6749   \fi
6750   \ignorespaces
6751 }
6752 \checkcommand\def\@bibitem#1{%
6753   \item
6754   \if@filesw
6755     \immediate\write\@auxout{%
6756       \string\bibcite{#1}{\the\value{\@listctr}}}%
6757     }%
6758   \fi
6759   \ignorespaces
6760 }
6761 </check>
6762 <*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.

```

6763 \@ifclassloaded{revtex}{%
6764   \Hy@Info{*** compatibility with revtex **** }%
6765   \def\revtex@checking#1#2{%
6766     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6767     \expandafter\def\csname b@#1\endcsname{#2}%
6768     \@SetMaxRnhfLabel{#1}%

```

```

6769 \expandafter\let\csname b@#1\endcsname\T@temp
6770 }%

```

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

```

6771 \ifundefined{@CITE}{\def\CITE{\@cite}}}%
6772 \providecommand*{\@extra@b@citeb}{}%
6773 \def\CITEX[#1]#2{%
6774   \let\@citea\@empty
6775   \leavevmode
6776   \unskip
6777   $~{%
6778     \scriptstyle
6779     \@CITE{%
6780       \@for\@citeb:=#2\do{%
6781         \@citea
6782         \def\@citea{,\penalty\@m\ }%
6783         \edef\@citeb{\expandafter\@firstofone\@citeb}%
6784         \if@filesw
6785           \immediate\write\@auxout{\string\citation{\@citeb}}%
6786         \fi
6787         \ifundefined{b@\@citeb\extra@b@citeb}{%
6788           \mbox{\reset@font\bfseries ?}%
6789           \G@refundefinedtrue
6790           \@latex@warning{%
6791             Citation '\@citeb' on page \thepage \space undefined%
6792           }%
6793         }{%
6794           {\csname b@\@citeb\extra@b@citeb\endcsname}%
6795         }%
6796       }%
6797     }{#1}%
6798   }$%
6799 }%

```

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.

```

6800 \def\@citex[#1]#2{%
6801   \let\@citea\@empty
6802   \@cite{%
6803     \@for\@citeb:=#2\do{%
6804       \@citea
6805       \def\@citea{,\penalty\@m\ }%
6806       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6807       \if@filesw
6808         \immediate\write\@auxout{\string\citation{\@citeb}}%
6809       \fi
6810       \ifundefined{b@\@citeb\extra@b@citeb}{%
6811         \mbox{\reset@font\bfseries ?}%
6812         \G@refundefinedtrue
6813         \@latex@warning{%
6814           Citation '\@citeb' on page \thepage \space undefined%
6815         }%
6816       }{%
6817         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6818       }%
6819     }{#1}%
6820   }%

```

```

6821 }%
6822 }{}

```

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.

```

6823 \ifpackageloaded{harvard}{%
6824   \Hy@AtBeginDocument{%
6825     \Hy@Info{*** compatibility with harvard **** }%
6826     \Hy@raiselinksfalse
6827     \def\harvardcite#1#2#3#4{%
6828       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
6829       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
6830       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
6831       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6832     }%
6833     \def\HAR@citetoaux#1{%
6834       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6835       \ifHy@backref
6836         \ifx\@empty\@currentlabel
6837           \else
6838             \@bsphack
6839             \if@filesw
6840               \protected@write\@auxout{}{%
6841                 \string\@writefile{brf}{%
6842                   \string\backcite{#1}{%
6843                     {\thepage}{\@currentlabel}{\@currentHref}}%
6844                 }%
6845               }%
6846             }%
6847           \fi
6848         \@esphack
6849       \fi
6850     }%
6851   }%
6852   \def\harvarditem{%
6853     \ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
6854   }%
6855   \def\@harvarditem[#1]#2#3#4#5\par{%
6856     \item[]%
6857     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6858     \if@filesw
6859       \begingroup
6860       \def\protect##1{\string ##1\space}%
6861       \ifthenelse{\equal{#1}{\null}}{%
6862         {\def\next{{#4}{#2}{#3}}}%
6863         {\def\next{{#4}{#2}{#1}{#3}}}%
6864       \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6865       \endgroup
6866     \fi
6867     \protect\hspace*{-\labelwidth}%

```

```

6868 \protect\hspace*{-\labelsep}%
6869 \ignorespaces
6870 #5%
6871 \ifHy@backref
6872 \newblock
6873 \backref{\csname br@#4\endcsname}%
6874 \fi
6875 \par
6876 }%

```

\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:

```

6877 \long\def\HAR@checkcitations#1#2#3#4{%
6878 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6879 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6880 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6881 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6882 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6883 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6884 \else
6885 \@tempswatrue
6886 \fi
6887 \else
6888 \@tempswatrue
6889 \fi
6890 \else
6891 \@tempswatrue
6892 \fi
6893 }%
6894 }%
6895 }{}

```

37.2 Package chicago

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

```

6896 \@ifpackageloaded{chicago}{%

```

\citeN

```

6897 \def\citeN{%
6898 \def\@citeseppen{-1000}%
6899 \def\@cite##1##2{##1}%
6900 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6901 \@citedata@opt
6902 }%

```

\shortciteN

```

6903 \def\shortciteN{%
6904 \def\@citeseppen{-1000}%
6905 \def\@cite##1##2{##1}%
6906 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6907 \@citedata@opt
6908 }%

```


\@citedata@opt

```
6909 \def\@citedata@opt{%
6910   \let\@cite@opt\@empty
6911   \ifnextchar [{%
6912     \@tempswatrue
6913     \@citedatax@opt
6914   }{%
6915     \@tempswafalse
6916     \@citedatax[]%
6917   }%
6918 }%
```

\@citedatax@opt

```
6919 \def\@citedatax@opt[#1]{%
6920   \def\@cite@opt{, #1}%
6921   \@citedatax[{#1}]%
6922 }%

6923 }{}
```

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.

```
6924 \def\Hy@EveryPageAnchor{%
6925   \Hy@DistillerDestFix
6926   \ifHy@pageanchor
6927     \ifHy@hypertextnames
6928       \ifHy@plainpages
6929         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6930       \else
6931         \begingroup
6932           \let\@number\@firstofone
6933           \Hy@unicodfalse
6934           \pdfstringdef\@the@H@page{\thepage}%
6935         \endgroup
6936         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6937       \fi
6938     \else
6939       \Hy@GlobalStepCount\Hy@pagecounter
6940       \def\Hy@TempPageAnchor{%
6941         \hyper@@anchor{page.\the\Hy@pagecounter}%
6942       }%
6943     \fi
6944   \vbox to 0pt{%
6945     \kern\hoffset
6946     \kern\topmargin
6947     \kern-1bp\relax
6948     \hbox to 0pt{%
6949       \kern\hoffset
6950       \kern\ifodd\value{page}%

```

```

6951         \oddsidemargin
6952     \else
6953         \evensidemargin
6954     \fi
6955     \kern-1bp\relax
6956     \Hy@TempPageAnchor
6957     \hss
6958 }%
6959 \vss
6960 }%
6961 \fi
6962 }
6963 \g@addto@macro\Hy@EveryPageBoxHook{%
6964     \Hy@EveryPageAnchor
6965 }

```

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.

```

6966 \def\addcontentsline#1#2#3{% toc extension, type, tag
6967     \begingroup
6968     \let\label\@gobble
6969     \ifx\@currentHref\@empty
6970         \Hy@Warning{%
6971             No destination for bookmark of \string\addcontentsline,%
6972             \MessageBreak destination is added%
6973         }%
6974         \phantomsection
6975     \fi
6976     \expandafter\ifx\csname toplevel@#2\endcsname\relax
6977         \begingroup
6978         \def\Hy@tempa{#1}%
6979         \ifx\Hy@tempa\Hy@bookmarkstype
6980             \Hy@WarningNoLine{%
6981                 bookmark level for unknown #2 defaults to 0%
6982             }%
6983         \else
6984             \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6985         \fi
6986     \endgroup
6987     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6988     \fi
6989     \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
6990     \Hy@writebookmark{\csname the#2\endcsname}%
6991         {#3}%
6992         {\@currentHref}%
6993         {\Hy@toclevel}%
6994         {#1}%
6995     \ifHy@verbose
6996         \begingroup
6997         \def\Hy@tempa{#3}%
6998         \@onelevel@sanitize\Hy@tempa
6999         \let\temp@online\on@line
7000         \let\on@line\@empty

```

```

7001 \Hy@Info{%
7002   bookmark\temp@online:\MessageBreak
7003   thecounter {\csname the#2\endcsname}\MessageBreak
7004   text {\Hy@tempa}\MessageBreak
7005   reference {\@currentHref}\MessageBreak
7006   toplevel {\Hy@toclevel}\MessageBreak
7007   type {#1}%
7008 }%
7009 \endgroup
7010 \fi
7011 \addtocontents{#1}{%
7012   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7013 }%
7014 \endgroup
7015 }
7016 \def\contentsline#1#2#3#4{%
7017   \ifx\#4\%
7018     \csname l@#1\endcsname{#2}{#3}%
7019   \else
7020     \ifcase\Hy@linktoc % none
7021       \csname l@#1\endcsname{#2}{#3}%
7022     \or % section
7023       \csname l@#1\endcsname{%
7024         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7025       }{#3}%
7026     \or % page
7027       \csname l@#1\endcsname{#2}{#3}%
7028       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7029     }%
7030   \else % all
7031     \csname l@#1\endcsname{%
7032       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7033     }{#3}%
7034     \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7035   }%
7036 \fi
7037 \fi
7038 }
7039 \end{package}
7040 \end{check}
7041 \checklatex
7042 \checkcommand\def\addcontentsline#1#2#3{%
7043   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7044 }
7045 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7046 \end{check}
7047 \end{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.

```

7048 \let\H@definecounter\@definecounter
7049 \def\@definecounter#1{%
7050   \H@definecounter{#1}%
7051   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%

```

```
7052 }
```

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.

```
7053 \let\H@newctr\@newctr
7054 \def\@newctr#1[#2]{%
7055   \H@newctr#1[#2]}%
7056 \expandafter\def\csname theH#1\endcsname{%
7057   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
7058 }%
7059 }
```

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.

```
7060 \ifpackageloaded{amsmath}{%
7061   \def\Hy@make@anchor{%
7062     \Hy@MakeCurrentHrefAuto{AMS}%
7063     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7064   }%
7065   \def\Hy@make@df@tag@@#1{%
7066     \gdef\df@tag{%
7067       \maketag@@@{\Hy@make@anchor#1}%
7068       \def\@currentlabel{#1}%
7069     }%
7070   }%
7071   \def\Hy@make@df@tag@@@#1{%
7072     \gdef\df@tag{%
7073       \tagform@{\Hy@make@anchor#1}%
7074       \toks@\xp{\p@equation{#1}}%
7075       \edef\@currentlabel{the\toks@}%
7076     }%
7077   }%
7078   \let\HyOrg@make@df@tag@@\make@df@tag@@
7079   \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
7080   \let\make@df@tag@@\Hy@make@df@tag@@
7081   \let\make@df@tag@@@ \Hy@make@df@tag@@@
7082 }{}
```

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

```
7083 \ifpackagewith{hyperref}{pdftex}{%
7084   \let\H@seteqlabel\@seteqlabel
7085   \def\@seteqlabel#1{%
7086     \H@seteqlabel{#1}%
7087     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7088     \Hy@raisedlink{%
7089       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7090     }%
7091   }%
7092 }{}
```

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.

```
7093 \let\HyOrg@addtoreset\@addtoreset
7094 \def\@addtoreset#1#2{%
7095   \HyOrg@addtoreset{#1}{#2}%
7096   \expandafter\xdef\csname theH#1\endcsname{%
7097     \expandafter\noexpand
7098       \csname the\@ifundefined{theH#2}{H#2\endcsname
7099       .\noexpand\the\noexpand\value{#1}}%
7100   }%
7101 }
```

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

```
7102 </package>
7103 <*check>
7104 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7105 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7106   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7107     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7108       \@addtoreset{#2}{#3}%
7109       \@xp\xdef\csname the#2\endcsname{%
7110         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7111       }%
7112     }%
7113   }%
7114 }%
7115 </check>
7116 <*package>
7117 \ifpackageloaded{amsmath}{%
7118   \ifpackagelater{amsmath}{1999/12/14}{%
7119     \renewcommand*\numberwithin[3][\arabic]{%
7120       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7121         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7122           \HyOrg@addtoreset{#2}{#3}%
7123           \@xp\xdef\csname the#2\endcsname{%
7124             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7125           }%
7126           \@xp\xdef\csname theH#2\endcsname{%
7127             \@xp\@nx
7128             \csname the\@ifundefined{theH#3}{H#3\endcsname
7129             .\@nx#1{#2}%
7130           }%
7131         }%
7132       }%
7133     }%
7134   }%
7135 }
```

```

7132 }%
7133 }%
7134 }{%
7135 \Hy@WarningNoLine{%
7136 \string\numberwithin\space of package ‘amsmath’ %
7137 only fixed\MessageBreak
7138 for version 2000/06/06 v2.12 or newer%
7139 }%
7140 }%
7141 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7142 \ifHy@figures
7143 \let\Hy@Gin@setfile\Gin@setfile
7144 \def\Gin@setfile#1#2#3{%
7145 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7146 }%
7147 \fi
7148 \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.

```

7149 \ifHy@hyperindex
7150 \def\HyInd@ParenLeft{(%
7151 \def\HyInd@ParenRight{)%
7152 \def\hyperindexformat#1#2{%
7153 \let\HyOrg@hyperpage\hyperpage
7154 \let\hyperpage\@firstofone
7155 #1{\HyOrg@hyperpage{#2}}%
7156 \let\hyperpage\HyOrg@hyperpage
7157 }%
7158 \Hy@nextfalse
7159 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7160 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7161 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7162 \begingroup
7163 \lccode‘\|=\expandafter‘\HyInd@EncapChar\relax
7164 \lccode‘\/=‘\\relax
7165 \lowercase{\endgroup
7166 \ifHy@next
7167 \let\HyInd@org@wrindex\@wrindex
7168 \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2}||\}%
7169 \def\HyInd@@wrindex#1#2|#3|#4\{\%

```

```

7170 \ifx\#3\%
7171 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7172 \else
7173 \HyInd@@@wrindex{#1}{#2}#3\%
7174 \fi
7175 }%
7176 \def\HyInd@@@wrindex#1#2#3#4\%
7177 \def\Hy@temp@A{#3}%
7178 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7179 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7180 \relax
7181 \HyInd@org@wrindex{#1}{%
7182 #2|hyperindexformat{/#3#4}%
7183 }%
7184 \else
7185 \ifx\#4\%
7186 \ifx\Hy@temp@A\HyInd@ParenRight
7187 \HyInd@org@wrindex{#1}{#2|#3}%
7188 \else
7189 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7190 \fi
7191 \else
7192 \HyInd@org@wrindex{#1}{%
7193 #2|#3hyperindexformat{/#4}%
7194 }%
7195 \fi
7196 \fi
7197 }%
7198 \else
7199 \def\@wrindex#1{\@wrindex#1||\}%
7200 \def\@wrindex#1|#2|#3\%
7201 \if@filesw
7202 \ifx\#2\%
7203 \protected@write\@indexfile{}\%
7204 \string\indexentry{#1|hyperpage}{\thepage}%
7205 }%
7206 \else
7207 \HyInd@@@wrindex{#1}#2\%
7208 \fi
7209 \fi
7210 \endgroup
7211 \@esphack
7212 }%
7213 \def\HyInd@@@wrindex#1#2#3\%
7214 \def\Hy@temp@A{#2}%
7215 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7216 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7217 \relax
7218 \protected@write\@indexfile{}\%
7219 \string\indexentry{%
7220 #1|hyperindexformat{/#2#3}%
7221 }{\thepage}%
7222 }%
7223 \else
7224 \ifx\#3\%
7225 \ifx\Hy@temp@A\HyInd@ParenRight
7226 \protected@write\@indexfile{}\%

```

```

7227         \string\indexentry{#1|#2}{\thepage}%
7228     }%
7229     \else
7230         \protected@write\@indexfile{}{%
7231             \string\indexentry{#1|#2hyperpage}{\thepage}%
7232         }%
7233     \fi
7234     \else
7235         \protected@write\@indexfile{}{%
7236             \string\indexentry{%
7237                 #1|#2hyperindexformat{/#3}%
7238             }{\thepage}%
7239         }%
7240     \fi
7241 \fi
7242 }%
7243 \fi
7244 }%
7245 \fi
7246 \Hy@DisableOption{hyperindex}
7247 \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.

```

7248 \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.

```

7249 \def\hyperpage#1{%
7250     \HyInd@hyperpage#1\nohyperpage{}\@nil
7251 }
7252 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7253     \HyInd@@hyperpage{#1}%
7254     #2%
7255     \def\Hy@temp{#3}%
7256     \ifx\Hy@temp\@empty
7257     \else
7258         \Hy@ReturnAfterFi{%
7259             \HyInd@hyperpage#3\@nil
7260         }%
7261     \fi
7262 }
7263 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7264 \def\@hyperpage#1--#2--#3\{\{%
7265     \ifx\#2\%
7266         \@commahyperpage{#1}%
7267     \else
7268         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7269     \fi
7270 }
7271 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7272 \def\@commahyperpage#1, #2,#3\{\{%
7273     \ifx\#2\%
7274         \HyInd@pagelink{#1}%
7275     \else
7276         \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7277     \fi

```


7278 }

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

```

7279 \def\HyInd@pagelink#1{%
7280   \begingroup
7281   \toks@={}%
7282   \HyInd@removespaces#1 \@nil
7283   \endgroup
7284 }
7285 \def\HyInd@removespaces#1 #2\@nil{%
7286   \toks@=\expandafter{\the\toks@#1}%
7287   \ifx\#2\%
7288     \edef\x{\the\toks@}%
7289     \ifx\x\@empty
7290       \else
7291         \hyperlink{page.\the\toks@}{\the\toks@}%
7292         \fi
7293       \else
7294         \Hy@ReturnAfterFi{%
7295           \HyInd@removespaces#2\@nil
7296         }%
7297       \fi
7298 }

```

44 Compatibility with foiltex

```

7299 \@ifclassloaded{foils}{%
7300   \providecommand*\ext@table{lot}%
7301   \providecommand*\ext@figure{lof}%
7302 }{}

```

45 Compatibility with seminar slide package

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

```

7303 \@ifclassloaded{seminar}{%
7304   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
7305 }{%
7306   \Hy@seminarslidesfalse
7307 }
7308 \@ifpackageloaded{slidesec}{%
7309   \newcommand\theHslidesection {\arabic{slidesection}}%
7310   \newcommand\theHslidesubsection{%
7311     \theHslidesection.\arabic{slidesubsection}%
7312   }%
7313   \def\slide@heading[#1]#2{%
7314     \H@refstepcounter{slidesection}%
7315     \@addtoreset{slidesubsection}{slidesection}%
7316     \addtocontents{los}{%
7317       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7318       {\@SCTR}{slideheading.\theslidesection}%
7319     }%
7320   \def\Hy@tempa{#2}%
7321   \ifx\Hy@tempa\@empty
7322     \else

```

```

7323 {%
7324 \edef\@currentlabel{%
7325 \csname p@slidesection\endcsname\theslidesection
7326 }%
7327 \makeslideheading{#2}%
7328 }%
7329 \fi
7330 \gdef\theslideheading{#1}%
7331 \gdef\theslidesubheading{}%
7332 \ifHy@bookmarksnumbered
7333 \def\Hy@slidetitle{\theslidesection\space #1}%
7334 \else
7335 \def\Hy@slidetitle{#1}%
7336 \fi
7337 \ifHy@hypertextnames
7338 \ifHy@naturalnames
7339 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7340 \Hy@writebookmark
7341 {\theslidesection}%
7342 {\Hy@slidetitle}%
7343 {slideheading.\theslidesection}%
7344 {1}%
7345 {toc}%
7346 \else
7347 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7348 \Hy@writebookmark
7349 {\theslidesection}%
7350 {\Hy@slidetitle}%
7351 {slideheading.\theHslidesection}%
7352 {1}%
7353 {toc}%
7354 \fi
7355 \else
7356 \Hy@GlobalStepCount\Hy@linkcounter
7357 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7358 \Hy@writebookmark
7359 {\theslidesection}%
7360 {\Hy@slidetitle}%
7361 {slideheading.\the\Hy@linkcounter}%
7362 {1}%
7363 {toc}%
7364 \fi
7365 }%
7366 \def\slide@subheading[#1]#2{%
7367 \H@refstepcounter{slidesubsection}%
7368 \addtocontents{los}{%
7369 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7370 {\@SCTR}{slideheading.\theslidesubsection}%
7371 }%
7372 \def\Hy@tempa{#2}%
7373 \ifx\Hy@tempa\@empty
7374 \else
7375 {%
7376 \edef\@currentlabel{%
7377 \csname p@slidesubsection\endcsname\theslidesubsection
7378 }%
7379 \makeslidesubheading{#2}%

```

```

7380 }%
7381 \fi
7382 \gdef\theslidesubheading{#1}%
7383 \ifHy@bookmarksnumbered
7384   \def\Hy@slidetitle{\theslidesubsection\space #1}%
7385 \else
7386   \def\Hy@slidetitle{#1}%
7387 \fi
7388 \ifHy@hypertextnames
7389   \ifHy@naturalnames
7390     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7391     \Hy@writebookmark
7392       {\theslidesubsection}%
7393       {\Hy@slidetitle}%
7394       {slideheading.\theslidesubsection}%
7395       {2}%
7396       {toc}%
7397   \else
7398     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7399     \Hy@writebookmark
7400       {\theslidesubsection}%
7401       {\Hy@slidetitle}%
7402       {slideheading.\theHslidesubsection}%
7403       {2}%
7404       {toc}%
7405   \fi
7406 \else
7407   \Hy@GlobalStepCount\Hy@linkcounter
7408   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7409   \Hy@writebookmark
7410     {\theslidesubsection}%
7411     {\Hy@slidetitle}%
7412     {slideheading.\the\Hy@linkcounter}%
7413     {1}%
7414     {toc}%
7415 \fi
7416 }%
7417 \providecommand*{\listslidenam}{List of Slides}%
7418 \def\listofslides{%
7419   \section*{%
7420     \listslidenam
7421     \@mkboth{%
7422       \expandafter\MakeUppercase\listslidenam
7423     }{%
7424       \expandafter\MakeUppercase\listslidenam
7425     }%
7426   }%
7427   \def\l@slide##1##2##3##4{%
7428     \slide@undottedcline{%
7429       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7430     }{%
7431     }%
7432     \let\l@subslide\l@slide
7433     \@startlos
7434   }%
7435   \def\slide@contents{%
7436     \def\l@slide##1##2##3##4{%

```

```

7437 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7438 }%
7439 \let\l@subslide\@gobblefour
7440 \@startlos
7441 }%
7442 \def\Slide@contents{%
7443 \def\l@slide##1##2##3##4{%
7444 \ifcase\lslide@flag
7445 \message{##1 ** \the\c@slidesection}%
7446 \ifnum##1>\c@slidesection
7447 \def\lslide@flag{1}%
7448 {%
7449 \large
7450 \slide@cline{%
7451 \slidenumberline{$\rightarrow\bullet$}%
7452 {\hyperlink{##4}{##2}}%
7453 }{##3}%
7454 }%
7455 \else
7456 {%
7457 \large
7458 \slide@cline{%
7459 \slidenumberline{$\surd\bullet$}%
7460 {\hyperlink{##4}{##2}}%
7461 }{##3}%
7462 }%
7463 \fi
7464 \or
7465 \def\lslide@flag{2}%
7466 {%
7467 \large
7468 \slide@cline{%
7469 \slidenumberline{$\bullet$}%
7470 {\hyperlink{##4}{##2}}%
7471 }{##3}%
7472 }%
7473 \or
7474 {%
7475 \large
7476 \slide@cline{%
7477 \slidenumberline{$\bullet$}%
7478 {\hyperlink{##4}{##2}}%
7479 }{##3}%
7480 }%
7481 \fi
7482 }%
7483 \def\l@subslide##1##2##3##4{%
7484 \ifnum\lslide@flag=1 %
7485 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7486 \fi
7487 }%
7488 \def\lslide@flag{0}%
7489 \@startlos
7490 }%
7491 }-{}

```

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.)

```

7492 \ifHy@texht
7493 \expandafter\endinput
7494 \fi
7495 \let\real@setref\@setref
7496 \def\@setref#1#2#3{% csname, extract group, refname
7497 \ifx#1\relax
7498 \protect\G@refundefinedtrue
7499 \nfss@text{\reset@font\bfseries ??}%
7500 \@latex@warning{%
7501 Reference '#3' on page \thepage \space undefined%
7502 }%
7503 \else
7504 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7505 \fi
7506 }

```

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

```

7507 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7508 \begingroup
7509 \toks0={\hyper@@link{#5}{#4}}%
7510 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7511 \edef\x{\endgroup
7512 \the\toks0 {\the\toks1 }}%
7513 }%
7514 \x
7515 }
7516 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7517 \ifx#1\relax
7518 \protect\G@refundefinedtrue
7519 \nfss@text{\reset@font\bfseries ??}%
7520 \@latex@warning{%
7521 Reference '#3' on page \thepage \space undefined%
7522 }%
7523 \else
7524 \protect\hyper@@link
7525 {\expandafter\@fifthoffive#1}%
7526 {page.\expandafter\@secondoffive#1}%
7527 {\expandafter\@secondoffive#1}%
7528 \fi
7529 }

7530 </package>
7531 <*check>
7532 \checklatex
7533 \checkcommand\def\@setref#1#2#3{%
7534 \ifx#1\relax
7535 \protect\G@refundefinedtrue
7536 \nfss@text{\reset@font\bfseries ??}%
7537 \@latex@warning{%
7538 Reference '#3' on page \thepage \space undefined%
7539 }%
7540 \else
7541 \expandafter#2#1\null
7542 \fi
7543 }
7544 </check>

```

7545 `\package`

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

```

7546 \def\HyRef@StarSetRef#1{%
7547   \begingroup
7548   \Hy@safe@activetrue
7549   \edef\x{#1}%
7550   \@onelevel@sanitize\x
7551   \edef\x{\endgroup
7552     \noexpand\HyRef@@StarSetRef
7553     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7554   }%
7555   \x
7556 }
7557 \def\HyRef@@StarSetRef#1#2#3{%
7558   \ifx#1\@undefined
7559     \let#1\relax
7560   \fi
7561   \real@setref#1#3{#2}%
7562 }
7563 \def\@refstar#1{%
7564   \HyRef@StarSetRef{#1}\@firstoffive
7565 }
7566 \def\@pagerefstar#1{%
7567   \HyRef@StarSetRef{#1}\@secondoffive
7568 }
7569 \def\@namerefstar#1{%
7570   \HyRef@StarSetRef{#1}\@thirdoffive
7571 }
7572 \Hy@AtBeginDocument{%
7573   \@ifpackageloaded{varioref}{%
7574     \def\@Refstar#1{%
7575       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7576     }%
7577     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7578       \MakeUppercase#1%
7579     }%
7580     \DeclareRobustCommand*\@Ref*{%
7581       \@ifstar\@Refstar\HyRef@Ref
7582     }%
7583     \def\HyRef@Ref#1{%
7584       \hyperref[{#1}]{\Ref*{#1}}%
7585     }%
7586     \def\Vr@f#1{%
7587       \leavevmode\unskip\vref@space
7588       \hyperref[{#1}]{%
7589         \Ref*{#1}%
7590       }%
7591       \let\vref@space\nobreakspace
7592       \@vpageref[\unskip]{#1}%
7593     }%
7594     \def\vr@f#1{%
7595       \leavevmode\unskip\vref@space
7596       \begingroup
7597         \let\T@pageref\@pagerefstar
7598         \hyperref[{#1}]{%
7599           \ref*{#1}%

```

```

7600     \vpageref[\unskip]{#1}%
7601     }%
7602     \endgroup
7603     }%
7604     }{}%
7605 }
7606 \DeclareRobustCommand*\autopageref{%
7607   \@ifstar{%
7608     \HyRef@autopagerefname\pageref*%
7609   }\HyRef@autopageref
7610 }
7611 \def\HyRef@autopageref#1{%
7612   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7613 }
7614 \def\HyRef@autopagerefname{%
7615   \ltx@ifundefined{pageautorefname}{%
7616     \ltx@ifundefined{pagename}{%
7617       \Hy@Warning{No autoref name for 'page'}%
7618     }{%
7619       \pagename\nobreakspace
7620     }%
7621   }{%
7622     \pageautorefname\nobreakspace
7623   }%
7624 }
7625 \DeclareRobustCommand*\autoref{%
7626   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7627 }
7628 \def\HyRef@autoref#1#2{%
7629   \begingroup
7630   \Hy@safe@activetrue
7631   \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7632   \endgroup
7633 }
7634 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7635   \HyRef@ShowKeysRef{#2}%
7636   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7637   \edef\HyRef@thisref{%
7638     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7639   }%
7640   \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7641   \Hy@safe@activesfalse
7642   #3{%
7643     \expandafter\@fifthoffive#1\@empty\@empty\@empty
7644   }{%
7645     \expandafter\@fourthoffive#1\@empty\@empty\@empty
7646   }{%
7647     \HyRef@currentHtag
7648     \expandafter\@firstoffive#1\@empty\@empty\@empty
7649     \null
7650   }%
7651   \else
7652     \protect\G@refundefinedtrue
7653     \nfss@text{\reset@font\bfseries ??}%
7654     \@latex@warning{%
7655       Reference '#2' on page \thepage\space undefined%
7656     }%

```

```

7657 \fi
7658 }
7659 \def\HyRef@testreftype#1.#2\{%
7660 \ltx@ifundefined{#1autorefname}{%
7661 \ltx@ifundefined{#1name}{%
7662 \HyRef@StripStar#1\*\@nil{#1}%
7663 \ltx@ifundefined{\HyRef@name autorefname}{%
7664 \ltx@ifundefined{\HyRef@name name}{%
7665 \def\HyRef@currentHtag{}%
7666 \Hy@Warning{No autoref name for '#1'}%
7667 }{%
7668 \edef\HyRef@currentHtag{%
7669 \expandafter\noexpand\csname\HyRef@name name\endcsname
7670 \noexpand~%
7671 }%
7672 }%
7673 }{%
7674 \edef\HyRef@currentHtag{%
7675 \expandafter\noexpand
7676 \csname\HyRef@name autorefname\endcsname
7677 \noexpand~%
7678 }%
7679 }%
7680 }{%
7681 \edef\HyRef@currentHtag{%
7682 \expandafter\noexpand\csname#1name\endcsname
7683 \noexpand~%
7684 }%
7685 }%
7686 }{%
7687 \edef\HyRef@currentHtag{%
7688 \expandafter\noexpand\csname#1autorefname\endcsname
7689 \noexpand~%
7690 }%
7691 }%
7692 }
7693 \def\HyRef@StripStar#1*\#2\@nil#3{%
7694 \def\HyRef@name{#2}%
7695 \ifx\HyRef@name\HyRef@CaseStar
7696 \def\HyRef@name{#1}%
7697 \else
7698 \def\HyRef@name{#3}%
7699 \fi
7700 }
7701 \def\HyRef@CaseStar{*}
7702 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7703 \let\HyRef@ShowKeysRef\@gobble
7704 \def\HyRef@ShowKeysInit{%
7705 \begingroup\expandafter\expandafter\endgroup
7706 \expandafter\ifx\csname SK@@label\endcsname\relax
7707 \else
7708 \ifx\SK@ref\@empty
7709 \else
7710 \def\HyRef@ShowKeysRef{%

```



```

7711 \SK@\SK@@@ref
7712 }%
7713 \fi
7714 \fi
7715 }
7716 \@ifpackageloaded{showkeys}{%
7717 \HyRef@ShowKeysInit
7718 }{%
7719 \Hy@AtBeginDocument{%
7720 \@ifpackageloaded{showkeys}{%
7721 \HyRef@ShowKeysInit
7722 }{}%
7723 }%
7724 }

```

Defaults for the names that `\autoref` uses.

```

7725 \providecommand*\AMSautorefname{\equationautorefname}
7726 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7727 \providecommand*\Itemautorefname{\itemautorefname}
7728 \providecommand*\itemautorefname{item}
7729 \providecommand*\equationautorefname{Equation}
7730 \providecommand*\footnoteautorefname{footnote}
7731 \providecommand*\itemautorefname{item}
7732 \providecommand*\figureautorefname{Figure}
7733 \providecommand*\tableautorefname{Table}
7734 \providecommand*\partautorefname{Part}
7735 \providecommand*\appendixautorefname{Appendix}
7736 \providecommand*\chapterautorefname{chapter}
7737 \providecommand*\sectionautorefname{section}
7738 \providecommand*\subsectionautorefname{subsection}
7739 \providecommand*\subsubsectionautorefname{subsubsection}
7740 \providecommand*\paragraphautorefname{paragraph}
7741 \providecommand*\subparagraphautorefname{subparagraph}
7742 \providecommand*\FancyVerbLineautorefname{line}
7743 \providecommand*\theoremautorefname{Theorem}
7744 \providecommand*\pageautorefname{page}
7745 </package>

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

7746 <*pdfTex | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7747 \RequirePackage{pdfTexcmds}[2009/04/10]
7748 \begingroup\expandafter\expandafter\expandafter\endgroup
7749 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7750 \begingroup
7751 \catcode'\|=0 %
7752 \@makeother\| %

```

```

7753 |@firstofone{ |endgroup
7754 |def|Hy@pstringdef#1#2{%
7755 |begingroup
7756 |edef~{|string~}%
7757 |xdef|Hy@gtemp{#2}%
7758 |endgroup
7759 |let#1|Hy@gtemp
7760 |@onelevel@sanitize#1%
7761 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
7762 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1|@nil}%
7763 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
7764 }%
7765 |def|Hy@ExchangeBackslash#1#2|@nil{%
7766 #1%
7767 |ifx|\#2\\%
7768 |else
7769 \\%
7770 |Hy@ReturnAfterFi{%
7771 |Hy@ExchangeBackslash#2|@nil
7772 }%
7773 |fi
7774 }%
7775 }%
7776 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7777 #1%
7778 \ifx\\#2\\%
7779 \else
7780 \@backslashchar(%
7781 \Hy@ReturnAfterFi{%
7782 \Hy@ExchangeLeftParenthesis#2\@nil
7783 }%
7784 \fi
7785 }%
7786 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7787 #1%
7788 \ifx\\#2\\%
7789 \else
7790 \@backslashchar)%
7791 \Hy@ReturnAfterFi{%
7792 \Hy@ExchangeRightParenthesis#2\@nil
7793 }%
7794 \fi
7795 }%
7796 \else
7797 \def\Hy@pstringdef#1#2{%
7798 \begingroup
7799 \edef~{\string~}%
7800 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7801 \endgroup
7802 \let#1\Hy@gtemp
7803 }%
7804 \fi
7805 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```
7806 <*pdfTeX>
```

```

7807 \providecommand*\XR@ext}{pdf}
7808 \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, 2005-08-081: \pdfminorversion

```

7809 \let\Hy@pdfminorversion\relax
7810 \begingroup\expandafter\expandafter\expandafter\endgroup
7811 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7812 \begingroup\expandafter\expandafter\expandafter\endgroup
7813 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7814 \else
7815 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7816 \fi
7817 \else
7818 \def\Hy@pdfminorversion{\pdfminorversion}%
7819 \fi
7820 \ifundefined{Hy@pdfminorversion}{%
7821 \PackageInfo{hyperref}{%
7822 PDF version is not set, because pdfTeX is too old (<1.10a)%
7823 }%
7824 }{%
7825 \ifHy@ocgcolorlinks
7826 \ifnum\Hy@pdfminorversion<5 %
7827 \setkeys{Hyp}{pdfversion=1.5}%
7828 \fi
7829 \fi
7830 \ifHy@setpdfversion
7831 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7832 \else
7833 \Hy@pdfminorversion=\Hy@pdfversion\relax
7834 \fi
7835 \PackageInfo{hyperref}{%
7836 \expandafter\string\Hy@pdfminorversion
7837 :=\number\Hy@pdfversion\space
7838 }%
7839 \fi
7840 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7841 }
7842 \Hy@DisableOption{pdfversion}%

7843 \ifHy@ocgcolorlinks
7844 \immediate\pdfobj{%
7845 <<%
7846 /Type/OCG%
7847 /Name(View)%
7848 /Usage<<%
7849 /Print<<%
7850 /PrintState/OFF%
7851 >>%
7852 /View<<%
7853 /ViewState/ON%
7854 >>%
7855 >>%

```

```

7856   >>%
7857 }%
7858 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7859 \immediate\pdfobj{%
7860   <<%
7861     /Type/OCG%
7862     /Name(Print)%
7863     /Usage<<%
7864     /Print<<%
7865     /PrintState/ON%
7866     >>%
7867     /View<<%
7868     /ViewState/OFF%
7869     >>%
7870   >>%
7871   >>%
7872 }%
7873 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7874 \immediate\pdfobj{%
7875   [%
7876     \OBJ@OCG@view\space\OBJ@OCG@print
7877   ]%
7878 }%
7879 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7880 \pdfcatalog{%
7881   /OCProperties<<%
7882   /OCGs \OBJ@OCGs
7883   /D<<%
7884   /OFF[\OBJ@OCG@print]%
7885   /AS[%
7886     <<%
7887     /Event/View%
7888     /OCGs \OBJ@OCGs
7889     /Category[/View]%
7890     >>%
7891     <<%
7892     /Event/Print%
7893     /OCGs \OBJ@OCGs
7894     /Category[/Print]%
7895     >>%
7896     <<%
7897     /Event/Export%
7898     /OCGs \OBJ@OCGs
7899     /Category[/Print]%
7900     >>%
7901   ]%
7902   >>%
7903 >>%
7904 }%
7905 \begingroup
7906 \edef\x{\endgroup
7907 \pdfpageresources{%
7908   /Properties<<%
7909   /OCView \OBJ@OCG@view
7910   /OCPrint \OBJ@OCG@print
7911   >>%
7912 }%

```

```

7913 }%
7914 \x
7915 \Hy@AtBeginDocument{%
7916 \def\Hy@colorlink#1{%
7917 \begingroup
7918 \ifHy@ocgcolorlinks
7919 \def\Hy@ocgcolor{#1}%
7920 \setbox0=\color@hbox
7921 \else
7922 \HyColor@UseColor#1%
7923 \fi
7924 }%
7925 \def\Hy@endcolorlink{%
7926 \ifHy@ocgcolorlinks
7927 \color@endbox
7928 \mbox{%
7929 \pdfliteral page{/OC/OCPrint BDC}%
7930 \rlap{\copy0}%
7931 \pdfliteral page{EMC/OC/OCView BDC}%
7932 \begingroup
7933 \expandafter\HyColor@UseColor\Hy@ocgcolor
7934 \box0 %
7935 \endgroup
7936 \pdfliteral page{EMC}%
7937 }%
7938 \fi
7939 \endgroup
7940 }%
7941 }%
7942 \else
7943 \Hy@DisableOption{ocgcolorlinks}%
7944 \fi

```

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

```

7945 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7946 \ifx\pdfstartlink\@undefined% less than version 14
7947 \let\pdfstartlink\pdfannotlink
7948 \let\pdfinkmargin\@tempdima
7949 \let\pdfxform\pdfform
7950 \let\pdfastxform\pdfastform
7951 \let\pdfrefxform\pdfrefform
7952 \else
7953 \pdfinkmargin1pt %
7954 \fi

```

First set up the default linking

```

7955 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

7956 \def\new@pdfink#1{%
7957 \Hy@SaveLastskip
7958 \Hy@VerboseAnchor{#1}%
7959 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7960 \Hy@DestName\Hy@pstringDest\@pdfview
7961 \Hy@RestoreLastskip
7962 }
7963 \let\pdf@endanchor\@empty

```

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

```

7964 \def\Hy@DestName#1#2{%
7965   \pdfdest name{#1}#2\relax
7966 }

```

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.

```

7967 \providecommand*\@pdfborder{0 0 1}
7968 \providecommand*\@pdfborderstyle{}
7969 \def\Hy@undefinedname{UNDEFINED}
7970 \def\find@pdflink#1#2{%
7971   \leavevmode
7972   \protected@edef\Hy@testname{#2}%
7973   \ifx\Hy@testname\@empty
7974     \Hy@Warning{%
7975       Empty destination name,\MessageBreak
7976       using '\Hy@undefinedname'%
7977     }%
7978     \let\Hy@testname\Hy@undefinedname
7979   \else
7980     \Hy@pstringdef\Hy@testname{%
7981       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7982     }%
7983   \fi
7984   \Hy@StartlinkName{%
7985     \ifHy@pdfa /F 4\fi
7986     \Hy@setpdfborder
7987     \ifx\@pdfhighlight\@empty
7988       \else
7989         /H\@pdfhighlight
7990       \fi
7991       \ifx\CurrentBorderColor\relax
7992         \else
7993           /C[\CurrentBorderColor]%
7994         \fi
7995     }\Hy@testname
7996     \expandafter\Hy@colorlink\csname @#1color\endcsname
7997   }
7998 \def\Hy@StartlinkName#1#2{%
7999   \pdfstartlink attr{#1}goto name{#2}\relax
8000 }
8001 \def\close@pdflink{%
8002   \Hy@endcolorlink
8003   \Hy@VerboseLinkStop
8004   \pdfendlink
8005 }
8006 \def\hyper@anchor#1{%
8007   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8008 }
8009 \def\hyper@anchorstart#1{%
8010   \new@pdflink{#1}%
8011   \Hy@activeanchortrue
8012 }
8013 \def\hyper@anchorend{%

```

```

8014 \pdf@endanchor
8015 \Hy@activeanchorfalse
8016 }
8017 \def\hyper@linkstart#1#2{%
8018 \Hy@VerboseLinkStart{#1}{#2}%
8019 \ltx@ifundefined{@#1bordercolor}{%
8020 \let\CurrentBorderColor\relax
8021 }{%
8022 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8023 }%
8024 \find@pdfink{#1}{#2}%
8025 }
8026 \def\hyper@linkend{\close@pdfink}
8027 \def\hyper@link#1#2#3{%
8028 \Hy@VerboseLinkStart{#1}{#2}%
8029 \ltx@ifundefined{@#1bordercolor}{%
8030 \let\CurrentBorderColor\relax
8031 }{%
8032 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8033 }%
8034 \find@pdfink{#1}{#2}#3%
8035 \close@pdfink
8036 }
8037 \let\CurrentBorderColor\@linkbordercolor
8038 \def\hyper@linkurl#1#2{%
8039 \begingroup
8040 \Hy@pstringdef\Hy@pstringURI{#2}%
8041 \hyper@chars
8042 \leavevmode
8043 \pdfstartlink
8044 attr{%
8045 \Hy@setpdfborder
8046 \ifx\@pdfhighlight\@empty
8047 \else
8048 /H\@pdfhighlight
8049 \fi
8050 \ifx\@urlbordercolor\relax
8051 \else
8052 /C[\@urlbordercolor]%
8053 \fi
8054 }%
8055 user{%
8056 /Subtype/Link%
8057 \ifHy@pdfa /F 4\fi
8058 /A<<%
8059 /Type/Action%
8060 /S/URI%
8061 /URI(\Hy@pstringURI)%
8062 >>%
8063 }%
8064 \relax
8065 \Hy@colorlink\@urlcolor#1%
8066 \close@pdfink
8067 \endgroup
8068 }
8069 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8070 \begingroup

```

```

8071 \Hy@pstringdef\Hy@pstringF{#2}%
8072 \Hy@pstringdef\Hy@pstringD{#3}%
8073 \leavevmode
8074 \pdfstartlink
8075   attr{%
8076     \Hy@setpdfborder
8077     \ifx\@pdfhighlight\@empty
8078     \else
8079       /H\@pdfhighlight
8080     \fi
8081     \ifx\@filebordercolor\relax
8082     \else
8083       /C[\@filebordercolor]%
8084     \fi
8085   }%
8086   user {%
8087     /Subtype/Link%
8088     \ifHy@pdfa /F 4\fi
8089     /A<<%
8090     /F(\Hy@pstringF)%
8091     /S/GoToR%
8092     \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}

```

```

8093   \ifx\#3\%
8094     /D[0 \@pdfstartview]%
8095   \else
8096     /D(\Hy@pstringD)%
8097   \fi
8098   >>%
8099   }%
8100   \relax
8101   \Hy@colorlink\@filecolor#1%
8102   \close@pdflink
8103 \endgroup
8104 }
8105 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8106 \begingroup
8107   \Hy@pstringdef\Hy@pstringF{#1}%
8108   \Hy@pstringdef\Hy@pstringP{#3}%
8109   \leavevmode
8110   \pdfstartlink
8111   attr{%
8112     \Hy@setpdfborder
8113     \ifx\@pdfhighlight\@empty
8114     \else
8115       /H\@pdfhighlight
8116     \fi

```



```

8117 \ifx\@runbordercolor\relax
8118 \else
8119 /C[\@runbordercolor]%
8120 \fi
8121 }%
8122 user {%
8123 /Subtype/Link%
8124 \ifHy@pdfa /F 4\fi
8125 /A<<%
8126 /F(\Hy@pstringF)%
8127 /S/Launch%
8128 \Hy@SetNewWindow
8129 \ifx\#3\%
8130 \else
8131 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8132 \fi
8133 >>%
8134 }%
8135 \relax
8136 \Hy@colorlink\@runcolor#2%
8137 \close@pdflink
8138 \endgroup
8139 }

```

\@pdfproducer

```

8140 \ifx\@pdfproducer\relax
8141 \begingroup\expandafter\expandafter\expandafter\endgroup
8142 \expandafter\ifx\csname luatexversion\endcsname\relax
8143 \def\@pdfproducer{pdfTeX}%
8144 \ifx\eTeXversion\@undefined
8145 \else
8146 \ifx\eTeXversion\relax
8147 \else
8148 \ifnum\eTeXversion>0 %
8149 \def\@pdfproducer{pdfTeX}%
8150 \fi
8151 \fi
8152 \fi
8153 \ifx\pdfTeXversion\@undefined
8154 \else
8155 \ifnum\pdfTeXversion<100 %
8156 \edef\@pdfproducer{%
8157 \@pdfproducer
8158 \the\pdfTeXversion.\pdfTeXrevision
8159 }%
8160 \else
8161 \ifnum\pdfTeXversion<130 %
8162 \edef\@pdfproducer{%
8163 \@pdfproducer-%
8164 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8165 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8166 \pdfTeXrevision
8167 }%
8168 \else
8169 \ifnum\pdfTeXversion<140 %
8170 \else
8171 \def\@pdfproducer{pdfTeX}%

```

```

8172     \fi
8173     \edef\@pdfproducer{%
8174       \@pdfproducer-%
8175       \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8176       \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8177       \pdfTeXrevision
8178     }%
8179   \fi
8180 \fi
8181 \fi
8182 \else
8183 \begingroup
8184   \count@=\luatexversion
8185   \divide\count@ by 100 %
8186   \edef\x{\the\count@}%
8187   \count@=-\x\relax
8188   \multiply\count@ by 100 %
8189   \advance\count@ by \luatexversion
8190   \edef\x{\endgroup
8191     \def\noexpand\@pdfproducer{%
8192       LuaTeX-\x.\the\count@.\luatexrevision
8193     }%
8194   }%
8195   \x
8196 \fi
8197 \fi

```

\PDF@SetupDox

```

8198 \def\PDF@SetupDoc{%
8199   \ifx\@pdfpagescrop\@empty
8200   \else
8201     \edef\process@me{%
8202       \pdfpagesattr={%
8203         /CropBox[\@pdfpagescrop]%
8204         \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8205         \else
8206           ^^J\the\pdfpagesattr
8207         \fi
8208       }%
8209     }%
8210     \process@me
8211   \fi
8212   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8213   \pdfcatalog{%
8214     /PageMode/\@pdfpagemode
8215     \ifx\@baseurl\@empty
8216     \else
8217       /URI<</Base(\Hy@pstringB)>>%
8218     \fi
8219   }%
8220   \ifx\@pdfstartpage\@empty
8221   \else
8222     \ifx\@pdfstartview\@empty
8223     \else
8224       openaction goto page\@pdfstartpage{\@pdfstartview}%
8225     \fi
8226   \fi

```

```

8227 \edef\Hy@temp{%
8228   \ifHy@toolbar\else /HideToolbar true\fi
8229   \ifHy@menubar\else /HideMenubar true\fi
8230   \ifHy>windowui\else /HideWindowUI true\fi
8231   \ifHy@fitwindow /FitWindow true\fi
8232   \ifHy@centerwindow /CenterWindow true\fi
8233   \ifHy@displaydoctitle /DisplayDocTitle true\fi
8234   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8235   \Hy@UseNameKey{Direction}\@pdfdirection
8236   \Hy@UseNameKey{ViewArea}\@pdfviewarea
8237   \Hy@UseNameKey{ViewClip}\@pdfviewclip
8238   \Hy@UseNameKey{PrintArea}\@pdfprintarea
8239   \Hy@UseNameKey{PrintClip}\@pdfprintclip
8240   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8241   \Hy@UseNameKey{Duplex}\@pdfduplex
8242   \ifx\@pdfpicktraybypdfsize\@empty
8243   \else
8244     /PickTrayByPDFSize \@pdfpicktraybypdfsize
8245   \fi
8246   \ifx\@pdfprintpagerange\@empty
8247   \else
8248     /PrintPageRange[\@pdfprintpagerange]%
8249   \fi
8250   \ifx\@pdfnumcopies\@empty
8251   \else
8252     /NumCopies \@pdfnumcopies
8253   \fi
8254 }%
8255 \pdfcatalog{%
8256   \ifx\Hy@temp\@empty
8257   \else
8258     /ViewerPreferences<<\Hy@temp>>%
8259   \fi
8260   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8261   \ifx\@pdflang\@empty
8262   \else
8263     /Lang(\@pdflang)%
8264   \fi
8265 }%
8266 }

```

\PDF@FinishDoc

```

8267 \def\PDF@FinishDoc{%
8268   \Hy@UseMaketitleInfos
8269   \HyInfo@GenerateAddons
8270   \pdfinfo{%
8271     /Author(\@pdfauthor)%
8272     /Title(\@pdftitle)%
8273     /Subject(\@pdfsubject)%
8274     /Creator(\@pdfcreator)%
8275     \ifx\@pdfcreationdate\@empty
8276     \else
8277       /CreationDate(\@pdfcreationdate)%
8278     \fi
8279     \ifx\@pdfmoddate\@empty
8280     \else
8281       /ModDate(\@pdfmoddate)%

```

```

8282 \fi
8283 \ifx\@pdfproducer\relax
8284 \else
8285   /Producer(\@pdfproducer)%
8286 \fi
8287 /Keywords(\@pdfkeywords)%
8288 \ifx\@pdftrapped\@empty
8289 \else
8290   /Trapped/\@pdftrapped
8291 \fi
8292 \HyInfo@Addons
8293 }%
8294 \Hy@DisableOption{pdfauthor}%
8295 \Hy@DisableOption{pdftitle}%
8296 \Hy@DisableOption{pdfsubject}%
8297 \Hy@DisableOption{pdfcreator}%
8298 \Hy@DisableOption{pdfcreationdate}%
8299 \Hy@DisableOption{pdfmoddate}%
8300 \Hy@DisableOption{pdfproducer}%
8301 \Hy@DisableOption{pdfkeywords}%
8302 \Hy@DisableOption{pdftrapped}%
8303 \Hy@DisableOption{pdfinfo}%
8304 }

```

`\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`.

```

8305 \def\hyper@pagetransition{%
8306   \ifx\@pdfpagetransition\relax
8307   \else
8308     \expandafter\Hy@RemoveTransPageAttr
8309     \the\pdfpageattr^^J/Trans{>>\END
8310     \ifx\@pdfpagetransition\@empty
8311     \else
8312       \edef\@processme{%
8313         \global\pdfpageattr{%
8314           \the\pdfpageattr
8315             ^^J/Trans << /S /\@pdfpagetransition\space >>%
8316         }%
8317       }%
8318       \@processme
8319     \fi
8320   \fi
8321 }

```

`\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.

```

8322 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8323   \ifx\\#2\\%
8324     \global\pdfpageattr{#1}%
8325   \else
8326     \Hy@RemoveTransPageAttr#1#4\END
8327   \fi
8328 }

```

`\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`.

```

8329 \def\hyper@pageduration{%
8330   \ifx\@pdfpageduration\relax
8331   \else
8332     \expandafter
8333     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
8334     \ifx\@pdfpageduration\@empty
8335     \else
8336       \edef\@processme{%
8337         \global\pdfpageattr{%
8338           \the\pdfpageattr
8339           ^^J/Dur \@pdfpageduration\space
8340         }%
8341       }%
8342       \@processme
8343     \fi
8344   \fi
8345 }
```

`\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.

```

8346 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8347   \ifx\#2\%
8348     \global\pdfpageattr{#1}%
8349   \else
8350     \Hy@RemoveDurPageAttr#1#4\END
8351   \fi
8352 }
```

`\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).

```

8353 \def\hyper@pagehidden{%
8354   \ifHy@useHidKey
8355   \expandafter
8356   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8357   \ifHy@pdfpagehidden
8358   \edef\@processme{%
8359     \global\pdfpageattr{%
8360       \the\pdfpageattr
8361       ^^J/Hid true % SPACE
8362     }%
8363   }%
8364   \@processme
8365   \fi
8366 \fi
8367 }
```

`\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.

```

8368 \gdef\Hy@RemoveHidPageAttr#1^~J/Hid#2#3 #4\END{%
8369   \ifx\#2\%
8370     \global\pdfpageattr{#1}%
8371   \else
8372     \Hy@RemoveHidPageAttr#1#4\END
8373   \fi
8374 }

8375 \g@addto@macro\Hy@EveryPageHook{%
8376   \hyper@pagetransition
8377   \hyper@pageduration
8378   \hyper@pagehidden
8379 }

```

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

```

8380 \</pdfTeX>
8381 \<*pdfTeX | xetex>
8382 \Hy@AtBeginDocument{%
8383   \ifHy@setpagesize
8384     \expandafter\@firstofone
8385   \else
8386     \expandafter\@gobble
8387   \fi
8388   {%
8389     \@ifclassloaded{seminar}{%
8390 \<*pdfTeX>
8391   \setlength{\pdfhorigin}{1truein}%
8392   \setlength{\pdfvorigin}{1truein}%
8393 \</pdfTeX>
8394   \ifportrait
8395     \ifdim\paperwidth=\z@
8396     \else
8397       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8398     \fi
8399     \ifdim\paperheight=\z@
8400     \else
8401       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8402     \fi
8403   \else
8404     \ifdim\paperheight=\z@
8405     \else
8406       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8407     \fi
8408     \ifdim\paperwidth=\z@
8409     \else
8410       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8411     \fi
8412   \fi
8413 }{%
8414   \ltx@ifundefined{stockwidth}{%
8415     \ifdim\paperwidth>\z@
8416     \setlength{\pdfpagewidth}{\paperwidth}%
8417   \fi
8418   \ifdim\paperheight>\z@
8419     \setlength{\pdfpageheight}{\paperheight}%
8420   \fi
8421 }{%

```

```

8422     \ifdim\stockwidth>\z@
8423       \setlength{\pdfpagewidth}{\stockwidth}%
8424     \fi
8425     \ifdim\stockheight>\z@
8426       \setlength{\pdfpageheight}{\stockheight}%
8427     \fi
8428   }%
8429 }%
8430 }%
8431 \Hy@DisableOption{setpagesize}%
8432 }
8433 </pdfTeX | xetex>
8434 <*pdfTeX>
8435 \def\Acrobatmenu#1#2{%
8436   \Hy@Acrobatmenu{#1}{#2}{%
8437     \pdfstartlink
8438     attr{%
8439       \Hy@setpdfborder
8440       \ifx\@pdfhighlight\@empty
8441         \else
8442           /H\@pdfhighlight
8443         \fi
8444       \ifx\@menubordercolor\relax
8445         \else
8446           /C[\@menubordercolor]%
8447         \fi
8448     }%
8449     user{%
8450       /Subtype/Link%
8451       \ifHy@pdfa /F 4\fi
8452       /A<<%
8453         /S/Named/N/#1%
8454       >>%
8455     }%
8456     \relax
8457     \Hy@colorlink\@menucolor#2%
8458     \close@pdflink
8459   }%
8460 }

```

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.

```

8461 \def\Hy@FixNotFirstPage{%
8462   \gdef\Hy@FixNotFirstPage{%
8463     \setbox\AtBeginShipoutBox=\hbox{%
8464       \copy\AtBeginShipoutBox
8465     }%
8466   }%
8467 }
8468 \AtBeginShipout{\Hy@FixNotFirstPage}

```

46.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of \backslash 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 (\backslash), and if it looks like a URL name it may cause problems.

```

8470  $\langle$ *hypertext $\rangle$ 
8471  $\backslash$ providecommand* $\{\backslash$ XR@ext $\}$ {dvi}
8472  $\backslash$ def\PDF@FinishDoc{}
8473  $\backslash$ def\PDF@SetupDoc{%
8474    $\backslash$ ifx\@baseurl\@empty
8475    $\backslash$ else
8476      $\backslash$ special{html:<base href="\@baseurl">}%
8477    $\backslash$ fi
8478 }
8479  $\backslash$ def\hyper@anchor#1{%
8480    $\backslash$ Hy@SaveLastskip
8481    $\backslash$ Hy@VerboseAnchor{#1}%
8482    $\backslash$ begingroup
8483      $\backslash$ let\protect=\string
8484      $\backslash$ hyper@chars
8485      $\backslash$ special{html:<a name=%
8486        $\backslash$ hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8487    $\backslash$ endgroup
8488    $\backslash$ Hy@activeanchortrue
8489    $\backslash$ Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8490    $\backslash$ special{html:</a>}%
8491    $\backslash$ Hy@activeanchorfalse
8492    $\backslash$ Hy@RestoreLastskip

```



```

8493 }
8494 \def\hyper@anchorstart#1{%
8495   \Hy@SaveLastskip
8496   \Hy@VerboseAnchor{#1}%
8497   \begingroup
8498     \hyper@chars
8499     \special{html:<a name=%
8500       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8501   \endgroup
8502   \Hy@activeanchortrue
8503 }
8504 \def\hyper@anchorend{%
8505   \special{html:</a>}%
8506   \Hy@activeanchorfalse
8507   \Hy@RestoreLastskip
8508 }
8509 \def\@urltype{url}
8510 \def\hyper@linkstart#1#2{%
8511   \Hy@VerboseLinkStart{#1}{#2}%
8512   \expandafter\Hy@colorlink\csname @#1color\endcsname
8513   \def\Hy@tempa{#1}%
8514   \ifx\Hy@tempa\@urltype
8515     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8516   \else
8517     \begingroup
8518       \hyper@chars
8519       \special{html:<a href=%
8520         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8521     \endgroup
8522   \fi
8523 }
8524 \def\hyper@linkend{%
8525   \special{html:</a>}%
8526   \Hy@endcolorlink
8527 }
8528 \def\hyper@linkfile#1#2#3{%
8529   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
8530 }
8531 \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.

```

8532 \leavevmode
8533 \ifHy@raiselinks
8534   \setbox\@tempboxa=\color@hbox #1\color@endbox
8535   \@linkdim\dp\@tempboxa
8536   \lower\@linkdim\hbox{%
8537     \hyper@chars
8538     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8539   }%
8540   \Hy@colorlink\@urlcolor#1%
8541   \@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).

```

8542   \advance\@linkdim by -6.5\p@
8543   \raise\@linkdim\hbox{\special{html:</a>}}%

```

```

8544 \Hy@endcolorlink
8545 \else
8546 \begingroup
8547 \hyper@chars
8548 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8549 \Hy@colorlink\@urlcolor#1%
8550 \special{html:</a>}%
8551 \Hy@endcolorlink
8552 \endgroup
8553 \fi
8554 }

```

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

```

8555 \def\hyper@link#1#2#3{%
8556 \Hy@VerboseLinkStart{#1}{#2}%
8557 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
8558 }

8559 \def\hyper@image#1#2{%
8560 \begingroup
8561 \hyper@chars
8562 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8563 \endgroup
8564 }
8565 </hypertex>
8566 <*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, L^AT_EX 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.

```

8567 \providecommand*\XR@ext{dvi}
8568 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8569 \def\hyper@anchor#1{%
8570 \Hy@SaveLastskip
8571 \Hy@VerboseAnchor{#1}%
8572 \begingroup
8573 \let\protect=\string
8574 \special{mark: #1}%
8575 \endgroup
8576 \Hy@activeanchortrue
8577 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8578 \Hy@activeanchorfalse
8579 \Hy@RestoreLastskip
8580 }
8581 \def\hyper@anchorstart#1{%
8582 \Hy@SaveLastskip
8583 \Hy@VerboseAnchor{#1}%
8584 \special{mark: #1}%

```

```

8585 \Hy@activeanchortrue
8586 }
8587 \def\hyper@anchorend{%
8588 \Hy@activeanchorfalse
8589 \Hy@RestoreLastskip
8590 }
8591 \def\hyper@linkstart#1#2{%
8592 \Hy@VerboseLinkStart{#1}{#2}%
8593 \expandafter\Hy@colorlink\csname @#1color\endcsname
8594 \special{button: %
8595 10000000 %
8596 \number\baselineskip\space
8597 #2%
8598 }%
8599 }
8600 \def\hyper@linkend{%
8601 \Hy@endcolorlink
8602 }
8603 \def\hyper@link#1#2#3{%
8604 \Hy@VerboseLinkStart{#1}{#2}%
8605 \setbox\@tempboxa=\color@hbox #3\color@endbox
8606 \leavevmode
8607 \ifHy@raiselinks
8608 \@linkdim\dp\@tempboxa
8609 \lower\@linkdim\hbox{%
8610 \special{button: %
8611 \number\wd\@tempboxa\space
8612 \number\ht\@tempboxa\space
8613 #2%
8614 }%
8615 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8616 \Hy@endcolorlink
8617 }%
8618 \@linkdim\ht\@tempboxa
8619 \advance\@linkdim by -6.5\p@
8620 \raise\@linkdim\hbox{%
8621 \else
8622 \special{button: %
8623 \number\wd\@tempboxa\space
8624 \number\ht\@tempboxa\space
8625 #2%
8626 }%
8627 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8628 \Hy@endcolorlink
8629 \fi
8630 }
8631 \def\hyper@linkurl#1#2{%
8632 \begingroup
8633 \hyper@chars
8634 \leavevmode
8635 \setbox\@tempboxa=\color@hbox #1\color@endbox
8636 \ifHy@raiselinks
8637 \@linkdim\dp\@tempboxa
8638 \lower\@linkdim\hbox{%
8639 \special{button: %
8640 \number\wd\@tempboxa\space
8641 \number\ht\@tempboxa\space

```

```

8642      launch: \wwwbrowser\space
8643      #2%
8644    }%
8645    \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8646  }%
8647  \@linkdim\ht\@tempboxa
8648  \advance\@linkdim by -6.5\p@
8649  \raise\@linkdim\hbox{}%
8650 \else
8651   \special{button: %
8652     \number\wd\@tempboxa\space
8653     \number\ht\@tempboxa\space
8654     launch: \wwwbrowser\space
8655     #2%
8656   }%
8657   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8658 \fi
8659 \endgroup
8660 }
8661 \def\hyper@linkfile#1#2#3{%
8662 \begingroup
8663   \hyper@chars
8664   \leavevmode
8665   \setbox\@tempboxa=\color@hbox #1\color@endbox
8666   \ifHy@raiselinks
8667     \@linkdim\dp\@tempboxa
8668     \lower\@linkdim\hbox{%
8669       \special{button: %
8670         \number\wd\@tempboxa\space
8671         \number\ht\@tempboxa\space
8672         #3,%
8673         file: #2%
8674       }%
8675       \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8676     }%
8677     \@linkdim\ht\@tempboxa
8678     \advance\@linkdim by -6.5\p@
8679     \raise\@linkdim\hbox{}%
8680   \else
8681     \special{button: %
8682       \number\wd\@tempboxa\space
8683       \number\ht\@tempboxa\space
8684       #3,%
8685       file: #2%
8686     }%
8687     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8688   \fi
8689 \endgroup
8690 }
8691 \ifx\@pdfproducer\relax
8692 \def\@pdfproducer{dviwindo + Distiller}%
8693 \fi
8694 \HyInfo@AddonUnsupportedtrue
8695 \def\PDF@FinishDoc{%
8696   \Hy@UseMaketitleInfos
8697   \HyInfo@TrappedUnsupported
8698   \special{PDF: Keywords \@pdfkeywords}%

```

```

8699 \special{PDF: Title \@pdftitle}%
8700 \special{PDF: Creator \@pdfcreator}%
8701 \ifx\@pdfcreationdate\@empty
8702 \else
8703   \special{PDF: CreationDate \@pdfcreationdate}%
8704 \fi
8705 \ifx\@pdfmoddate\@empty
8706 \else
8707   \special{PDF: ModDate \@pdfmoddate}%
8708 \fi
8709 \special{PDF: Author \@pdfauthor}%
8710 \ifx\@pdfproducer\relax
8711 \else
8712   \special{PDF: Producer \@pdfproducer}%
8713 \fi
8714 \special{PDF: Subject \@pdfsubject}%
8715 \Hy@DisableOption{pdfauthor}%
8716 \Hy@DisableOption{pdftitle}%
8717 \Hy@DisableOption{pdfsubject}%
8718 \Hy@DisableOption{pdfcreator}%
8719 \Hy@DisableOption{pdfcreationdate}%
8720 \Hy@DisableOption{pdfmoddate}%
8721 \Hy@DisableOption{pdfproducer}%
8722 \Hy@DisableOption{pdfkeywords}%
8723 \Hy@DisableOption{pdftrapped}%
8724 \Hy@DisableOption{pdfinfo}%
8725 }
8726 \def\PDF@SetupDoc{%
8727   \ifx\@baseurl\@empty
8728   \else
8729     \special{PDF: Base \@baseurl}%
8730   \fi
8731   \ifx\@pdfpagescrop\@empty\else
8732     \special{PDF: BBox \@pdfpagescrop}%
8733   \fi
8734   \def\Hy@temp{%
8735     \ifx\@pdfstartpage\@empty
8736     \else
8737       \ifx\@pdfstartview\@empty
8738       \else
8739         \edef\Hy@temp{%
8740           ,Page=\@pdfstartpage
8741           ,View=\@pdfstartview
8742         }%
8743       \fi
8744     \fi
8745     \edef\Hy@temp{%
8746       \noexpand\pdfmark{%
8747         pdfmark=/DOCVIEW,%
8748         PageMode=/\@pdfpagemode
8749       }\Hy@temp
8750     }%
8751   }%
8752   \Hy@temp
8753   \ifx\@pdfpagescrop\@empty
8754   \else
8755     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%

```

```

8756 \fi
8757 \edef\Hy@temp{%
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 \pdfmark{pdfmark=/PUT,%
8786   Raw={%
8787     \string{Catalog}\string}<<%
8788     \ifx\Hy@temp\@empty
8789     \else
8790       /ViewerPreferences<<\Hy@temp>>%
8791     \fi
8792     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8793     \ifx\@pdflang\@empty
8794     \else
8795       /Lang(\@pdflang)%
8796     \fi
8797     >>%
8798   }%
8799 }%
8800 }
8801 </dviwindo>
8802 <*dvi pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8803 \providecommand*{\XR@ext}{pdf}
8804 \Hy@setbreaklinks{true}
8805 \newsavebox{\pdfm@box}
8806 \def\@pdfm@mark#1{\special{pdf:#1}}
8807 \def\@pdfm@dest#1{%
8808   \Hy@SaveLastskip

```

```

8809 \Hy@VerboseAnchor{#1}%
8810 \begingroup
8811 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8812 \def\x{XYZ}%
8813 \ifx\x\@pdfview
8814 \def\x{XYZ @xpos @ypos null}%
8815 \else
8816 \def\x{FitH}%
8817 \ifx\x\@pdfview
8818 \def\x{FitH @ypos}%
8819 \else
8820 \def\x{FitBH}%
8821 \ifx\x\@pdfview
8822 \def\x{FitBH @ypos}%
8823 \else
8824 \def\x{FitV}%
8825 \ifx\x\@pdfview
8826 \def\x{FitV @xpos}%
8827 \else
8828 \def\x{FitBV}%
8829 \ifx\x\@pdfview
8830 \def\x{FitBV @xpos}%
8831 \else
8832 \def\x{Fit}%
8833 \ifx\x\@pdfview
8834 \let\x\@pdfview
8835 \else
8836 \def\x{FitB}%
8837 \ifx\x\@pdfview
8838 \let\x\@pdfview
8839 \else
8840 \def\x{FitR}%
8841 \ifx\x\@pdfview
8842 \Hy@Warning{'pdfview=FitR' is not supported}%
8843 \def\x{XYZ @xpos @ypos null}%
8844 \else
8845 \@onelevel@sanitize\@pdfview
8846 \Hy@Warning{%
8847   Unknown value '\@pdfview' for pdfview%
8848 }%
8849 \def\x{XYZ @xpos @ypos null}%
8850 \fi
8851 \fi
8852 \fi
8853 \fi
8854 \fi
8855 \fi
8856 \fi
8857 \fi
8858 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8859 \endgroup
8860 \Hy@RestoreLastskip
8861 }
8862 \providecommand*\@pdfview{XYZ}
8863 \providecommand*\@pdfborder{0 0 1}
8864 \providecommand*\@pdfborderstyle{}
8865 \def\hyper@anchor#1{%

```

```

8866 \pdfm@dest{#1}%
8867 }
8868 \def\hyper@anchorstart#1{%
8869 \Hy@activeanchortrue
8870 \pdfm@dest{#1}%
8871 }
8872 \def\hyper@anchorend{%
8873 \Hy@activeanchorfalse
8874 }

8875 \newcounter{Hy@AnnotLevel}

8876 \ifHy@ocgcolorlinks
8877 \def\OBJ@OCG@view{@OCG@view}%
8878 \pdfm@mark{%
8879 obj \OBJ@OCG@view <<%
8880 /Type/OCG%
8881 /Name(View)%
8882 /Usage<<%
8883 /Print<<%
8884 /PrintState/OFF%
8885 >>%
8886 /View<<%
8887 /ViewState/ON%
8888 >>%
8889 >>%
8890 >>%
8891 }%
8892 \pdfm@mark{close \OBJ@OCG@view}%
8893 \def\OBJ@OCG@print{@OCG@print}%
8894 \pdfm@mark{%
8895 obj \OBJ@OCG@print <<%
8896 /Type/OCG%
8897 /Name(Print)%
8898 /Usage<<%
8899 /Print<<%
8900 /PrintState/ON%
8901 >>%
8902 /View<<%
8903 /ViewState/OFF%
8904 >>%
8905 >>%
8906 >>%
8907 }%
8908 \pdfm@mark{close \OBJ@OCG@print}%
8909 \def\OBJ@OCGs{@OCGs}%
8910 \pdfm@mark{%
8911 obj \OBJ@OCGs [%
8912 \OBJ@OCG@view\space\OBJ@OCG@print
8913 ]%
8914 }%
8915 \pdfm@mark{close \OBJ@OCGs}%
8916 \pdfm@mark{%
8917 put @catalog <<%
8918 /OCProperties<<%
8919 /OCGs \OBJ@OCGs
8920 /D<<%
8921 /OFF[\OBJ@OCG@print]%
8922 /AS[%

```



```

8923      <<%
8924          /Event/View%
8925          /OCGs \OBJ@OCGs
8926          /Category[/View]%
8927      >>%
8928      <<%
8929          /Event/Print%
8930          /OCGs \OBJ@OCGs
8931          /Category[/Print]%
8932      >>%
8933      <<%
8934          /Event/Export%
8935          /OCGs \OBJ@OCGs
8936          /Category[/Print]%
8937      >>%
8938      l%
8939      >>%
8940      >>%
8941      >>%
8942  }%
8943  \AtBeginShipout{%
8944      \setbox\AtBeginShipoutBox=\hbox{%
8945          \copy\AtBeginShipoutBox
8946          \@pdfm@mark{%
8947              put @resources <<%
8948                  /Properties<<%
8949                  /OCView \OBJ@OCG@view
8950                  /OCPrint \OBJ@OCG@print
8951              >>%
8952              >>%
8953          }%
8954      }%
8955  }%
8956  \Hy@AtBeginDocument{%
8957      \def\Hy@colorlink#1{%
8958          \begingroup
8959              \ifHy@ocgcolorlinks
8960                  \def\Hy@ocgcolor{#1}%
8961                  \setbox0=\color@hbox
8962              \else
8963                  \HyColor@UseColor#1%
8964              \fi
8965      }%
8966      \def\Hy@endcolorlink{%
8967          \ifHy@ocgcolorlinks
8968              \color@endbox
8969              \mbox{%
8970                  \@pdfm@mark{content /OC/OCPrint BDC}%
8971                  \rlap{\copy0}%
8972                  \@pdfm@mark{content EMC/OC/OCView BDC}%
8973              \begingroup
8974                  \expandafter\HyColor@UseColor\Hy@ocgcolor
8975                  \box0 %
8976              \endgroup
8977              \@pdfm@mark{content EMC}%
8978          }%
8979      \fi

```

```

8980     \endgroup
8981   }%
8982 }%
8983 \else
8984   \Hy@DisableOption{ocgcolorlinks}%
8985 \fi

8986 \def\Hy@BeginAnnot#1{%
8987   \stepcounter{Hy@AnnotLevel}%
8988   \ifnum\value{Hy@AnnotLevel}=\@ne
8989     #1%
8990   \fi
8991 }

8992 \def\Hy@endAnnot{%
8993   \ifnum\value{Hy@AnnotLevel}=\@ne
8994     \Hy@endcolorlink
8995     \@pdfm@mark{eann}%
8996   \fi
8997   \addtocounter{Hy@AnnotLevel}\m@ne
8998 }

8999 \def\Hy@undefinedname{UNDEFINED}
9000 \def\hyper@linkstart#1#2{%
9001   \Hy@VerboseLinkStart{#1}{#2}%
9002   \Hy@BeginAnnot{%
9003     \protected@edef\Hy@testname{#2}%
9004     \ifx\Hy@testname\@empty
9005       \Hy@Warning{%
9006         Empty destination name,\MessageBreak
9007         using '\Hy@undefinedname'%
9008       }%
9009       \let\Hy@testname\Hy@undefinedname
9010     \else
9011       \Hy@pstringdef\Hy@testname{%
9012         \expandafter\HyperDestNameFilter\expandafter{%
9013           \Hy@testname
9014         }%
9015       }%
9016     \fi
9017     \@pdfm@mark{%
9018       bann<<%
9019       /Type/Annot%
9020       /Subtype/Link%
9021       \ifHy@pdfa /F 4\fi
9022       \Hy@setpdfborder
9023       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9024         \else
9025           /C[\csname @#1bordercolor\endcsname]%
9026         \fi
9027       /A<<%
9028       /S/GoTo%
9029       /D(\Hy@testname)%
9030       >>%
9031     >>%
9032   }%
9033   \expandafter\Hy@colorlink\csname @#1color\endcsname
9034 }%
9035 }

9036 \def\hyper@linkend{\Hy@endAnnot}%

```

```

9037 \def\hyper@link#1#2#3{%
9038   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9039 }
9040 \def\hyper@linkfile#1#2#3{%
9041   \leavevmode
9042   \Hy@BeginAnnot{%
9043     \Hy@pstringdef\Hy@pstringF{#2}%
9044     \Hy@pstringdef\Hy@pstringD{#3}%
9045     \@pdfm@mark{%
9046       bann<<%
9047       /Type/Annot%
9048       /Subtype/Link%
9049       \ifHy@pdfa /F 4\fi
9050       \Hy@setpdfborder
9051       \ifx\@filebordercolor\relax
9052         \else
9053           /C[\@filebordercolor]%
9054         \fi
9055       /A<<%
9056       /S/GoToR%
9057       /F(\Hy@pstringF)%
9058       /D\ifx\#3\[\0 \@pdfstartview\else(\Hy@pstringD)\fi
9059       \Hy@SetNewWindow
9060       >>%
9061     >>%
9062   }%
9063   \Hy@colorlink\@filecolor
9064 }%
9065 #1%
9066 \Hy@endAnnot
9067 }
9068 \def\hyper@linkurl#1#2{%
9069   \leavevmode
9070   \Hy@BeginAnnot{%
9071     \Hy@pstringdef\Hy@pstringURI{#2}%
9072     \@pdfm@mark{%
9073       bann<<%
9074       /Type/Annot%
9075       /Subtype/Link%
9076       \ifHy@pdfa /F 4\fi
9077       \Hy@setpdfborder
9078       \ifx\@urlbordercolor\relax
9079         \else
9080           /C[\@urlbordercolor]%
9081         \fi
9082       /A<<%
9083       /S/URI%
9084       /URI(\Hy@pstringURI)%
9085       >>%
9086     >>%
9087   }%
9088   \Hy@colorlink\@urlcolor
9089 }%
9090 #1%
9091 \Hy@endAnnot
9092 }
9093 \def\Acrobatmenu#1#2{%

```

```

9094 \Hy@Acrobatmenu{#1}{#2}{%
9095 \Hy@BeginAnnot{%
9096 \@pdfm@mark{%
9097   bann<<%
9098   /Type/Annot%
9099   /Subtype/Link%
9100   \ifHy@pdfa /F 4\fi
9101   /A<<%
9102   /S/Named%
9103   /N/#1%
9104   >>%
9105   \Hy@setpdfborder
9106   \ifx\@menubordercolor\relax
9107   \relax
9108   /C[\@menubordercolor]%
9109   \fi
9110   >>%
9111   }%
9112   \Hy@colorlink\@menucolor
9113   }%
9114   #2%
9115   \Hy@endAnnot
9116   }%
9117 }
9118 \ifx\@pdfproducer\relax
9119 \def\@pdfproducer{dvipdfm}%

```

Detect Xe_{TeX}. However, but xdvipdfmx will overwrite it in the final PDF file.

```

9120 \begingroup\expandafter\expandafter\expandafter\endgroup
9121 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9122 \else
9123 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9124 \fi
9125 \fi
9126 \def\PDF@FinishDoc{%
9127 \Hy@UseMaketitleInfos
9128 \HyInfo@GenerateAddons
9129 \@pdfm@mark{%
9130   docinfo<<%
9131   /Title(\@pdftitle)%
9132   /Subject(\@pdfsubject)%
9133   /Creator(\@pdfcreator)%
9134   \ifx\@pdfcreationdate\@empty
9135   \else
9136   /CreationDate(\@pdfcreationdate)%
9137   \fi
9138   \ifx\@pdfmoddate\@empty
9139   \else
9140   /ModDate(\@pdfmoddate)%
9141   \fi
9142   /Author(\@pdfauthor)%
9143   \ifx\@pdfproducer\relax
9144   \else
9145   /Producer(\@pdfproducer)%
9146   \fi
9147   /Keywords(\@pdfkeywords)%
9148   \ifx\@pdftrapped\@empty
9149   \else

```

```

9150      /Trapped/\@pdftrapped
9151      \fi
9152      \HyInfo@Addons
9153      >>%
9154  }%
9155  \Hy@DisableOption{pdfauthor}%
9156  \Hy@DisableOption{pdftitle}%
9157  \Hy@DisableOption{pdfsubject}%
9158  \Hy@DisableOption{pdfcreator}%
9159  \Hy@DisableOption{pdfcreationdate}%
9160  \Hy@DisableOption{pdfmoddate}%
9161  \Hy@DisableOption{pdfproducer}%
9162  \Hy@DisableOption{pdfkeywords}%
9163  \Hy@DisableOption{pdftrapped}%
9164  \Hy@DisableOption{pdfinfo}%
9165 }

9166 \def\PDF@SetupDoc{%
9167   \edef\Hy@temp{%
9168     \ifHy@toolbar\else /HideToolbar true\fi
9169     \ifHy@menubar\else /HideMenubar true\fi
9170     \ifHy>windowui\else /HideWindowUI true\fi
9171     \ifHy@fitwindow /FitWindow true\fi
9172     \ifHy@centerwindow /CenterWindow true\fi
9173     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9174     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9175     \Hy@UseNameKey{Direction}\@pdfdirection
9176     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9177     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9178     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9179     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9180     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9181     \Hy@UseNameKey{Duplex}\@pdfduplex
9182     \ifx\@pdfpicktraybypdfsize\@empty
9183     \else
9184       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9185     \fi
9186     \ifx\@pdfprintpagerange\@empty
9187     \else
9188       /PrintPageRange\@pdfprintpagerange\%
9189     \fi
9190     \ifx\@pdfnumcopies\@empty
9191     \else
9192       /NumCopies \@pdfnumcopies
9193     \fi
9194   }%
9195   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9196   \@pdfm@mark{%
9197     docview<<%
9198     \ifx\@pdfstartpage\@empty
9199     \else
9200       \ifx\@pdfstartview\@empty
9201       \else
9202         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9203       \fi
9204     \fi
9205     \ifx\@baseurl\@empty
9206     \else

```

```

9207      /URI<</Base(\Hy@pstringB)>>%
9208      \fi
9209      /PageMode/\@pdfpagemode
9210      \ifx\Hy@temp\@empty
9211      \else
9212      /ViewerPreferences<<\Hy@temp>>%
9213      \fi
9214      \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9215      \ifx\@pdflang\@empty
9216      \else
9217      /Lang(\@pdflang)%
9218      \fi
9219      >>%
9220    }%
9221    \ifx\@pdfpagescrop\@empty
9222    \else
9223    \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9224    \fi
9225  }
9226 </dvipdfm | xetex>

```

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

```

9227 <*dvipdfm>
9228 \AtBeginShipoutFirst{%
9229   \ifHy@setpagesize
9230     \begingroup
9231     \@ifundefined{stockwidth}{%
9232       \ifdim\paperwidth>\z@
9233       \ifdim\paperheight>\z@
9234       \special{papersize=\the\paperwidth,\the\paperheight}%
9235       \fi
9236     }{\fi
9237     \ifdim\stockwidth>\z@
9238     \ifdim\stockheight>\z@
9239     \special{papersize=\the\stockwidth,\the\stockheight}%
9240     \fi
9241   }{\fi
9242   }%
9243 \endgroup
9244 \fi
9245 \Hy@DisableOption{setpagesize}%
9246 }
9247 }
9248 </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.

```

9249 <*vtexhtml>
9250 \providecommand*{\XR@ext}{htm}
9251 \RequirePackage{vtexhtml}
9252 \newif\if@Localurl
9253 \def\PDF@FinishDoc{}
9254 \def\PDF@SetupDoc{%
9255   \ifx\@baseurl\@empty

```

```

9256 \else
9257 \special{!direct <base href="\@baseurl">}%
9258 \fi
9259 }
9260 \def\@urlltype{url}
9261 \def\hyper@link#1#2#3{%
9262 \Hy@VerboseLinkStart{#1}{#2}%
9263 \leavevmode
9264 \special{!direct <a href=%
9265 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9266 #3%
9267 \special{!direct </a>}%
9268 }
9269 \def\hyper@linkurl#1#2{%
9270 \begingroup
9271 \hyper@chars
9272 \leavevmode
9273 \MathBSuppress=1\relax
9274 \special{!direct <a href=%
9275 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9276 #1%
9277 \MathBSuppress=0\relax
9278 \special{!direct </a>}%
9279 \endgroup
9280 }
9281 \def\hyper@linkfile#1#2#3{%
9282 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9283 }
9284 \def\hyper@linkstart#1#2{%
9285 \Hy@VerboseLinkStart{#1}{#2}%
9286 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9287 \@Localurltrue
9288 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9289 \else
9290 \@Localurlfalse
9291 \begingroup
9292 \hyper@chars
9293 \special{!aref \HyperDestNameFilter{#2}}%
9294 \endgroup
9295 \fi
9296 }
9297 \def\hyper@linkend{%
9298 \if@Localurl
9299 \special{!endaref}%
9300 \else
9301 \special{!direct </a>}%
9302 \fi
9303 }
9304 \def\hyper@anchorstart#1{%
9305 \Hy@SaveLastskip
9306 \Hy@VerboseAnchor{#1}%
9307 \begingroup
9308 \hyper@chars
9309 \special{!aname #1}%
9310 \special{!direct <a name=%
9311 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9312 \endgroup

```

```

9313 \Hy@activeanchortrue
9314 }
9315 \def\hyper@anchorend{%
9316 \special{!direct </a>}%
9317 \Hy@activeanchorfalse
9318 \Hy@RestoreLastskip
9319 }
9320 \def\hyper@anchor#1{%
9321 \Hy@SaveLastskip
9322 \Hy@VerboseAnchor{#1}%
9323 \begingroup
9324 \let\protect=\string
9325 \hyper@chars
9326 \leavevmode
9327 \special{!aname #1}%
9328 \special{!direct <a name=%
9329 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9330 \endgroup
9331 \Hy@activeanchortrue
9332 \bgroup\anchor@spot\egroup
9333 \special{!direct </a>}%
9334 \Hy@activeanchorfalse
9335 \Hy@RestoreLastskip
9336 }
9337 \def\@Form[#1]{%
9338 \typeout{Sorry, TeXpider does not yet support FORMs}%
9339 }
9340 \def\@endForm{}
9341 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9342 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9343 }
9344 \def\@TextField[#1]#2{% parameters, label
9345 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9346 }
9347 \def\@CheckBox[#1]#2{% parameters, label
9348 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9349 }
9350 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9351 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9352 }
9353 \def\@PushButton[#1]#2{% parameters, label
9354 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9355 }
9356 \def\@Reset[#1]#2{%
9357 \typeout{Sorry, TeXpider does not yet support FORMs}%
9358 }
9359 \def\@Submit[#1]#2{%
9360 \typeout{Sorry, TeXpider does not yet support FORMs}%
9361 }
9362 </vtexhtml>
9363 <*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.

```

9364 \ifx\mediaheight\@undefined
9365 \else

```



```

9366 \ifx\mediaheight\relax
9367 \else
9368 \ifHy@setpagesize
9369 \providecommand*\VTeXInitMediaSize{%
9370 \ltx@ifundefined{stockwidth}{%
9371 \ifdim\paperheight>0pt %
9372 \setlength\mediaheight\paperheight
9373 \fi
9374 \ifdim\paperheight>0pt %
9375 \setlength\mediawidth\paperwidth
9376 \fi
9377 }{%
9378 \ifdim\stockheight>0pt %
9379 \setlength\mediaheight\stockheight
9380 \fi
9381 \ifdim\stockwidth>0pt %
9382 \setlength\mediawidth\stockwidth
9383 \fi
9384 }%
9385 }%
9386 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9387 \fi
9388 \Hy@DisableOption{setpagesize}%
9389 \fi
9390 \fi

```

Older versions of VTeX require xyz in lower case.

```

9391 \providecommand*\@pdfview{xyz}
9392 \providecommand*\@pdfborder{0 0 1}
9393 \providecommand*\@pdfborderstyle{}
9394 \let\CurrentBorderColor\@linkbordercolor
9395 \def\hyper@anchor#1{%
9396 \Hy@SaveLastskip
9397 \Hy@VerboseAnchor{#1}%
9398 \begingroup
9399 \let\protect=\string
9400 \hyper@chars
9401 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9402 \endgroup
9403 \Hy@activeanchortrue
9404 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9405 \Hy@activeanchorfalse
9406 \Hy@RestoreLastskip
9407 }
9408 \def\hyper@anchorstart#1{%
9409 \Hy@SaveLastskip
9410 \Hy@VerboseAnchor{#1}%
9411 \begingroup
9412 \hyper@chars
9413 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9414 \endgroup
9415 \Hy@activeanchortrue
9416 }
9417 \def\hyper@anchorend{%
9418 \Hy@activeanchorfalse
9419 \Hy@RestoreLastskip
9420 }
9421 \def\@urltype{url}

```

```

9422 \def\Hy@undefinedname{UNDEFINED}
9423 \def\hyper@linkstart#1#2{%
9424   \Hy@VerboseLinkStart{#1}{#2}%
9425   \Hy@pstringdef\Hy@pstringURI{#2}%
9426   \expandafter\Hy@colorlink\csname @#1color\endcsname
9427   \ltx@ifundefined{@#1bordercolor}{%
9428     \let\CurrentBorderColor\relax
9429   }{%
9430     \edef\CurrentBorderColor{%
9431       \csname @#1bordercolor\endcsname
9432     }%
9433   }%
9434   \def\Hy@tempa{#1}%
9435   \ifx\Hy@tempa@\urltype
9436     \special{!%
9437       aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9438       a=<%
9439         \ifHy@pdfa /F 4\fi
9440         \Hy@setpdfborder
9441         \ifx\CurrentBorderColor\relax
9442           \else
9443             /C [\CurrentBorderColor]%
9444           \fi
9445         >%
9446       }%
9447   \else
9448     \protected@edef\Hy@testname{#2}%
9449     \ifx\Hy@testname\@empty
9450       \Hy@Warning{%
9451         Empty destination name,\MessageBreak
9452         using '\Hy@undefinedname'%
9453       }%
9454       \let\Hy@testname\Hy@undefinedname
9455     \fi
9456     \special{!%
9457       aref \expandafter\HyperDestNameFilter
9458         \expandafter{\Hy@testname};%
9459       a=<%
9460         \ifHy@pdfa /F 4\fi
9461         \Hy@setpdfborder
9462         \ifx\CurrentBorderColor\relax
9463           \else
9464             /C [\CurrentBorderColor]%
9465           \fi
9466         >%
9467       }%
9468     \fi
9469   }
9470 \def\hyper@linkend{%
9471   \special{!endaref}%
9472   \Hy@endcolorlink
9473 }
9474 \def\hyper@linkfile#1#2#3{%
9475   \leavevmode
9476   \special{!%
9477     aref <%
9478     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi

```

```

9479 f=#2>#3;%
9480 a=<%
9481 \ifHy@pdfa /F 4\fi
9482 \Hy@setpdfborder
9483 \ifx\@filebordercolor\relax
9484 \else
9485 /C [\@filebordercolor]%
9486 \fi
9487 >%
9488 }%
9489 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9490 \special{!endaref}%
9491 }
9492 \def\hyper@linkurl#1#2{%
9493 \begingroup
9494 \Hy@pstringdef\Hy@pstringURI{#2}%
9495 \hyper@chars
9496 \leavevmode
9497 \special{!%
9498   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9499   a=<%
9500   \ifHy@pdfa /F 4\fi
9501   \Hy@setpdfborder
9502   \ifx\@urlbordercolor\relax
9503   \else
9504   /C [\@urlbordercolor]%
9505   \fi
9506   >%
9507   }%
9508   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9509   \special{!endaref}%
9510 \endgroup
9511 }
9512 \def\hyper@link#1#2#3{%
9513 \Hy@VerboseLinkStart{#1}{#2}%
9514 \ltx@ifundefined{@#1bordercolor}{%
9515 \let\CurrentBorderColor\relax
9516 }{%
9517 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9518 }%
9519 \leavevmode
9520 \protected@edef\Hy@testname{#2}%
9521 \ifx\Hy@testname\@empty
9522 \Hy@Warning{%
9523   Empty destination name,\MessageBreak
9524   using '\Hy@undefinedname'%
9525 }%
9526 \let\Hy@testname\Hy@undefinedname
9527 \fi
9528 \special{!%
9529   aref \expandafter\HyperDestNameFilter
9530   \expandafter{\Hy@testname};%
9531   a=<%
9532   \ifHy@pdfa /F 4\fi
9533   \Hy@setpdfborder
9534   \ifx\CurrentBorderColor\relax
9535   \else

```

```

9536      /C [\CurrentBorderColor]%
9537      \fi
9538      >%
9539  }%
9540  \expandafter
9541  \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9542  \special{!endaref}%
9543  }
9544  \def\hyper@image#1#2{%
9545  \hyper@linkurl{#2}{#1}%
9546  }
9547  \def\@hyper@launch run:#1\#2#3{%
9548  \Hy@pstringdef\Hy@pstringF{#1}%
9549  \Hy@pstringdef\Hy@pstringP{#3}%
9550  \leavevmode
9551  \special{!aref %
9552  <u=%
9553  /Type/Action%
9554  /S/Launch%
9555  /F(\Hy@pstringF)%
9556  \Hy@SetNewWindow
9557  \ifx\#3\%
9558  \else
9559  /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9560  \fi%
9561  >;%
9562  a=<%
9563  \ifHy@pdfa /F 4\fi
9564  \Hy@setpdfborder
9565  \ifx\@runbordercolor\relax
9566  \else
9567  /C[\@runbordercolor]%
9568  \fi
9569  >%
9570  }%
9571  \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9572  \special{!endaref}%
9573  }
9574  \def\Acrobatmenu#1#2{%
9575  \Hy@Acrobatmenu{#1}{#2}{%
9576  \special{!%
9577  aref <u=/S /Named /N /#1>;%
9578  a=<%
9579  \ifHy@pdfa /F 4\fi
9580  \Hy@setpdfborder
9581  \ifx\@menubordercolor\relax
9582  \else
9583  /C[\@menubordercolor]%
9584  \fi
9585  >%
9586  }%
9587  \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9588  \special{!endaref}%
9589  }%
9590  }

```

The following code (transition effects) is made by Alex Kostin.
The code below makes sense for VT_EX 7.02 or later.

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

```
9591 \ifnum\Hy@VTeXversion<702 %
9592 \else
9593 \def\hyper@pagetransition{%
9594 \ifx\@pdfpagetransition\relax
9595 \else
9596 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

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

```
9597 \else
9598 \hvtex@parse@trans\@pdfpagetransition
9599 \fi
9600 \fi
9601 }%
```

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

Syntax of V_TE_X `\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:

```
9602 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9603 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9604 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9605 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9606 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9607 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9608 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
9609 \def\hvtex@par@dimension{/Dm}%
9610 \def\hvtex@par@direction{/Di}%
9611 \def\hvtex@par@duration{/D}%
9612 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
9613 \def\hvtex@gettoken{%
9614 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9615 }%
```

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

```
9616 \def\hvtex@gettoken@#1 #2\@nil{%
9617 \edef\hvtex@token{#1}%
```

```

9618 \edef\hvtex@buffer{#2}%
9619 }%
9620 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9621 \let\hvtex@trans@code\@empty
9622 \let\hvtex@param@dimension\@empty
9623 \let\hvtex@param@direction\@empty
9624 \let\hvtex@param@duration\@empty
9625 \let\hvtex@param@motion\@empty
9626 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9627 \hvtex@gettoken
9628 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9629 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9630 \else
9631 \hvtex@gettoken
9632 \fi
9633 \fi
9634 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9635 \hvtex@trans@params
9636 }%

```

Reentrant macro to parse optional parameters.

```

9637 \def\hvtex@trans@params{%
9638 \ifx\hvtex@buffer\@empty
9639 \else
9640 \hvtex@gettoken
9641 \let\hvtex@trans@par\hvtex@token
9642 \ifx\hvtex@buffer\@empty
9643 \else
9644 \hvtex@gettoken
9645 \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

9646 \let\hvtex@param@duration\hvtex@token
9647 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

9648 \expandafter\edef\expandafter\hvtex@param@motion
9649 \expandafter{\expandafter\@gobble\hvtex@token}%
9650 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

9651 \expandafter\edef\expandafter\hvtex@param@dimension
9652 \expandafter{\expandafter\@gobble\hvtex@token}%
9653 \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).

```

9654 \let\hvtex@param@direction\hvtex@token
9655 \fi\fi\fi\fi
9656 \fi
9657 \fi

```

```

9658 \ifx\hvtex@buffer\@empty
9659 \let\next\hvtex@produce@trans
9660 \else
9661 \let\next\hvtex@trans@params
9662 \fi
9663 \next
9664 }%

```

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

```

9665 \def\hvtex@produce@trans{%
9666 \let\vtex@trans@special\@empty
9667 \if S\hvtex@trans@code
9668 \edef\vtex@trans@special{\hvtex@trans@code
9669 \hvtex@param@dimension\hvtex@param@motion}%
9670 \else\if B\hvtex@trans@code
9671 \edef\vtex@trans@special{%
9672 \hvtex@trans@code\hvtex@param@dimension
9673 }%
9674 \else\if X\hvtex@trans@code
9675 \edef\vtex@trans@special{%
9676 \hvtex@trans@code\hvtex@param@motion
9677 }%
9678 \else\if W\hvtex@trans@code
9679 \edef\vtex@trans@special{%
9680 \hvtex@trans@code\hvtex@param@direction
9681 }%
9682 \else\if D\hvtex@trans@code
9683 \let\vtex@trans@special\hvtex@trans@code
9684 \else\if R\hvtex@trans@code
9685 \let\vtex@trans@special\hvtex@trans@code
9686 \else\if G\hvtex@trans@code
9687 \edef\vtex@trans@special{%
9688 \hvtex@trans@code\hvtex@param@direction
9689 }%
9690 \fi\fi\fi\fi\fi\fi
9691 \ifx\vtex@trans@special\@empty
9692 \else
9693 \ifx\hvtex@param@duration\@empty
9694 \else
9695 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9696 \multiply\dimen@\@m
9697 \edef\vtex@trans@special{%
9698 \vtex@trans@special,\strip@pt\dimen@
9699 }%
9700 \fi

```

And all the mess is just for this.

```

9701 \special{!trans \vtex@trans@special}%
9702 \fi
9703 }%
9704 \def\hyper@pageduration{%
9705 \ifx\@pdfpageduration\relax
9706 \else
9707 \ifx\@pdfpageduration\@empty
9708 \special{!duration-}%

```

```

9709 \else
9710 \special{!duration \@pdfpageduration}%
9711 \fi
9712 \fi
9713 }%
9714 \def\hyper@pagehidden{%
9715 \ifHy@useHidKey
9716 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9717 \fi
9718 }%
9719 \g@addto@macro\Hy@EveryPageBoxHook{%
9720 \hyper@pagetransition
9721 \hyper@pageduration
9722 \hyper@pagehidden
9723 }%
9724 \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

```

9725 \ifx\@pdfproducer\relax
9726 \def\@pdfproducer{VTeX}%
9727 \ifnum\Hy@VTeXversion>\z@
9728 \count@\VTeXversion
9729 \divide\count@ 100 %
9730 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9731 \multiply\count@ -100 %
9732 \advance\count@\VTeXversion
9733 \edef\@pdfproducer{%
9734 \@pdfproducer
9735 .\ifnum\count@<10 0\fi\the\count@
9736 \ifx\VTeXOS\@undefined\else
9737 \ifnum\VTeXOS>0 %
9738 \ifnum\VTeXOS<6 %
9739 \space(%
9740 \ifcase\VTeXOS
9741 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9742 \fi
9743 )%
9744 \fi
9745 \fi
9746 \fi
9747 ,\space
9748 \ifnum\OpMode=\@ne PDF\else PS\fi
9749 \space backend%
9750 \ifx\gexmode\@undefined\else
9751 \ifnum\gexmode>\z@\space with GeX\fi
9752 \fi
9753 }%
9754 \fi
9755 \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).

```

9756 \def\PDF@SetupDoc{%
9757   \ifx\@pdfpagescrop\@empty
9758   \else
9759     \special{!pdfinfo b=<\@pdfpagescrop>}%
9760   \fi
9761   \ifx\@pdfstartpage\@empty
9762   \else
9763     \ifx\@pdfstartview\@empty
9764     \else
9765       \special{!onopen Page\@pdfstartpage}%
9766     \fi
9767   \fi
9768   \special{!pdfinfo p=</\@pdfpagemode>}%
9769   \ifx\@baseurl\@empty
9770   \else
9771     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9772   \fi
9773   \special{!pdfinfo v=<<<%
9774     \ifHy@toolbar\else /HideToolbar true\fi
9775     \ifHy@menubar\else /HideMenubar true\fi
9776     \ifHy>windowui\else /HideWindowUI true\fi
9777     \ifHy@fitwindow /FitWindow true\fi
9778     \ifHy@centerwindow /CenterWindow true\fi
9779     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9780     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9781     \Hy@UseNameKey{Direction}\@pdfdirection
9782     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9783     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9784     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9785     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9786     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9787     \Hy@UseNameKey{Duplex}\@pdfduplex
9788     \ifx\@pdfpicktraybypdfsize\@empty
9789     \else
9790       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9791     \fi
9792     \ifx\@pdfprintpagerange\@empty
9793     \else
9794       /PrintPageRange[\@pdfprintpagerange]%
9795     \fi
9796     \ifx\@pdfnumcopies\@empty
9797     \else

```

```

9798     /NumCopies \@pdfnumcopies
9799     \fi
9800 >>>}%
9801 \ifx\@pdfpagelayout\@empty
9802 \else
9803   \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9804 \fi
9805 }%
9806 \HyInfo@AddonUnsupportedtrue
9807 \def\PDF@FinishDoc{%
9808   \Hy@UseMaketitleInfos
9809   \HyInfo@TrappedUnsupported
9810   \special{!pdfinfo a=<\@pdfauthor>}%
9811   \special{!pdfinfo t=<\@pdftitle>}%
9812   \special{!pdfinfo s=<\@pdfsubject>}%
9813   \special{!pdfinfo c=<\@pdfcreator>}%
9814   \ifx\@pdfproducer\relax
9815   \else
9816     \special{!pdfinfo r=<\@pdfproducer>}%
9817   \fi
9818   \special{!pdfinfo k=<\@pdfkeywords>}%
9819   \Hy@DisableOption{pdfauthor}%
9820   \Hy@DisableOption{pdftitle}%
9821   \Hy@DisableOption{pdfsubject}%
9822   \Hy@DisableOption{pdfcreator}%
9823   \Hy@DisableOption{pdfcreationdate}%
9824   \Hy@DisableOption{pdfmoddate}%
9825   \Hy@DisableOption{pdfproducer}%
9826   \Hy@DisableOption{pdfkeywords}%
9827   \Hy@DisableOption{pdftrapped}%
9828   \Hy@DisableOption{pdfinfo}%
9829 }
9830 \</vtx>

```

46.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

9831 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9832 <package>\providecommand*{\Hy@DistillerDestFix}{%
9833 <*pdfmark | dviwindo>
9834 \def\Hy@DistillerDestFix{%
9835   \begingroup
9836   \let\x\literalps@out

```

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

```

9837   \ifnum \@ifundefined{OpMode}{0}{%
9838     \@ifundefined{gexmode}{0}{%
9839     \ifnum\gexmode>0 \OpMode\else 0\fi

```

```

9840      }>1 %
9841      \def\x###1{%
9842        \immediate\special{!=###1}%
9843      }%
9844      \fi
9845      \x{%
9846        /product where{%
9847          pop %
9848          product(Distiller)search{%
9849            pop pop pop %
9850            version(.)search{%
9851              exch pop exch pop%
9852              (3011)eq{%
9853                gsave %
9854                newpath 0 0 moveto closepath clip%
9855                /Courier findfont 10 scalefont setfont %
9856                72 72 moveto(.).show %
9857                grestore%
9858              }if%
9859            }{pop}ifelse%
9860          }{pop}ifelse%
9861        }if%
9862      }%
9863      \endgroup
9864    }
9865  \</pdfmark | dviwindo>

```

46.8 Direct pdfmark support

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

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

and the correct definitions of the following PostScript procedures:

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

```

9866 <*pdfmark>
9867 \Hy@breaklinks@unsupported
9868 \def\hyper@anchor#1{%
9869   \Hy@SaveLastskip
9870   \Hy@VerboseAnchor{#1}%
9871   \begingroup
9872   \pdfmark[\anchor@spot]{%
9873     pdfmark=/DEST,%
9874     linktype=anchor,%
9875     View=/\@pdfview \@pdfviewparams,%
9876     DestAnchor={#1}%
9877   }%
9878   \endgroup
9879   \Hy@RestoreLastskip
9880 }

```

```

9881 \ltx@ifundefined{hyper@anchorstart}{\endinput}
9882 \def\hyper@anchorstart#1{%
9883   \Hy@SaveLastskip
9884   \Hy@VerboseAnchor{#1}%
9885   \literalps@out{H.S}%
9886   \Hy@AllowHyphens
9887   \xdef\hyper@currentanchor{#1}%
9888   \Hy@activeanchortrue
9889 }
9890 \def\hyper@anchorend{%
9891   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9892   \pdfmark{%
9893     pdfmark=/DEST,%
9894     linktype=anchor,%
9895     View=/\@pdfview \@pdfviewparams,%
9896     DestAnchor=\hyper@currentanchor,%
9897   }%
9898   \Hy@activeanchorfalse
9899   \Hy@RestoreLastskip
9900 }
9901 \def\hyper@linkstart#1#2{%
9902   \Hy@VerboseLinkStart{#1}{#2}%
9903   \ifHy@breaklinks
9904   \else
9905     \leavevmode\hbox\bgroup
9906     \fi
9907     \expandafter\Hy@colorlink\csname @#1color\endcsname
9908     \literalps@out{H.S}%
9909     \Hy@AllowHyphens
9910     \xdef\hyper@currentanchor{#2}%
9911     \gdef\hyper@currentlinktype{#1}%
9912 }
9913 \def\hyper@linkend{%
9914   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9915   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
9916     \let\Hy@tempcolor\relax
9917   }{%
9918     \edef\Hy@tempcolor{%
9919       \csname @\hyper@currentlinktype bordercolor\endcsname
9920     }%
9921   }%
9922   \pdfmark{%
9923     pdfmark=/ANN,%
9924     linktype=link,%
9925     Subtype=/Link,%
9926     PDFAFlags=4,%
9927     Dest=\hyper@currentanchor,%
9928     AcroHighlight=\@pdfhighlight,%
9929     Border=\@pdfborder,%
9930     BorderStyle=\@pdfborderstyle,%
9931     Color=\Hy@tempcolor,%
9932     Raw=H.B%
9933   }%
9934   \Hy@endcolorlink
9935   \ifHy@breaklinks
9936   \else
9937     \egroup

```

```

9938 \fi
9939 }

```

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.

```

9940 \begingroup
9941 \catcode'P=12 %
9942 \catcode'T=12 %
9943 \lowercase{\endgroup
9944 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
9945 }
9946 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

9947 \def\hyper@pagetransition{%
9948 \ifx\@pdfpagetransition\relax
9949 \else
9950 \ifx\@pdfpagetransition\@empty
9951 % 1. Does an old entry have to be deleted?
9952 % 2. If 1=yes, how to delete?
9953 \else
9954 \pdfmark{%
9955 pdfmark=/PUT,%
9956 Raw={%
9957 \string{ThisPage\string}%
9958 <</Trans << /S /\@pdfpagetransition\space >> >>%
9959 }%
9960 }%
9961 \fi
9962 \fi
9963 }

```

\hyper@pageduration

```

9964 \def\hyper@pageduration{%
9965 \ifx\@pdfpageduration\relax
9966 \else
9967 \ifx\@pdfpageduration\@empty
9968 % 1. Does an old entry have to be deleted?
9969 % 2. If 1=yes, how to delete?
9970 \else
9971 \pdfmark{%
9972 pdfmark=/PUT,%
9973 Raw={%
9974 \string{ThisPage\string}%
9975 <</Dur \@pdfpageduration>>%
9976 }%
9977 }%
9978 \fi
9979 \fi
9980 }

```

\hyper@pagehidden

```

9981 \def\hyper@pagehidden{%
9982 \ifHy@useHidKey
9983 \pdfmark{%
9984 pdfmark=/PUT,%

```

```

9985     Raw={%
9986         \string{ThisPage\string}%
9987         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9988     }%
9989 }%
9990 \fi
9991 }

9992 \g@addto@macro\Hy@EveryPageBoxHook{%
9993     \hyper@pagetransition
9994     \hyper@pageduration
9995     \hyper@pagehidden
9996 }

9997 \def\hyper@image#1#2{%
9998     \hyper@linkurl{#2}{#1}%
9999 }

10000 \def\Hy@undefinedname{UNDEFINED}
10001 \def\hyper@link#1#2#3{%
10002     \Hy@VerboseLinkStart{#1}{#2}%
10003     \ltx@ifundefined{@#1bordercolor}{%
10004         \let\Hy@tempcolor\relax
10005     }{%
10006         \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10007     }%
10008     \begingroup
10009     \protected@edef\Hy@testname{#2}%
10010     \ifx\Hy@testname\@empty
10011         \Hy@Warning{%
10012             Empty destination name,\MessageBreak
10013             using '\Hy@undefinedname'%
10014         }%
10015         \let\Hy@testname\Hy@undefinedname
10016     \fi
10017     \pdfmark[{#3}]{%
10018         Color=\Hy@tempcolor,%
10019         linktype={#1},%
10020         AcroHighlight=\@pdfhighlight,%
10021         Border=\@pdfborder,%
10022         BorderStyle=\@pdfborderstyle,%
10023         pdfmark=/ANN,%
10024         Subtype=/Link,%
10025         PDFAFlags=4,%
10026         Dest=\Hy@testname
10027     }%
10028     \endgroup
10029 }

10030 \newtoks\pdf@docset
10031 \def\PDF@FinishDoc{%
10032     \Hy@UseMaketitleInfos
10033     \Hy@Info@GenerateAddons
10034     \let\Hy@temp\@empty
10035     \ifx\@pdfcreationdate\@empty
10036     \else
10037         \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10038     \fi
10039     \ifx\@pdfmoddate\@empty
10040     \else
10041         \expandafter\def\expandafter\Hy@temp\expandafter{%

```

```

10042     \Hy@temp
10043     ModDate=\@pdfmoddate,%
10044 }%
10045 \fi
10046 \ifx\@pdfproducer\relax
10047 \else
10048   \expandafter\def\expandafter\Hy@temp\expandafter{%
10049     \Hy@temp
10050     Producer=\@pdfproducer,%
10051   }%
10052 \fi
10053 \expandafter
10054 \pdfmark\expandafter{%
10055   \Hy@temp
10056   pdfmark=/DOCINFO,%
10057   Title=\@pdftitle,%
10058   Subject=\@pdfsubject,%
10059   Creator=\@pdfcreator,%
10060   Author=\@pdfauthor,%
10061   Keywords=\@pdfkeywords,%
10062   Trapped=\@pdftrapped
10063 }%
10064 \ifx\HyInfo@Addons\@empty
10065 \else
10066   \pdfmark{%
10067     pdfmark=/DOCINFO,%
10068     Raw={\HyInfo@Addons}%
10069   }%
10070 \fi
10071 \Hy@DisableOption{pdfauthor}%
10072 \Hy@DisableOption{pdftitle}%
10073 \Hy@DisableOption{pdfsubject}%
10074 \Hy@DisableOption{pdfcreator}%
10075 \Hy@DisableOption{pdfcreationdate}%
10076 \Hy@DisableOption{pdfmoddate}%
10077 \Hy@DisableOption{pdfproducer}%
10078 \Hy@DisableOption{pdfkeywords}%
10079 \Hy@DisableOption{pdftrapped}%
10080 \Hy@DisableOption{pdfinfo}%
10081 }
10082 \def\PDF@SetupDoc{%
10083   \def\Hy@temp{%
10084     \ifx\@pdfstartpage\@empty
10085     \else
10086       \ifx\@pdfstartview\@empty
10087       \else
10088         \edef\Hy@temp{%
10089           ,Page=\@pdfstartpage
10090           ,View=\@pdfstartview
10091         }%
10092       \fi
10093     \fi
10094     \edef\Hy@temp{%
10095       \noexpand\pdfmark{%
10096         pdfmark=/DOCVIEW,%
10097         PageMode=\/@pdfpagemode
10098       }\Hy@temp

```

```

10099 }%
10100 }%
10101 \Hy@temp
10102 \ifx\@pdfpagescrop\@empty
10103 \else
10104 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10105 \fi
10106 \edef\Hy@temp{%
10107 \ifHy@toolbar\else /HideToolbar true\fi
10108 \ifHy@menubar\else /HideMenubar true\fi
10109 \ifHy>windowui\else /HideWindowUI true\fi
10110 \ifHy@fitwindow /FitWindow true\fi
10111 \ifHy@centerwindow /CenterWindow true\fi
10112 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10113 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10114 \Hy@UseNameKey{Direction}\@pdfdirection
10115 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10116 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10117 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10118 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10119 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10120 \Hy@UseNameKey{Duplex}\@pdfduplex
10121 \ifx\@pdfpicktraybypdfsize\@empty
10122 \else
10123 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10124 \fi
10125 \ifx\@pdfprintpagerange\@empty
10126 \else
10127 /PrintPageRange\@pdfprintpagerange}%
10128 \fi
10129 \ifx\@pdfnumcopies\@empty
10130 \else
10131 /NumCopies \@pdfnumcopies
10132 \fi
10133 }%
10134 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10135 \pdfmark{%
10136 pdfmark=/PUT,%
10137 Raw={%
10138 \string{Catalog\string}<<%
10139 \ifx\Hy@temp\@empty
10140 \else
10141 /ViewerPreferences<<\Hy@temp>>%
10142 \fi
10143 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10144 \ifx\@pdflang\@empty
10145 \else
10146 /Lang(\@pdflang)%
10147 \fi
10148 \ifx\@baseurl\@empty
10149 \else
10150 /URI<</Base(\Hy@pstringB)>>%
10151 \fi
10152 >>%
10153 }%
10154 }%
10155 }

```



```

10156 </pdfmark>
10157 <*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.

```

10158 \newif\ifHy@pdfmarkerror
10159 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
10160 \def\pdfmark@[#1]#2{%
10161   \Hy@pdfmarkerrorfalse
10162   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10163   \@processme
10164   \let\pdf@type\relax
10165   \setkeys{PDF}{#2}%
10166   \ifHy@pdfmarkerror
10167   \else
10168     \ifx\pdf@type\relax
10169       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10170       \ifx\#1\%
10171       \else
10172         \pdf@rect{#1}%
10173         \fi
10174       \else
10175         \ifx\#1\%
10176           \literalps@out{%
10177             [\the\pdf@toks\space\pdf@type\space pdfmark%
10178             ]%
10179           \else
10180             \ltx@ifundefined{@\pdf@linktype color}{%
10181               \Hy@colorlink\@linkcolor
10182             }{%
10183               \expandafter\Hy@colorlink
10184                 \csname @\pdf@linktype color\endcsname
10185             }%
10186             \pdf@rect{#1}%
10187             \literalps@out{%
10188               [\the\pdf@toks\space\pdf@type\space pdfmark%
10189               ]%
10190             \Hy@endcolorlink
10191           \fi
10192         \fi
10193       \fi
10194 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

10195 \newsavebox{\pdf@box}
10196 \providecommand*{\Hy@setouterhbox}{\sbox}
10197 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10198 \def\Hy@DEST{/DEST}
10199 \def\pdf@rect#1{%
10200   \leavevmode
10201   \ifHy@breaklinks
10202     \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10203   \else
10204     \sbox\pdf@box{#1}%
10205   \fi
10206   \dimen@{\ht\pdf@box}
10207   \ifdim\dp\pdf@box=\z@
10208     \literalps@out{H.S}%
10209   \else
10210     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10211   \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...).

```

10212   \ifHy@breaklinks
10213     \expandafter\Hy@breaklinksunhbox
10214   \else
10215     \expandafter\box
10216   \fi
10217 \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

10218 \ifdim\dimen@=\z@
10219   \literalps@out{H.R}%
10220 \else
10221   \raise\dimen@\hbox{\literalps@out{H.R}}%
10222 \fi
10223 \ifx\pdf@type\Hy@DEST
10224 \else
10225   \pdf@addtoksx{H.B}%
10226 \fi
10227 }

```

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.

```

10228 \newtoks\pdf@toks
10229 \newtoks\pdf@defaulttoks
10230 \pdf@defaulttoks={}%
10231 \def\pdf@addtoks#1#2{%
10232   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10233   \@processme
10234 }
10235 \def\pdf@addtoksx#1{%
10236   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10237   \@processme
10238 }
10239 \def\PDFdefaults#1{%
10240   \pdf@defaulttoks={#1}%
10241 }

```

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

```

10242 % what is the type of pdfmark?
10243 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10244 % what is the link type?
10245 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10246 \def\pdf@linktype{link}
10247 % parameter is a stream of PDF
10248 \define@key{PDF}{Raw}{\pdf@addtoks{#1}}
10249 % parameter is a name
10250 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10251 % parameter is a array
10252 \define@key{PDF}{Border}{%
10253   \edef\Hy@temp{#1}%
10254   \ifx\Hy@temp\@empty
10255     \else
10256       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10257   \fi
10258 }
10259 \let\Hy@BorderArrayPatch\@empty
10260 % parameter is a dictionary
10261 \define@key{PDF}{BorderStyle}{%
10262   \edef\Hy@temp{#1}%
10263   \ifx\Hy@temp\@empty
10264     \else
10265       \pdf@addtoks{<<#1>>}{BS}%
10266   \fi
10267 }
10268 % parameter is a array
10269 \define@key{PDF}{Color}{%
10270   \ifx\relax#1\relax
10271     \else
10272       \pdf@addtoks{[#1]}{Color}% hash-ok
10273   \fi
10274 }
10275 % parameter is a string
10276 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10277 % parameter is a integer
10278 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10279 % parameter is a array
10280 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10281 % parameter is a string
10282 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10283 % parameter is a string or file
10284 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10285 % parameter is a destination
10286 \define@key{PDF}{Dest}{%
10287   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10288   \ifx\Hy@pstringDest\@empty
10289     \Hy@pdfmarkerrortrue
10290     \Hy@Warning{Destination with empty name ignored}%
10291   \else
10292     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10293   \fi
10294 }
10295 \define@key{PDF}{DestAnchor}{%
10296   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10297   \ifx\Hy@pstringDest\@empty

```

```

10298 \Hy@pdfmarkerrortrue
10299 \Hy@Warning{Destination with empty name ignored}%
10300 \else
10301 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10302 \fi
10303 }
10304 % parameter is a string
10305 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10306 % parameter is a string
10307 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10308 % parameter is a int
10309 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10310 \define@key{PDF}{PDFAFlags}{%
10311 \ifHy@pdfa
10312 \pdf@addtoks{#1}{F}%
10313 \fi
10314 }
10315 % parameter is a name
10316 \define@key{PDF}{AcroHighlight}{%
10317 \begingroup
10318 \edef\x{#1}%
10319 \expandafter\endgroup\ifx\x@empty
10320 \else
10321 \pdf@addtoks{#1}{H}%
10322 \fi
10323 }
10324 % parameter is a string
10325 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10326 % parameter is a string
10327 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10328 % parameter is a string
10329 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10330 % parameter is a string
10331 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10332 % parameter is a Boolean
10333 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10334 % parameter is a integer or name
10335 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10336 % parameter is a name
10337 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10338 % parameter is a string
10339 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10340 % parameter is a array
10341 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10342 % parameter is a integer
10343 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10344 % parameter is a name
10345 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10346 % parameter is a string
10347 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10348 % parameter is a string
10349 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10350 % parameter is a string
10351 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10352 % parameter is an array
10353 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10354 % parameter is a string

```

```
10355 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}
```

These are the keys used in the DOCINFO section.

```
10356 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10357 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10358 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10359 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10360 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10361 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10362 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10363 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10364 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10365 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10366 \define@key{PDF}{Trapped}{%
10367   \edef\Hy@temp{#1}%
10368   \ifx\Hy@temp\@empty
10369     \else
10370       \pdf@addtoks{/#1}{Trapped}%
10371     \fi
10372 }
10373
10374 </pdfmarkbase>
10375 <*pdfmark>
10376 \def\Acrobatmenu#1#2{%
10377   \Hy@Acrobatmenu{#1}{#2}{%
10378     \pdfmark[{#2}]{%
10379       linktype=menu,%
10380       pdfmark=/ANN,%
10381       AcroHighlight=\@pdfhighlight,%
10382       Border=\@pdfborder,%
10383       BorderStyle=\@pdfborderstyle,%
10384       Action={<< /Subtype /Named /N /#1 >>},%
10385       Subtype=/Link,%
10386       PDFAFlags=4%
10387     }%
10388   }%
10389 }
```

And now for some useful examples:

```
10390 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
10391 \def\PDFNextPage@[#1]#2{%
10392   \pdfmark[{#2}]{%
10393     #1,%
10394     Border=\@pdfborder,%
10395     BorderStyle=\@pdfborderstyle,%
10396     Color=.2 .1 .5,%
10397     pdfmark=/ANN,%
10398     Subtype=/Link,%
10399     PDFAFlags=4,%
10400     Page=/Next%
10401   }%
10402 }
10403 \def\PDFPreviousPage{%
10404   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10405 }
10406 \def\PDFPreviousPage@[#1]#2{%
10407   \pdfmark[{#2}]{%
10408     #1,%
```

```

10409   Border=\@pdfborder,%
10410   BorderStyle=\@pdfborderstyle,%
10411   Color=.4 .4 .1,%
10412   pdfmark=/ANN,%
10413   Subtype=/Link,%
10414   PDFAFlags=4,%
10415   Page=/Prev%
10416 }%
10417 }
10418 \def\PDFOpen#1{%
10419   \pdfmark{#1,pdfmark=/DOCVIEW}%
10420 }

```

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

```

10421 \def\hyper@linkurl#1#2{%
10422   \begingroup
10423     \Hy@pstringdef\Hy@pstringURI{#2}%
10424     \hyper@chars
10425     \leavevmode
10426     \pdfmark[{#1}]{%
10427       pdfmark=/ANN,%
10428       linktype=url,%
10429       AcroHighlight=\@pdfhighlight,%
10430       Border=\@pdfborder,%
10431       BorderStyle=\@pdfborderstyle,%
10432       Color=\@urlbordercolor,%
10433       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10434       Subtype=/Link,%
10435       PDFAFlags=4%
10436     }%
10437   \endgroup
10438 }
10439 \def\hyper@linkfile#1#2#3{%
10440   \begingroup
10441     \Hy@pstringdef\Hy@pstringF{#2}%
10442     \Hy@pstringdef\Hy@pstringD{#3}%
10443     \leavevmode
10444     \pdfmark[{#1}]{%
10445       pdfmark=/ANN,%
10446       Subtype=/Link,%
10447       PDFAFlags=4,%
10448       AcroHighlight=\@pdfhighlight,%
10449       Border=\@pdfborder,%
10450       BorderStyle=\@pdfborderstyle,%
10451       linktype=file,%
10452       Color=\@filebordercolor,%
10453       Action={%
10454         <<%
10455           /S/GoToR%
10456           \Hy@SetNewWindow
10457           /F(\Hy@pstringF)%
10458           /D\ifx\#3\@pdfstartview\else(\Hy@pstringD)cvn\fi
10459         >>%
10460       }%
10461     }%
10462   \endgroup
10463 }
10464 \def\hyper@launch run:#1\#2#3{%

```

```

10465 \begingroup
10466   \Hy@pstringdef\Hy@pstringF{#1}%
10467   \Hy@pstringdef\Hy@pstringP{#3}%
10468   \leavevmode
10469   \pdfmark[{#2}]{%
10470     pdfmark=/ANN,%
10471     Subtype=/Link,%
10472     PDFAFlags=4,%
10473     AcroHighlight=\@pdfhighlight,%
10474     Border=\@pdfborder,%
10475     BorderStyle=\@pdfborderstyle,%
10476     linktype=run,%
10477     Color=\@runbordercolor,%
10478     Action={%
10479       <<%
10480         /S/Launch%
10481         \Hy@SetNewWindow
10482         /F(\Hy@pstringF)%
10483         \ifx\#3\%
10484           \else
10485             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10486           \fi
10487         >>%
10488       }%
10489     }%
10490 \endgroup
10491 }
10492 </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.

```

10493 <*dvips>
10494 \providecommand*{\XR@ext}{pdf}
10495 \def\Hy@raisedlink{}
10496 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
10497 \def\headerps@out#1{\special{! #1}}%
10498 \input{pdfmark.def}%
10499 \ifx\@pdfproducer\relax
10500   \def\@pdfproducer{dvips + Distiller}%
10501 \fi
10502 \providecommand*\@pdfborder{0 0 1}
10503 \providecommand*\@pdfborderstyle{}
10504 \providecommand*\@pdfview{XYZ}
10505 \providecommand*\@pdfviewparams{H.V}
10506 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10507 \g@addto@macro\Hy@FirstPageHook{%
10508   \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.

```
10509 /DvipsToPDF{72.27 mul Resolution div} def%
10510 /PDFToDvips{72.27 div Resolution mul} def%
10511 /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.

```
10512 /BorderArrayPatch{%
10513   lsexch{%
10514     dup dup type/integertype eq exch type/realtype eq or%
10515     {BPToDvips}if%
10516   }forall}%
10517 }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.

```
10518 /HyperBorder {1 PDFToDvips} def%
10519 /H.V {pdf@hoff pdf@voff null} def%
10520 /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

```
10521 /H.S {%
10522   currentpoint %
10523   HyperBorder add /pdf@lly exch def %
10524   dup DvipsToPDF 72 add /pdf@hoff exch def %
10525   HyperBorder sub /pdf@llx exch def%
10526 } 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

```
10527 /H.L {%
10528   2 sub dup%
10529   /HyperBasePt exch def %
10530   PDFToDvips /HyperBaseDvips exch def %
10531   currentpoint %
10532   HyperBaseDvips sub /pdf@ury exch def%
10533   /pdf@urx exch def%
10534 } def%
10535 /H.A {%
10536   H.L %
10537 % |pdf@voff| = the distance from the top of the page to a point
10538 % |\baselineskip| above the current point in PDF coordinates
10539   currentpoint exch pop %
```



```

10540     vsize 72 sub exch DvipsToPDF %
10541     HyperBasePt sub % baseline skip
10542     sub /pdf@voff exch def%
10543 } def%
10544 /H.R. {%
10545     currentpoint %
10546     HyperBorder sub /pdf@ury exch def %
10547     HyperBorder add /pdf@urx exch def %
10548 % | /pdf@voff| = the distance from the top of the page to the current point, in
10549 % PDF coordinates
10550     currentpoint exch pop vsize 72 sub %
10551     exch DvipsToPDF sub /pdf@voff exch def%
10552 } def%
10553 }%
10554 }
10555 \AtBeginShipoutFirst{%
10556 \ifHy@setpagesize
10557 \begingroup
10558 \ifundefined{stockwidth}{%
10559 \ifdim\paperwidth>\z@
10560 \ifdim\paperheight>\z@
10561 \special{papersize=\the\paperwidth,\the\paperheight}%
10562 \fi
10563 \fi
10564 }{%
10565 \ifdim\stockwidth>\z@
10566 \ifdim\stockheight>\z@
10567 \special{papersize=\the\stockwidth,\the\stockheight}%
10568 \fi
10569 \fi
10570 }%
10571 \endgroup
10572 \fi
10573 \Hy@DisableOption{setpagesize}%
10574 }
10575 \</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.

```

10576 \<*vtexpdfmark>
10577 \providecommand*{\XR@ext}{pdf}
10578 \def\Hy@raisedlink{}
10579 \def\literalps@out#1{\special{pS:#1}}%
10580 \def\headerps@out#1{\immediate\special{pS:#1}}%
10581 \input{pdfmark.def}%
10582 \ifx\@pdfproducer\relax
10583 \ifnum\OpMode=\@ne
10584 \def\@pdfproducer{VTeX}%
10585 \else
10586 \def\@pdfproducer{VTeX + Distiller}%
10587 \fi
10588 \fi

```

```

10589 \providecommand*\@pdfborder{0 0 1}
10590 \providecommand*\@pdfborderstyle{}
10591 \providecommand*\@pdfview{XYZ}
10592 \providecommand*\@pdfviewparams{ H.V}

10593 \g@addto@macro\Hy@FirstPageHook{%
10594   \headerps@out{%
10595     /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.

```

10596   /HyperBorder {1} def%
10597   /H.V {pdf@hoff pdf@voff null} def%
10598   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10599   /H.S {%
10600     currentpoint %
10601     HyperBorder sub%
10602     /pdf@lly exch def %
10603     dup 72 add /pdf@hoff exch def %
10604     HyperBorder sub%
10605     /pdf@llx exch def%
10606   } def%

```

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

```

10607   /H.L {%
10608     2 sub%
10609     /HyperBasePt exch def %
10610     currentpoint %
10611     HyperBasePt add HyperBorder add%
10612     /pdf@ury exch def %
10613     HyperBorder add%
10614     /pdf@urx exch def%
10615   } def%
10616   /H.A {%
10617     H.L %
10618     currentpoint exch pop %
10619     vsize 72 sub exch %
10620     HyperBasePt add add%
10621     /pdf@voff exch def%
10622   } def%

```

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

```

10623   /H.R {%
10624     currentpoint %
10625     HyperBorder add%
10626     /pdf@ury exch def %
10627     HyperBorder add%
10628     /pdf@urx exch def %
10629     currentpoint exch pop vsize 72 sub add%
10630     /pdf@voff exch def%
10631   } def%
10632 }%
10633 }
10634 </vtxpdfmark>

```

46.11 Textures

```
10635 (*textures)
10636 \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.

```
10637 \begingroup
10638   \obeylines %
10639   \gdef\Hy@ps@CR{\noexpand
10640     }%
10641 \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.

```
10642 \def\literalps@out#1{%
10643   \special{postscript 0 0 transform}%
10644   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10645 }%
10646 %
```

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.

```
10647 \def\headerps@out#1{%
10648   \special{%
10649     prepostscript TeXdict begin\Hy@ps@CR
10650       #1\Hy@ps@CR
10651     end%
10652   }%
10653 }%
10654 %
```

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.

```
10655 \g@addto@macro\Hy@FirstPageHook{%
10656   \headerps@out{%
10657     /betterpdfmark {%
10658       systemdict begin %
10659         dup /BP eq%
10660         {cleartomark gsave nulldevice []}%
10661         {dup /EP eq%
10662           {cleartomark cleartomark grestore}%

```

```

10663      {cleartomark}%
10664      ifelse%
10665    }ifelse %
10666  end%
10667 }def\Hy@ps@CR
10668 ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
10669 }% end of \headerps@out
10670 }% end of \AtBeginShipoutFirst
10671 %
10672 \input{pdfmark.def}%
10673 %
10674 \ifx\@pdfproducer\relax
10675   \def\@pdfproducer{Textures + Distiller}%
10676 \fi
10677 \providecommand*\@pdfborder{0 0 1}
10678 \providecommand*\@pdfborderstyle{}
10679 \providecommand*\@pdfview{XYZ}
10680 \providecommand*\@pdfviewparams{ H.V}
10681 %

```

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 .

```

10682 \Hy@AtBeginDocument{%
10683   \headerps@out{%

```

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

```

10684   /vsize {\Hy@pageheight} def%
10685   /DvipsToPDF {} def%
10686   /PDFToDvips {} def%
10687   /BPTToDvips {} def%
10688   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10689   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10690   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10691   /H.S {%
10692     currentpoint %
10693     HyperBorder add /pdf@lly exch def %
10694     dup DvipsToPDF 72 add /pdf@hoff exch def %
10695     HyperBorder sub /pdf@llx exch def%
10696   } def\Hy@ps@CR
10697   /H.L {%
10698     2 sub %
10699     PDFToDvips /HyperBase exch def %
10700     currentpoint %
10701     HyperBase sub /pdf@ury exch def%
10702     /pdf@urx exch def%
10703   } def\Hy@ps@CR
10704   /H.A {%
10705     H.L %
10706     currentpoint exch pop %
10707     vsize 72 sub exch DvipsToPDF %
10708     HyperBase sub % baseline skip
10709     sub /pdf@voff exch def%
10710   } def\Hy@ps@CR
10711   /H.R {%
10712     currentpoint %

```

```

10713   HyperBorder sub /pdf@ury exch def %
10714   HyperBorder add /pdf@urx exch def %
10715   currentpoint exch pop vsize 72 sub %
10716   exch DvipsToPDF sub /pdf@voff exch def%
10717   } def\Hy@ps@CR
10718 }%
10719 }

10720 \Hy@AtBeginDocument{%
10721   \ifHy@colorlinks
10722     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10723   \fi
10724 }

```

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.

```

10725 \expandafter\let\expandafter\keepPDF@SetupDoc
10726   \csname PDF@SetupDoc\endcsname
10727 \def\PDF@SetupDoc{%
10728   \ifx\@baseurl\@empty
10729     \else
10730       \special{html:<base href="\@baseurl">}%
10731     \fi
10732   \keepPDF@SetupDoc
10733 }

10734 \def\hyper@anchor#1{%
10735   \Hy@SaveLastskip
10736   \Hy@VerboseAnchor{#1}%
10737   \begingroup
10738     \let\protect=\string
10739     \special{html:<a name=%
10740       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10741   \endgroup
10742   \Hy@activeanchortrue
10743   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10744   \special{html:</a>}%
10745   \Hy@activeanchorfalse
10746   \Hy@RestoreLastskip
10747 }

10748 \def\hyper@anchorstart#1{%
10749   \Hy@SaveLastskip
10750   \Hy@VerboseAnchor{#1}%
10751   \begingroup
10752     \hyper@chars
10753     \special{html:<a name=%
10754       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10755   \endgroup
10756   \Hy@activeanchortrue
10757 }

10758 \def\hyper@anchorend{%
10759   \special{html:</a>}%
10760   \Hy@activeanchorfalse
10761   \Hy@RestoreLastskip
10762 }

10763 \def\@urltype{url}
10764 \def\hyper@linkstart#1#2{%
10765   \Hy@VerboseLinkStart{#1}{#2}%
10766   \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

10767 \def\Hy@tempa{#1}%
10768 \ifx\Hy@tempa\@urlltype
10769 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10770 \else
10771 \begingroup
10772 \hyper@chars
10773 \special{%
10774     html:<a href=%
10775     \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
10776     }%
10777 \endgroup
10778 \fi
10779 }
10780 \def\hyper@linkend{%
10781 \special{html:</a>}%
10782 \Hy@endcolorlink
10783 }
10784 \def\hyper@linkfile#1#2#3{%
10785 \hyper@linkurl{#1}{%
10786     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10787     }%
10788 }
10789 \def\hyper@linkurl#1#2{%
10790 \leavevmode
10791 \ifHy@raiselinks
10792 \setbox\@tempboxa=\color@hbox #1\color@endbox
10793 \@linkdim\dp\@tempboxa
10794 \lower\@linkdim\hbox{%
10795     \hyper@chars
10796     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10797     }%
10798     \Hy@colorlink\@urlcolor#1%
10799     \@linkdim\ht\@tempboxa
10800     \advance\@linkdim by -6.5\p@
10801     \raise\@linkdim\hbox{\special{html:</a>}}%
10802     \Hy@endcolorlink
10803 \else
10804 \begingroup
10805 \hyper@chars
10806 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10807 \Hy@colorlink\@urlcolor#1%
10808 \special{html:</a>}%
10809 \Hy@endcolorlink
10810 \endgroup
10811 \fi
10812 }

```

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

```

10813 \def\hyper@link#1#2#3{%
10814 \Hy@VerboseLinkStart{#1}{#2}%
10815 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
10816 }
10817 \def\hyper@image#1#2{%
10818 \begingroup
10819 \hyper@chars
10820 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10821 \endgroup
10822 }

```

10823 \langle /textures \rangle

46.12 dvipsone

```
10824 % \subsection{dvipsone driver}
10825 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10826 % |\special| commands.
10827  $\langle$ *dvipsone $\rangle$ 
10828 \providecommand*\XR@ext}{pdf}
10829 \def\Hy@raisedlink{}
10830 \providecommand*\@pdfborder{0 0 1}
10831 \providecommand*\@pdfborderstyle{}
10832 \def\literalps@out#1{\special{ps:#1}}%
10833 \def\headerps@out#1{\special{headertext=#1}}%
10834 \input{pdfmark.def}%
10835 \ifx\@pdfproducer\relax
10836   \def\@pdfproducer{dvipsone + Distiller}%
10837 \fi
10838 \HyInfo@AddonUnsupportedtrue
10839 \def\PDF@FinishDoc{%
10840   \Hy@UseMaketitleInfos
10841   \HyInfo@TrappedUnsupported
10842   \special{PDF: Keywords \@pdfkeywords}%
10843   \special{PDF: Title \@pdftitle}%
10844   \special{PDF: Creator \@pdfcreator}%
10845   \ifx\@pdfcreationdate\empty
10846     \else
10847       \special{PDF: CreationDate \@pdfcreationdate}%
10848   \fi
10849   \ifx\@pdfmoddate\empty
10850     \else
10851       \special{PDF: ModDate \@pdfmoddate}%
10852   \fi
10853   \special{PDF: Author \@pdfauthor}%
10854   \ifx\@pdfproducer\relax
10855     \else
10856       \special{PDF: Producer \@pdfproducer}%
10857   \fi
10858   \special{PDF: Subject \@pdfsubject}%
10859   \Hy@DisableOption{pdfauthor}%
10860   \Hy@DisableOption{pdftitle}%
10861   \Hy@DisableOption{pdfsubject}%
10862   \Hy@DisableOption{pdfcreator}%
10863   \Hy@DisableOption{pdfcreationdate}%
10864   \Hy@DisableOption{pdfmoddate}%
10865   \Hy@DisableOption{pdfproducer}%
10866   \Hy@DisableOption{pdfkeywords}%
10867   \Hy@DisableOption{pdftrapped}%
10868   \Hy@DisableOption{pdfinfo}%
10869 }
10870 \def\PDF@SetupDoc{%
10871   \def\Hy@temp{}%
10872   \ifx\@pdfstartpage\empty
10873     \else
10874       \ifx\@pdfstartview\empty
10875         \else
10876           \edef\Hy@temp{%
```

```

10877     ,Page=\@pdfstartpage
10878     ,View=\@pdfstartview
10879   }%
10880 \fi
10881 \fi
10882 \edef\Hy@temp{%
10883   \noexpand\pdfmark{%
10884     pdfmark=/DOCVIEW,%
10885     PageMode=/\@pdfpagemode
10886   \Hy@temp
10887   }%
10888 }%
10889 \Hy@temp
10890 \ifx\@pdfpagescrop\@empty
10891 \else
10892   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10893 \fi
10894 \edef\Hy@temp{%
10895   \ifHy@toolbar\else /HideToolbar true\fi
10896   \ifHy@menubar\else /HideMenubar true\fi
10897   \ifHy>windowui\else /HideWindowUI true\fi
10898   \ifHy@fitwindow /FitWindow true\fi
10899   \ifHy@centerwindow /CenterWindow true\fi
10900   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10901   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10902   \Hy@UseNameKey{Direction}\@pdfdirection
10903   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10904   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10905   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10906   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10907   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10908   \Hy@UseNameKey{Duplex}\@pdfduplex
10909   \ifx\@pdfpicktraybypdfsize\@empty
10910   \else
10911     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10912   \fi
10913   \ifx\@pdfprintpagerange\@empty
10914   \else
10915     /PrintPageRange[\@pdfprintpagerange]%
10916   \fi
10917   \ifx\@pdfnumcopies\@empty
10918   \else
10919     /NumCopies \@pdfnumcopies
10920   \fi
10921   }%
10922   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10923   \pdfmark{%
10924     pdfmark=/PUT,%
10925     Raw={%
10926       \string{Catalog\string}<<%
10927       \ifx\Hy@temp\@empty
10928       \else
10929         /ViewerPreferences<<\Hy@temp>>%
10930       \fi
10931       \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10932       \ifx\@pdflang\@empty
10933       \else

```



```

10934      /Lang(\@pdflang)%
10935      \fi
10936      \ifx\@baseurl\@empty
10937      \else
10938      /URI<</Base(\Hy@pstringB)>>%
10939      \fi
10940      >>%
10941      }%
10942      }%
10943      }
10944      \providecommand*\@pdfview{XYZ}
10945      \providecommand*\@pdfviewparams{ %
10946      gsave revscl currentpoint grestore %
10947      72 add exch pop null exch null%
10948      }
10949      \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 .

```

10950 \g@addto@macro\Hy@FirstPageHook{%
10951 \headerps@out{%

```

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

```

10952 /DvipsToPDF { 65781 div } def%
10953 /PDFToDvips { 65781 mul } def%
10954 /BPToDvips{65781 mul}def%
10955 /HyperBorder { 1 PDFToDvips } def%
10956 /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.

```

10957 /BorderArrayPatch{%
10958 [exch{%
10959 dup dup type/integertype eq exch type/realtype eq or%
10960 {BPToDvips}if%
10961 }forall]%
10962 }def%
10963 /H.S {%
10964 currentpoint %
10965 HyperBorder add /pdf@lly exch def %
10966 dup DvipsToPDF 72 add /pdf@hoff exch def %
10967 HyperBorder sub /pdf@llx exch def%
10968 } def%
10969 /H.L {%
10970 2 sub %
10971 PDFToDvips /HyperBase exch def %
10972 currentpoint %
10973 HyperBase sub /pdf@ury exch def%
10974 /pdf@urx exch def%
10975 } def%
10976 /H.A {%
10977 H.L %
10978 currentpoint exch pop %
10979 HyperBase sub % baseline skip
10980 DvipsToPDF /pdf@voff exch def%

```

```

10981 } def%
10982 /H.R {%
10983   currentpoint %
10984   HyperBorder sub /pdf@ury exch def %
10985   HyperBorder add /pdf@urx exch def %
10986   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10987 } def%
10988 }%
10989 }
10990 </dvipsone>

```

46.13 TeX4ht

```

10991 <*tex4ht>
10992 \providecommand*{\XR@ext}{html}
10993 \def\Hy@raisedlink{}
10994 \@ifpackageloaded{tex4ht}{%
10995   \typeout{hyperref tex4ht: tex4ht already loaded}%
10996 }{%
10997   \RequirePackage[hx4ht]{tex4ht}%
10998 }
10999 \hyperlinkfileprefix{}
11000 \def\PDF@FinishDoc{}
11001 \def\PDF@SetupDoc{%
11002   \ifx\@baseurl\@empty
11003     \else
11004     \special{t4ht=<base href="\@baseurl">}%
11005   \fi
11006 }
11007 \def\hyper@anchor#1{%
11008   \Hy@SaveLastskip
11009   \Hy@VerboseAnchor{#1}%
11010   \begingroup
11011     \let\protect=\string
11012     \special{t4ht=<a name=%
11013       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11014   \endgroup
11015   \Hy@activeanchortrue
11016   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11017   \special{t4ht=</a>}%
11018   \Hy@activeanchorfalse
11019   \Hy@RestoreLastskip
11020 }
11021 \def\hyper@anchorstart#1{%
11022   \Hy@SaveLastskip
11023   \Hy@VerboseAnchor{#1}%
11024   \begingroup
11025     \hyper@chars\special{t4ht=<a name=%
11026       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11027   \endgroup
11028   \Hy@activeanchortrue
11029 }
11030 \def\hyper@anchorend{%
11031   \special{t4ht=</a>}%
11032   \Hy@activeanchorfalse
11033   \Hy@RestoreLastskip
11034 }
11035 \def\@urlltype{url}

```

```

11036 \def\hyper@linkstart#1#2{%
11037   \Hy@VerboseLinkStart{#1}{#2}%
11038   \expandafter\Hy@colorlink\csname @#1color\endcsname
11039   \def\Hy@tempa{#1}%
11040   \ifx\Hy@tempa \@urltype
11041     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11042   \else
11043     \begingroup
11044       \hyper@chars
11045       \special{t4ht=<a href=%
11046         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
11047     \endgroup
11048   \fi
11049 }
11050 \def\hyper@linkend{%
11051   \special{t4ht=</a>}%
11052   \Hy@endcolorlink
11053 }
11054 \def\hyper@linkfile#1#2#3{%
11055   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
11056 }
11057 \def\hyper@linkurl#1#2{%
11058   \leavevmode
11059   \ifHy@raiselinks
11060     \setbox\@tempboxa=\color@hbox #1\color@endbox
11061     \@linkdim\dp\@tempboxa
11062     \lower\@linkdim\hbox{%
11063       \begingroup
11064         \hyper@chars
11065         \special{%
11066           t4ht=<a href=\hyper@quote#2\hyper@quote>%
11067         }%
11068       \endgroup
11069     }%
11070     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11071     \@linkdim\ht\@tempboxa
11072     \advance\@linkdim by -6.5\p@
11073     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11074   \else
11075     \begingroup
11076       \hyper@chars
11077       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11078       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11079       \special{t4ht=</a>}%
11080     \endgroup
11081   \fi
11082 }

Poor implementation of \hyper@link without considering #1.
11083 \def\hyper@link#1#2#3{%
11084   \Hy@VerboseLinkStart{#1}{#2}%
11085   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
11086 }
11087 \def\hyper@image#1#2{%
11088   \begingroup
11089     \hyper@chars
11090     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11091   \endgroup

```

```

11092 }
11093 \let\autoref\ref
11094 \ifx \rEfLiNK \UnDef
11095 \def\rEfLiNK #1#2{#2}%
11096 \fi
11097 \def\backref#1{}
11098 </tex4ht>
11099 <*tex4htcfg>
11100 \IfFileExists{\jobname.cfg}{\endinput}{}
11101 \Preamble{html}
11102 \begin{document}%
11103 \EndPreamble
11104 \def\TeX{TeX}
11105 \def\OMEGA{Omega}
11106 \def\LaTeX{LaTeX}
11107 \def\LaTeXe{LaTeX2e}
11108 \def\eTeX{e-TeX}
11109 \def\MF{Metafont}
11110 \def\MP{MetaPost}
11111 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11112 <*pdfmark>
11113 \long\def\@Form[#1]{%
11114 \g@addto@macro\Hy@FirstPageHook{%
11115 \headerps@out{%
11116 [%
11117 /__objdef{pdfDocEncoding}%
11118 /type/dict%
11119 /OBJ pdfmark%
11120 [%
11121 {pdfDocEncoding}%
11122 <<%
11123 /Type/Encoding%
11124 /Differences%
11125 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11126 /tilde %
11127 39/quotesingle %
11128 96/grave %
11129 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11130 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11131 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11132 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11133 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11134 164/currency %
11135 166/brokenbar %
11136 168/dieresis/copyright/ordfeminine %
11137 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11138 /twosuperior/threesuperior/acute/mu %
11139 183/periodcentered/cedilla/onesuperior/ordmasculine %
11140 188/onequarter/onehalf/threequarters %
11141 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11142 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11143 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11144 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%

```

```

11145      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11146      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11147      /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11148      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
11149      /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
11150      /ucircumflex/udieresis/yacute/thorn/ydieresis%
11151    ]%
11152  >>%
11153 /PUT pdfmark%
11154 [%
11155   /_objdef{ZaDb}%
11156   /type/dict%
11157 /OBJ pdfmark%
11158 [%
11159   {ZaDb}%
11160   <<%
11161     /Type/Font%
11162     /Subtype/Type1%
11163     /Name/ZaDb%
11164     /BaseFont/ZapfDingbats%
11165   >>%
11166 /PUT pdfmark%
11167 [%
11168   /_objdef{Helv}%
11169   /type/dict%
11170 /OBJ pdfmark%
11171 [%
11172   {Helv}%
11173   <<%
11174     /Type/Font%
11175     /Subtype/Type1%
11176     /Name/Helv%
11177     /BaseFont/Helvetica%
11178     /Encoding{pdfDocEncoding}%
11179   >>%
11180 /PUT pdfmark%
11181 [%
11182   /_objdef{aform}%
11183   /type/dict%
11184 /OBJ pdfmark%
11185 [%
11186   /_objdef{afields}%
11187   /type/array%
11188 /OBJ pdfmark%
11189 {%
11190   [%
11191     /BBox[0 0 100 100]%
11192     /_objdef{Check}%
11193   /BP pdfmark %
11194   1 0 0 setrgbcolor%
11195   /ZapfDingbats 80 selectfont %
11196   20 20 moveto%
11197   (4)show%
11198   [/EP pdfmark%
11199   [%
11200     /BBox[0 0 100 100]%
11201     /_objdef{Cross}%

```

```

11202 /BP pdfmark %
11203 1 0 0 setrgbcolor%
11204 /ZapfDingbats 80 selectfont %
11205 20 20 moveto%
11206 (8)show%
11207 [/EP pdfmark%
11208 [%
11209 /BBox[0 0 250 100]%
11210 /_objdef{Submit}%
11211 /BP pdfmark %
11212 0.6 setgray %
11213 0 0 250 100 rectfill %
11214 1 setgray %
11215 2 2 moveto %
11216 2 98 lineto %
11217 248 98 lineto %
11218 246 96 lineto %
11219 4 96 lineto %
11220 4 4 lineto %
11221 fill %
11222 0.34 setgray %
11223 248 98 moveto %
11224 248 2 lineto %
11225 2 2 lineto %
11226 4 4 lineto %
11227 246 4 lineto %
11228 246 96 lineto %
11229 fill%
11230 /Helvetica 76 selectfont %
11231 0 setgray %
11232 8 22.5 moveto%
11233 (Submit)show%
11234 [/EP pdfmark%
11235 [%
11236 /BBox[0 0 250 100]%
11237 /_objdef{SubmitP}%
11238 /BP pdfmark %
11239 0.6 setgray %
11240 0 0 250 100 rectfill %
11241 0.34 setgray %
11242 2 2 moveto %
11243 2 98 lineto %
11244 248 98 lineto %
11245 246 96 lineto %
11246 4 96 lineto %
11247 4 4 lineto %
11248 fill %
11249 1 setgray %
11250 248 98 moveto %
11251 248 2 lineto %
11252 2 2 lineto %
11253 4 4 lineto %
11254 246 4 lineto %
11255 246 96 lineto %
11256 fill%
11257 /Helvetica 76 selectfont %
11258 0 setgray %

```

```

11259 10 20.5 moveto%
11260 (Submit)show%
11261 [/EP pdfmark%
11262 } ?pdfmark%
11263 [%
11264 {aform}%
11265 <<%
11266 /Fields{afields}%
11267 /DR<<%
11268 /Font<<%
11269 /ZaDb{ZaDb}%
11270 /Helv{Helv}%
11271 >>%
11272 >>%
11273 /DA(/Helv 10 Tf 0 g)%
11274 /CO{corder}%
11275 \ifHy@pdfa
11276 \else
11277 /NeedAppearances true%
11278 \fi
11279 >>%
11280 /PUT pdfmark%
11281 [%
11282 {Catalog}%
11283 <<%
11284 /AcroForm{aform}%
11285 >>%
11286 /PUT pdfmark%
11287 [%
11288 /_objdef{corder}%
11289 /type/array%
11290 /OBJ pdfmark% dps
11291 }}%
11292 \setkeys{Form}{#1}%
11293 }
11294 \def\@endForm{}
11295 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11296 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11297 }
11298 \def\@TextField[#1]#2{% parameters, label
11299 \def\Fld@name{#2}%
11300 \def\Fld@default{}%
11301 \let\Fld@value\@empty
11302 \def\Fld@width{\DefaultWidthofText}%
11303 \def\Fld@height{%
11304 \ifFld@multiline
11305 \DefaultHeightofTextMultiline
11306 \else
11307 \DefaultHeightofText
11308 \fi
11309 }%
11310 \begingroup
11311 \Field@toks={ }%
11312 \expandafter\HyField@SetKeys\expandafter{%
11313 \DefaultOptionsofText,#1%
11314 }%
11315 \HyField@FlagsText

```

```

11316 \ifFld@hidden\def\Fld@width{1sp}\fi
11317 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11318 \LayoutTextField{#2}{%
11319   \Hy@escapeform\PDFForm@Text
11320   \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11321     pdfmark=/ANN,Raw={\PDFForm@Text}%
11322   }%
11323 }%
11324 \endgroup
11325 }
11326 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11327   \def\Fld@name{#2}%
11328   \let\Fld@default\relax
11329   \let\Fld@value\relax
11330   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11331   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11332   \begingroup
11333     \Fld@menulength=0 %
11334     \@tempdima\z@
11335     \@for\@curropt:=#3\do{%
11336       \expandafter\Fld@checkequals\@curropt==\%
11337       \Hy@StepCount\Fld@menulength
11338       \settowidth{\@tempdimb}{\@currDisplay}%
11339       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11340     }%
11341     \advance\@tempdima by 15\p@
11342     \Field@toks={ }%
11343     \begingroup
11344       \HyField@SetKeys{#1}%
11345     \edef\x{\endgroup
11346       \noexpand\expandafter
11347       \noexpand\HyField@SetKeys
11348       \noexpand\expandafter{%
11349         \expandafter\noexpand\csname DefaultOptionsof%
11350           \ifFld@radio
11351             Radio%
11352           \else
11353             \ifFld@combo
11354               \ifFld@popdown
11355                 PopdownBox%
11356               \else
11357                 ComboBox%
11358             \fi
11359           \else
11360             ListBox%
11361           \fi
11362         \endcsname
11363       }%
11364     }\x
11365     \HyField@SetKeys{#1}%
11366   \ifFld@hidden\def\Fld@width{1sp}\fi
11367   \ifx\Fld@value\relax
11368     \let\Fld@value\Fld@default
11369   \fi
11370   \LayoutChoiceField{#2}{%
11371     \ifFld@radio

```



```

11373 \HyField@FlagsRadioButton
11374 \@@Radio{#3}%
11375 \else
11376 \beginngroup
11377 \HyField@FlagsChoice
11378 \ifdim\Fld@width<\@tempdima
11379 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11380 \edef\Fld@width{\the\@tempdima}%
11381 \fi
11382 \ifFld@combo
11383 \else
11384 \@tempdima=\the\Fld@menulength\Fld@charsize
11385 \advance\@tempdima by \Fld@borderwidth bp %
11386 \advance\@tempdima by \Fld@borderwidth bp %
11387 \edef\Fld@height{\the\@tempdima}%
11388 \fi
11389 \@@ListBox{#3}%
11390 \endgroup
11391 \fi
11392 }%
11393 \endgroup
11394 }
11395 \def\@@Radio#1{%
11396 \Fld@listcount=0 %
11397 \for\@curropt=#1\do{%
11398 \expandafter\Fld@checkequals\@curropt==\%
11399 \Hy@StepCount\Fld@listcount
11400 \@currDisplay\space
11401 \Hy@escapeform\PDFForm@Radio
11402 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11403 pdfmark=/ANN,%
11404 Raw={%
11405 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11406 }%
11407 } % deliberate space between radio buttons
11408 }%
11409 }
11410 \newcount\Fld@listcount
11411 \def\@@ListBox#1{%
11412 \HyField@PDFChoices{#1}%
11413 \Hy@escapeform\PDFForm@List
11414 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11415 pdfmark=/ANN,Raw={\PDFForm@List}%
11416 }%
11417 }
11418 \def\@PushButton[#1]#2{% parameters, label
11419 \def\Fld@name{#2}%
11420 \beginngroup
11421 \Field@toks={ }%
11422 \expandafter\HyField@SetKeys\expandafter{%
11423 \DefaultOptionsofPushButton,#1%
11424 }%
11425 \ifHy@pdfa
11426 \PackageError{hyperref}{%
11427 PDF/A: Push button with JavaScript is prohibited%
11428 }\@ehc
11429 \LayoutPushButtonField{%

```

```

11430     \leavevmode
11431     \MakeButtonField{#2}%
11432 }%
11433 \else
11434   \HyField@FlagsPushButton
11435   \ifFld@hidden\def\Fld@width{1sp}\fi
11436   \LayoutPushButtonField{%
11437     \leavevmode
11438     \Hy@escapeform\PDFForm@Push
11439     \pdfmark[\MakeButtonField{#2}]{%
11440       pdfmark=/ANN,Raw={\PDFForm@Push}%
11441     }%
11442   }%
11443   \fi
11444 \endgroup
11445 }
11446 \def\@Submit[#1]#2{%
11447   \Field@toks={ }%
11448   \def\Fld@width{\DefaultWidthofSubmit}%
11449   \def\Fld@height{\DefaultHeightofSubmit}%
11450   \begingroup
11451     \expandafter\HyField@SetKeys\expandafter{%
11452       \DefaultOptionsofSubmit,#1%
11453     }%
11454     \HyField@FlagsPushButton
11455     \HyField@FlagsSubmit
11456     \ifFld@hidden\def\Fld@width{1sp}\fi
11457     \Hy@escapeform\PDFForm@Submit
11458     \pdfmark[\MakeButtonField{#2}]{%
11459       pdfmark=/ANN,%
11460       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11461     }%
11462   \endgroup
11463 }
11464 \def\@Reset[#1]#2{%
11465   \Field@toks={ }%
11466   \def\Fld@width{\DefaultWidthofReset}%
11467   \def\Fld@height{\DefaultHeightofReset}%
11468   \begingroup
11469     \expandafter\HyField@SetKeys\expandafter{%
11470       \DefaultOptionsofReset,#1%
11471     }%
11472     \leavevmode
11473     \ifHy@pdfa
11474       \PackageError{hyperref}{%
11475         PDF/A: Reset action is prohibited%
11476       }\@ehc
11477       \MakeButtonField{#2}%
11478     \else
11479       \HyField@FlagsPushButton
11480       \ifFld@hidden\def\Fld@width{1sp}\fi
11481       \Hy@escapeform\PDFForm@Reset
11482       \pdfmark[\MakeButtonField{#2}]{%
11483         pdfmark=/ANN,Raw={\PDFForm@Reset}%
11484       }%
11485     \fi
11486   \endgroup

```

```

11487 }%
11488 \def\@CheckBox[#1]#2{% parameters, label
11489   \def\Fld@name{#2}%
11490   \def\Fld@default{0}%
11491   \begingroup
11492     \def\Fld@width{\DefaultWidthofCheckBox}%
11493     \def\Fld@height{\DefaultHeightofCheckBox}%
11494     \Field@toks={ }%
11495     \expandafter\HyField@SetKeys\expandafter{%
11496       \DefaultOptionsofCheckBox,#1%
11497     }%
11498     \HyField@FlagsCheckBox
11499     \ifFld@hidden\def\Fld@width{1sp}\fi
11500     \LayoutCheckField{#2}{%
11501       \Hy@escapeform\PDFForm@Check
11502       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11503         pdfmark=/ANN,Raw={\PDFForm@Check}%
11504       }%
11505     }%
11506   \endgroup
11507 }
11508 \pdfmark

```

47.2 HyperTeX

```

11509 \hypertex
11510 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11511 \def\@endForm{}
11512 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11513   \typeout{Sorry, HyperTeX does not support FORM gauges}%
11514 }
11515 \def\@TextField[#1]#2{% parameters, label
11516   \typeout{Sorry, HyperTeX does not support FORM text fields}%
11517 }
11518 \def\@CheckBox[#1]#2{% parameters, label
11519   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11520 }
11521 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11522   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11523 }
11524 \def\@PushButton[#1]#2{% parameters, label
11525   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11526 }
11527 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11528 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11529 \hypertex

```

47.3 TeX4ht

```

11530 \tex4ht
11531 \def\@Form[#1]{%
11532   \setkeys{Form}{#1}%
11533   \HCode{<form action="\Form@action" method="\Form@method">}%
11534 }
11535 \def\@endForm{\HCode{</form>}}
11536 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11537   \typeout{Sorry, TeX4ht does not support gauges}%
11538 }
11539 \def\@TextField[#1]#2{% parameters, label

```

```

11540 \let\Hy@reserved@a\@empty
11541 \def\Fld@name{#2}%
11542 \def\Fld@default{}%
11543 \bgroup
11544 \Field@toks={ }%
11545 \setkeys{Field}{#1}%
11546 \HCode{<label for="\Fld@name">#2</label>}%
11547 \ifFld@password
11548 \@@PasswordField
11549 \else
11550 \@@TextField
11551 \fi
11552 \egroup
11553 }
11554 \def\@@PasswordField{%
11555 \HCode{%
11556 <input type="password" %
11557 id="\Fld@name" %
11558 name="\Fld@name" %
11559 \ifFld@hidden type="hidden" \fi
11560 value="\Fld@default" %
11561 \the\Field@toks
11562 >%
11563 }%
11564 }
11565 \def\@@TextField{%
11566 \ifFld@multiline
11567 \HCode{<textarea %
11568 \ifFld@readonly readonly \fi
11569 id="\Fld@name" %
11570 name="\Fld@name" %
11571 \ifFld@hidden type="hidden" \fi
11572 \the\Field@toks>%
11573 }%
11574 \Fld@default
11575 \HCode{</textarea>}%
11576 \else
11577 \HCode{<input type="text" %
11578 \ifFld@readonly readonly \fi
11579 id="\Fld@name" %
11580 name="\Fld@name" %
11581 \ifFld@hidden type="hidden" \fi
11582 value="\Fld@default" %
11583 \the\Field@toks>%
11584 }%
11585 \fi
11586 }
11587 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11588 \def\Fld@name{#2}%
11589 \def\Fld@default{}%
11590 \let\Hy@reserved@a\relax
11591 \begingroup
11592 \expandafter\Fld@findlength#3\\%
11593 \Field@toks={ }%
11594 \setkeys{Field}{#1}%
11595 #2%
11596 \ifFld@radio

```

```

11597     \expandafter\@@Radio#3\\%
11598     \else
11599     \expandafter\@@Menu#3\\%
11600     \fi
11601 \endgroup
11602 }
11603 \def\Fld@findlength#1\\{%
11604   \Fld@menulength=0 %
11605   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11606 }
11607 \def\@@Menu#1\\{%
11608   \HCode{<select size="\the\Fld@menulength" %
11609     name="\Fld@name" %
11610     \the\Field@toks>%
11611   }%
11612   \@for\@curropt:=#1\do{%
11613     \expandafter\Fld@checkequals\@curropt==\\%
11614     \HCode{<option %
11615       \ifx\@curropt\Fld@default selected \fi
11616       value="\@currValue">\@currDisplay</option>%
11617     }%
11618   }%
11619   \HCode{</select>}%
11620 }
11621 \def\@@Radio#1\\{%
11622   \@for\@curropt:=#1\do{%
11623     \expandafter\Fld@checkequals\@curropt==\\%
11624     \HCode{<input type="radio" %
11625       \ifx\@curropt\Fld@default checked \fi
11626       name="\Fld@name" %
11627       value="\@currValue" %
11628       \the\Field@toks>%
11629     }%
11630     \@currDisplay
11631   }%
11632 }
11633 \def\@PushButton[#1]#2{% parameters, label
11634   \def\Fld@name{#2}%
11635   \bgroup
11636   \Field@toks={ }%
11637   \setkeys{Field}{#1}%
11638   \HCode{<input type="button" %
11639     name="\Fld@name" %
11640     value="#2" %
11641     \the\Field@toks>%
11642   }%
11643   \HCode{</button>}%
11644   \egroup
11645 }
11646 \def\@Submit[#1]#2{%
11647   \HCode{<button type="submit">#2</button>}%
11648 }
11649 \def\@Reset[#1]#2{%
11650   \HCode{<button type="reset">#2</button>}%
11651 }
11652 \def\@CheckBox[#1]#2{% parameters, label
11653   \let\Hy@reserved@a\@empty

```

```

11654 \def\Fld@name{#2}%
11655 \def\Fld@default{0}%
11656 \bgroup
11657 \Field@toks={ }%
11658 \setkeys{Field}{#1}%
11659 \HCode{<input type="checkbox" %
11660 \ifFld@checked checked \fi
11661 \ifFld@disabled disabled \fi
11662 \ifFld@readonly readonly \fi
11663 name="\Fld@name" %
11664 \ifFld@hidden type="hidden" \fi
11665 value="\Fld@default" %
11666 \the\Field@toks>%
11667 #2%
11668 }%
11669 \egroup
11670 }
11671 </tex4ht>

```

47.4 pdfTeX

```

11672 <*pdfTeX>
11673 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11674 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11675 }
11676 \def\MakeFieldObject#1#2{\sbox0{#1}%
11677 \immediate\pdfxform0 %
11678 \expandafter\edef\csname #2Object\endcsname{%
11679 \the\pdfastxform\space 0 R%
11680 }%
11681 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
11682 }%
11683 \def\HyField@afields{}
11684 \begingroup\expandafter\expandafter\expandafter\endgroup
11685 \expandafter\ifx\csname pdfastlink\endcsname\relax
11686 \let\HyField@AddToFields\relax
11687 \PackageInfo{hyperref}{%
11688 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11689 \MessageBreak
11690 Adobe Reader/Acrobat accepts an empty /Field array,%
11691 \MessageBreak
11692 but other PDF viewers might complain%
11693 }%
11694 \else
11695 \def\HyField@AuxAddToFields#1{%
11696 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11697 \Hy@AtBeginDocument{%
11698 \if@filesw
11699 \immediate\write\@mainaux{%
11700 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11701 }%
11702 \fi
11703 \let\HyField@AfterAuxOpen\@firstofone
11704 \def\HyField@AuxAddToFields#1{%
11705 \xdef\HyField@afields{%
11706 \ifx\HyField@afields\@empty
11707 \else
11708 \HyField@afields

```

```

11709     \space
11710     \fi
11711     #1 0 R%
11712 }%
11713 }%
11714 }%
11715 \def\HyField@AddToFields{%
11716   \expandafter\HyField@@AddToFields\expandafter{%
11717     \the\pdfastlink
11718   }%
11719 }%
11720 \def\HyField@@AddToFields#1{%
11721   \HyField@AfterAuxOpen{%
11722     \if@filesw
11723       \write\@mainaux{%
11724         \string\HyField@AuxAddToFields{#1}%
11725       }%
11726     \fi
11727   }%
11728 }%
11729 \fi
11730 \def\@Form[#1]{%
11731   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11732   \setkeys{Form}{#1}%
11733   \Hy@FormObjects
11734   \ifnum\pdfTeXversion>13 %
11735     \pdfrefobj\OBJ@pdfdocencoding
11736     \pdfrefobj\OBJ@ZaDb
11737     \pdfrefobj\OBJ@Helv
11738   \fi
11739   \AtVeryEndDocument{%
11740     \immediate\pdfobj{%
11741       <<%
11742         /Fields[\HyField@afields]%
11743         /DR<<%
11744         /Font<<%
11745           /ZaDb \OBJ@ZaDb\space 0 R%
11746           /Helv \OBJ@Helv\space 0 R%
11747         >>%
11748       >>%
11749       /DA(/Helv 10 Tf 0 g)%
11750       \ifHy@pdfa
11751       \else
11752         /NeedAppearances true%
11753       \fi
11754     >>%
11755   }%
11756   \edef\OBJ@acroform{\the\pdfastobj}%
11757   \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11758 }%
11759 \MakeFieldObject{%

Same as \ding{123} of package pifont.
11760   \begingroup
11761     \fontfamily{pzd}%
11762     \fontencoding{U}%
11763     \fontseries{m}%
11764     \fontshape{n}%

```

```

11765 \selectfont
11766 \char123 %
11767 \endgroup
11768 }{Ding}%
11769 \MakeFieldObject{%
11770 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11771 }{Submit}%
11772 \MakeFieldObject{%
11773 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11774 }{SubmitP}%
11775 }
11776 \def\@endForm{}
11777 \def\@TextField[#1]#2{% parameters, label
11778 \def\Fld@name{#2}%
11779 \def\Fld@default{}%
11780 \let\Fld@value\@empty
11781 \def\Fld@width{\DefaultWidthofText}%
11782 \def\Fld@height{%
11783 \ifFld@multiline
11784 \DefaultHeightofTextMultiline
11785 \else
11786 \DefaultHeightofText
11787 \fi
11788 }%
11789 \begingroup
11790 \Field@toks={ }%
11791 \expandafter\HyField@SetKeys\expandafter{%
11792 \DefaultOptionsofText,#1%
11793 }%
11794 \PDFForm@Name
11795 \HyField@FlagsText
11796 \ifFld@hidden\def\Fld@width{1sp}\fi
11797 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11798 \LayoutTextField{#2}{%
11799 \Hy@escapeform\PDFForm@Text
11800 \pdfstartlink user {\PDFForm@Text}\relax
11801 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11802 \HyField@AddToFields
11803 }%
11804 \endgroup
11805 }
11806 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11807 \def\Fld@name{#2}%
11808 \let\Fld@default\relax
11809 \let\Fld@value\relax
11810 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11811 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11812 \begingroup
11813 \Fld@menulength=0 %
11814 \@tempdima\z@
11815 \@for\@curropt:=#3\do{%
11816 \expandafter\Fld@checkequals\@curropt==\%
11817 \Hy@StepCount\Fld@menulength
11818 \settowidth{\@tempdimb}{\@currDisplay}%
11819 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11820 }%
11821 \advance\@tempdima by 15\p@

```



```

11822 \Field@toks={ }%
11823 \begingroup
11824 \HyField@SetKeys{#1}%
11825 \edef\x{\endgroup
11826 \noexpand\expandafter
11827 \noexpand\HyField@SetKeys
11828 \noexpand\expandafter{%
11829 \expandafter\noexpand\csname DefaultOptionsof%
11830 \ifFld@radio
11831 Radio%
11832 \else
11833 \ifFld@combo
11834 \ifFld@popdown
11835 PopdownBox%
11836 \else
11837 ComboBox%
11838 \fi
11839 \else
11840 ListBox%
11841 \fi
11842 \fi
11843 \endcsname
11844 }%
11845 }\x
11846 \HyField@SetKeys{#1}%
11847 \PDFForm@Name
11848 \ifFld@hidden\def\Fld@width{1sp}\fi
11849 \ifx\Fld@value\relax
11850 \let\Fld@value\Fld@default
11851 \fi
11852 \LayoutChoiceField{#2}{%
11853 \ifFld@radio
11854 \HyField@FlagsRadioButton
11855 \@@Radio{#3}%
11856 \else
11857 \begingroup
11858 \HyField@FlagsChoice
11859 \ifdim\Fld@width<\@tempdima
11860 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11861 \edef\Fld@width{\the\@tempdima}%
11862 \fi
11863 \ifFld@combo
11864 \else
11865 \@tempdima=\the\Fld@menulength\Fld@charsize
11866 \advance\@tempdima by \Fld@borderwidth bp %
11867 \advance\@tempdima by \Fld@borderwidth bp %
11868 \edef\Fld@height{\the\@tempdima}%
11869 \fi
11870 \@@ListBox{#3}%
11871 \endgroup
11872 \fi
11873 }%
11874 \endgroup
11875 }
11876 \def\@@Radio#1{%
11877 \Fld@listcount=0 %
11878 \@for\@curropt=#1\do{%

```

```

11879 \expandafter\Fld@checkequals\@curropt==\%
11880 \Hy@StepCount\Fld@listcount
11881 \@currDisplay\space
11882 \leavevmode
11883 \Hy@escapeform\PDFForm@Radio
11884 \pdfstartlink user {%
11885 \PDFForm@Radio
11886 /AP<<%
11887 /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.

```

11888 \/\@currValue\space \DingObject
11889 >>%
11890 >>%
11891 }%
11892 \relax
11893 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11894 \ifnum\Fld@listcount=1 %
11895 \HyField@AddToFields
11896 \fi
11897 \space % deliberate space between radio buttons
11898 }%
11899 }
11900 \newcount\Fld@listcount
11901 \def\@@ListBox#1{%
11902 \HyField@PDFChoices{#1}%
11903 \leavevmode
11904 \Hy@escapeform\PDFForm@List
11905 \pdfstartlink user {\PDFForm@List}\relax
11906 \MakeChoiceField{\Fld@width}{\Fld@height}%
11907 \pdfendlink
11908 \HyField@AddToFields
11909 }
11910 \def\@PushButton[#1]#2{% parameters, label
11911 \def\Fld@name{#2}%
11912 \begingroup
11913 \Field@toks={ }%
11914 \expandafter\HyField@SetKeys\expandafter{%
11915 \DefaultOptionsofPushButton,#1%
11916 }%
11917 \PDFForm@Name
11918 \ifHy@pdfa
11919 \PackageError{hyperref}{%
11920 PDF/A: Push button with JavaScript is prohibited%
11921 }\@ehc
11922 \LayoutPushButtonField{%
11923 \leavevmode
11924 \MakeButtonField{#2}%
11925 }%
11926 \else
11927 \HyField@FlagsPushButton
11928 \ifFld@hidden\def\Fld@width{1sp}\fi
11929 \LayoutPushButtonField{%
11930 \leavevmode
11931 \Hy@escapeform\PDFForm@Push
11932 \pdfstartlink user {\PDFForm@Push}\relax

```

```

11933 \MakeButtonField{#2}%
11934 \pdfendlink
11935 \HyField@AddToFields
11936 }%
11937 \fi
11938 \endgroup
11939 }
11940 \def\@Submit[#1]#2{%
11941 \Field@toks={ }%
11942 \def\Fld@width{\DefaultWidthofSubmit}%
11943 \def\Fld@height{\DefaultHeightofSubmit}%
11944 \begingroup
11945 \expandafter\HyField@SetKeys\expandafter{%
11946 \DefaultOptionsofSubmit,#1%
11947 }%
11948 \HyField@FlagsPushButton
11949 \HyField@FlagsSubmit
11950 \ifFld@hidden\def\Fld@width{1sp}\fi
11951 \leavevmode
11952 \Hy@escapeform\PDFForm@Submit
11953 \pdfstartlink user {%
11954 \PDFForm@Submit
11955 /AP<</N \SubmitObject/D \SubmitPObj>>%
11956 }%
11957 \relax
11958 \MakeButtonField{#2}%
11959 \pdfendlink
11960 \HyField@AddToFields
11961 \endgroup
11962 }
11963 \def\@Reset[#1]#2{%
11964 \Field@toks={ }%
11965 \def\Fld@width{\DefaultWidthofReset}%
11966 \def\Fld@height{\DefaultHeightofReset}%
11967 \begingroup
11968 \expandafter\HyField@SetKeys\expandafter{%
11969 \DefaultOptionsofReset,#1%
11970 }%
11971 \leavevmode
11972 \ifHy@pdfa
11973 \PackageError{hyperref}{%
11974 PDF/A: Reset action is prohibited%
11975 }{\@ehc}
11976 \MakeButtonField{#2}%
11977 \else
11978 \HyField@FlagsPushButton
11979 \ifFld@hidden\def\Fld@width{1sp}\fi
11980 \Hy@escapeform\PDFForm@Reset
11981 \pdfstartlink user {\PDFForm@Reset}\relax
11982 \MakeButtonField{#2}%
11983 \pdfendlink
11984 \HyField@AddToFields
11985 \fi
11986 \endgroup
11987 }
11988 \def\@CheckBox[#1]#2{% parameters, label
11989 \def\Fld@name{#2}%

```

```

11990 \def\Fld@default{0}%
11991 \begingroup
11992 \def\Fld@width{\DefaultWidthofCheckBox}%
11993 \def\Fld@height{\DefaultHeightofCheckBox}%
11994 \Field@toks={ }%
11995 \expandafter\HyField@SetKeys\expandafter{%
11996 \DefaultOptionsofCheckBox,#1%
11997 }%
11998 \PDFForm@Name
11999 \HyField@FlagsCheckBox
12000 \ifFld@hidden\def\Fld@width{1sp}\fi
12001 \LayoutCheckField{#2}{%
12002 \Hy@escapeform\PDFForm@Check
12003 \pdfstartlink user {\PDFForm@Check}\relax
12004 \MakeCheckField{\Fld@width}{\Fld@height}%
12005 \pdfendlink
12006 \HyField@AddToFields
12007 }%
12008 \endgroup
12009 }
12010 \def\Hy@FormObjects{%
12011 \pdfobj {%
12012 <<%
12013 /Type/Encoding%
12014 /Differences%
12015 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12016 /ring/tilde %
12017 39/quotesingle %
12018 96/grave %
12019 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12020 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12021 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12022 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12023 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12024 164/currency %
12025 166/brokenbar %
12026 168/dieresis/copyright/ordfeminine %
12027 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12028 /twosuperior/threesuperior/acute/mu %
12029 183/periodcentered/cedilla/onesuperior/ordmasculine %
12030 188/onequarter/onehalf/threequarters %
12031 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12032 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12033 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12034 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12035 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12036 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12037 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12038 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12039 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12040 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12041 ]%
12042 >>%
12043 }%
12044 \xdef\OBJ@pdfdocencoding{\the\pdfflastobj}%
12045 \pdfobj{%
12046 <<%

```

```

12047 /Type/Font%
12048 /Subtype/Type1%
12049 /Name/ZaDb%
12050 /BaseFont/ZapfDingbats%
12051 >>%
12052 }%
12053 \xdef\OBJ@ZaDb{\the\pdfastobj}%
12054 \pdfobj{%
12055 <<%
12056 /Type/Font%
12057 /Subtype/Type1%
12058 /Name/Helv%
12059 /BaseFont/Helvetica%
12060 /Encoding \OBJ@pdfdocencoding\space 0 R%
12061 >>%
12062 }%
12063 \xdef\OBJ@Helv{\the\pdfastobj}%
12064 \global\let\Hy@FormObjects\relax
12065 }
12066 \pdfTeX

```

47.5 dvipdfm, xetex

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

```
12067 \*dvipdfm | xetex
```

\@Gauge

```

12068 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12069 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12070 }

```

\@Form

```

12071 \def\@Form[#1]{%
12072 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12073 \setkeys{Form}{#1}%
12074 \Hy@FormObjects
12075 \@pdfm@mark{obj @afields []}%
12076 \@pdfm@mark{obj @corder []}%
12077 \@pdfm@mark{%
12078 obj @aform <<%
12079 /Fields @afields%
12080 /DR<<%
12081 /Font<<%
12082 /ZaDb @OBJZaDb%
12083 /Helv @OBJHelv%
12084 >>%
12085 >>%
12086 /DA(/Helv 10 Tf 0 g)%
12087 /CO @corder%
12088 \ifHy@pdfa
12089 \else
12090 /NeedAppearances true%
12091 \fi
12092 >>%
12093 }%
12094 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12095 }

```

\@endForm

12096 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

12097 \def\dvipdfm@setdim{%
12098 height \the\ht\pdfm@box\space
12099 width \the\wd\pdfm@box\space
12100 depth \the\dp\pdfm@box\space
12101 }

\HyField@AnnotCount

12102 \newcount\HyField@AnnotCount
12103 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount

12104 \def\HyField@AdvanceAnnotCount{%
12105 \global\advance\HyField@AnnotCount\@ne
12106 }

\HyField@TheAnnotCount

12107 \def\HyField@TheAnnotCount{%
12108 \the\HyField@AnnotCount
12109 }

\@TextField

12110 \def\@TextField[#1]#2{% parameters, label
12111 \def\Fld@name{#2}%
12112 \def\Fld@default{}%
12113 \let\Fld@value\@empty
12114 \def\Fld@width{\DefaultWidthofText}%
12115 \def\Fld@height{%
12116 \ifFld@multiline
12117 \DefaultHeightofTextMultiline
12118 \else
12119 \DefaultHeightofText
12120 \fi
12121 }%
12122 \begingroup
12123 \Field@toks={ }%
12124 \expandafter\HyField@SetKeys\expandafter{%
12125 \DefaultOptionsofText,#1%
12126 }%
12127 \PDFForm@Name
12128 \HyField@FlagsText
12129 \ifFld@hidden\def\Fld@width{1sp}\fi
12130 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12131 \setbox\pdfm@box=\hbox{%
12132 \MakeTextField{\Fld@width}{\Fld@height}%
12133 }%
12134 \HyField@AdvanceAnnotCount
12135 \LayoutTextField{#2}{%
12136 \Hy@escapeform\PDFForm@Text
12137 \@pdfm@mark{%
12138 ann @text\HyField@TheAnnotCount\space
12139 \dvipdfm@setdim << \PDFForm@Text >>%
12140 }%

```

12141 }%
12142 \unhbox\pdfm@box
12143 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12144 % record in @afields array
12145 \endgroup
12146 }

```

\@ChoiceMenu

```

12147 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12148 \def\Fld@name{#2}%
12149 \let\Fld@default\relax
12150 \let\Fld@value\relax
12151 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12152 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12153 \begingroup
12154 \Fld@menulength=0 %
12155 \@tempdima\z@
12156 \@for\@curropt:=#3\do{%
12157 \expandafter\Fld@checkequals\@curropt==\%
12158 \Hy@StepCount\Fld@menulength
12159 \settowidth{\@tempdimb}{\@currDisplay}%
12160 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12161 }%
12162 \advance\@tempdima by 15\p@
12163 \Field@toks={ }%
12164 \begingroup
12165 \HyField@SetKeys{#1}%
12166 \edef\x{\endgroup
12167 \noexpand\expandafter
12168 \noexpand\HyField@SetKeys
12169 \noexpand\expandafter{%
12170 \expandafter\noexpand\csname DefaultOptionsof%
12171 \ifFld@radio
12172 Radio%
12173 \else
12174 \ifFld@combo
12175 \ifFld@popdown
12176 PopdownBox%
12177 \else
12178 ComboBox%
12179 \fi
12180 \else
12181 ListBox%
12182 \fi
12183 \fi
12184 \endcsname
12185 }%
12186 }\x
12187 \HyField@SetKeys{#1}%
12188 \PDFForm@Name
12189 \ifFld@hidden\def\Fld@width{1sp}\fi
12190 \ifx\Fld@value\relax
12191 \let\Fld@value\Fld@default
12192 \fi
12193 \LayoutChoiceField{#2}{%
12194 \ifFld@radio
12195 \HyField@FlagsRadioButton

```

```

12196 \@@Radio{#3}%
12197 \else
12198 \begingroup
12199 \HyField@FlagsChoice
12200 \ifdim\Fld@width<\@tempdima
12201 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12202 \edef\Fld@width{\the\@tempdima}%
12203 \fi
12204 \ifFld@combo
12205 \else
12206 \@tempdima=\the\Fld@menulength\Fld@charsize
12207 \advance\@tempdima by \Fld@borderwidth bp %
12208 \advance\@tempdima by \Fld@borderwidth bp %
12209 \edef\Fld@height{\the\@tempdima}%
12210 \fi
12211 \@@ListBox{#3}%
12212 \endgroup
12213 \fi
12214 }%
12215 \endgroup
12216 }

```

\@@Radio

```

12217 \def\@@Radio#1{%
12218 \Fld@listcount=0 %
12219 \setbox\pdfm@box=\hbox{%
12220 \MakeRadioField{\Fld@width}{\Fld@height}%
12221 }%
12222 \@for\@curropt:=#1\do{%
12223 \expandafter\Fld@checkequals\@curropt==\%
12224 \Hy@StepCount\Fld@listcount
12225 \@currDisplay\space
12226 \leavevmode
12227 \Hy@escapeform\PDFForm@Radio
12228 \ifnum\Fld@listcount=1 %
12229 \HyField@AdvanceAnnotCount
12230 \fi
12231 \@pdfm@mark{%
12232 ann %
12233 \ifnum\Fld@listcount=1 %
12234 @radio\HyField@TheAnnotCount%
12235 \space
12236 \fi
12237 \dvi pdfm@setdim
12238 <<%
12239 \PDFForm@Radio
12240 /AP<</N<</\@currValue /null>>>>%
12241 >>%
12242 }%
12243 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12244 \ifnum\Fld@listcount=1 %
12245 \@pdfm@mark{%
12246 put @afields @radio\HyField@TheAnnotCount
12247 }%
12248 \fi
12249 }%
12250 }

```


\Fld@listcount

12251 \newcount\Fld@listcount

\@@Listbox

```
12252 \def\@@Listbox#1{%
12253   \HyField@PDFChoices{#1}%
12254   \setbox\pdfm@box=\hbox{%
12255     \MakeChoiceField{\Fld@width}{\Fld@height}%
12256   }%
12257   \leavevmode
12258   \Hy@escapeform\PDFForm@List
12259   \HyField@AdvanceAnnotCount
12260   \@pdfm@mark{%
12261     ann @list\HyField@TheAnnotCount\space
12262     \dvipdfm@setdim
12263     <<\PDFForm@List>>%
12264   }%
12265   \unhbox\pdfm@box
12266   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12267 }
```

\@PushButton

```
12268 \def\@PushButton[#1]#2{% parameters, label
12269   \def\Fld@name{#2}%
12270   \begingroup
12271     \Field@toks={ }%
12272     \expandafter\HyField@SetKeys\expandafter{%
12273       \DefaultOptionsofPushButton,#1%
12274     }%
12275     \PDFForm@Name
12276     \ifHy@pdfa
12277       \PackageError{hyperref}{%
12278         PDF/A: Push button with JavaScript is prohibited%
12279       }\@ehc
12280       \LayoutPushButtonField{%
12281         \leavevmode
12282         \MakeButtonField{#2}%
12283       }%
12284     \else
12285       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12286       \HyField@FlagsPushButton
12287       \ifFld@hidden\def\Fld@width{1sp}\fi
12288       \HyField@AdvanceAnnotCount
12289       \LayoutPushButtonField{%
12290         \leavevmode
12291         \Hy@escapeform\PDFForm@Push
12292         \@pdfm@mark{%
12293           ann @push\HyField@TheAnnotCount\space
12294           \dvipdfm@setdim
12295           <<\PDFForm@Push>>%
12296         }%
12297       }%
12298       \unhbox\pdfm@box
12299       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12300     \fi
12301   \endgroup
12302 }
```

\@Submit

```
12303 \def\@Submit[#1]#2{%
12304   \Field@toks={ }%
12305   \def\Fld@width{\DefaultWidthofSubmit}%
12306   \def\Fld@height{\DefaultHeightofSubmit}%
12307   \begingroup
12308     \expandafter\HyField@SetKeys\expandafter{%
12309       \DefaultOptionsofSubmit,#1%
12310     }%
12311     \HyField@FlagsPushButton
12312     \HyField@FlagsSubmit
12313     \ifFld@hidden\def\Fld@width{1sp}\fi
12314     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12315     \leavevmode
12316     \Hy@escapeform\PDFForm@Submit
12317     \HyField@AdvanceAnnotCount
12318     \@pdfm@mark{%
12319       ann @submit\HyField@TheAnnotCount\space
12320       \dvipdfm@setdim
12321       <<\PDFForm@Submit>>%
12322     }%
12323     \unhbox\pdfm@box%
12324     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12325   \endgroup
12326 }
```

\@Reset

```
12327 \def\@Reset[#1]#2{%
12328   \Field@toks={ }%
12329   \def\Fld@width{\DefaultWidthofReset}%
12330   \def\Fld@height{\DefaultHeightofReset}%
12331   \begingroup
12332     \expandafter\HyField@SetKeys\expandafter{%
12333       \DefaultOptionsofReset,#1%
12334     }%
12335     \leavevmode
12336     \ifHy@pdfa
12337       \PackageError{hyperref}{%
12338         PDF/A: Reset action is prohibited%
12339       }\@ehc
12340       \MakeButtonField{#2}%
12341     \else
12342       \HyField@FlagsPushButton
12343       \ifFld@hidden\def\Fld@width{1sp}\fi
12344       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12345       \Hy@escapeform\PDFForm@Reset
12346       \HyField@AdvanceAnnotCount
12347       \@pdfm@mark{%
12348         ann @reset\HyField@TheAnnotCount\space
12349         \dvipdfm@setdim
12350         <<\PDFForm@Reset>>%
12351       }%
12352       \unhbox\pdfm@box
12353       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12354     \fi
12355   \endgroup
12356 }
```

\@CheckBox

```
12357 \def\@CheckBox[#1]#2{% parameters, label
12358 \def\Fld@name{#2}%
12359 \def\Fld@default{0}%
12360 \begingroup
12361 \def\Fld@width{\DefaultWidthofCheckBox}%
12362 \def\Fld@height{\DefaultHeightofCheckBox}%
12363 \Field@toks={ }%
12364 \expandafter\HyField@SetKeys\expandafter{%
12365 \DefaultOptionsofCheckBox,#1%
12366 }%
12367 \PDFForm@Name
12368 \HyField@FlagsCheckBox
12369 \ifFld@hidden\def\Fld@width{1sp}\fi
12370 \setbox\pdfm@box=\hbox{%
12371 \MakeCheckField{\Fld@width}{\Fld@height}%
12372 }%
12373 \HyField@AdvanceAnnotCount
12374 \LayoutCheckField{#2}{%
12375 \Hy@escapeform\PDFForm@Check
12376 \@pdfm@mark{%
12377 ann @check\HyField@TheAnnotCount\space
12378 \dvipdfm@setdim
12379 <<\PDFForm@Check>>%
12380 }%
12381 \unhbox\pdfm@box
12382 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12383 }%
12384 \endgroup
12385 }

12386 \def\Hy@FormObjects{%
12387 \@pdfm@mark{obj @OBJpdfdocencoding%
12388 <<%
12389 /Type/Encoding%
12390 /Differences[%
12391 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12392 39/quotesingle %
12393 96/grave %
12394 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12395 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12396 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12397 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12398 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12399 164/currency %
12400 166/brokenbar %
12401 168/dieresis/copyright/ordfeminine %
12402 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12403 /twosuperior/threesuperior/acute/mu %
12404 183/periodcentered/cedilla/onesuperior/ordmasculine %
12405 188/onequarter/onehalf/threequarters %
12406 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12407 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12408 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12409 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12410 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12411 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%}
```

```

12412      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12413      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12414      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12415      /thorn/ydieresis%
12416      ]%
12417      >>%
12418      }%
12419      \@pdfm@mark{obj @OBJZaDb%
12420      <<%
12421      /Type/Font%
12422      /Subtype/Type1%
12423      /Name/ZaDb%
12424      /BaseFont/ZapfDingbats%
12425      >>%
12426      }%
12427      \@pdfm@mark{obj @OBJHelv%
12428      <<%
12429      /Type/Font%
12430      /Subtype/Type1%
12431      /Name/Helv%
12432      /BaseFont/Helvetica%
12433      /Encoding @OBJpdfdocencoding%
12434      >>%
12435      }%
12436      \global\let\Hy@FormObjects\relax
12437      }
12438      </dvipdfm | xetex>

```

47.6 Common forms part

```

12439      <*pdfmform>

```

\Hy@escapestring

```

12440      \begingroup\expandafter\expandafter\expandafter\endgroup
12441      \expandafter\ifx\csname pdfescapestring\endcsname\relax
12442      \let\Hy@escapestring\@firstofone
12443      \def\Hy@escapeform#1{%
12444      \ifHy@escapeform
12445      \def\Hy@escapestring##1{%
12446      \noexpand\Hy@escapestring{\noexpand##1}%
12447      }%
12448      \edef\Hy@temp{#1}%
12449      \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12450      \def\Hy@escapestring##1{%
12451      \@ifundefined{Hy@esc@\string##1}{%
12452      ##1%
12453      \ThisShouldNotHappen
12454      }{%
12455      \csname Hy@esc@\string##1\endcsname
12456      }%
12457      }%
12458      \else
12459      \let\Hy@escapestring\@firstofone
12460      \fi
12461      }%
12462      \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
12463      \ifx\#3\%

```

```

12464 \else
12465 \expandafter
12466 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12467 \Hy@ReturnAfterFi{%
12468 \Hy@@escapeform#3\@nil
12469 }%
12470 \fi
12471 }%
12472 \else
12473 \def\Hy@escapeform#1{%
12474 \ifHy@escapeform
12475 \let\Hy@escapestring\pdfescapestring
12476 \else
12477 \let\Hy@escapestring\@firstofone
12478 \fi
12479 }%
12480 \Hy@escapeform{}}%
12481 \fi

```

\PDFForm@Name

```

12482 \def\PDFForm@Name{%
12483 \begingroup
12484 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12485 \ifHy@unicode
12486 \Hy@unicodedefalse
12487 \fi
12488 \fi
12489 \HyPsd@XeTeXBigCharstrue
12490 \pdfstringdef\Hy@gtemp\Fld@name
12491 \endgroup
12492 \let\Fld@name\Hy@gtemp
12493 }

```

\PDFForm@Check

```

12494 \def\PDFForm@Check{%
12495 /Subtype/Widget%
12496 \Fld@annotflags
12497 /T(\Fld@name)%
12498 /FT/Btn%
12499 \Fld@flags
12500 /Q \Fld@align
12501 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12502 /MK<<%
12503 \ifnum\Fld@rotation=\z@
12504 \else
12505 /R \Fld@rotation
12506 \fi
12507 \ifx\Fld@bordercolor\relax
12508 \else
12509 /BC[\Fld@bordercolor]%
12510 \fi
12511 \ifx\Fld@bcolor\relax
12512 \else
12513 /BG[\Fld@bcolor]%
12514 \fi
12515 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12516 >>%

```

```

12517 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12518 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12519 /H/P%
12520 \ifFld@checked /V/Yes\else /V/Off\fi
12521 }

```

\PDFForm@Push

```

12522 \ifHy@pdfa
12523 \else
12524 \def\PDFForm@Push{%
12525 /Subtype/Widget%
12526 \Fld@annotflags
12527 /T(\Fld@name)%
12528 /FT/Btn%
12529 \Fld@flags
12530 /H/P%
12531 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12532 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12533 \ifx\Fld@bordercolor\relax\else 1\fi
12534 \space
12535 \else
12536 /MK<<%
12537 \ifnum\Fld@rotation=\z@
12538 \else
12539 /R \Fld@rotation
12540 \fi
12541 \ifx\Fld@bordercolor\relax
12542 \else
12543 /BC[\Fld@bordercolor]%
12544 \fi
12545 >>%
12546 \fi
12547 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12548 }%
12549 \fi

```

\Fld@additionalactions

```

12550 \def\Fld@@additionalactions{%
K input (keystroke) format
12551 \ifx\Fld@keystroke@code\@empty
12552 \else
12553 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12554 \fi
F display format
12555 \ifx\Fld@format@code\@empty
12556 \else
12557 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12558 \fi
V validation
12559 \ifx\Fld@validate@code\@empty
12560 \else
12561 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12562 \fi
C calculation
12563 \ifx\Fld@calculate@code\@empty

```

```

12564 \else
12565   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12566 \fi

```

Fo receiving the input focus

```

12567 \ifx\Fld@onfocus@code\@empty
12568 \else
12569   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12570 \fi

```

Bl loosing the input focus (blurred)

```

12571 \ifx\Fld@onblur@code\@empty
12572 \else
12573   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12574 \fi

```

D pressing the mouse button (down)

```

12575 \ifx\Fld@onmousedown@code\@empty
12576 \else
12577   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12578 \fi

```

U releasing the mouse button (up)

```

12579 \ifx\Fld@onmouseup@code\@empty
12580 \else
12581   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12582 \fi

```

E cursor enters the annotation's active area.

```

12583 \ifx\Fld@onenter@code\@empty
12584 \else
12585   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12586 \fi

```

X cursor exits the annotation's active area.

```

12587 \ifx\Fld@onexit@code\@empty
12588 \else
12589   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12590 \fi

```

```

12591 }

```

```

12592 \def\Fld@additionalactions{%
12593 \if\Fld@@additionalactions-%
12594 \else
12595   \ifHy@pdfa
12596   \else
12597     /AA<<\Fld@@additionalactions>>%
12598   \fi
12599 \fi
12600 }

```

\PDFForm@List

```

12601 \def\PDFForm@List{%
12602   /Subtype/Widget%
12603   \Fld@annotflags
12604   /T(\Fld@name)%
12605   /FT/Ch%
12606   \Fld@flags
12607   /Q \Fld@align
12608   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12609   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```

```

12610      \ifx\Fld@bordercolor\relax\else 1\fi
12611      \ifx\Fld@bcolor\relax      \else 1\fi
12612      \space
12613  \else
12614    /MK<<%
12615    \ifnum\Fld@rotation=\z@
12616    \else
12617      /R \Fld@rotation
12618    \fi
12619    \ifx\Fld@bordercolor\relax
12620    \else
12621      /BC[\Fld@bordercolor]%
12622    \fi
12623    \ifx\Fld@bcolor\relax
12624    \else
12625      /BG[\Fld@bcolor]%
12626    \fi
12627    >>%
12628  \fi
12629  /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12630    \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12631  \Fld@choices
12632  \Fld@additionalactions
12633 }

```

\PDFForm@Radio

```

12634 \def\PDFForm@Radio{%
12635   /Subtype/Widget%
12636   \Fld@annotflags
12637   /T(\Fld@name)%
12638   /FT/Btn%
12639   \Fld@flags
12640   /H/P%
12641   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12642   /MK<<%
12643     \ifnum\Fld@rotation=\z@
12644     \else
12645       /R \Fld@rotation
12646     \fi
12647     \ifx\Fld@bordercolor\relax
12648     \else
12649       /BC[\Fld@bordercolor]%
12650     \fi
12651     \ifx\Fld@bcolor\relax
12652     \else
12653       /BG[\Fld@bcolor]%
12654     \fi
12655     /CA(\Fld@radiosymbol)%
12656   >>%
12657   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12658     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12659   \ifx\@currValue\Fld@default
12660     /V/\Fld@default
12661   \else
12662     /V/Off%
12663   \fi
12664   \Fld@additionalactions

```


12665 }

\PDFForm@Text

```
12666 \def\PDFForm@Text{%
12667   /Subtype/Widget%
12668   \Fld@annotflags
12669   /T(\Fld@name)%
12670   /FT/Tx%
12671   \Fld@flags
12672   /Q \Fld@align
12673   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12674   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12675     \ifx\Fld@bordercolor\relax\else 1\fi
12676     \ifx\Fld@bcolor\relax \else 1\fi
12677     \space
12678   \else
12679     /MK<<%
12680     \ifnum\Fld@rotation=\z@
12681     \else
12682       /R \Fld@rotation
12683     \fi
12684     \ifx\Fld@bordercolor\relax
12685     \else
12686       /BC[\Fld@bordercolor]%
12687     \fi
12688     \ifx\Fld@bcolor\relax
12689     \else
12690       /BG[\Fld@bcolor]%
12691     \fi
12692     >>%
12693   \fi
12694   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12695     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12696   /DV(\Hy@escapestring{\Fld@default})%
12697   /V(\Hy@escapestring{\Fld@value})%
12698   \Fld@additionalactions
12699   \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12700 }
```

\PDFForm@Submit

```
12701 \def\PDFForm@Submit{%
12702   /Subtype/Widget%
12703   \Fld@annotflags
12704   /T(\Fld@name)%
12705   /FT/Btn%
12706   \Fld@flags
12707   /H/P%
12708   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12709   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12710     \ifx\Fld@bordercolor\relax\else 1\fi
12711     \space
12712   \else
12713     /MK<<%
12714     \ifnum\Fld@rotation=\z@
12715     \else
12716       /R \Fld@rotation
12717     \fi
```

```

12718 \ifx\Fld@bordercolor\relax
12719 \else
12720 /BC[\Fld@bordercolor]%
12721 \fi
12722 >>%
12723 \fi
12724 /A<<%
12725 /S/SubmitForm%
12726 /F<<%
12727 /FS/URL%
12728 /F(\Hy@escapestring{\Form@action})%
12729 >>%
12730 \Fld@submitflags
12731 >>%
12732 }

```

\PDFForm@Reset

```

12733 \ifHy@pdfa
12734 \else
12735 \def\PDFForm@Reset{%
12736 /Subtype/Widget%
12737 \Fld@annotflags
12738 /T(\Fld@name)%
12739 /FT/Btn%
12740 \Fld@flags
12741 /H/P%
12742 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12743 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12744 \ifx\Fld@bordercolor\relax\else 1\fi
12745 \space
12746 \else
12747 /MK<<%
12748 \ifnum\Fld@rotation=\z@
12749 \else
12750 /R \Fld@rotation
12751 \fi
12752 \ifx\Fld@bordercolor\relax
12753 \else
12754 /BC[\Fld@bordercolor]%
12755 \fi
12756 % /CA (Clear)
12757 % /AC (Done)
12758 >>%
12759 \fi
12760 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12761 /A<</S/ResetForm>>%
12762 }%
12763 \fi

12764 \end{pdfform}
12765 \end{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`

```
12766 \def\phantomsection{%
12767   \Hy@MakeCurrentHrefAuto{section*}%
12768   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12769 }
12770 \</package>
```

48.1 Bookmarks

```
12771 \<*outlines>
```

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

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
12772 \def\Hy@writebookmark#1#2#3#4#5{%
12773   % section number, text, label, level, file
12774   \ifx\WriteBookmarks\relax%
12775   \else
12776     \ifnum#4>\Hy@bookmarksdepth\relax
12777     \else
12778       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12779     \fi
12780   \fi
12781 }
12782 \def\Hy@currentbookmarklevel{0}
12783 \def\Hy@numberline#1{#1 }
12784 \def\@@@writetorep#1#2#3#4#5{%
12785   \begingroup
12786     \edef\Hy@tempa{#5}%
12787     \ifx\Hy@tempa\Hy@bookmarkstype
12788       \edef\Hy@level{#4}%
12789       \ifx\Hy@levelcheck Y%
12790         \@tempcnta\Hy@level\relax
12791         \advance\@tempcnta by -1 %
12792         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12793           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12794           \advance\@tempcnta by 1 %
12795           \Hy@Warning{%
12796             Difference (\the\@tempcnta) between bookmark levels is %
12797             greater \MessageBreak than one, level fixed%
12798           }%
12799           \@tempcnta\Hy@currentbookmarklevel
```

```

12800     \advance\@tempcnta by 1 %
12801     \edef\Hy@level{\the\@tempcnta}%
12802     \fi
12803     \else
12804     \global\let\Hy@levelcheck Y%
12805     \fi
12806     \global\let\Hy@currentbookmarklevel\Hy@level
12807     \@tempcnta\Hy@level\relax
12808     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12809     \advance\@tempcnta by -1 %
12810     \edef\Hy@tempa{#3}%
12811     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12812     \ifx\Hy@tempa\Hy@tempb
12813     \Hy@Warning{%
12814     The anchor of a bookmark and its parent's must not%
12815     \MessageBreak be the same. Added a new anchor%
12816     }%
12817     \phantomsection
12818     \fi
12819     \ifHy@bookmarksnumbered
12820     \let\numberline\Hy@numberline
12821     \let\partnumberline\Hy@numberline
12822     \let\chapternumberline\Hy@numberline
12823     \else
12824     \let\numberline\@gobble
12825     \let\partnumberline\@gobble
12826     \let\chapternumberline\@gobble
12827     \fi
12828     \HyPsd@XeTeXBigCharstrue
12829     \pdfstringdef\Hy@tempa{#2}%
12830     \HyPsd@SanitizeForOutFile\Hy@tempa
12831     \if@filesw
12832     \stepcounter{bookmark@seq@number}%
12833     \@ifundefined{@outlinefile}{%
12834     }{%
12835     \protected@write\@outlinefile}{%
12836     \protect\BOOKMARK
12837     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12838     {\Hy@tempa}{\Hy@tempb}%
12839     \@percentchar\space\thebookmark@seq@number
12840     }%
12841     }%
12842     \fi
12843     \fi
12844     \endgroup
12845 }
12846 \newcounter{bookmark@seq@number}
12847 \begingroup
12848 \lccode'('= '{%
12849 \lccode'='}%
12850 \lccode'1=\z@
12851 \lccode'2=\z@
12852 \lccode'3=\z@
12853 \lccode'5=\z@
12854 \lccode'7=\z@
12855 \lccode'#= \z@
12856 \lccode'\='=\z@

```

```

12857 \lccode'\{=\z@
12858 \lccode'\}=\z@
12859 \lowercase{%
12860 \endgroup
12861 \def\HyPsd@SanitizeForOutFile#1{%
12862   \@onelevel@sanitize\Hy@tempa
12863   \escapechar'\%
12864   \edef\Hy@tempa{%
12865     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12866   }%
12867   \edef\Hy@tempa{%
12868     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12869   }%
12870 }%
12871 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12872   #1%
12873   \ifx\#2\%
12874     \expandafter\ltx@gobble
12875   \else
12876     \expandafter\ltx@firstofone
12877   \fi
12878   {%
12879     \string\173%
12880     \HyPsd@SanitizeOut@BraceLeft#2\@nil
12881   }%
12882 }%
12883 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12884   #1%
12885   \ifx\#2\%
12886     \expandafter\ltx@gobble
12887   \else
12888     \expandafter\ltx@firstofone
12889   \fi
12890   {%
12891     \string\175%
12892     \HyPsd@SanitizeOut@BraceRight#2\@nil
12893   }%
12894 }%
12895 }

```

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

```

12896 \newcommand{\currentpdfbookmark}{%
12897   \pdfbookmark[\Hy@currentbookmarklevel]%
12898 }
12899 \newcommand{\subpdfbookmark}{%
12900   \@tempcnta\Hy@currentbookmarklevel
12901   \Hy@StepCount\@tempcnta
12902   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12903 }
12904 \newcommand{\belowpdfbookmark}[2]{%
12905   \@tempcnta\Hy@currentbookmarklevel
12906   \Hy@StepCount\@tempcnta
12907   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12908   \advance\@tempcnta by -1 %
12909   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12910 }

```

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.

```

12911 \renewcommand\pdfbookmark[3][0]{%
12912   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12913   \hyper@anchorstart{#3.#1}\hyper@anchorend
12914 }
12915 \def\BOOKMARK{%
12916   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
12917 }
12918 \def\@BOOKMARK[#1]{%
12919   \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
12920 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

12921 \RequirePackage{rerunfilecheck}[2009/12/10]
12922 \def\Hy@OutlineRerunCheck{%
12923   \RerunFileCheck{\jobname.out}{%
12924     \immediate\closeout\@outlinefile
12925   }{%
12926     Rerun to get outlines right\MessageBreak
12927     or use package 'bookmark'%
12928   }%
12929 }

```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by 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.

```

12930 <*vtex>
12931 \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.

```

12932 \begingroup
12933   \catcode'\'=12 %
12934   \ifnum\Hy@VTeXversion<650 %
12935     \catcode'\ "=12 %
12936     \gdef\hv@pdf@char#1#2#3{%
12937       \char
12938       \ifcase'#1#2#3 %
12939         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12940         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12941         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12942         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12943         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12944         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12945         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12946         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12947         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%

```

```

12948 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12949 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12950 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12951 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12952 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12953 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12954 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12955 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12956 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12957 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12958 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12959 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12960 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12961 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12962 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12963 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12964 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12965 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12966 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12967 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12968 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12969 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12970 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12971 \fi
12972 }%
12973 \else
12974 \gdef\hv@pdf@char{\char'}%
12975 \fi
12976 \endgroup

```

\@@BOOKMARK

```

12977 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12978 \expandafter\edef\csname @count@#3\endcsname{%
12979 \the\@serial@counter
12980 }%
12981 \edef\@mycount{\the\@serial@counter}%
12982 \Hy@StepCount\@serial@counter
12983 \edef\@parcount{%
12984 \expandafter\ifx\csname @count@#5\endcsname\relax
12985 0%
12986 \else
12987 \csname @count@#5\endcsname
12988 \fi
12989 }%
12990 \immediate\special{%
12991 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12992 s=\ifx#2-c\else o\fi,t=#4%
12993 }%
12994 }%

```

\ReadBookmarks

```

12995 \def\ReadBookmarks{%
12996 \begingroup
12997 \def\0{\hv@pdf@char 0}%
12998 \def\1{\hv@pdf@char 1}%
12999 \def\2{\hv@pdf@char 2}%
13000 \def\3{\hv@pdf@char 3}%

```

```

13001 \def\{(){}%
13002 \def\}(){}%
13003 \def\do##1{%
13004   \ifnum\catcode'##1=\active
13005     \@makeother##1%
13006   \else
13007     \ifnum\catcode'##1=6 %
13008       \@makeother##1%
13009     \fi
13010   \fi
13011 }%
13012 \dospecials
13013 \Hy@safe@activetrue
13014 \InputIfFileExists{\jobname.out}{-}{-}%
13015 \endgroup
13016 \ifx\WriteBookmarks\relax
13017 \else
13018   \if@filesw
13019     \newwrite\@outlinefile
13020     \Hy@OutlineRerunCheck
13021     \immediate\openout\@outlinefile=\jobname.out\relax
13022     \ifHy@typexml
13023       \immediate\write\@outlinefile{<relaxxml>\relax}%
13024     \fi
13025   \fi
13026 \fi
13027 }

13028 </vtex>
13029 <!*vtex>
13030 \def\ReadBookmarks{%
13031   \begingroup
13032   \def\do##1{%
13033     \ifnum\catcode'##1=\active
13034       \@makeother##1%
13035     \else
13036       \ifnum\catcode'##1=6 %
13037         \@makeother##1%
13038       \fi
13039     \fi
13040   }%
13041   \dospecials
13042   \Hy@safe@activetrue
13043   \escapechar='\\%
13044   \let\escapechar\@gobble %
13045   \def\@@BOOKMARK[##1][##2]##3##4##5{%
13046     \calc@bm@number{##5}%
13047   }%
13048   \InputIfFileExists{\jobname.out}{-}{-}%
13049   \ifx\WriteBookmarks\relax
13050     \global\let\WriteBookmarks\relax
13051   \fi
13052   \def\@@BOOKMARK[##1][##2]##3##4##5{%
13053     \def\Hy@temp{##4}%
13054   }%
13055   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13056   \Hy@OutlineName{\Hy@pstringName}%
13057   ##2\check@bm@number{##3}%

```



```

13058     }{ %
13059     \expandafter\strip@prefix\meaning\Hy@temp
13060     } %
13061 \</pdfTex>
13062 \<*pdfmark>
13063     \pdfmark{ %
13064     pdfmark=/OUT, %
13065     Count={###2\check@bm@number{###3}}, %
13066     Dest={###3}, %
13067     Title=\expandafter\strip@prefix\meaning\Hy@temp
13068     } %
13069 \</pdfmark>
13070 \<*dvipdfm | xetex>
13071     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{###3}} %
13072     \@pdfm@mark{ %
13073     outline \ifHy@DvipdfmxOutlineOpen
13074             [ %
13075             \ifnum##21>\z@
13076             \else
13077             - %
13078             \fi
13079             ] %
13080             \fi
13081             ##1<< %
13082             /Title(\expandafter\strip@prefix\meaning\Hy@temp) %
13083             /A<< %
13084             /S/GoTo %
13085             /D(\Hy@pstringName) %
13086             >> %
13087             >> %
13088             } %
13089 \</dvipdfm | xetex>
13090 } %
13091 { %
13092     \def\WriteBookmarks{0} %
13093     \InputIfFileExists{\jobname.out}{\relax}{\relax} %
13094 } %
13095 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}{\relax}} %
13096 \ifx\WriteBookmarks\relax
13097 \else
13098     \if@filesw
13099         \newwrite\@outlinefile
13100         \Hy@OutlineRerunCheck
13101         \immediate\openout\@outlinefile=\jobname.out\relax
13102         \ifHy@typexml
13103             \immediate\write\@outlinefile{<relaxxml>\relax} %
13104         \fi
13105     \fi
13106 \fi
13107 \endgroup
13108 }
13109 \<*pdfTex>
13110 \def\Hy@OutlineName#1#2#3#4{ %
13111     \pdfoutline goto name{#2}count#3{#4} %
13112 }
13113 \</pdfTex>
13114 \def\check@bm@number#1{ %

```

```

13115 \expandafter\ifx\csname B_#1\endcsname\relax
13116   0%
13117 \else
13118   \csname B_#1\endcsname
13119 \fi
13120 }
13121 \def\calc@bm@number#1{%
13122   \@tempcnta=\check@bm@number{#1}\relax
13123   \advance\@tempcnta by 1 %
13124   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13125 }
13126 </!vtex>

13127 \ifHy@implicit
13128 \else
13129   \expandafter\endinput
13130 \fi

13131 </outlines>
13132 <*outlines | hypertex>

13133 \newlength\Hy@SectionHShift
13134 \def\Hy@SectionAnchorHref#1{%
13135   \ifx\protect\@typeset@protect
13136     \Hy@@@SectionAnchor{#1}%
13137   \fi
13138 }
13139 \DeclareRobustCommand*\Hy@@@SectionAnchor[1]{%
13140   \leavevmode
13141   \hbox to 0pt{%
13142     \kern-\Hy@SectionHShift
13143     \Hy@raisedlink{%
13144       \hyper@anchorstart{#1}\hyper@anchorend
13145     }%
13146     \hss
13147   }%
13148 }
13149 \let\H@old@ssect\@ssect
13150 \def\@ssect#1#2#3#4#5{%
13151   \Hy@MakeCurrentHrefAuto{section*}%
13152   \setlength{\Hy@SectionHShift}{#1}%
13153   \begingroup
13154     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13155     \toks\tw@\expandafter{%
13156       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13157       #5%
13158     }%
13159   \edef\x{\endgroup
13160     \the\toks@\the\toks\tw@}%
13161   }\x
13162 }
13163 \let\H@old@schapter\@schapter
13164 \def\@schapter#1{%
13165   \begingroup
13166     \let\@mkboth\@gobbletwo
13167     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13168     \Hy@raisedlink{%
13169       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13170     }%

```

```

13171 \endgroup
13172 \H@old@schapter{#1}%
13173 }

```

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:

```

13174 \ltx@ifundefined{@chapter}{}{%
13175   \let\Hy@org@chapter\@chapter
13176   \def\@chapter{%
13177     \def\Hy@next{%
13178       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13179       \Hy@raisedlink{%
13180         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13181       }%
13182     }%
13183     \ifnum\c@secnumdepth>\m@ne
13184       \ltx@ifundefined{if@mainmatter}%
13185       \iftrue{\csname if@mainmatter\endcsname}%
13186       \let\Hy@next\relax
13187     \fi
13188     \fi
13189     \Hy@next
13190     \Hy@org@chapter
13191   }%
13192 }

13193 \let\H@old@part\@part
13194 \begingroup\expandafter\expandafter\expandafter\endgroup
13195 \expandafter\ifx\csname chapter\endcsname\relax
13196   \let\Hy@secnum@part\z@
13197 \else
13198   \let\Hy@secnum@part\m@ne
13199 \fi
13200 \def\@part{%
13201   \ifnum\Hy@secnum@part>\c@secnumdepth
13202     \phantomsection
13203   \fi
13204   \H@old@part
13205 }

13206 \let\H@old@spart\@spart
13207 \def\@spart#1{%
13208   \Hy@MakeCurrentHrefAuto{part*}%
13209   \Hy@raisedlink{%
13210     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13211   }%
13212   \H@old@spart{#1}%
13213 }

13214 \let\H@old@sect\@sect
13215 \def\@sect#1#2#3#4#5#6[#7]#8{%
13216   \ifnum #2>\c@secnumdepth
13217     \expandafter\@firstoftwo
13218   \else
13219     \expandafter\@secondoftwo
13220   \fi
13221   {%
13222     \Hy@MakeCurrentHrefAuto{section*}%
13223     \setlength{\Hy@SectionHShift}{#3}%

```

```

13224 \begingroup
13225 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}}%
13226 \toks\tw@\expandafter{%
13227 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13228 #8%
13229 }%
13230 \edef\x{\endgroup
13231 \the\toks@{\the\toks\tw@}}%
13232 }\x
13233 }{%
13234 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13235 }%
13236 }

13237 </outlines | hypertex>
13238 <*outlines>

13239 \expandafter\def\csname Parent-4\endcsname{}
13240 \expandafter\def\csname Parent-3\endcsname{}
13241 \expandafter\def\csname Parent-2\endcsname{}
13242 \expandafter\def\csname Parent-1\endcsname{}
13243 \expandafter\def\csname Parent0\endcsname{}
13244 \expandafter\def\csname Parent1\endcsname{}
13245 \expandafter\def\csname Parent2\endcsname{}
13246 \expandafter\def\csname Parent3\endcsname{}
13247 \expandafter\def\csname Parent4\endcsname{}

13248 </outlines>

```

49 Compatibility with koma-script classes

```

13249 <*outlines | hypertex>

```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

13250 \def\Hy@tempa{%
13251 \def\@addchap[##1]##2{%
13252 \typeout{##2}%
13253 \if@twoside
13254 \@mkboth{##1}{}%
13255 \else
13256 \@mkboth{}{##1}%
13257 \fi
13258 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13259 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13260 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13261 \Hy@raisedlink{%
13262 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13263 }%
13264 \if@twocolumn
13265 \@topnewpage[\@makeschapterhead{##2}]%
13266 \else
13267 \@makeschapterhead{##2}%
13268 \@afterheading
13269 \fi
13270 \addcontentsline{toc}{chapter}{##1}%

```

```

13271 }%
13272 }
13273 \@ifclassloaded{scrbook}{%
13274   \@ifclasslater{scrbook}{2001/01/01}{%
13275     \let\Hy@tempa\@empty
13276   }{}%
13277 }{%
13278   \@ifclassloaded{scrreprt}{%
13279     \@ifclasslater{scrreprt}{2001/01/01}{%
13280       \let\Hy@tempa\@empty
13281     }{}%
13282   }{%
13283     \let\Hy@tempa\@empty
13284   }%
13285 }%
13286 \Hy@tempa
13287 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13288 <*pdlenc>
13289 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

13290 \DeclareTextAccent{'}{PD1}{\textasciigrave}
13291 \DeclareTextAccent{''}{PD1}{\textacute}
13292 \DeclareTextAccent{`}{PD1}{\textasciicircum}
13293 \DeclareTextAccent{~}{PD1}{\texttilde}
13294 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
13295 \DeclareTextAccent{\r}{PD1}{\textring}
13296 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13297 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13298 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13299 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13300 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13301 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13302 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
13303 \DeclareTextCompositeCommand{''}{PD1}{\@empty}{\textacute}
13304 \DeclareTextCompositeCommand{`}{PD1}{\@empty}{\textasciicircum}
13305 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
13306 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
13307 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13308 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13309 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13310 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13311 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13312 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13313 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13314 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}
13315 \DeclareTextCompositeCommand{''}{PD1}{\ }{\textacute}
13316 \DeclareTextCompositeCommand{`}{PD1}{\ }{\textasciicircum}
13317 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
13318 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}

```

```

13319 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13320 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13321 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13322 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13323 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13324 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13325 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13326 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13327 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13328 \DeclareTextCommand{\newtie}{PD1}[1]{%
13329   \TextSymbolUnavailable{\newtie{#1}}#1%
13330 }

```

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

```

13331 % U+0009 (CHARACTER TABULATION)
13332 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13333 % U+000A (LINE FEED)
13334 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13335 % U+000D (CARRIAGE RETURN)
13336 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

13337 % U+02D8 BREVE; breve
13338 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13339 % U+02C7 CARON; caron
13340 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13341 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13342 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
13343 % U+02D9 DOT ABOVE; dotaccent
13344 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13345 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13346 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13347 % U+02DB OGONEK; ogonek
13348 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13349 % U+02DA RING ABOVE; ring
13350 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13351 % U+02DC SMALL TILDE; ilde, *tilde
13352 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

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

\041: U+0021 EXCLAMATION MARK; exclam

```

13353 % U+0022 QUOTATION MARK; quotedbl
13354 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13355 % U+0023 NUMBER SIGN; numbersign
13356 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13357 % U+0024 DOLLAR SIGN; dollar
13358 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13359 % U+0025 PERCENT SIGN; percent
13360 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13361 % U+0026 AMPERSAND; ampersand
13362 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

```

13363 % U+0028 LEFT PARENTHESIS; parenleft

13364 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028

13365 % U+0029 RIGHT PARENTHESIS; parenright

13366 \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
 13367 % U+002E FULL STOP; period
 13368 \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
 13369 % U+003C LESS-THAN SIGN; less
 13370 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13371 % U+003E GREATER-THAN SIGN; greater
 13372 \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
 13373 % U+005C REVERSE SOLIDUS; backslash
 13374 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13375 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13376 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13377 % U+005F LOW LINE; underscore
 13378 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13379 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13380 % U+0060 GRAVE ACCENT; grave
 13381 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13382 % U+0069 LATIN SMALL LETTER I; i
 13383 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13384 % U+007B LEFT CURLY BRACKET; braceleft
 13385 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13386 % U+007C VERTICAL LINE; *bar, verticalbar
 13387 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13388 % U+007D RIGHT CURLY BRACKET; braceright
 13389 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13390 % U+007E TILDE; asciitilde
 13391 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13392 % U+2022 BULLET; bullet
 13393 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13394 % U+2020 DAGGER; dagger
 13395 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13396 % U+2021 DOUBLE DAGGER; daggerdbl

13397 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
13398 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
13399 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
13400 % U+2014 EM DASH; emdash
13401 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
13402 % U+2013 EN DASH; endash
13403 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
13404 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
13405 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
13406 % U+2044 FRACTION SLASH; fraction
13407 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
13408 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
13409 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
13410 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
ingright
13411 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
13412 % U+2212 MINUS SIGN; minus
13413 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
13414 % U+2030 PER MILLE SIGN; perthousand
13415 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
13416 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
13417 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13418 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13419 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13420 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13421 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13422 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13423 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13424 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13425 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13426 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13427 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13428 % U+2122 TRADE MARK SIGN; trademark
13429 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13430 % U+FB01 LATIN SMALL LIGATURE FI; fi
13431 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13432 % U+FB02 LATIN SMALL LIGATURE FL; fl
13433 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13434 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13435 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13436 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13437 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13438 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13439 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13440 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13441 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
13442 \DeclareTextCommand{\IJ}{PD1}{\230}
13443 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13444 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13445 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13446 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13447 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13448 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13449 % U+0153 LATIN SMALL LIGATURE OE; oe
13450 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13451 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron

13452 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 13453 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13454 \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.

13455 % U+20AC EURO SIGN; *Euro, euro
 13456 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13457 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13458 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13459 % U+00A2 CENT SIGN; cent
 13460 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13461 % U+00A3 POUND SIGN; sterling
 13462 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13463 % U+00A4 CURRENCY SIGN; currency
 13464 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13465 % U+00A5 YEN SIGN; yen
 13466 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13467 % U+00A6 BROKEN BAR; brokenbar
 13468 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13469 % U+00A7 SECTION SIGN; section
 13470 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13471 % U+00A8 DIAERESIS; dieresis
 13472 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13473 % U+00A9 COPYRIGHT SIGN; copyright
 13474 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13475 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13476 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13477 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13478 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13479 % U+00AC NOT SIGN; logicalnot
 13480 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13481 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

13482 % U+00AE REGISTERED SIGN; registered
 13483 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13484 % U+00AF MACRON; *macron, overscore
 13485 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13486 % U+00B0 DEGREE SIGN; degree
 13487 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13488 % U+00B1 PLUS-MINUS SIGN; plusminus
 13489 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13490 % U+00B2 SUPERScript TWO; twosuperior
 13491 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13492 % U+00B3 SUPERScript THREE; threesuperior
 13493 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13494 % U+00B4 ACUTE ACCENT; acute
 13495 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13496 % U+00B5 MICRO SIGN; mu, mu1
 13497 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13498 % U+00B6 PILCROW SIGN; paragraph
 13499 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13500 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13501 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 13502 % U+00B8 CEDILLA; cedilla
 13503 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13504 % U+00B9 SUPERScript ONE; onesuperior

13505 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13506 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13507 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13508 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
13509 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13510 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13511 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13512 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13513 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13514 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13515 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13516 % U+00BF INVERTED QUESTION MARK; questiondown
13517 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13518 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13519 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13520 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13521 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13522 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13523 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13524 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13525 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13526 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13527 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
13528 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13529 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13530 % U+00C6 LATIN CAPITAL LETTER AE; AE
13531 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13532 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13533 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13534 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13535 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13536 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13537 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13538 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13539 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13540 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13541 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
13542 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13543 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13544 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13545 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13546 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13547 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13548 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13549 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
13550 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13551 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13552 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13553 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13554 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13555 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13556 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13557 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13558 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13559 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13560 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4

13561 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13562 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13563 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13564 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13565 % U+00D7 MULTIPLICATION SIGN; multiply
13566 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13567 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13568 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13569 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13570 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13571 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13572 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13573 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13574 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13575 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13576 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13577 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13578 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13579 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13580 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13581 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13582 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13583 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13584 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13585 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13586 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13587 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13588 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13589 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13590 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13591 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13592 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13593 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13594 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13595 % U+00E6 LATIN SMALL LETTER AE; ae
13596 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13597 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13598 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13599 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13600 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13601 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13602 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13603 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13604 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13605 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13606 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13607 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13608 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13609 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13610 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13611 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13612 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13613 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13614 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13615 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13616 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13617 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF

13618 \DeclareTextCompositeCommand{"}{PD1}{\i}{\357}% U+00EF
 13619 % U+00F0 LATIN SMALL LETTER ETH; eth
 13620 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 13621 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 13622 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
 13623 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 13624 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 13625 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 13626 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
 13627 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 13628 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
 13629 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 13630 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 13631 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13632 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 13633 % U+00F7 DIVISION SIGN; divide
 13634 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 13635 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13636 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13637 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13638 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 13639 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13640 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 13641 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13642 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 13643 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13644 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 13645 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13646 \DeclareTextCompositeCommand{\`}{PD1}{y}{\375}% U+00FD
 13647 % U+00FE LATIN SMALL LETTER THORN; thorn
 13648 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13649 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13650 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 13651 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13652 \DeclareTextCommand{\SS}{PD1}{SS}
 13653 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13654 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13655 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13656 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13657 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13658 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13659 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13660 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13661 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13662 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13663 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13664 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13665 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13666 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13667 \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).

```

13668 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13669 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13670 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13671 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13672 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13673 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13674 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13675 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13676 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13677 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13678 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13679 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13680 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13681 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13682 </pdlenc>

```

50.2 PU encoding

```

13683 <*puenc>
13684 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

```

13685 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13686 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
13687 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13688 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
13689 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13690 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
13691 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
13692 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
13693 % U+0304 COMBINING MACRON; macroncmb
13694 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
13695 % U+0306 COMBINING BREVE; brevecmb
13696 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
13697 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
13698 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13699 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
13700 % U+0308 COMBINING DIAERESIS; dierescmb
13701 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
13702 % U+030A COMBINING RING ABOVE; ringcmb
13703 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13704 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13705 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13706 % U+030C COMBINING CARON; caroncmb
13707 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13708 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13709 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13710 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13711 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13712 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13713 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
13714 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13715 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13716 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13717 % U+0327 COMBINING CEDILLA; cedillacmb
13718 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13719 % U+0328 COMBINING OGONEK; ogonekcmb

```

```

13720 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13721 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13722 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13723 % U+20DD COMBINING ENCLOSING CIRCLE
13724 \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.

```

13725 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
13726 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13727 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
13728 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
13729 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13730 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13731 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13732 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13733 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13734 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13735 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13736 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13737 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13738 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13739 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13740 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13741 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13742 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13743 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13744 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13745 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13746 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13747 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13748 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13749 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13750 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13751 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13752 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13753 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13754 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13755 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13756 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13757 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13758 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13759 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13760 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13761 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13762 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13763 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13764 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13765 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'\{#1}}
13766 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{#1}}
13767 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\~{#1}}
13768 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13769 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\~{#1}}
13770 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13771 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13772 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}

```

```

13773 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13774 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13775 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13776 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13777 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

13778 % U+0009 (CHARACTER TABULATION)
13779 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13780 % U+000A (LINE FEED)
13781 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13782 % U+000D (CARRIAGE RETURN)
13783 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

13784 % U+0022 QUOTATION MARK; quotedbl
13785 \DeclareTextCommand{\textquotedbl}{PU}{\string"% \80\042 U+0022
13786 % U+0023 NUMBER SIGN; numbersign
13787 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13788 % U+0024 DOLLAR SIGN; dollar
13789 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
13790 % U+0025 PERCENT SIGN; percent
13791 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
13792 % U+0026 AMPERSAND; ampersand
13793 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
13794 % U+0027 APOSTROPHE; quotesingle
13795 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
13796 % U+0028 LEFT PARENTHESIS; parenleft
13797 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
13798 % U+0029 RIGHT PARENTHESIS; parenright
13799 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
13800 % U+002A ASTERISK; asterisk
13801 \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

13802 % U+003C LESS-THAN SIGN; less
13803 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

13804 % U+003E GREATER-THAN SIGN; greater
13805 \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
 13806 % U+005C REVERSE SOLIDUS; backslash
 13807 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13808 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13809 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13810 % U+005F LOW LINE; underscore
 13811 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13812 % U+0060 GRAVE ACCENT; grave
 13813 \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
 13814 % U+0069 LATIN SMALL LETTER I; i
 13815 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 13816 \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
 13817 % U+007B LEFT CURLY BRACKET; braceleft
 13818 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13819 % U+007C VERTICAL LINE; *bar, verticalbar
 13820 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13821 % U+007D RIGHT CURLY BRACKET; braceright
 13822 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13823 % U+007E TILDE; asciitilde
 13824 \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
 13825 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13826 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13827 % U+00A2 CENT SIGN; cent
 13828 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13829 % U+00A3 POUND SIGN; sterling
 13830 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13831 % U+00A4 CURRENCY SIGN; currency
 13832 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13833 % U+00A5 YEN SIGN; yen
 13834 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13835 % U+00A6 BROKEN BAR; brokenbar
 13836 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13837 % U+00A7 SECTION SIGN; section
 13838 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13839 % U+00A8 DIAERESIS; dieresis
 13840 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13841 % U+00A9 COPYRIGHT SIGN; copyright
 13842 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13843 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13844 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13845 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13846 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB

13847 % U+00AC NOT SIGN; logicalnot
 13848 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13849 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13850 % U+00AE REGISTERED SIGN; registered
 13851 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13852 % U+00AF MACRON; *macron, overscore
 13853 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13854 % U+00B0 DEGREE SIGN; degree
 13855 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13856 % U+00B1 PLUS-MINUS SIGN; plusminus
 13857 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13858 % U+00B2 SUPERSCRIPT TWO; twosuperior
 13859 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13860 % U+00B3 SUPERSCRIPT THREE; threesuperior
 13861 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13862 % U+00B4 ACUTE ACCENT; acute
 13863 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13864 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13865 % U+00B5 MICRO SIGN; mu, mul
 13866 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13867 % U+00B6 PILCROW SIGN; paragraph
 13868 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 13869 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13870 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 13871 % U+00B8 CEDILLA; cedilla
 13872 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 13873 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13874 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 13875 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13876 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 13877 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13878 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 13879 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13880 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 13881 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13882 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 13883 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13884 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 13885 % U+00BF INVERTED QUESTION MARK; questiondown
 13886 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 13887 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13888 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 13889 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13890 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 13891 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13892 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 13893 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13894 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 13895 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13896 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
 13897 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13898 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 13899 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13900 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13901 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

13902 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
13903 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13904 \DeclareTextCompositeCommand{\' }{PU}{E}{\80\310}% U+00C8
13905 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13906 \DeclareTextCompositeCommand{\' }{PU}{E}{\80\311}% U+00C9
13907 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13908 \DeclareTextCompositeCommand{\^ }{PU}{E}{\80\312}% U+00CA
13909 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13910 \DeclareTextCompositeCommand{\" }{PU}{E}{\80\313}% U+00CB
13911 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13912 \DeclareTextCompositeCommand{\' }{PU}{I}{\80\314}% U+00CC
13913 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13914 \DeclareTextCompositeCommand{\' }{PU}{I}{\80\315}% U+00CD
13915 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13916 \DeclareTextCompositeCommand{\^ }{PU}{I}{\80\316}% U+00CE
13917 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13918 \DeclareTextCompositeCommand{\" }{PU}{I}{\80\317}% U+00CF
13919 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13920 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
13921 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13922 \DeclareTextCompositeCommand{\~ }{PU}{N}{\80\321}% U+00D1
13923 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13924 \DeclareTextCompositeCommand{\' }{PU}{O}{\80\322}% U+00D2
13925 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13926 \DeclareTextCompositeCommand{\' }{PU}{O}{\80\323}% U+00D3
13927 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13928 \DeclareTextCompositeCommand{\^ }{PU}{O}{\80\324}% U+00D4
13929 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13930 \DeclareTextCompositeCommand{\~ }{PU}{O}{\80\325}% U+00D5
13931 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13932 \DeclareTextCompositeCommand{\" }{PU}{O}{\80\326}% U+00D6
13933 % U+00D7 MULTIPLICATION SIGN; multiply
13934 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13935 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13936 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13937 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13938 \DeclareTextCompositeCommand{\' }{PU}{U}{\80\331}% U+00D9
13939 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13940 \DeclareTextCompositeCommand{\' }{PU}{U}{\80\332}% U+00DA
13941 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13942 \DeclareTextCompositeCommand{\^ }{PU}{U}{\80\333}% U+00DB
13943 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13944 \DeclareTextCompositeCommand{\" }{PU}{U}{\80\334}% U+00DC
13945 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13946 \DeclareTextCompositeCommand{\' }{PU}{Y}{\80\335}% U+00DD
13947 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13948 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13949 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13950 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13951 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13952 \DeclareTextCompositeCommand{\' }{PU}{a}{\80\340}% U+00E0
13953 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13954 \DeclareTextCompositeCommand{\' }{PU}{a}{\80\341}% U+00E1
13955 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13956 \DeclareTextCompositeCommand{\^ }{PU}{a}{\80\342}% U+00E2
13957 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13958 \DeclareTextCompositeCommand{\~ }{PU}{a}{\80\343}% U+00E3

13959 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13960 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
13961 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13962 \DeclareTextCompositeCommand{r}{PU}{a}{\80\345}% U+00E5
13963 % U+00E6 LATIN SMALL LETTER AE; ae
13964 \DeclareTextCommand{ae}{PU}{\80\346}% U+00E6
13965 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13966 \DeclareTextCompositeCommand{c}{PU}{c}{\80\347}% U+00E7
13967 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13968 \DeclareTextCompositeCommand{'}{PU}{e}{\80\350}% U+00E8
13969 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13970 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}% U+00E9
13971 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13972 \DeclareTextCompositeCommand{^}{PU}{e}{\80\352}% U+00EA
13973 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13974 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
13975 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13976 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
13977 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
13978 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13979 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
13980 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
13981 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13982 \DeclareTextCompositeCommand{^}{PU}{i}{\80\356}% U+00EE
13983 \DeclareTextCompositeCommand{^}{PU}{i}{\80\356}% U+00EE
13984 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13985 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
13986 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
13987 % U+00F0 LATIN SMALL LETTER ETH; eth
13988 \DeclareTextCommand{dh}{PU}{\80\360}% U+00F0
13989 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13990 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
13991 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13992 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
13993 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13994 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
13995 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13996 \DeclareTextCompositeCommand{^}{PU}{o}{\80\364}% U+00F4
13997 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13998 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
13999 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14000 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
14001 % U+00F7 DIVISION SIGN; divide
14002 \DeclareTextCommand{textdivide}{PU}{\80\367}% U+00F7
14003 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14004 \DeclareTextCommand{o}{PU}{\80\370}% U+00F8
14005 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14006 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
14007 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14008 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
14009 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14010 \DeclareTextCompositeCommand{^}{PU}{u}{\80\373}% U+00FB
14011 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14012 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
14013 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14014 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
14015 % U+00FE LATIN SMALL LETTER THORN; thorn

14016 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14017 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14018 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

14019 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14020 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14021 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14022 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14023 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14024 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14025 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14026 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14027 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14028 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14029 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14030 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14031 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14032 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 14033 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14034 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 14035 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 14036 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 14037 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 14038 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 14039 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 14040 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 14041 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 14042 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 14043 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 14044 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 14045 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 14046 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 14047 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 14048 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 14049 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 14050 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 14051 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 14052 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 14053 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
 14054 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 14055 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 14056 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 14057 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 14058 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 14059 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 14060 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 14061 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 14062 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 14063 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
 14064 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
 14065 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
 14066 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
 14067 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
 14068 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
 14069 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek

14070 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14071 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14072 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14073 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14074 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14075 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14076 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14077 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14078 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14079 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14080 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14081 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14082 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14083 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14084 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14085 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14086 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14087 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14088 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14089 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14090 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14091 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14092 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
14093 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14094 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14095 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14096 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14097 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14098 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14099 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14100 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14101 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14102 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14103 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14104 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14105 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14106 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14107 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14108 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14109 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14110 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14111 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14112 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14113 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14114 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14115 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14116 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14117 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14118 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14119 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14120 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14121 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14122 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14123 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14124 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14125 % U+0133 LATIN SMALL LIGATURE IJ; ij

14126 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 14127 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 14128 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 14129 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 14130 \DeclareTextCompositeCommand{\~}{PU}{j}{\81\065}% U+0135
 14131 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 14132 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 14133 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 14134 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 14135 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be \textkgreenlandic, following the glyph naming convention. However latex/base/inputenc.dtx has choosen \textkra.

14136 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 14137 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 14138 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 14139 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 14140 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 14141 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 14142 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 14143 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 14144 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14145 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14146 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14147 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14148 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14149 \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.

14150 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14151 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14152 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14153 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14154 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14155 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14156 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14157 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14158 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14159 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14160 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14161 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14162 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 14163 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14164 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14165 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 14166 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14167 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14168 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14169 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14170 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 14171 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14172 % U+014A LATIN CAPITAL LETTER ENG; Eng

14173 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
14174 % U+014B LATIN SMALL LETTER ENG; eng
14175 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
14176 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
14177 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
14178 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
14179 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
14180 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
14181 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
14182 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
14183 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
14184 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
14185 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
14186 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
14187 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
14188 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14189 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
14190 % U+0153 LATIN SMALL LIGATURE OE; oe
14191 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
14192 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
14193 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
14194 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
14195 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14196 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14197 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14198 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14199 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14200 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14201 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14202 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14203 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14204 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14205 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\132}% U+015A
14206 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14207 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\133}% U+015B
14208 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14209 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14210 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14211 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14212 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14213 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14214 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14215 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14216 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14217 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14218 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14219 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14220 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14221 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14222 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14223 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14224 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14225 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164

14226 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14227 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14228 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14229 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14230 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14231 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14232 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14233 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14234 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14235 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14236 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14237 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14238 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14239 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14240 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14241 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
14242 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
14243 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
14244 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
14245 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
14246 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
14247 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
14248 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
14249 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
14250 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
14251 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
14252 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
14253 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
14254 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
14255 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
14256 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
14257 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
14258 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
14259 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
14260 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
14261 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
14262 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
14263 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
14264 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14265 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
14266 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
14267 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
14268 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
14269 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
14270 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
14271 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
14272 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
14273 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
14274 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14275 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
14276 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14277 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
14278 % U+017F LATIN SMALL LETTER LONG S; longs, slong
14279 \DeclareTextCommand{\textlongs}{PU}{\81\177}% U+017F

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

14280 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14281 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
14282 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
14283 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
14284 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
14285 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
14286 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
14287 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
14288 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
14289 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14290 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14291 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
14292 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
14293 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
14294 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
14295 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
14296 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
14297 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
14298 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
14299 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
14300 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
14301 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
14302 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
14303 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14304 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14305 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14306 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14307 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14308 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14309 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14310 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14311 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14312 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14313 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14314 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14315 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14316 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14317 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14318 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14319 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14320 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14321 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14322 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14323 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
14324 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14325 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
14326 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14327 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
14328 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14329 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
14330 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslasha-
cute, Ostrokeacute
14331 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
14332 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
cute, ostrokeacute
14333 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF

14334 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 14335 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 14336 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 14337 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 14338 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 14339 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 14340 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 14341 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 14342 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 14343 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 14344 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 14345 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14346 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14347 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 14348 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 14349 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 14350 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 14351 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 14352 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 14353 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 14354 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 14355 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 14356 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 14357 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 14358 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14359 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14360 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14361 % U+021F LATIN SMALL LETTER H WITH CARON
 14362 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14363 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14364 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14365 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14366 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14367 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14368 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14369 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14370 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14371 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14372 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14373 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14374 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14375 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14376 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14377 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14378 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14379 % U+0237 LATIN SMALL LETTER DOTLESS J
 14380 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

14381 % U+02C7 CARON; caron
 14382 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14383 % U+02D8 BREVE; breve
 14384 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14385 % U+02D9 DOT ABOVE; dotaccent
 14386 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14387 % U+02DA RING ABOVE; ring
 14388 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA

14389 % U+02DB OGONEK; ogonek
 14390 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14391 % U+02DC SMALL TILDE; ilde, *tilde
 14392 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14393 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14394 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14395 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14396 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14397 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14398 % U+02F7 MODIFIER LETTER LOW TILDE
 14399 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

14400 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14401 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14402 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14403 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14404 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14405 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14406 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14407 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14408 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14409 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

14410 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14411 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14412 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14413 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14414 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 14415 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14416 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14417 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14418 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14419 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14420 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14421 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 14422 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 14423 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 14424 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 14425 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 14426 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14427 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 14428 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadieresis
 14429 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 14430 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14431 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14432 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14433 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14434 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14435 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 14436 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 14437 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 14438 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 14439 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395

14440 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 14441 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 14442 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 14443 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 14444 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 14445 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 14446 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 14447 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 14448 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 14449 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 14450 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
 14451 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 14452 % U+039C GREEK CAPITAL LETTER MU; Mu
 14453 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 14454 % U+039D GREEK CAPITAL LETTER NU; Nu
 14455 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
 14456 % U+039E GREEK CAPITAL LETTER XI; Xi
 14457 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
 14458 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 14459 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 14460 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 14461 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
 14462 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 14463 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 14464 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 14465 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 14466 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 14467 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 14468 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 14469 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 14470 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 14471 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 14472 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 14473 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 14474 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 14475 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 14476 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
 14477 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
 14478 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
 14479 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
 14480 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
 14481 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
 silondieresis
 14482 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 14483 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos
 14484 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
 14485 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon
 14486 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 14487 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
 14488 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 14489 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
 14490 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 14491 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
 silondieresis
 14492 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
 14493 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 14494 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1

14495 % U+03B2 GREEK SMALL LETTER BETA; beta
 14496 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 14497 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 14498 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 14499 % U+03B4 GREEK SMALL LETTER DELTA; delta
 14500 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 14501 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 14502 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 14503 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 14504 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 14505 % U+03B7 GREEK SMALL LETTER ETA; eta
 14506 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 14507 % U+03B8 GREEK SMALL LETTER THETA; theta
 14508 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 14509 % U+03B9 GREEK SMALL LETTER IOTA; iota
 14510 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
 14511 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 14512 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 14513 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 14514 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 14515 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 14516 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 14517 % U+03BD GREEK SMALL LETTER NU; nu
 14518 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
 14519 % U+03BE GREEK SMALL LETTER XI; xi
 14520 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 14521 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 14522 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 14523 % U+03C0 GREEK SMALL LETTER PI; pi
 14524 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 14525 % U+03C1 GREEK SMALL LETTER RHO; rho
 14526 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 14527 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 14528 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 14529 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 14530 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 14531 % U+03C4 GREEK SMALL LETTER TAU; tau
 14532 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 14533 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 14534 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 14535 % U+03C6 GREEK SMALL LETTER PHI; phi
 14536 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 14537 % U+03C7 GREEK SMALL LETTER CHI; chi
 14538 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 14539 % U+03C8 GREEK SMALL LETTER PSI; psi
 14540 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 14541 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 14542 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 14543 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 14544 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 14545 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 14546 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 14547 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 14548 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 14549 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 14550 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD

14551 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
 14552 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 14553 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
 14554 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 14555 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 14556 % U+03DB GREEK SMALL LETTER STIGMA
 14557 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14558 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14559 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14560 % U+03DD GREEK SMALL LETTER DIGAMMA
 14561 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14562 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14563 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14564 % U+03DF GREEK SMALL LETTER KOPPA
 14565 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14566 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14567 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14568 % U+03E1 GREEK SMALL LETTER SAMPI
 14569 \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.

14570 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 14571 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
 14572 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 14573 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 14574 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\001}% ???
 14575 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 14576 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 14577 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 14578 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
 14579 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 14580 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 14581 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 14582 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 14583 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyril-
 lic, *afii10055
 14584 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 14585 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 14586 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 14587 \DeclareTextCompositeCommand{\'}{PU}{\CYRII}{\84\007}% U+0407
 14588 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 14589 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 14590 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 14591 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 14592 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 14593 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 14594 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 14595 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 14596 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 14597 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 14598 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 14599 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
 14600 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 14601 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 14602 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E

14603 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14604 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14605 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14606 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14607 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14608 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14609 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14610 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14611 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14612 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14613 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14614 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14615 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14616 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14617 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14618 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14619 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14620 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14621 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14622 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14623 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14624 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14625 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14626 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14627 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14628 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14629 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14630 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14631 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14632 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14633 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14634 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14635 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14636 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14637 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14638 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14639 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14640 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14641 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14642 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14643 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14644 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14645 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14646 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14647 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14648 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14649 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14650 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14651 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14652 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14653 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14654 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14655 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14656 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14657 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14658 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14659 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A

14660 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14661 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14662 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14663 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14664 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14665 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14666 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14667 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14668 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14669 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14670 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14671 \DeclareTextCommand{\cyr a}{PU}{\84\060}% U+0430
14672 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14673 \DeclareTextCommand{\cyr b}{PU}{\84\061}% U+0431
14674 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14675 \DeclareTextCommand{\cyr v}{PU}{\84\062}% U+0432
14676 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14677 \DeclareTextCommand{\cyr g}{PU}{\84\063}% U+0433
14678 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14679 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
14680 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14681 \DeclareTextCommand{\cyr e}{PU}{\84\065}% U+0435
14682 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14683 \DeclareTextCommand{\cyr zh}{PU}{\84\066}% U+0436
14684 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14685 \DeclareTextCommand{\cyr z}{PU}{\84\067}% U+0437
14686 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14687 \DeclareTextCommand{\cyr i}{PU}{\84\070}% U+0438
14688 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14689 \DeclareTextCommand{\cyr ishrt}{PU}{\84\071}% U+0439
14690 \DeclareTextCompositeCommand{\U}{PU}{\cyr i}{\84\071}% U+0439
14691 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14692 \DeclareTextCommand{\cyr k}{PU}{\84\072}% U+043A
14693 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14694 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
14695 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14696 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
14697 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14698 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
14699 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14700 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
14701 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14702 \DeclareTextCommand{\cyr p}{PU}{\84\077}% U+043F
14703 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14704 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
14705 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14706 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
14707 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14708 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
14709 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14710 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
14711 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14712 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
14713 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14714 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
14715 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14716 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446

14717 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14718 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
14719 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14720 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14721 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14722 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14723 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14724 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14725 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14726 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14727 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14728 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
14729 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14730 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14731 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14732 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
14733 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14734 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
14735 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14736 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14737 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14738 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
14739 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\121}% U+0451
14740 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14741 \DeclareTextCommand{\cyrDje}{PU}{\84\122}% U+0452
14742 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14743 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14744 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14745 \DeclareTextCommand{\cyrIe}{PU}{\84\124}% U+0454
14746 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14747 \DeclareTextCommand{\cyrDze}{PU}{\84\125}% U+0455
14748 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14749 \DeclareTextCommand{\cyrIi}{PU}{\84\126}% U+0456
14750 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14751 \DeclareTextCommand{\cyrYi}{PU}{\84\127}% U+0457
14752 \DeclareTextCompositeCommand{\'}{PU}{\cyrIi}{\84\127}% U+0457
14753 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14754 \DeclareTextCommand{\cyrJe}{PU}{\84\130}% U+0458
14755 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14756 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
14757 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14758 \DeclareTextCommand{\cyrNje}{PU}{\84\132}% U+045A
14759 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14760 \DeclareTextCommand{\cyrTshe}{PU}{\84\133}% U+045B
14761 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14762 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14763 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14764 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14765 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14766 \DeclareTextCommand{\cyrUshrt}{PU}{\84\136}% U+045E
14767 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14768 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14769 \DeclareTextCommand{\cyrDzhe}{PU}{\84\137}% U+045F
14770 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14771 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14772 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic

14773 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14774 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14775 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14776 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14777 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14778 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14779 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14780 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14781 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14782 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14783 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14784 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14785 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14786 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14787 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14788 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14789 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14790 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14791 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14792 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14793 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
14794 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
14795 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
14796 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
lic
14797 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
14798 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
14799 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
14800 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
14801 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
14802 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
14803 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
14804 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
14805 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
14806 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
14807 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
14808 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
14809 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
14810 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
14811 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
14812 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
14813 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
14814 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; Izhitsadblgravecyrillic
14815 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
14816 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; izhitsadblgravecyrillic
14817 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
14818 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
14819 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
14820 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
14821 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
14822 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic

14823 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14824 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14825 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14826 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-cyrillic
 14827 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14828 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 14829 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14830 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14831 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14832 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14833 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14834 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14835 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14836 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14837 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14838 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14839 \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
 14840 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14841 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14842 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14843 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14844 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14845 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14846 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14847 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14848 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14849 \DeclareTextCommand{\CYRRRTICK}{PU}{\84\216}% U+048E
 14850 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14851 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14852 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 14853 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14854 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14855 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14856 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14857 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14858 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14859 \DeclareTextCommand{\cyrgghcrs}{PU}{\84\223}% U+0493
 14860 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14861 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494

14862 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemid-
 dlehookcyrillic
 14863 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14864 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescen-
 dercyrillic
 14865 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14866 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescen-
 dercyrillic
 14867 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14868 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 14869 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14870 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14871 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 14872 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 14873 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14874 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 14875 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14876 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescender-
 cyrillic
 14877 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 14878 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-
 ticalstrokecyrillic
 14879 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 14880 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
 ticalstrokecyrillic
 14881 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 14882 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 14883 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 14884 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 14885 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 14886 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 14887 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 14888 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 14889 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 14890 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 14891 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 14892 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 14893 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 14894 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 14895 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 14896 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 14897 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 14898 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 14899 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 14900 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 14901 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 14902 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 14903 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 14904 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

14905 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14906 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
14907 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14908 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14909 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
14910 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
14911 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
14912 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
14913 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14914 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
14915 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
14916 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14917 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14918 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14919 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
14920 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
14921 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14922 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
14923 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
14924 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
14925 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
14926 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
14927 \DeclareTextCommand{\cyrh dsc}{PU}{\84\263}% U+04B3
14928 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
14929 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
14930 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
14931 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
14932 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
14933 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
14934 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
14935 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
14936 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
14937 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
14938 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
14939 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
14940 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
14941 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
14942 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
14943 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
14944 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
14945 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
14946 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
14947 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD

14948 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 14949 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 14950 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 14951 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 14952 \DeclareTextCommand{\cyrahchdsc}{PU}{\84\277}% U+04BF
 14953 \DeclareTextCompositeCommand{\k}{PU}{\cyrahch}{\84\277}% U+04BF
 14954 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 14955 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 14956 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 14957 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 14958 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 14959 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 14960 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 14961 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 14962 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 14963 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 14964 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 14965 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 14966 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 14967 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
 14968 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 14969 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 14970 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 14971 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 14972 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-
 cyrillic
 14973 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 14974 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 14975 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 14976 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 14977 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 14978 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 14979 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 14980 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 14981 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 14982 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 14983 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 14984 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 14985 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 14986 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 14987 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 14988 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 14989 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 14990 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 14991 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 14992 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 14993 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 14994 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 14995 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 14996 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 14997 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 14998 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic

14999 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
15000 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
siscyrillic
15001 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
15002 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
siscyrillic
15003 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
15004 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
15005 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
15006 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
15007 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
15008 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
15009 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
15010 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
15011 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
15012 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
cyrillic
15013 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
15014 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
15015 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
15016 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
15017 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
15018 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15019 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
15020 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
15021 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15022 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
15023 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
15024 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
15025 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15026 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
15027 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15028 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
15029 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
15030 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
15031 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
15032 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
15033 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
15034 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
15035 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
15036 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
15037 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
15038 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
15039 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
15040 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
15041 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
15042 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
15043 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
15044 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
15045 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
15046 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

15047 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15048 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15049 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 15050 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15051 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15052 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15053 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 15054 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 15055 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 15056 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15057 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15058 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15059 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15060 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15061 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 15062 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15063 \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
 15064 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15065 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15066 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15067 \DeclareTextCommand{\cyrhkh}{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

15068 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15069 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

15070 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15071 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 15072 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15073 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 15074 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15075 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15076 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15077 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15078 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15079 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 15080 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15081 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
 15082 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15083 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 15084 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15085 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 15086 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15087 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10

15088 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
15089 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
15090 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
15091 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
15092 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15093 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
15094 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15095 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15096 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15097 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15098 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15099 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
15100 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15101 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
15102 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15103 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
15104 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15105 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
15106 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15107 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15108 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15109 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15110 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15111 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15112 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15113 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15114 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15115 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15116 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15117 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15118 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15119 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15120 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15121 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15122 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15123 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15124 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15125 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15126 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15127 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15128 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15129 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15130 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15131 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15132 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15133 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15134 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15135 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15136 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15137 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15138 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15139 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15140 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15141 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15142 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15143 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15144 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent

15145 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15146 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15147 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15148 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15149 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15150 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15151 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15152 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15153 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15154 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15155 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15156 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15157 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15158 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15159 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15160 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15161 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15162 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15163 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15164 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15165 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15166 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15167 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
15168 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15169 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
15170 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15171 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
15172 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15173 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
15174 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15175 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
15176 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15177 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
15178 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15179 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
15180 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15181 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
15182 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15183 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
15184 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15185 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
15186 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15187 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
15188 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15189 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
15190 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15191 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
15192 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15193 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
15194 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
15195 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
15196 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
15197 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
15198 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
15199 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
15200 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
15201 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95

15202 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
15203 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
15204 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
15205 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
15206 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
15207 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
15208 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
15209 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
15210 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
cent
15211 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
15212 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
15213 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
15214 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
15215 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
15216 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
15217 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
15218 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
15219 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
15220 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
15221 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
15222 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
15223 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

15224 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
15225 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
15226 % U+2013 EN DASH; endash
15227 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
15228 % U+2014 EM DASH; emdash
15229 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
15230 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
15231 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
15232 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
15233 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
15234 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
15235 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
15236 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
15237 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
15238 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbleft
15239 \DeclareTextCommand{\textquotedbleft}{PU}{\9040\034}% U+201C
15240 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
15241 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
15242 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
15243 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
15244 % U+2020 DAGGER; dagger
15245 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
15246 % U+2021 DOUBLE DAGGER; daggerdbl
15247 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
15248 % U+2022 BULLET; bullet
15249 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
15250 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
15251 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
15252 % U+2030 PER MILLE SIGN; perthousand
15253 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
15254 % U+2031 PER TEN THOUSAND SIGN
15255 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031

15256 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15257 \DeclareTextCommand{\guilingleft}{PU}{\9040\071}% U+2039
 15258 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 ingright
 15259 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 15260 % U+203B REFERENCE MARK; referencemark
 15261 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15262 % U+203D INTERROBANG
 15263 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15264 % U+2044 FRACTION SLASH; fraction
 15265 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15266 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15267 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15268 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15269 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15270 % U+2052 COMMERCIAL MINUS SIGN
 15271 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

15272 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15273 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15274 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15275 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15276 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15277 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 15278 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15279 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15280 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15281 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15282 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15283 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15284 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15285 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15286 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15287 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15288 % U+207B SUPERSCRIPT MINUS
 15289 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15290 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15291 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 15292 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15293 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15294 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15295 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15296 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15297 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15298 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15299 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15300 % U+2081 SUBSCRIPT ONE; oneinferior
 15301 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15302 % U+2082 SUBSCRIPT TWO; twoinferior
 15303 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15304 % U+2083 SUBSCRIPT THREE; threeinferior
 15305 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15306 % U+2084 SUBSCRIPT FOUR; fourinferior
 15307 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15308 % U+2085 SUBSCRIPT FIVE; fiveinferior

15309 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15310 % U+2086 SUBSCRIPT SIX; sixinferior
 15311 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15312 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15313 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15314 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15315 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15316 % U+2089 SUBSCRIPT NINE; nineinferior
 15317 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15318 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15319 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15320 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15321 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

15322 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15323 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15324 % U+20A4 LIRA SIGN; afii08941, *lira
 15325 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15326 % U+20A6 NAIRA SIGN
 15327 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15328 % U+20A7 PESETA SIGN; peseta
 15329 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15330 % U+20A9 WON SIGN; won
 15331 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15332 % U+20AB DONG SIGN; dong
 15333 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15334 % U+20AC EURO SIGN; *Euro, euro
 15335 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15336 % U+20B1 PESO SIGN
 15337 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15338 % U+20B2 GUARANI SIGN
 15339 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

15340 % U+2103 DEGREE CELSIUS; centigrade
 15341 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15342 % U+2116 NUMERO SIGN; *afii61352, numero
 15343 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15344 % U+2117 SOUND RECORDING COPYRIGHT
 15345 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15346 % U+211E PRESCRIPTION TAKE; prescription
 15347 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15348 % U+2120 SERVICE MARK
 15349 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15350 % U+2122 TRADE MARK SIGN; trademark
 15351 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15352 % U+2126 OHM SIGN; Ohm, Omega
 15353 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15354 % U+2127 INVERTED OHM SIGN
 15355 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15356 % U+212B ANGSTROM SIGN; angstrom
 15357 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15358 % U+212E ESTIMATED SYMBOL; estimated
 15359 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15360 % U+2135 ALEF SYMBOL; aleph
 15361 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15362 % U+2190 LEFTWARDS ARROW; arrowleft
15363 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
15364 % U+2191 UPWARDS ARROW; arrowup
15365 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
15366 % U+2192 RIGHTWARDS ARROW; arrowright
15367 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
15368 % U+2193 DOWNWARDS ARROW; arrowdown
15369 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

15370 % U+2212 MINUS SIGN; minus
15371 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
15372 % U+221A SQUARE ROOT; radical
15373 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

15374 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
15375 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
15376 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
15377 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

15378 % U+2422 BLANK SYMBOL
15379 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
15380 % U+2423 OPEN BOX; blank
15381 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

15382 % U+2460 CIRCLED DIGIT ONE; onecircle
15383 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
15384 % U+2461 CIRCLED DIGIT TWO; twocircle
15385 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
15386 % U+2462 CIRCLED DIGIT THREE; threecircle
15387 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
15388 % U+2463 CIRCLED DIGIT FOUR; fourcircle
15389 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
15390 % U+2464 CIRCLED DIGIT FIVE; fivecircle
15391 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
15392 % U+2465 CIRCLED DIGIT SIX; sixcircle
15393 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
15394 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
15395 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
15396 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
15397 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
15398 % U+2468 CIRCLED DIGIT NINE; ninecircle
15399 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
15400 % U+2469 CIRCLED NUMBER TEN; tencircle
15401 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
15402 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
15403 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
15404 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
15405 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
15406 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
15407 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
15408 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle

15409 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15410 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15411 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15412 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15413 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15414 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15415 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15416 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15417 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15418 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15419 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15420 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15421 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15422 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15423 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15424 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15425 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15426 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15427 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15428 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15429 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15430 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15431 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15432 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15433 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15434 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 15435 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 15436 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 15437 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 15438 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 15439 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 15440 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 15441 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 15442 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 15443 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 15444 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 15445 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 15446 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 15447 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 15448 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 15449 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 15450 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 15451 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 15452 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 15453 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 15454 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 15455 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 15456 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 15457 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 15458 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 15459 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 15460 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 15461 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 15462 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 15463 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 15464 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 15465 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB

15466 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 15467 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 15468 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 15469 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 15470 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 15471 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 15472 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 15473 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 15474 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 15475 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 15476 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 15477 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 15478 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 15479 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 15480 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 15481 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 15482 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 15483 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 15484 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 15485 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 15486 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 15487 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 15488 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 15489 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 15490 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 15491 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 15492 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15493 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15494 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15495 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15496 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15497 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15498 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15499 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15500 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15501 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15502 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15503 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15504 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15505 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15506 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15507 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15508 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15509 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15510 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15511 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15512 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15513 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15514 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15515 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15516 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15517 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15518 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15519 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15520 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15521 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15522 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle

15523 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15524 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15525 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15526 % U+24EA CIRCLED DIGIT ZERO
 15527 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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

15528 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15529 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15530 % U+25EF LARGE CIRCLE; largecircle
 15531 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

15532 % U+266A EIGHTH NOTE; musicalnote
 15533 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15534 % U+26AD MARRIAGE SYMBOL
 15535 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15536 % U+26AE DIVORCE SYMBOL
 15537 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

15538 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15539 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15540 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15541 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

15542 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15543 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15544 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15545 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15546 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15547 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 15548 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 15549 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 15550 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 15551 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 15552 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 15553 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 15554 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15555 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15556 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15557 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15558 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15559 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 15560 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
15561 \DeclareTextCommand{\*puvnc}
15562 \DeclareTextCommand{\abreve}{PU}{\81\003}
15563 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15564 \DeclareTextCommand{\dj}{PU}{\81\021}
15565 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15566 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15567 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15568 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15569 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15570 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15571 \DeclareTextCommand{\DJ}{PU}{\81\020}
15572 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15573 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15574 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15575 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15576 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15577 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15578 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15579 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15580 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15581 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15582 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15583 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15584 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
15585 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15586 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15587 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15588 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15589 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15590 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15591 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15592 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15593 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15594 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15595 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15596 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15597 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15598 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15599 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15600 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15601 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15602 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15603 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15604 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15605 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15606 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15607 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15608 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15609 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15610 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15611 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15612 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15613 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15614 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
```

15615 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15616 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15617 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15618 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15619 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15620 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15621 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15622 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15623 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15624 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15625 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15626 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15627 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15628 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15629 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15630 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15631 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15632 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15633 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15634 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15635 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15636 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15637 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15638 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15639 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15640 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15641 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
15642 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15643 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15644 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15645 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15646 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15647 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15648 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15649 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15650 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15651 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15652 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15653 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15654 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15655 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15656 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15657 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15658 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15659 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15660 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15661 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15662 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15663 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15664 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15665 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15666 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15667 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15668 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15669 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15670 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15671 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}

```

15672 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15673 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15674 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15675 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15676 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15677 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15678 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15679 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15680 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15681 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15682 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15683 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15684 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15685 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15686 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15687 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15688 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15689 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15690 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15691 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15692 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15693 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15694 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15695 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15696 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

15697 <*puarenc>
15698 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
15699 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15700 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15701 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15702 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15703 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15704 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15705 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15706 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15707 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15708 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
15709 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
15710 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15711 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15712 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15713 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15714 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15715 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN

```

15716 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15717 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
15718 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD
15719 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
15720 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
15721 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
15722 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
15723 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
15724 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
15725 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
15726 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
15727 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
15728 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
15729 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
TER MEEM
15730 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON
15731 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
15732 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
15733 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
15734 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15735 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15736 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15737 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15738 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15739 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15740 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15741 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15742 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi
15743 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15744 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
TER TCHEH
15745 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15746 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
15747 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15748 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

15749 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15750 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15751 \</puarenc>

51 End of file hycheck.tex

15752 \< *check>
15753 \typeout{}
15754 \begin{document}
15755 \end{document}
15756 \</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	14415, 14417, 14419, 14421, 14423, 14425, 14427, 14429, 14484, 14486, 14488, 14490, 14548, 14551, 14553, 14578, 14597, 14743, 14762, 15111, 15113, 15123, 15125, 15139, 15141, 15171, 15173, 15576, 15581, 15586, 15591, 15596, 15601, 15606, 15611, 15616, 15621, 15626, 15631, 15636, 15641, 15646, 15651, 15656, 15661, 15666, 15671, 15676, 15681, 15686, 15691	\@@Menu 11599, 11607			
\"	202, 227, 2904, 12935, 13294, 13306, 13318, 13441, 13527, 13541, 13549, 13564, 13576, 13592, 13606, 13617, 13618, 13632, 13644, 13650, 13701, 13729, 13748, 13769, 13896, 13910, 13918, 13932, 13944, 13960, 13974, 13985, 13986, 14000, 14012, 14018, 14265, 14480, 14482, 14492, 14544, 14546, 14574, 14587, 14739, 14752, 14985, 14987, 15001, 15003, 15005, 15007, 15009, 15011, 15021, 15023, 15025, 15027, 15033, 15035, 15037, 15039, 15045, 15047, 15053, 15055, 15061, 15063, 15103, 15105, 15175, 15177, 15187, 15189, 15205	\(. . 190, 215, 627, 630, 632, 13001, 13364	\@@PasswordField . 11548, 11554			
\#	427, 1999, 2000, 4134, 4145, 4147, 4163, 4195, 4253, 7765, 7767, 8520, 8529, 8557, 9282, 10775, 10786, 10815, 11046, 11055, 11085, 12855	\) . . 191, 216, 599, 605, 608, 13002, 13366	\@@Radio . . 11374, 11395, 11597, 11621, 11855, 11876, 12196, 12217			
\\$	184, 209, 428, 4136, 4252	\+ 200, 225	\@@TextField 11550, 11565			
\%	429, 1974, 1975, 4133, 4142, 4144, 4196, 7767	\- 201, 226	\@@commahyperpage . 7271, 7272			
\&	185, 210, 430, 4137, 4148, 4150, 10825	\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\@Alpha . . . 5955, 5956, 5959, 5960	\@@hyperref 4287, 4288		
\'	203, 228, 2844, 2858, 2899, 2901, 2902, 2903, 2904, 2909, 2910, 2912, 2917, 2923, 2927, 2928, 2931, 2974, 2975, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2989, 2993, 3006, 12933, 13291, 13303, 13315, 13521, 13537, 13545, 13558, 13572, 13578, 13586, 13602, 13611, 13612, 13626, 13640, 13646, 13669, 13671, 13672, 13673, 13676, 13678, 13679, 13680, 13688, 13726, 13745, 13766, 13890, 13906, 13914, 13926, 13940, 13946, 13954, 13970, 13979, 13980, 13994, 14008, 14014, 14032, 14034, 14139, 14141, 14159, 14161, 14193, 14195, 14205, 14207, 14267, 14269, 14319, 14321, 14327, 14329, 14331, 14333,	\+ 200, 225	\@BIBLABEL . . 6694, 6700, 6706	\@@latextohtmlX 2737, 4492		
		\- 201, 226	\@BOOKMARK . . 12916, 12918	\@@wrindex 7199, 7200		
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@CITE 6771, 6779	\@@writetorep 12778, 12784	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@CITEX 6773	\@Alpha . . . 5955, 5956, 5959, 5960	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@CheckBox . . 5179, 9347, 11488, 11518, 11652, 11988, 12357	\@Alpha@bul 5959	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@ChoiceMenu . 5176, 9350, 11326, 11521, 11587, 11806, 12147	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Gauge 5185, 9341, 11295, 11512, 11536, 11673, 12068	\@Gauge 5185, 9341, 11295, 11512, 11536, 11673, 12068	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Localurifalse 9290	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Localurltrue 9287	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@M 1000, 2261, 4241, 6329	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@MM 6457	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@PushButton . 5182, 9353, 11418, 11524, 11633, 11910, 12268	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Reset . 5191, 9356, 11464, 11527, 11649, 11963, 12327	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Roman 503	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@SCTR 7318, 7370	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@SetMaxRnhefLabel 6768	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Submit 5188, 9359, 11446, 11528, 11646, 11940, 12303	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@TextField . . . 5173, 9344, 11298, 11515, 11539, 11777, 12110	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@Textfield . . . 5173, 9344, 11298, 11515, 11539, 11777, 12110	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@addchap 13251	\@Form . 4950, 9337, 11113, 11510, 11531, 11730, 12071	
		\. . . . 198, 223, 1094, 13297, 13309, 13321, 13383, 13674, 13681, 13699, 13732, 13751, 13775, 13815, 13816, 14040, 14042, 14064, 14066, 14084, 14086, 14120, 14151, 14153, 14271, 14273, 14364, 14366, 14372, 14374, 15071, 15073, 15079, 15081, 15091, 15093, 15099, 15101, 15127, 15129, 15131, 15133, 15143, 15145, 15147, 15149, 15155, 15157, 15179, 15181, 15183, 15185, 15191, 15193, 15211	\+ 200, 225	\@addtoreset . . 7093, 7094,		

\@auxout . 2216, 4332, 5401, 5403, 6046, 6074, 6714, 6729, 6745, 6755, 6785, 6808, 6834, 6840, 6864	6100, 6137, 6147, 6149, 6188, 6199, 6203, 6210, 6234, 6298, 6322, 6386, 6396, 6398, 6399, 6442, 6470, 6568, 6594, 6598, 6613, 6615, 6843, 6969, 6992, 7005, 7012, 7063, 7087, 7089, 12768, 13156, 13169, 13180, 13210, 13227, 13262	\@footnotetext . 6338, 6345, 6374, 6492, 6494, 6508, 6509, 6529
\@backslashchar 721, 724, 727, 1224, 1894, 1898, 1901, 2021, 2038, 2044, 2048, 2056, 4158, 7780, 7790	\@currentlabel . 6460, 6836, 6843, 7068, 7075, 7324, 7376	\@for 3219, 4558, 6780, 6803, 11335, 11397, 11605, 11612, 11622, 11815, 11878, 12156, 12222
\@baseurl 3200, 3202, 4426, 8212, 8215, 8474, 8476, 8727, 8729, 9195, 9205, 9255, 9257, 9769, 9771, 10134, 10148, 10728, 10730, 10922, 10936, 11002, 11004	\@currentlabelname . . 2214, 6387, 6443, 6471, 6573	\@fourthoffive . 4081, 4320, 7638, 7645
\@begintheorem 6293, 6300	\@currentlabstr 2213, 2221	\@gobble 49, 56, 117, 445, 446, 447, 448, 485, 486, 487, 488, 515, 516, 517, 526, 528, 685, 798, 834, 845, 986, 990, 993, 1363, 1424, 1443, 1456, 1460, 1522, 1585, 1586, 1593, 1598, 1612, 1617, 2251, 2483, 2495, 3532, 3685, 3687, 3739, 4124, 4901, 5081, 5335, 5339, 5357, 5359, 5375, 5376, 5377, 5379, 5380, 5382, 5821, 5836, 5840, 6282, 6550, 6639, 6968, 7703, 8386, 9649, 9652, 11731, 12072, 12824, 12825, 12826, 13044
\@bibitem 6721, 6752	\@curropt . . 11335, 11336, 11397, 11398, 11605, 11612, 11613, 11615, 11622, 11623, 11625, 11815, 11816, 11878, 11879, 12156, 12157, 12222, 12223	\@gobblefour 451, 551, 1120, 1121, 1122, 3351, 7439
\@biblabel 6694, 6741	\@dblarg 2314, 6563, 6644	\@gobbleopt 5382, 5384
\@bookmarkopenstatus . . . 3967, 3984, 12837	\@definecounter 7048, 7049	\@gobbletwo 449, 519, 544, 552, 553, 698, 1119, 1540, 1617, 1621, 2368, 3349, 3350, 3689, 4847, 5361, 5370, 5378, 5382, 7626, 13166
\@bookmarksopenlevel 3163, 3165, 3970	\@ehc 2543, 3737, 4390, 4662, 4786, 4982, 5128, 5164, 11428, 11476, 11921, 11975, 12279, 12339	\@harvarditem 6853, 6855
\@bsphack 2209, 4325, 6838	\@ehd 63, 6549, 6638	\@hyper@anchor . . . 4453, 4454
\@capstartfalse 6588	\@endForm . . . 4951, 9340, 11294, 11511, 11535, 11776, 12096	\@hyper@itemfalse . . . 5872, 5888, 5902
\@caption 6553, 6565, 6608, 6644, 6646	\@endpary 6289	\@hyper@itemtrue 5873
\@capter 2218, 6548, 6552, 6556, 6563, 6570, 6612, 6637, 6641, 6644	\@eqnncr 6218	\@hyper@launch 4396, 4405, 8105, 9547, 10464
\@car 1505, 1521, 1539, 1559, 3142, 4568, 8164, 8175	\@eqnstarfalse 6194, 6221	\@hyper@linkfile 4377, 4380, 4384, 4416
\@cdr 8165, 8176	\@eqnstartrue 6218	\@hyper@readexternallink . 4371, 4375
\@chapter 13175, 13176	\@eqnswtrue 6164, 6173	\@hyperdef 4295, 4296
\@cite 6771, 6802, 6899, 6905	\@esphack . 2230, 4336, 6848, 7211	\@hyperpage 7263, 7264
\@cite@opt . 6900, 6906, 6910, 6920	\@extra@b@citemb 6679, 6682, 6699, 6704, 6724, 6772, 6794, 6810, 6817	\@hyperref 4276, 4287
\@citea . . 6774, 6781, 6782, 6801, 6804, 6805	\@extra@b@info . . 6678, 6681, 6685	\@ifclasslater 13274, 13279
\@citeb . . 6780, 6783, 6785, 6787, 6791, 6794, 6803, 6806, 6808, 6810, 6814, 6817	\@fifthoffive 3697, 4082, 4319, 7525, 7643	\@ifclassloaded 2201, 6018, 6055, 6763, 7299, 7303, 8389, 13273, 13278
\@citebordercolor 3624	\@filebordercolor 3622, 8081, 8083, 9051, 9053, 9483, 9485, 10452	\@ifnextchar 12, 88, 103, 123, 545, 4246, 4276, 4295, 4344, 4950, 5173, 5176, 5179, 5182, 5185, 5188, 5191, 5382, 5454, 5463, 6495, 6513, 6853, 6911, 10159, 10390, 10404, 12916, 12919
\@citedata@opt . 6901, 6907, 6909	\@filecolor 3192, 8101, 8675, 8687, 9063, 9489	\@ifpackagelater . 856, 2232, 6009, 7118
\@citedatax 6916, 6921	\@firstoffive 4078, 4087, 7564, 7648	
\@citedatax@opt 6913, 6919	\@firstofone 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 492, 681, 836, 847, 1080, 1084, 1088, 1426, 3544, 3969, 4916, 4922, 5091, 5842, 5953, 5966, 6033, 6561, 6642, 6783, 6806, 6932, 7154, 8384, 11703, 12442, 12459, 12477	
\@citesep 6898, 6904	\@firstoftwo . . 512, 791, 962, 1633, 5371, 13217	
\@citex 6800	\@footnotemark 6339, 6392, 6479, 6491, 6493, 6505, 6506, 6536, 6538	
\@clubpenalty 6331		
\@commahyperpage . . 7266, 7271		
\@currDisplay 5005, 11338, 11400, 11616, 11630, 11818, 11881, 12159, 12225		
\@currValue . . . 5007, 5009, 11405, 11616, 11627, 11888, 12240, 12659		
\@currentHlabel 6007		
\@currentHref 2224, 5281, 5926, 5987, 5989, 5998, 6000, 6007, 6088, 6090,		

\@ifpackageloaded	381, 751, 855, 2204, 2595, 3119, 3123, 3676, 3819, 5910, 6008, 6021, 6083, 6116, 6120, 6128, 6160, 6274, 6335, 6406, 6449, 6609, 6823, 6896, 7060, 7117, 7159, 7160, 7161, 7308, 7573, 7716, 7720, 10994		
\@ifpackagewith	3677, 7083		
\@ifstar	66, 4104, 4107, 4110, 5316, 5320, 5388, 5392, 7581, 7607, 7626		
\@ifundefined	34, 244, 770, 778, 794, 797, 2345, 2457, 2525, 2608, 3064, 3072, 3079, 3092, 3140, 3647, 4657, 4977, 5774, 5914, 5919, 5954, 6122, 6131, 6183, 6205, 6229, 6266, 6554, 6572, 6688, 6771, 6787, 6810, 7057, 7098, 7106, 7107, 7120, 7121, 7128, 7820, 9231, 9837, 9838, 10558, 11731, 12072, 12451, 12833		
\@indexfile	7203, 7218, 7226, 7230, 7235		
\@inlabelfalse	6310		
\@inmathwarn	421, 422		
\@inpenc@undefined@	2076		
\@labels	6326		
\@latex@	5485, 5486		
\@latex@error	2678, 2696, 2706, 2713, 6549, 6638		
\@latex@warning	4314, 6790, 6813, 7500, 7520, 7537, 7654		
\@lbibitem	6695, 6740		
\@linkbordercolor	3619, 8037, 9394		
\@linkcolor	10181		
\@linkdim	348, 8535, 8536, 8541, 8542, 8543, 8608, 8609, 8618, 8619, 8620, 8637, 8638, 8647, 8648, 8649, 8667, 8668, 8677, 8678, 8679, 10793, 10794, 10799, 10800, 10801, 11061, 11062, 11071, 11072, 11073		
\@listctr	6730, 6756		
\@m	983, 6782, 6805, 9696		
\@mainaux	5399, 5400, 5804, 5812, 11699, 11723		
\@makecaption	6589, 6591, 6657		
\@makefnmark	6401, 6541		
\@makefntext	6461		
\@makeother	166, 167, 179, 180, 182, 183, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201,		
	202, 203, 4148, 7752, 13005, 13008, 13034, 13037		
\@makeschapterhead	13265, 13267		
\@menubordercolor	3621, 8444, 8446, 9106, 9108, 9581, 9583		
\@menucolor	8457, 9112, 9587		
\@minipagefalse	6306		
\@mkboth	519, 7421, 13166, 13254, 13256		
\@mpfn	6342, 6514, 6526		
\@mpfootnotetext	6345, 6358, 6359		
\@mycount	12981, 12991		
\@namedef	1100, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 4668, 4669, 4670, 4671, 4993, 4994, 6019, 6217, 6220, 6828, 6829, 6830, 6831		
\@namerefstar	4110, 7569		
\@nameuse	2218, 2615, 4674, 4985		
\@ne	969, 2562, 2657, 8988, 8993, 9748, 10583, 12105		
\@newctr	7053, 7054		
\@newl@bel	5448, 6681		
\@newlistfalse	6307		
\@nil	367, 371, 376, 380, 395, 1418, 1421, 1429, 1505, 1523, 1541, 1557, 1559, 1562, 1565, 1568, 2085, 2087, 2103, 2105, 3142, 4180, 4184, 4189, 4443, 4451, 4568, 5072, 5075, 5094, 5473, 5476, 5483, 5485, 5486, 5571, 5618, 5619, 5621, 5644, 5661, 5709, 5711, 6132, 6141, 6143, 6155, 7250, 7252, 7259, 7282, 7285, 7295, 7504, 7507, 7662, 7693, 7776, 7782, 7786, 7792, 8164, 8165, 8175, 8176, 9614, 9616, 12449, 12462, 12468, 12865, 12868, 12871, 12880, 12883, 12892		
\@nobreakfalse	5445, 6329		
\@nocnterr	7107, 7121		
\@nocounterr	7106, 7120		
\@noparitemfalse	6308		
\@number	5953, 6033, 6932		
\@nx	7110, 7124, 7127, 7129		
\@onelevel@sanitiz	2361, 2365, 2577, 3141, 3714, 3744, 4214, 4438, 4441, 4658, 4894, 4978, 5671, 5673, 5994, 6998, 7550, 8845, 12862		
\@oparg	6293, 6300		
\@outlinefile	12835, 12924, 13019, 13021, 13023, 13099, 13101, 13103		
\@pagerefstar	4107, 7566, 7597		
\@pagesetref	7516		
\@parboxrestore	6459, 6581, 6652		
\@parcount	12983, 12991		
\@part	13193, 13200		
\@pdfauthor	3367, 3627, 8271, 8709, 9142, 9810, 10060, 10853		
\@pdfborder	2741, 3245, 3248, 3250, 4050, 7967, 8863, 9392, 9929, 10021, 10382, 10394, 10409, 10430, 10449, 10474, 10502, 10589, 10677, 10830		
\@pdfborderstyle	3246, 3252, 3254, 4051, 7968, 8864, 9393, 9930, 10022, 10383, 10395, 10410, 10431, 10450, 10475, 10503, 10590, 10678, 10831		
\@pdfcreationdate	3384, 3630, 8275, 8277, 8701, 8703, 9134, 9136, 10035, 10037, 10845, 10847		
\@pdfcreator	3379, 3629, 8274, 8700, 9133, 9813, 10059, 10844		
\@pdfdirection	8235, 8765, 9175, 9781, 10114, 10902		
\@pdfduplex	8241, 8771, 9181, 9787, 10120, 10908		
\@pdfhighlight	3238, 3625, 7987, 7989, 8048, 8077, 8079, 8113, 8115, 8440, 8442, 9928, 10020, 10381, 10429, 10448, 10473		
\@pdfhightlight	8046		
\@pdfkeywords	3403, 3633, 8287, 8698, 9147, 9818, 10061, 10842		
\@pdflang	3611, 3639, 8261, 8263, 8793, 8795, 9215, 9217, 10144, 10146, 10932, 10934		
\@pdfm@dest	8807, 8866, 8870		
\@pdfm@mark	5792, 8806, 8858, 8878, 8892, 8894, 8908, 8910, 8915, 8916, 8946, 8970, 8972, 8977, 8995, 9017, 9045, 9072, 9096, 9129, 9196, 9223, 12075, 12076, 12077, 12094, 12137, 12143, 12231, 12245, 12260, 12266, 12292, 12299, 12318, 12324, 12347, 12353, 12376, 12382, 12387, 12419, 12427, 13072		
\@pdfmoddate	3390, 3631, 8279, 8281, 8705, 8707, 9138, 9140, 10039, 10043, 10849, 10851		
\@pdfnonfullscreenpagemode	8234, 8764, 9174, 9780, 10113, 10901		

<code>\@pdfnumcopies</code> 8250, 8252, 8780, 8782, 9190, 9192, 9796, 9798, 10129, 10131, 10917, 10919	<code>\@pdftitle</code> 3361, 3626, 8272, 8699, 9131, 9811, 10057, 10843	<code>\@tempboxa</code> 8534, 8535, 8541, 8605, 8608, 8611, 8612, 8618, 8623, 8624, 8635, 8637, 8640, 8641, 8647, 8652, 8653, 8665, 8667, 8670, 8671, 8677, 8682, 8683, 10792, 10793, 10799, 11060, 11061, 11071
<code>\@pdfpageduration</code> . . . 3208, 8330, 8334, 8339, 9705, 9707, 9710, 9965, 9967, 9975	<code>\@pdftrapped</code> . . 3408, 3411, 3414, 3423, 3432, 3634, 8288, 8290, 9148, 9150, 10062	<code>\@tempcnta</code> . 12790, 12791, 12792, 12793, 12794, 12796, 12799, 12800, 12801, 12807, 12809, 12811, 12900, 12901, 12902, 12905, 12906, 12907, 12908, 12909, 13122, 13123, 13124
<code>\@pdfpagelayout</code> 8260, 8792, 9214, 9801, 9803, 10143, 10931	<code>\@pdfview</code> 3534, 7955, 7960, 8813, 8817, 8821, 8825, 8829, 8833, 8834, 8837, 8838, 8841, 8845, 8847, 8862, 9391, 9401, 9413, 9875, 9895, 10504, 10591, 10679, 10944	<code>\@tempdima</code> 2264, 5213, 5214, 5215, 5216, 5217, 5218, 5219, 5220, 7948, 11334, 11339, 11341, 11378, 11379, 11380, 11384, 11385, 11386, 11387, 11814, 11819, 11821, 11859, 11860, 11861, 11865, 11866, 11867, 11868, 12155, 12160, 12162, 12200, 12201, 12202, 12206, 12207, 12208, 12209
<code>\@pdfpagemode</code> 3807, 3808, 3980, 3981, 3990, 3991, 8214, 8748, 9209, 9768, 10097, 10885	<code>\@pdfviewarea</code> . 8236, 8766, 9176, 9782, 10115, 10903	<code>\@tempdimb</code> 11338, 11339, 11818, 11819, 12159, 12160
<code>\@pdfpagescrop</code> 3565, 3635, 8199, 8203, 8731, 8732, 8753, 8755, 9221, 9223, 9757, 9759, 10102, 10104, 10890, 10892	<code>\@pdfviewclip</code> . 8237, 8767, 9177, 9783, 10116, 10904	<code>\@tempswafalse</code> 6915
<code>\@pdfpagetransition</code> . . 3206, 8306, 8310, 8315, 9594, 9596, 9598, 9948, 9950, 9958	<code>\@pdfviewparams</code> 3536, 3538, 9875, 9895, 10505, 10592, 10680, 10945	<code>\@tempwattrue</code> 6885, 6888, 6891, 6912
<code>\@pdfpicktraybypdfsize</code> 8242, 8244, 8772, 8774, 9182, 9184, 9788, 9790, 10121, 10123, 10909, 10911	<code>\@percentchar</code> . 4143, 4144, 4196, 12839	<code>\@temptokena</code> . 3011, 3016, 3019, 3021
<code>\@pdfprintarea</code> . 8238, 8768, 9178, 9784, 10117, 10905	<code>\@processme</code> . . 5001, 5002, 8312, 8318, 8336, 8342, 8358, 8364, 10162, 10163, 10232, 10233, 10236, 10237	<code>\@tfor</code> 6247
<code>\@pdfprintclip</code> . 8239, 8769, 9179, 9785, 10118, 10906	<code>\@protected@testopt</code> 548	<code>\@the@H@page</code> 6934, 6936
<code>\@pdfprintpagerange</code> 3319, 3638, 8246, 8248, 8776, 8778, 9186, 9188, 9792, 9794, 10125, 10127, 10913, 10915	<code>\@protected@testopt@xargs</code> . 549	<code>\@thefnmark</code> . . 6343, 6354, 6420, 6421, 6460, 6477, 6484, 6515, 6527, 6534
<code>\@pdfprintscaling</code> 8240, 8770, 9180, 9786, 10119, 10907	<code>\@refstar</code> 4104, 7563	<code>\@thirdoffive</code> 4080, 7570
<code>\@pdfproducer</code> 3373, 3628, 8140, 8283, 8285, 8691, 8692, 8710, 8712, 9118, 9119, 9123, 9143, 9145, 9725, 9726, 9730, 9733, 9734, 9814, 9816, 10046, 10050, 10499, 10500, 10582, 10584, 10586, 10674, 10675, 10835, 10836, 10854, 10856	<code>\@runbordercolor</code> 3623, 8117, 8119, 9565, 9567, 10477	<code>\@thm</code> 6275
<code>\@pdfstartpage</code> 3553, 3555, 3637, 8220, 8224, 8735, 8740, 9198, 9202, 9761, 9765, 10084, 10089, 10872, 10877	<code>\@runcolor</code> 8136, 9571	<code>\@topnewpage</code> 13265
<code>\@pdfstartview</code> 3560, 3562, 3636, 8094, 8222, 8224, 8737, 8741, 9058, 9200, 9202, 9763, 10086, 10090, 10458, 10874, 10878	<code>\@safe@activesfalse</code> 501, 4084	<code>\@topsep</code> 6288
<code>\@pdfsubject</code> 3397, 3632, 8273, 8714, 9132, 9812, 10058, 10858	<code>\@safe@activestrue</code> 500, 4083	<code>\@topsepadd</code> 6289
<code>\@pdftempa</code> 4382, 4383, 4386	<code>\@schapter</code> 13163, 13164	<code>\@typeset@protect</code> 13135
<code>\@pdftempwordfile</code> . . . 4373, 4383	<code>\@secondoffive</code> . 3698, 4079, 4092, 7526, 7527, 7567	<code>\@undefined</code> . . 257, 260, 554, 3015, 5372, 5407, 5420, 5432, 5633, 5651, 5690, 6548, 6611, 6623, 6628, 6637, 7558, 7946, 8144, 8153, 9364, 9736, 9750
<code>\@pdftempwordrun</code> . . 4374, 4386	<code>\@secondoftwo</code> . 489, 518, 789, 965, 1631, 3697, 3698, 13219	<code>\@undottedtocline</code> 7485
	<code>\@sect</code> 13214, 13215	<code>\@unprocessedoptions</code> 3929
	<code>\@seqncr</code> 6218	<code>\@urlbordercolor</code> 3620, 8050, 8052, 9078, 9080, 9502, 9504, 10432
	<code>\@serial@counter</code> . . 12931, 12979, 12981, 12982	<code>\@urlcolor</code> 8065, 8540, 8549, 8645, 8657, 9088, 9508, 10798, 10807, 11070, 11078
	<code>\@seteqlabel</code> 7084, 7085	<code>\@urltype</code> 8509, 8514, 9260, 9286, 9421, 9435, 10763, 10768, 11035, 11040
	<code>\@setminipage</code> 6583, 6654	
	<code>\@setref</code> . . 4087, 4092, 7495, 7496, 7533	
	<code>\@sharp</code> 6132, 6138	
	<code>\@skiphyperreffalse</code> . . 5889, 6710, 6722	
	<code>\@skiphyperreftrue</code> . . . 6696, 6722	
	<code>\@spart</code> 13206, 13207	
	<code>\@sssect</code> 13149, 13150	
	<code>\@startlos</code> 7433, 7440, 7489	
	<code>\@starttoc</code> 5433	
	<code>\@tempa</code> . 6292, 6299, 6303, 6408, 6412, 6415, 6430	
	<code>\@tempb</code> 6246, 6250	

\@vpageref 7591
 \@whilenum 1136
 \@wrindex 7167, 7168, 7199
 \@writefile 6841
 \@x@sf 6394, 6403, 6540, 6542
 \@xfootnote 6513
 \@xfootnotemark 6351, 6531
 \@xfootnotenext 6340, 6524
 \@xp 7074, 7109, 7110, 7123, 7124,
 7126, 7127
 \[. 192, 217
 \{ 424, 12857
 \} 425, 12858
 \] 193, 218
 ^ 186, 211, 2014,
 2015, 2922, 4131, 4132, 4140,
 13292, 13304, 13316, 13523,
 13539, 13547, 13560, 13574,
 13588, 13604, 13614, 13615,
 13628, 13642, 13690, 13727,
 13746, 13767, 13892, 13908,
 13916, 13928, 13942, 13956,
 13972, 13982, 13983, 13996,
 14010, 14036, 14038, 14076,
 14078, 14092, 14094, 14128,
 14130, 14131, 14209, 14211,
 14257, 14259, 14261, 14263,
 15195, 15197
 _ . 187, 212, 432, 4135, 4152, 4153
 ' 166, 172, 179, 182,
 2858, 2992, 2995, 2997, 3005,
 12856, 13290, 13302, 13314,
 13519, 13535, 13543, 13556,
 13570, 13584, 13600, 13608,
 13609, 13624, 13638, 13686,
 13725, 13744, 13765, 13888,
 13904, 13912, 13924, 13938,
 13952, 13968, 13976, 13977,
 13992, 14006, 14323, 14325,
 14571, 14599, 14736, 14764,
 15167, 15169, 15217, 15219,
 15578, 15583, 15588, 15593,
 15598, 15603, 15608, 15613,
 15618, 15623, 15628, 15633,
 15638, 15643, 15648, 15653,
 15658, 15663, 15668, 15673,
 15678, 15683, 15688, 15693
 | 188, 213, 1840, 1956, 2804, 3662,
 7163, 7751, 7761
 ~ 431, 1138, 2064, 2916,
 2924, 2925, 2926, 3758, 4156,
 13293, 13305, 13317, 13525,
 13554, 13562, 13590, 13622,
 13630, 13692, 13728, 13747,
 13768, 13894, 13922, 13930,
 13958, 13990, 13998, 14100,
 14102, 14103, 14233, 14235,

15163, 15165, 15213, 15215,
 15221, 15223, 15580, 15585,
 15590, 15595, 15600, 15605,
 15610, 15615, 15620, 15625,
 15630, 15635, 15640, 15645,
 15650, 15655, 15660, 15665,
 15670, 15675, 15680, 15685,
 15690, 15695

Numbers

\3 409, 1182, 1183,
 1184, 1185, 1186, 1187, 1188,
 1189, 1298, 1299, 1300, 1301,
 1302, 1303, 1304, 1305, 2178,
 13000, 13519, 13521, 13523,
 13525, 13527, 13529, 13531,
 13533, 13535, 13537, 13539,
 13541, 13543, 13545, 13547,
 13549, 13551, 13552, 13554,
 13556, 13558, 13560, 13562,
 13564, 13566, 13568, 13570,
 13572, 13574, 13576, 13578,
 13580, 13582, 13584, 13586,
 13588, 13590, 13592, 13594,
 13596, 13598, 13600, 13602,
 13604, 13606, 13608, 13609,
 13611, 13612, 13614, 13615,
 13617, 13618, 13620, 13622,
 13624, 13626, 13628, 13630,
 13632, 13634, 13636, 13638,
 13640, 13642, 13644, 13646,
 13648, 13650, 13651, 13724,
 13888, 13890, 13892, 13894,
 13896, 13898, 13900, 13902,
 13904, 13906, 13908, 13910,
 13912, 13914, 13916, 13918,
 13920, 13922, 13924, 13926,
 13928, 13930, 13932, 13934,
 13936, 13938, 13940, 13942,
 13944, 13946, 13948, 13950,
 13952, 13954, 13956, 13958,
 13960, 13962, 13964, 13966,
 13968, 13970, 13972, 13974,
 13976, 13977, 13979, 13980,
 13982, 13983, 13985, 13986,
 13988, 13990, 13992, 13994,
 13996, 13998, 14000, 14002,
 14004, 14006, 14008, 14010,
 14012, 14014, 14016, 14018,
 14283, 14285, 14287, 14289,
 14290, 14292, 14294, 14296,
 14298, 14300, 14302, 14304,
 14306, 14308, 14310, 14312,
 14314, 14316, 14317, 14319,
 14321, 14323, 14325, 14327,
 14329, 14331, 14333, 14382,
 14384, 14386, 14388, 14390,
 14392, 14394, 14397, 14399,

14524, 14526, 14528, 14530,
 14532, 14534, 14536, 14538,
 14540, 14542, 14544, 14546,
 14548, 14550, 14551, 14553,
 14555, 14557, 14559, 14561,
 14563, 14565, 14567, 14569,
 14955, 14957, 14959, 14961,
 14963, 14965, 14967, 14969,
 14971, 14973, 14975, 14977,
 14979, 14981, 14983, 14985,
 14987, 14989, 14991, 14993,
 14995, 14997, 14999, 15001,
 15003, 15005, 15007, 15009,
 15011, 15013, 15015, 15017,
 15019, 15021, 15023, 15025,
 15027, 15029, 15031, 15033,
 15035, 15037, 15039, 15041,
 15043, 15045, 15047, 15049,
 15051, 15053, 15055, 15057,
 15059, 15061, 15063, 15065,
 15067, 15217, 15219, 15221,
 15223, 15443, 15445, 15447,
 15449, 15451, 15453, 15455,
 15457, 15459, 15461, 15463,
 15465, 15467, 15469, 15471,
 15473, 15475, 15477, 15479,
 15481, 15483, 15485, 15487,
 15489, 15491, 15493, 15495,
 15497, 15499, 15501, 15503,
 15505, 15507, 15509, 15511,
 15513, 15515, 15517, 15519,
 15521, 15523, 15525, 15527,
 15529, 15531, 15539, 15541,
 15563, 15565, 15566, 15570,
 15572, 15573, 15576, 15578,
 15580, 15591, 15593, 15597,
 15598, 15599, 15600, 15601,
 15602, 15603, 15604, 15606,
 15607, 15608, 15609, 15610,
 15611, 15612, 15613, 15614,
 15615, 15616, 15617, 15618,
 15619, 15620, 15621, 15622,
 15623, 15624, 15626, 15627,
 15628, 15629, 15630, 15631,
 15632, 15633, 15634, 15635,
 15636, 15638, 15640, 15651,
 15653, 15657, 15658, 15659,
 15660, 15661, 15662, 15663,
 15664, 15666, 15667, 15668,
 15669, 15670, 15671, 15672,
 15673, 15674, 15675, 15676,
 15677, 15678, 15679, 15680,
 15681, 15682, 15683, 15684,
 15686, 15687, 15688, 15689,
 15690, 15691, 15692, 15693,
 15694, 15695, 15748, 15750

\9 412, 1202, 1205, 1236,

2106, 2121, 2130, 2158, 2178,	15515, 15517, 15519, 15521,	\add@accent 423
13724, 15069, 15071, 15073,	15523, 15525, 15527, 15529,	\addcontentsline 6577, 6648, 6966,
15075, 15077, 15079, 15081,	15531, 15533, 15535, 15537,	6971, 7042, 13270
15083, 15085, 15087, 15089,	15539, 15541, 15543, 15545,	\addtocontents 7011, 7043, 7316,
15091, 15093, 15095, 15097,	15577, 15579, 15581, 15582,	7368, 13258, 13259
15099, 15101, 15103, 15105,	15583, 15584, 15585, 15586,	\addtocounter . 6030, 6053, 6062,
15107, 15109, 15111, 15113,	15587, 15588, 15589, 15590,	6073, 6077, 6268, 8997
15115, 15117, 15119, 15121,	15592, 15594, 15595, 15596,	\addvspace 13258, 13259
15123, 15125, 15127, 15129,	15597, 15598, 15599, 15600,	\advance 346, 347,
15131, 15133, 15135, 15137,	15602, 15604, 15607, 15609,	1137, 4518, 4846, 4892, 5214,
15139, 15141, 15143, 15145,	15611, 15612, 15613, 15614,	5215, 5218, 5219, 5588, 8189,
15147, 15149, 15151, 15153,	15615, 15616, 15617, 15618,	8542, 8619, 8648, 8678, 9732,
15155, 15157, 15159, 15161,	15619, 15620, 15622, 15624,	10800, 11072, 11341, 11385,
15163, 15165, 15167, 15169,	15626, 15627, 15628, 15629,	11386, 11821, 11866, 11867,
15171, 15173, 15175, 15177,	15630, 15632, 15633, 15634,	12105, 12162, 12207, 12208,
15179, 15181, 15183, 15185,	15635, 15637, 15639, 15641,	12791, 12793, 12794, 12800,
15187, 15189, 15191, 15193,	15642, 15643, 15644, 15645,	12809, 12908, 13123
15195, 15197, 15199, 15201,	15646, 15647, 15648, 15649,	\AE 13531, 13900, 14327
15203, 15205, 15207, 15209,	15650, 15652, 15654, 15655,	\ae 13596, 13964, 14329
15211, 15213, 15215, 15217,	15656, 15657, 15658, 15659,	\afterassignment 1729, 1735, 1741
15219, 15221, 15223, 15225,	15660, 15662, 15664, 15667,	\AfterBeginDocument . . 244, 258
15227, 15229, 15231, 15233,	15669, 15671, 15672, 15673,	\aftergroup 6464
15235, 15237, 15239, 15241,	15674, 15675, 15676, 15677,	\alef 15704
15243, 15245, 15247, 15249,	15678, 15679, 15680, 15682,	\alefhamza 15700
15251, 15253, 15255, 15257,	15684, 15686, 15687, 15688,	\aleflowerhamza 15702
15259, 15261, 15263, 15265,	15689, 15690, 15692, 15693,	\alefmadda 15699
15267, 15269, 15271, 15273,	15694, 15695, 15749	\alefmaqsura 15733
15275, 15277, 15279, 15281,		\Alph 5637, 5941, 5942
15283, 15285, 15287, 15289,		\alph 5638, 6239, 6270
15291, 15293, 15295, 15297,	_ 533, 2939, 2942, 6782, 6805,	\AMSautorefname 7725
15299, 15301, 15303, 15305,	13314, 13315, 13316, 13317,	\anchor@spot . . 4458, 4471, 4478,
15307, 15309, 15311, 15313,	13318, 13319, 13320, 13321,	4484, 8007, 8489, 8577, 9332,
15315, 15317, 15319, 15321,	13322, 13323, 13324, 13325,	9404, 9872, 10743, 11016
15323, 15325, 15327, 15329,	13744, 13745, 13746, 13747,	\appendix 5938, 5939
15331, 15333, 15335, 15337,	13748, 13749, 13750, 13751,	\appendixautorefname 2814, 2832,
15339, 15341, 15343, 15345,	13752, 13753, 13754, 13755,	2850, 2868, 2886, 2904, 2922,
15347, 15349, 15351, 15353,	13756, 13757, 13758, 13759,	2954, 2955, 2980, 2998, 7735
15355, 15357, 15359, 15361,	13760, 13761, 13762	\arabic 5634, 5847, 5850, 5853,
15363, 15365, 15367, 15369,		5854, 5855, 5857, 5858, 5859,
15371, 15373, 15375, 15377,	A	5860, 5862, 5863, 5864, 5865,
15379, 15381, 15383, 15385,	\ABREVE . . 15569, 15641, 15642,	5866, 5867, 5870, 5880, 5881,
15387, 15389, 15391, 15393,	15643, 15644, 15645	5920, 6037, 7051, 7057, 7105,
15395, 15397, 15399, 15401,	\abreve 15562, 15581, 15582, 15583,	7119, 7304, 7309, 7311
15403, 15405, 15407, 15409,	15584, 15585	\AtBeginDocument . . . 245, 5405
15411, 15413, 15415, 15417,	\AccFancyVerbLineautorefname .	\AtBeginShipout 5517, 8468, 8943
15419, 15421, 15423, 15425, 2966	\AtBeginShipoutBox . 5521, 5524,
15427, 15429, 15431, 15433,	\Accfootnoteautorefname . . 2946	8463, 8464, 8944, 8945
15435, 15437, 15439, 15441,	\Acctheoremautorefname . . 2970	\AtBeginShipoutFirst 5528, 9228,
15443, 15445, 15447, 15449,	\ACIRCUMFLEX . 15570, 15646,	10555, 10670
15451, 15453, 15455, 15457,	15647, 15648, 15649, 15650	\AtEndDocument 5419
15459, 15461, 15463, 15465,	\acircumflex . . 2997, 15563, 15586,	\AtEndOfPackage 255
15467, 15469, 15471, 15473,	15587, 15588, 15589, 15590	\AtVeryEndDocument 5730, 11739
15475, 15477, 15479, 15481,	\Acrobatmenu . 2253, 3694, 5369,	\author 5453, 5463
15483, 15485, 15487, 15489,	8435, 9093, 9574, 10376	\autopageref 3806, 7606
15491, 15493, 15495, 15497,	\active 1116, 1123,	\autoref 523, 3805, 7625, 11093
15499, 15501, 15503, 15505,	4132, 4133, 4134, 4135, 4136,	\ayn 15722
15507, 15509, 15511, 15513,	4137, 4140, 4142, 4145, 4153,	
	13004, 13033	

B

\b . . . 752, 756, 762, 13300, 13312,
 13324, 13716, 13739, 13758,
 15075, 15077, 15083, 15085,
 15115, 15117, 15119, 15121,
 15135, 15137, 15151, 15153,
 15159, 15161, 15199, 15201,
 15203
\baa 15705
\back@none 2749, 2759, 2772
\back@page 2751, 2764
\back@section . . 2750, 2756, 2762,
 2768
\back@slide 2752, 2761
\backcite 6842
\backref 6873, 11097
\baselineskip . . 2256, 5227, 5228,
 5229, 5230, 5231, 5232, 8596,
 9891, 9914, 10538
\bbl@cite@choice 6689
\BeforeTeXIVht 2631
\begin 11102, 15754
\belowpdfbookmark 12904
\bfseries . . . 467, 6788, 6811, 7499,
 7519, 7536, 7653
\bgroup 542,
 4246, 6451, 6463, 9332, 9905,
 11543, 11635, 11656
\bibcite . . 6680, 6686, 6690, 6715,
 6730, 6746, 6756
\bitsetGetDec . . 4570, 4703, 4721,
 4735, 4748, 4764, 4796, 4821
\bitsetGetHex 4571
\bitsetGetSetBitList 4559
\bitsetIsEmpty 4700, 4718, 4732,
 4745, 4761, 4793, 4818
\bitsetReset . . . 4673, 4707, 4726,
 4740, 4753, 4769, 4801
\bitsetSetValue 4539, 4549
\BOOKMARK 12836, 12915
\box 5221, 5524, 7934, 8975, 10215
\bullet 7451, 7459, 7469, 7477

C

\C 13710, 14815, 14817
\c 753, 757, 763, 2916,
 2924, 2925, 2926, 5476, 5483,
 13298, 13310, 13322, 13533,
 13598, 13718, 13733, 13752,
 13763, 13902, 13966, 14088,
 14090, 14133, 14135, 14143,
 14145, 14163, 14165, 14197,
 14199, 14213, 14215, 14221,
 14223, 14368, 14370, 14870,
 14873, 15087, 15089, 15107,
 15109
\c@footnote 6353, 6410, 6418, 6533

\c@page . . 5570, 5588, 5589, 5593,
 5605, 5607, 5612, 5619, 5621,
 5623, 5652, 6929
\c@secnumdepth . . 13183, 13201,
 13216
\c@slidesection . . 7317, 7445, 7446
\c@slidesubsection 7369
\c@tocdepth 3133, 3138
\calc@bm@number . . 13046, 13121
\calculate@pdfview . . 3530, 3533
\capitalacute 13766
\capitalbreve 13773
\capitalcaron 13772
\capitalcedilla 13763
\capitalcircumflex 13767
\capitaldieresis 13769
\capitaldotaccent 13775
\capitalgrave 13765
\capitalhungarumlaut . . . 13770
\capitalmacron 13774
\capitalnewtie 13777
\capitalogonek 13764
\capitalring 13771
\capitaltie 13776
\capitaltilde 13768
\caption . . . 6547, 6549, 6636, 6638
\catcode 172, 173,
 184, 185, 186, 187, 206, 678,
 679, 815, 1116, 1123, 1840,
 1841, 1956, 1957, 2013, 2014,
 2015, 4000, 4002, 4131, 4132,
 4133, 4134, 4135, 4136, 4137,
 4140, 4142, 4145, 4153, 4163,
 4252, 4253, 7751, 9941, 9942,
 12933, 12935, 13004, 13007,
 13033, 13036
\cf@encoding 1441
\chapterautorefname . 2815, 2833,
 2851, 2869, 2887, 2905, 2923,
 2952, 2981, 2999, 7736
\chapternumberline 12822, 12826
\char 11766, 12937, 12974
\chardef . . 2447, 2448, 2449, 2450,
 2657, 2659
\check@bm@number 13057, 13065,
 13114, 13122
\CheckBox 5178
\CheckCommand 6407
\checkcommand . . 42, 6072, 6524,
 6531, 6538, 6636, 6646, 6740,
 6752, 7042, 7045, 7105, 7533
\checklatex . . 4, 6523, 6635, 6739,
 7041, 7532
\checkpackage 9, 6071, 7104
\ChoiceBox 4896
\ChoiceMenu 5175
\citation 6785, 6808, 6834

\citeauthoryear 6900, 6906
\citeN 6897
\CJK@char 1119
\CJK@charx 1120
\CJK@CJK 1108
\CJK@eight 1319, 1322, 1436
\CJK@five 1319, 1321, 1436
\CJK@four 1318, 1321, 1435
\CJK@hundred 1385
\CJK@hundredmillion 1348
\CJK@ignorespaces 1118
\CJK@kern 1106
\CJK@minus 1310
\CJK@nine 1319, 1323, 1436
\CJK@null 1412
\CJK@one 1318, 1320, 1435
\CJK@punctchar 1121
\CJK@punctcharx 1122
\CJK@seven . . . 1319, 1322, 1436
\CJK@six 1319, 1322, 1436
\CJK@ten 1320, 1321, 1322, 1323,
 1400
\CJK@tenthousand . . 1333, 1354
\CJK@thousand 1370
\CJK@three 1318, 1321, 1435
\CJK@two 1318, 1320, 1435
\CJK@zero 1318, 1336, 1353, 1357,
 1373, 1388, 1410
\CJKdigits 1195
\CJKkern 1107
\CJKnumber 1194
\close@pdfink . . 8001, 8026, 8035,
 8066, 8102, 8137, 8458
\closeout 5399, 12924
\clubpenalty 6329, 6331
\codeof 6864
\color@endbox 7927,
 8534, 8605, 8635, 8665, 8968,
 10792, 11060
\color@hbox 7920, 8534, 8605, 8635,
 8665, 8961, 10792, 11060
\columnwidth 6458
\comma@entry . . 4887, 4894, 4896
\comma@parse 4886
\contentsline . . 5408, 5409, 5421,
 7012, 7016, 7043, 7045
\copy 6143, 6151, 7930, 8464, 8945,
 8971
\count@ 717, 719,
 720, 723, 726, 729, 732, 1135,
 1136, 1137, 1138, 1730, 3149,
 3150, 3155, 3156, 4517, 4518,
 4533, 4829, 4844, 4846, 4870,
 4892, 4908, 8184, 8185, 8186,
 8187, 8188, 8189, 8192, 9728,
 9729, 9730, 9731, 9732, 9735

\CurrentBorderColor . 7991, 7993, 8020, 8022, 8030, 8032, 8037, 9394, 9428, 9430, 9441, 9443, 9462, 9464, 9515, 9517, 9534, 9536	\cyrerev 14730	\CYRKHCRS 14883
\currentpdfbookmark 12896	\CYRERY 14661, 15061	\cyrkhcrs 14885
\curu 14767	\cyrery . 2934, 2936, 14726, 15063	\CYRKKHK 14961
\cyr . . 502, 2934, 2936, 2939, 2942, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2956, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971	\CYRF 14647	\cyrkhk 14963
\CYRA 14606, 14981, 14985	\cyrf 14712	\CYRKOPPA 14835
\cyra 2936, 2943, 2945, 2950, 2953, 2958, 2959, 2965, 2969, 14671, 14983, 14987	\CYRFITA 14807	\cyrkoppa 14837
\CYRABHCH 14945, 14950	\cyrfita 14809	\CYRKSI 14799
\cyrabhch 14947, 14953	\CYRG 14578, 14612	\cyrksi 14801
\CYRABHCHDSC 14949	\cyrgh 2952, 14677, 14743	\CYRKVCRS 14879
\cyrabhchdsc 14952	\CYRGDSC 15057	\cyrkvcrs 14881
\CYRABHDZE 15013	\cyrghdsc 15059	\CYRL 14629
\cyrabhdze 15015	\CYRGHCRS 14857	\cyrli 2950, 2952, 2954, 2956, 14694
\CYRABHHA 14903	\cyrghcrs 14859	\CYRLDSC 14965
\cyrabhha 14905	\CYRGHK 14861	\cyrldsc 14967
\CYRAE 14989	\cyrghk 14863	\CYRLJE 14591
\cyræ 14991	\CYRGUP 14853	\cyrlje 14756
\CYRB 14608	\cyrgup 14855	\CYRLYUS 14783
\cyrb 2950, 14673	\CYRH 14649	\cyrlyus 14785
\CYRBYUS 14791	\cyrh 14714	\CYRM 14631
\cyrbyus 14793	\CYRHDSC 14925	\cyrm 2939, 2943, 2969, 2970, 14696
\CYRC 14651	\cyrhdsc 14927	\CYRMDSC 14977
\cyrç 14716	\CYRHHK 15065	\cyrmdsc 14979
\CYRCH 14653, 15053	\cyrhkh 15067	\CYRN 14633
\cyrch . . 2942, 2943, 2951, 14718, 15055	\CYRHRDSN 14659	\cyrn 2936, 2942, 2943, 2945, 2946, 2948, 2956, 2962, 2963, 14698
\CYRCHLDSC 14973	\cyrhrdsn 14724	\CYRNDSC 14891
\cyrchldsc 14975	\CYRI 14599, 14622, 14625, 15017, 15021	\cyrndsc 14893
\CYRCHRDSC 14933	\cyrri 2936, 2939, 2943, 2949, 2954, 2956, 14687, 14690, 14764, 15019, 15023	\CYRNG 14895
\cyrchrdsc 14935	\CYRIE 14580	\cyrng 14897
\CYRCHVCRS 14937	\cyrrie 14745	\CYRNHK 14969
\cyrchvcrs 14939	\CYRII 14584, 14587	\cyrnhk 14971
\CYRD 14614	\cyrrii 14749, 14752	\CYRNJE 14593
\cyrd 2939, 2942, 2953, 2958, 2959, 14679	\CYRIOTBYUS 14795	\cyrnje 14758
\CYRDJE 14576	\cyrriotbyus 14797	\CYRO 14635, 15025
\cyrdje 14741	\CYRIOTE 14779	\cyro 2939, 2942, 2945, 2946, 2956, 2965, 2966, 2968, 2969, 2970, 14700, 15027
\CYRDZE 14582	\cyrriote 14781	\CYROMEGA 14771
\cyrdze 14747	\CYRIOTLYUS 14787	\cyromega 14773
\CYRDZHE 14604	\cyrriotlyus 14789	\CYROMEGARND 14823
\cyrdzhe 14769	\CYRISHRT 14624	\cyromegarnd 14825
\CYRE 14571, 14574, 14616, 14993	\cyrishrt 14689	\CYROMEGATITLO 14827
\cyre 2936, 2942, 2943, 2956, 2968, 2969, 2970, 14681, 14736, 14739, 14995	\CYRISHRTDSC 14841	\cyromegatitlo 14829
\cyreref 15039	\cyrishrtdsc 14843	\CYROT 14831
\CYREREV 14665, 15037	\CYRIZH 14811, 14815	\cyrot 14833
	\cyrizh 14813, 14817	\CYROTLD 15029, 15033
	\CYRJE 14589	\cyrotld 15031, 15035
	\cyrje 14754	\CYRP 14637
	\CYRK 14597, 14627	\cyrp 2939, 2942, 2943, 2947, 2948, 2954, 2956, 2960, 2961, 2962, 2963, 14702
	\cyrk 2945, 2946, 2948, 2962, 2963, 2965, 2966, 2967, 14692, 14762	\CYRpalochka 14955
	\CYRKBEAK 14887	\CYRPHK 14899
	\cyrkbeak 14889	\cyrphk 14901
	\CYRKDSC 14875	\CYRPSI 14803
	\cyrkdsc 14877	\cyrpsi 14805
		\CYRR 14639

\cyrr	2934, 2936, 2939, 2942, 2943, 2949, 2953, 2954, 2956, 2958, 2959, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 14704
\CYRRTICK	14849
\cyrrtick	14851
\CYRS	14641, 14908
\cyr	2939, 2942, 2945, 2946, 2949, 2964, 2965, 2966, 2967, 2971, 14706, 14911
\CYRSCHWA	14997, 15001
\cyrswa	14999, 15003
\CYRSDSC	14907, 14908
\cyrds	14910
\CYRSEMISFTSN	14845
\cyrsemisftsn	14847
\CYRSFTSN	14663
\cyrftsn	14728
\CYRSH	14655
\cyrsh	14720
\CYRSHCH	14657
\cyrshch	14722
\CYRSHHA	14941
\cyrshha	14943
\CYRT	14643
\cyr	2939, 2942, 2948, 2950, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 14708
\CYRTDSC	14913
\cyrtd	14915
\CYRTETSE	14929
\cyr	14931
\cyrthousands	14839
\CYRTSHE	14595
\cyrtshe	14760
\CYRU	14602, 14645, 15041, 15045, 15049
\cyr	2946, 2948, 2962, 2963, 2966, 2970, 14710, 15043, 15047, 15051
\CYRUK	14819
\cyr	14821
\CYRUSHRT	14601
\cyrushrt	14766
\CYRV	14610
\cyr	2934, 2936, 14675
\CYRY	14917
\cyr	14919
\CYRYA	14669
\cyr	14734
\CYRYAT	14775
\cyr	14777
\CYRYHCERS	14921
\cyr	14923
\CYRYI	14586
\cyr	14751
\CYRYO	14573
\cyr	14738
\CYRYU	14667
\cyr	14732
\CYRZ	14620, 14870, 15009
\cyr	2953, 2958, 2959, 14685, 14873, 15011
\CYRZDSC	14869
\cyr	14872
\CYRZH	14618, 14957, 15005
\cyr	2936, 2956, 14683, 14959, 15007
\CYRZHDSC	14865
\cyr	14867
D	
\d	754, 758, 764, 2994, 2998, 3000, 3001, 3002, 3003, 3004, 3006, 13301, 13313, 13325, 13714, 13740, 13759, 15577, 15582, 15587, 15592, 15597, 15602, 15607, 15612, 15617, 15622, 15627, 15632, 15637, 15642, 15647, 15652, 15657, 15662, 15667, 15672, 15677, 15682, 15687, 15692
\dad	15719
\dal	15712
\damma	15739
\declare@shorthand	870, 871, 876, 877, 882, 892, 893, 894, 899, 900, 905, 906, 911, 916, 917, 922, 927, 928, 929, 930, 931, 932, 937, 938, 943, 944, 949, 950
\DeclareFontEncoding	13289, 13684
\DeclareFontFamily	774, 782, 2529
\DeclareFontShape	775, 783, 2530
\DeclareFontSubstitution	776, 784, 2531
\DeclareLocalOptions	3673
\DeclareRobustCommand	4103, 4106, 4109, 4245, 4262, 4264, 4266, 4275, 5172, 5175, 5178, 5181, 5184, 5187, 5190, 5315, 5319, 5387, 5391, 7580, 7606, 7625, 13139
\DeclareTextAccent	13290, 13291, 13292, 13293, 13294, 13295, 13296, 13297, 13298, 13299, 13300, 13301
\DefaultHeightofCheckBox	5227, 11493, 11993, 12362
\DefaultHeightofChoiceMenu	5229, 11331, 11811, 12152
\DefaultHeightofReset	5225, 11467, 11966, 12330
\DefaultHeightofSubmit	5223, 11449, 11943, 12306
\DefaultHeightofText	5231, 11307, 11786, 12119
\DefaultHeightofTextMultiline	5232, 11305, 11784, 12117
\DefaultOptionsofCheckBox	5237, 11496, 11996, 12365
\DefaultOptionsofComboBox	5240
\DefaultOptionsofListBox	5239
\DefaultOptionsofPopdownBox	5241
\DefaultOptionsofPushButton	5236, 11423, 11915, 12273
\DefaultOptionsofRadio	5242
\DefaultOptionsofReset	5235, 11470, 11969, 12333
\DefaultOptionsofSubmit	5234, 11452, 11946, 12309
\DefaultOptionsofText	5238, 11313, 11792, 12125
\DefaultWidthofCheckBox	5228, 11492, 11992, 12361
\DefaultWidthofChoiceMenu	5230, 11330, 11810, 12151
\DefaultWidthofReset	5226, 11466, 11965, 12329
\DefaultWidthofSubmit	5224, 11448, 11942, 12305
\DefaultWidthofText	5233, 11302, 11781, 12114
\define@key	2346, 2348, 2391, 2406, 2409, 2412, 2420, 2423, 2433, 2436, 2439, 2456, 2468, 2470, 2473, 2476, 2493, 2497, 2500, 2503, 2506, 2509, 2512, 2515, 2550, 2607, 2627, 2628, 2642, 2645, 2648, 2651, 2654, 2662, 2665, 2668, 2671, 2675, 2703, 2719, 2730, 2733, 2736, 2739, 2743, 2746, 2753, 2782, 2801, 2804, 3030, 3061, 3069, 3077, 3084, 3087, 3102, 3127, 3130, 3134, 3162, 3167, 3171, 3174, 3181, 3193, 3201, 3204, 3207, 3209, 3212, 3221, 3231, 3238, 3245, 3246, 3318, 3327, 3357, 3363, 3369, 3375, 3381, 3387, 3393, 3399, 3405, 3438, 3445, 3479, 3530, 3531, 3551, 3558, 3565, 3566, 3569, 3572, 3575, 3578, 3581, 3584, 3587, 3610, 3613, 3616, 4511, 4599, 4655, 4957, 4962, 4975, 5012, 5015, 5018, 5021, 5024, 5027, 5030, 5034, 5037, 5040, 5043, 5046, 5049, 5052, 5055,

12543, 12610, 12619, 12621,
12647, 12649, 12675, 12684,
12686, 12710, 12718, 12720,
12744, 12752, 12754

\Fld@bordersep 4944, 5053

\Fld@borderstyle 4946, 5050,
12501, 12531, 12608, 12641,
12673, 12708, 12760

\Fld@borderwidth . . . 4945, 5047,
5211, 5214, 5215, 5218, 5219,
11385, 11386, 11866, 11867,
12207, 12208, 12501, 12531,
12608, 12641, 12673, 12708,
12760

\Fld@calculate@code 5112, 12563,
12565

\Fld@cbsymbol 4947, 5065, 12515

\Fld@charsize . . 4937, 4938, 5044,
11384, 11865, 12206, 12517,
12629, 12657, 12694, 12742

\Fld@checkedfalse 4933

\Fld@checkequals . . . 5004, 11336,
11398, 11613, 11623, 11816,
11879, 12157, 12223

\Fld@choices . . 4826, 4834, 4836,
4840, 4849, 4857, 4862, 4910,
4912, 4920, 4921, 12631

\Fld@color 4941, 5107, 12518,
12630, 12658, 12695

\Fld@default
. . . . 4851, 4854, 4856, 5056,
11300, 11317, 11328, 11369,
11490, 11542, 11560, 11574,
11582, 11589, 11615, 11625,
11655, 11665, 11779, 11797,
11808, 11850, 11990, 12112,
12130, 12149, 12191, 12359,
12659, 12660, 12696

\Fld@DingDef . . 5065, 5068, 5070

\Fld@disabledfalse 4934

\Fld@export 4664, 4667, 4674, 4966

\Fld@findlength . . . 11592, 11603

\Fld@flags
4733, 4735, 4746, 4748, 4762,
4764, 4794, 4796, 4819, 4821,
12499, 12529, 12606, 12639,
12671, 12706, 12740

\Fld@format@code . . 5110, 12555,
12557

\Fld@getmethodfalse 4986

\Fld@getmethodtrue 4988

\Fld@height . . 5041, 11303, 11320,
11331, 11387, 11402, 11414,
11449, 11467, 11493, 11502,
11782, 11801, 11811, 11868,
11893, 11906, 11943, 11966,
11993, 12004, 12115, 12132,
12152, 12209, 12220, 12255,
12306, 12330, 12362, 12371

\Fld@hiddenfalse 4622

\Fld@hiddentrue 4623

\Fld@invisiblefalse 4618

\Fld@invisibletrue 4619

\Fld@keystroke@code 5113, 12551,
12553

\Fld@listcount 11396, 11399,
11410, 11877, 11880, 11894,
11900, 12218, 12224, 12228,
12233, 12244, 12251

\Fld@loc 5013

\Fld@maxlen . . 4939, 5035, 12699

\Fld@menulength 4935, 5038,
11333, 11337, 11384, 11604,
11605, 11608, 11813, 11817,
11865, 12154, 12158, 12206

\Fld@name . . 5028, 11299, 11327,
11419, 11489, 11541, 11546,
11557, 11558, 11569, 11570,
11579, 11580, 11588, 11609,
11626, 11634, 11639, 11654,
11663, 11778, 11807, 11911,
11989, 12111, 12148, 12269,
12358, 12490, 12492, 12497,
12527, 12604, 12637, 12669,
12704, 12738

\Fld@norotatefalse 4635

\Fld@norotatetrue 4634

\Fld@noviewfalse 4638

\Fld@noviewtrue 4639

\Fld@nozoomfalse 4631

\Fld@nozoomtrue 4630

\Fld@onblur@code . . 5115, 12571,
12573

\Fld@onclick@code . . . 5109, 5168,
12547

\Fld@onenter@code . . 5118, 12583,
12585

\Fld@onexit@code . . 5119, 12587,
12589

\Fld@onfocus@code . . 5114, 12567,
12569

\Fld@onmousedown@code . 5116,
12575, 12577

\Fld@onmouseup@code . . . 5117,
12579, 12581

\Fld@printfalse 4627

\Fld@printtrue 4626

\Fld@radiosymbol . . . 4948, 5068,
12655

\Fld@rotation . 4949, 5098, 12503,
12505, 12532, 12537, 12539,
12609, 12615, 12617, 12643,
12645, 12674, 12680, 12682,
12709, 12714, 12716, 12743,
12748, 12750

\Fld@submitflags 4701, 4703,
12730

\Fld@temp 5071, 5073, 5076, 5077,
5086, 5087

\Fld@validate@code . 5111, 12559,
12561

\Fld@value 4852, 4859, 4861, 5062,
11301, 11317, 11329, 11368,
11369, 11780, 11797, 11809,
11849, 11850, 12113, 12130,
12150, 12190, 12191, 12697

\Fld@width . . 5031, 11302, 11316,
11320, 11330, 11367, 11378,
11380, 11402, 11414, 11435,
11448, 11456, 11466, 11480,
11492, 11499, 11502, 11781,
11796, 11801, 11810, 11848,
11859, 11861, 11893, 11906,
11928, 11942, 11950, 11965,
11979, 11992, 12000, 12004,
12114, 12129, 12132, 12151,
12189, 12200, 12202, 12220,
12255, 12287, 12305, 12313,
12329, 12343, 12361, 12369,
12371

\float@caption 6557, 6617

\float@makebox 6619, 6620

\floatingpenalty 6457

\flq 510

\flqq 508

\fmtname 7

\fmtversion 7

\fontencoding 413, 417, 445, 11762

\fontfamily 446, 11761

\fontseries 447, 6283, 11763

\fontshape 448, 4066, 11764

\fontsize 449

\footins 6451

\footnote 4488

\footnoteautorefname 2809, 2827,
2845, 2863, 2881, 2899, 2917,
2938, 2941, 2975, 2993, 7726,
7730

\footnotesep 6455, 6462

\footnotesize 478, 6453

\footnotetext 6410

\footref 6481, 6482

\Form 4950

\Form@action 4960, 11533, 12728

\Form@boolkey 4954

\Form@htmlfalse 4953, 4972

\Form@htmltrue 4965

\Form@method 4984, 4992, 11533

\frq 511

\frqq 509

\futurelet 563, 1460
 \FV@SetLineNo 6011
 \FV@StepLineNo 6010, 6012, 6013

G

\G . . . 13709, 13735, 13754, 14335,
 14337, 14339, 14341, 14343,
 14345, 14346, 14348, 14350,
 14352, 14354, 14356, 14358
 \g@addto@macro 5531, 5682,
 6689, 6963, 8375, 9719, 9992,
 10507, 10593, 10655, 10950,
 11114
 \G@refundefinedtrue . 4313, 6789,
 6812, 7498, 7518, 7535, 7652
 \gaf 15747
 \Gauge 5184
 \GenericError 551, 3351
 \GenericInfo 553, 3349
 \GenericWarning 552, 3350
 \getpagerefnumber 6125
 \getrefbykeydefault . . 6081, 6082
 \gexmode 9750, 9751, 9839
 \ghayn 15723
 \Gin@setfile 7143, 7144
 \glossary 517
 \glq 506
 \glqq 504
 \greek@Alph 5955
 \Greeknumeral 958
 \greeknumeral 957
 \grq 507
 \grqq 505
 \guill@spacing 887
 \guillemotleft . . 927, 13478, 13658,
 13846, 15551
 \guillemotright 928, 13509, 13659,
 13878, 15552
 \guilsinglleft 13409, 13660, 15257,
 15553
 \guilsinglright 13411, 13661, 15259,
 15554

H

\H . . . 13705, 13737, 13756, 13770,
 14185, 14187, 14249, 14251,
 15049, 15051
 \h 2996, 15579, 15584, 15589, 15594,
 15599, 15604, 15609, 15614,
 15619, 15624, 15629, 15634,
 15639, 15644, 15649, 15654,
 15659, 15664, 15669, 15674,
 15679, 15684, 15689, 15694
 \H@footnotemark . . 6339, 6356,
 6486, 6493, 6505, 6516
 \H@footnotetext . . . 6338, 6348,
 6375, 6435, 6494, 6508, 6516

\H@mpfootnotetext . 6346, 6358,
 6360
 \H@definecounter 7048, 7050
 \H@endeqnarray 6196, 6215
 \H@endequation 6159, 6191
 \H@endsubeqnarray . . 6225, 6237
 \H@eqnarray 6195, 6200
 \H@equation 6158, 6182
 \H@item . . 5868, 5874, 6697, 6722
 \H@newctr 7053, 7055
 \H@old@part 13193, 13204
 \H@old@schapter . . 13163, 13172
 \H@old@sect 13214, 13225, 13234
 \H@old@spart 13206, 13212
 \H@old@ssect 13149, 13154
 \H@refstepcounter . . . 5883, 5893,
 6012, 6135, 6181, 6296, 6552,
 7314, 7367
 \H@seteqlabel 7084, 7086
 \H@subeqnarray 6224, 6228
 \ha 15731
 \Haa 15710
 \halign 526
 \hamza 15698
 \HAR@checkcitations 6877
 \HAR@citetoaux 6833
 \HAR@tempa . . 6878, 6879, 6880,
 6881, 6882, 6883
 \harvardcite 6827, 6864
 \harvarditem 6852
 \hbox 1728, 1734, 1740, 2268,
 3148, 3154, 5032, 5205, 5206,
 5207, 5208, 6817, 6948, 8463,
 8536, 8543, 8609, 8620, 8638,
 8649, 8668, 8679, 8944, 9905,
 10210, 10221, 10794, 10801,
 11062, 11073, 11681, 12131,
 12219, 12254, 12285, 12314,
 12344, 12370, 13141
 \hc@currentHref 6568
 \HCode 11533, 11535, 11546, 11555,
 11567, 11575, 11577, 11608,
 11614, 11619, 11624, 11638,
 11643, 11647, 11650, 11659
 \headerps@out 5777, 10497, 10508,
 10580, 10594, 10647, 10656,
 10669, 10683, 10722, 10833,
 10951, 11115
 \hfill 5205, 5206, 5207, 5208, 6708,
 6741
 \Hfootnoteautorefname . . . 7726
 \hhyperref 4493
 \hoffset 6949
 \hphantom 488
 \href . 518, 4245, 4487, 4488, 5377
 \href@ 4246, 4249, 4254
 \href@split 4254, 4255

\hsize 6458
 \hskip 1739, 1817, 2304, 2305, 4242,
 5211, 11681
 \hspace 514, 6867, 6868
 \hss 6957, 13146
 \ht 5213, 5216,
 8541, 8612, 8618, 8624, 8641,
 8647, 8653, 8671, 8677, 8683,
 10206, 10799, 11071, 12098
 \htmladdimg 4486
 \htmladdnormallink 4487
 \htmladdnormallinkfoot . . 4488
 \htmlref 4489
 \Huge 475
 \huge 479
 \Hurl 4261, 4263, 4265
 \hv@pdf@char 12932, 12997, 12998,
 12999, 13000
 \hvtex@buffer . 9614, 9618, 9626,
 9629, 9638, 9642, 9658
 \hvtex@gettoken 9613, 9627, 9631,
 9640, 9644
 \hvtex@gettoken@ . . . 9614, 9616
 \hvtex@par@dimension 9609, 9650
 \hvtex@par@direction 9610, 9653
 \hvtex@par@duration . 9611, 9645
 \hvtex@par@motion . . 9612, 9647
 \hvtex@param@dimension . 9622,
 9651, 9669, 9672
 \hvtex@param@direction . . 9623,
 9654, 9680, 9688
 \hvtex@param@duration . . 9624,
 9646, 9693, 9695
 \hvtex@param@motion 9625, 9648,
 9669, 9676
 \hvtex@parse@trans . . 9598, 9620
 \hvtex@produce@trans 9659, 9665
 \hvtex@token . . 9617, 9628, 9634,
 9641, 9646, 9649, 9652, 9654
 \hvtex@trans@code . . 9602, 9603,
 9604, 9605, 9606, 9607, 9608,
 9621, 9667, 9668, 9670, 9672,
 9674, 9676, 9678, 9680, 9682,
 9683, 9684, 9685, 9686, 9688
 \hvtex@trans@effect@Blinds 9602
 \hvtex@trans@effect@Box . . 9603
 \hvtex@trans@effect@Dissolve . .
 9604
 \hvtex@trans@effect@Glitter 9605
 \hvtex@trans@effect@R . . . 9608
 \hvtex@trans@effect@Split . 9606
 \hvtex@trans@effect@Wipe . 9607
 \hvtex@trans@par . . 9641, 9645,
 9647, 9650, 9653
 \hvtex@trans@params 9635, 9637,
 9661
 \Hy@boolkey 2314, 2315

\Hy@@DefNameKey . . 2388, 2390	\Hy@boolkey . . 2314, 2407, 2410,	3961, 3962, 3964, 3994, 4047,
\Hy@Cescapeform . 12449, 12462,	2413, 2434, 2437, 2440, 2471,	4075, 4076, 4126, 4127, 5287,
12468	2474, 2477, 2494, 2498, 2501,	5288, 5289, 5290, 5291, 5292,
\Hy@@SectionAnchor 13136, 13139	2504, 2507, 2510, 2513, 2516,	5293, 5294, 5295, 5296, 5297,
\Hy@Ctemp 3178, 3180, 5121, 5123	2744, 2747, 2802, 3085, 3088,	5298, 5299, 5300, 5301, 5302,
\Hy@abspage . . 5551, 5616, 5726,	3103, 3128, 3131, 3172, 3175,	5303, 5304, 5305, 5306, 5307,
5803	3213, 3328, 3567, 3570, 3573,	5308, 5309, 5310, 5489, 5684,
\Hy@Acrobatmenu . . . 3710, 3751,	3576, 3579, 3582, 3585, 3593,	6520, 7148, 7246, 7247, 7842,
8436, 9094, 9575, 10377	3614, 3617, 5744	7943, 8294, 8295, 8296, 8297,
\Hy@activeanchorfalse 4128, 8015,	\Hy@BorderArrayPatch . . 10256,	8298, 8299, 8300, 8301, 8302,
8491, 8506, 8578, 8588, 8873,	10259, 10506, 10949	8303, 8431, 8715, 8716, 8717,
9317, 9334, 9405, 9418, 9898,	\Hy@breaklinks@unsupported . .	8718, 8719, 8720, 8721, 8722,
10745, 10760, 11018, 11032 2482, 9867	8723, 8724, 8984, 9155, 9156,
\Hy@activeanchortrue 8011,	\Hy@breaklinksfalse 313	9157, 9158, 9159, 9160, 9161,
8488, 8502, 8576, 8585, 8869,	\Hy@breaklinksunhbox . . 10197,	9162, 9163, 9164, 9246, 9388,
9313, 9331, 9403, 9415, 9888,	10213	9819, 9820, 9821, 9822, 9823,
10742, 10756, 11015, 11028	\Hy@CatcodeWrapper 3995, 4054,	9824, 9825, 9826, 9827, 9828,
\Hy@ActiveCarriageReturn 4164,	4098, 4116	10071, 10072, 10073, 10074,
4167	\Hy@centerwindowfalse 314	10075, 10076, 10077, 10078,
\Hy@AllowHyphens . . 4238, 9886,	\Hy@chapapp . . 5937, 5943, 5950,	10079, 10080, 10573, 10859,
9909, 10202	13167, 13178, 13260	10860, 10861, 10862, 10863,
\Hy@AnchorName . . . 4298, 4300,	\Hy@chapterstring . . . 5932, 5934,	10864, 10865, 10866, 10867,
4303, 4305, 4327, 4329, 4333,	5937, 5949	10868
4338, 4340	\Hy@CheckOptionValue . . . 2358,	\Hy@displaydoctitlefalse . . . 344
\Hy@appendixstring . 5936, 5943	2395	\Hy@DistillerDestFix . 6925, 9832,
\Hy@AtBeginDocument 247,	\Hy@CJKbookmarksfalse . . . 315	9834
866, 2534, 2594, 2635, 2689,	\Hy@cjkpu 1129, 1131, 1152	\Hy@draftfalse 274
2737, 3090, 3645, 3683, 3798,	\Hy@colorlink	\Hy@drafttrue 275
3804, 3898, 4034, 4113, 5283, 4058, 4066, 4070, 7916,	\Hy@driver 349, 2487, 2632, 2643,
5396, 5810, 6017, 6824, 7572,	7996, 8065, 8101, 8136, 8457,	2646, 2649, 2652, 2663, 2666,
7719, 7915, 8382, 8956, 9386,	8489, 8512, 8540, 8549, 8577,	2669, 2672, 2683, 2686, 2711,
10682, 10720, 11696, 11697	8593, 8615, 8627, 8645, 8657,	2720, 2731, 2734, 2740, 3820,
\Hy@AtBeginDocumentHook 248,	8675, 8687, 8957, 9033, 9063,	3823, 3827, 3830, 3834, 3837,
253, 259, 260	9088, 9112, 9404, 9426, 9489,	3839, 3843, 3847, 3851, 3854,
\Hy@AtEndOfPackage . 250, 760,	9508, 9541, 9571, 9587, 9907,	3858, 3862, 3866, 3869, 3873,
2202, 3063, 3071, 3078, 3786,	10181, 10183, 10743, 10766,	3876, 3878, 3882, 3886, 3889,
3812, 3818, 3963, 3986	10798, 10807, 11016, 11038,	3892, 3895, 3906, 3909, 3911,
\Hy@AtEndOfPackageHook . 251,	11070, 11078	3917, 3919, 3924, 3926, 3928
254, 256, 257	\Hy@ColorList 3218, 3219	\Hy@dth@currentHref 6298, 6322
\Hy@author 5465, 5469	\Hy@CounterExists . . 5833, 5846,	\Hy@DvipdfmxOutlineOpentru
\Hy@babelnormalise . 4276, 4278	5849 3936, 3943
\Hy@backout . . 4124, 5335, 5339,	\Hy@currentbookmarklevel 12782,	\Hy@EndAnnot 8992, 9036, 9066,
6663	12792, 12793, 12799, 12806,	9091, 9115
\Hy@backreffalse 309, 2773, 2795,	12897, 12900, 12905, 12909	\Hy@endcolorlink 4062, 4067,
3810	\Hy@defaultdriver 3887, 3911, 3917	4071, 7925, 8002, 8489, 8526,
\Hy@backreftrue 2766, 2770, 2792	\Hy@DefFormAction . 4958, 4960	8544, 8551, 8577, 8601, 8616,
\Hy@BeginAnnot 8986, 9002, 9042,	\Hy@DefNameKey . . . 2387, 3239,	8628, 8645, 8657, 8675, 8687,
9070, 9095	3257, 3265, 3273, 3277, 3284,	8966, 8994, 9404, 9472, 9489,
\Hy@bibcite 6686, 6690	3291, 3298, 3305, 3309, 3314,	9508, 9541, 9571, 9587, 9934,
\Hy@bookmarksdepth 3133, 3138,	3321, 3602	10190, 10743, 10782, 10802,
3150, 3156, 12776	\Hy@DEST 10198, 10223	10809, 11016, 11052, 11070,
\Hy@bookmarksnumberedfalse . .	\Hy@DestName 7960, 7964	11078
..... 310	\Hy@DisableOption . . 2344, 3703,	\Hy@endWrap . 3996, 3998, 3999,
\Hy@bookmarksopenfalse . . . 311	3704, 3705, 3707, 3791, 3817,	4032
\Hy@bookmarkstrue 312	3946, 3947, 3948, 3949, 3950,	\Hy@escapeform . . 11319, 11401,
\Hy@bookmarkstype . 3168, 3170,	3951, 3952, 3953, 3954, 3955,	11413, 11438, 11457, 11481,
6979, 12787	3956, 3957, 3958, 3959, 3960,	11501, 11799, 11883, 11904,

11931, 11952, 11980, 12002,
 12136, 12227, 12258, 12291,
 12316, 12345, 12375, 12443,
 12473, 12480
 \Hy@escapeformfalse 316
 \Hy@escapestring . . 12440, 12515,
 12547, 12553, 12557, 12561,
 12565, 12569, 12573, 12577,
 12581, 12585, 12589, 12696,
 12697, 12728
 \Hy@EveryPageAnchor 6924, 6964
 \Hy@EveryPageBoxHook . . 5515,
 5519, 5523, 6963, 9719, 9992
 \Hy@EveryPageHook . 5514, 5518,
 5682, 8375
 \Hy@ExchangeLeftParenthesis . .
 7776, 7782
 \Hy@ExchangeRightParenthesis .
 7786, 7792
 \Hy@false . . 2250, 2325, 2758, 2794
 \Hy@figuresfalse 317
 \Hy@finalfalse 275
 \Hy@finaltrue 274
 \Hy@FirstPage 3721
 \Hy@FirstPageHook
 5516, 5529, 5531, 5775, 5776,
 10507, 10593, 10655, 10950,
 11114
 \Hy@fitwindowfalse 318
 \Hy@FixNotFirstPage 8461, 8462,
 8468
 \Hy@float@caption . . . 6558, 6608,
 6610
 \Hy@float@currentHref 6611, 6613,
 6615, 6623, 6626, 6628
 \Hy@footnote@currentHref . 5282,
 6363, 6368, 6378, 6383, 6386,
 6398, 6400, 6426, 6467, 6470
 \Hy@FormObjects . 11733, 12010,
 12064, 12074, 12386, 12436
 \Hy@Gin@setfile 7143, 7145
 \Hy@GlobalStepCount 347, 5616,
 5981, 6004, 6939, 7356, 7407
 \Hy@gtemp . 675, 676, 4856, 4857,
 4861, 4862, 4873, 4887, 7800,
 7802, 12490, 12492
 \Hy@href 4246, 4248
 \Hy@hyperfootnotesfalse . . 6335
 \Hy@hyperfootnotestru . . . 319
 \Hy@hyperindextrue 320
 \Hy@hypertextnamesfalse . . 2206
 \Hy@hypertextnamestrue . . . 321
 \Hy@ifStringEndsWith 4423, 4435
 \Hy@implicittrue 322
 \Hy@Info . . 243, 2333, 3761, 3763,
 3766, 3768, 3771, 3773, 3776,
 3778, 3781, 3783, 3979, 3985,
 4063, 4068, 4072, 4207, 4234,
 4566, 5244, 5246, 5249, 5251,
 5254, 5256, 5259, 5261, 5264,
 5266, 5269, 5271, 5274, 5276,
 6764, 6825, 6984, 7001
 \Hy@LastPage 3724
 \Hy@level . . 12788, 12790, 12801,
 12806, 12807, 12808, 12837
 \Hy@levelcheck . . . 12789, 12804
 \Hy@linkcounter . 351, 353, 5981,
 5982, 6004, 6005, 7087, 7356,
 7357, 7361, 7407, 7408, 7412
 \Hy@linkfileprefix 3203, 4407, 4428,
 8529, 9282, 10786, 11055
 \Hy@linktoc . . . 2442, 2444, 2452,
 2454, 2464, 7020
 \Hy@linktoc@all 2450
 \Hy@linktoc@none 2447
 \Hy@linktoc@page . . . 2442, 2449,
 2452
 \Hy@linktoc@section . 2444, 2448,
 2454
 \Hy@linktocpagefalse 323
 \Hy@localanchornamefalse . . 324
 \Hy@LT@currentHref . 6137, 6147
 \Hy@LT@footnotetext 6424, 6434
 \Hy@make@anchor . . . 7061, 7067,
 7073
 \Hy@make@df@tag@@ 7065, 7080
 \Hy@make@df@tag@@@ 7071, 7081
 \Hy@MakeCurrentHref 5992, 6005
 \Hy@MakeCurrentHrefAuto
 . . . 6003, 6085, 7062, 12767,
 13151, 13167, 13178, 13208,
 13222, 13260
 \Hy@maketitle@end . . 6497, 6502,
 6504
 \Hy@maketitle@optarg 6495, 6500
 \Hy@MaybeStopNow . 2674, 2679,
 2697, 2707, 2714, 3670
 \Hy@menubartrue 325
 \Hy@naturalnamesfalse 326
 \Hy@nestingfalse 327
 \Hy@newline@author 5508
 \Hy@newline@title 5507
 \Hy@newwindowfalse 329
 \Hy@newwindowsetfalse 328, 3590
 \Hy@newwindowsettrue . . . 3592
 \Hy@next 5632, 5642, 5647, 13177,
 13186, 13189
 \Hy@nextfalse 3753, 7158
 \Hy@NextPage 3715
 \Hy@nexttrue . . 3754, 3755, 3756,
 7159, 7160, 7161
 \Hy@number . . . 3543, 3547, 3555
 \Hy@numberline . . 12783, 12820,
 12821, 12822
 \Hy@ObsoletePaperOption 2416,
 2424
 \Hy@ocgcolor . . 7919, 7933, 8960,
 8974
 \Hy@ocgcolorlinksfalse 4042
 \Hy@org@chapter . . 13175, 13190
 \Hy@OutlineName . 13056, 13110
 \Hy@OutlineRerunCheck . 12921,
 13020, 13100
 \Hy@pageanchortrue 330
 \Hy@pagecounter . 352, 354, 6043,
 6939, 6941
 \Hy@pageheight 3659, 10595,
 10684
 \Hy@pagelabelsfalse 5538
 \Hy@pagelabelstrue 331
 \Hy@param 5948, 5949, 5950, 5978,
 5982
 \Hy@pdfafalse 345
 \Hy@pdfencoding@pdfdoc . 2589
 \Hy@pdfmarkerrorfalse . . 10161
 \Hy@pdfmarkerrortrue . . . 10289,
 10298
 \Hy@pdfminorversion 7809, 7815,
 7818, 7826, 7831, 7833, 7836,
 7840
 \Hy@pdfpagehiddenfalse . . . 332
 \Hy@pdfstringdef . 674, 4831, 4839
 \Hy@pdfstringfalse 333, 5312
 \Hy@pdfstringtrue 530, 5284
 \Hy@pdfversion 2615, 2626, 4833,
 7831, 7833, 7837, 7840, 12484
 \Hy@plainpagesfalse 334
 \Hy@PrevPage 3718
 \Hy@ps@CR 10637, 10644, 10649,
 10650, 10667, 10688, 10689,
 10690, 10696, 10703, 10710,
 10717
 \Hy@pstringB
 8212, 8217, 9195, 9207,
 10134, 10150, 10922, 10938
 \Hy@pstringD . 8072, 8096, 9044,
 9058, 10442, 10458
 \Hy@pstringdef
 7746, 7959, 7980, 8040,
 8071, 8072, 8107, 8108, 8212,
 8811, 9011, 9043, 9044, 9071,
 9195, 9425, 9494, 9548, 9549,
 10134, 10287, 10296, 10423,
 10441, 10442, 10466, 10467,
 10922, 12466, 13055, 13071
 \Hy@pstringDest
 7959, 7960, 8811, 8858,
 10287, 10288, 10292, 10296,
 10297, 10301
 \Hy@pstringF
 8071, 8090, 8107, 8126, 8131,

9043, 9057, 9548, 9555, 9559,
 10441, 10457, 10466, 10482,
 10485
 \Hy@pstringName . 13055, 13056,
 13071, 13085
 \Hy@pstringP . 8108, 8131, 9549,
 9559, 10467, 10485
 \Hy@pstringURI 8040, 8061, 9071,
 9084, 9425, 9437, 9494, 9498,
 10423, 10433
 \Hy@PutCatalog 5678, 5686, 5792
 \Hy@raisedlink 2257, 5925,
 6087, 6108, 6109, 6110, 6113,
 6148, 6188, 6191, 6319, 6366,
 6381, 6439, 6465, 6596, 6674,
 6698, 6703, 6723, 7063, 7088,
 10495, 10578, 10829, 10993,
 12768, 13143, 13168, 13179,
 13209, 13261
 \Hy@raiselinksfalse . . . 335, 6826
 \Hy@RemoveDurPageAttr . 8333,
 8346
 \Hy@RemoveHidPageAttr . 8356,
 8368
 \Hy@RemovePercentCr . . . 4180,
 4184, 4189
 \Hy@RemoveTransPageAttr 8308,
 8322
 \Hy@Reserved@a 4343, 6198, 6227,
 11540, 11590, 11653
 \Hy@RestoreCatcodes 205, 3666,
 3930
 \Hy@RestoreLastskip
 2272, 7961, 8492,
 8507, 8579, 8589, 8860, 9318,
 9335, 9406, 9419, 9879, 9899,
 10746, 10761, 11019, 11033
 \Hy@ReturnAfterElseFi 355, 4168
 \Hy@ReturnAfterElseFiFiEnd . .
 359, 1702
 \Hy@ReturnAfterFi 355, 375, 1880,
 4172, 4188, 7258, 7294, 7781,
 7791, 12467
 \Hy@ReturnAfterFiFiEnd . . 358,
 1694, 1708, 1786, 1793
 \Hy@ReturnEnd . . 357, 358, 359,
 1714, 1798
 \Hy@safe@activesfalse 360, 4088,
 4093, 4357, 7641
 \Hy@safe@activestruer 360,
 4086, 4091, 4160, 4197, 4205,
 4233, 4280, 4349, 7548, 7630,
 13013, 13042
 \Hy@saved@currentHref . . . 6396,
 6399
 \Hy@saved@footnotemark . 6491,
 6506
 \Hy@saved@footnotetext . . 6492,
 6509
 \Hy@saved@hook 5493, 5503
 \Hy@SaveLastskip
 2272, 7957, 8480,
 8495, 8570, 8582, 8808, 9305,
 9321, 9396, 9409, 9869, 9883,
 10735, 10749, 11008, 11022
 \Hy@scanauthor 5463, 5468
 \Hy@scanoptauthor . . 5463, 5464
 \Hy@scanopttitle 5454, 5455
 \Hy@scantitle 5454, 5459
 \Hy@secnum@part . 13196, 13198,
 13201
 \Hy@SectionAnchorHref 528,
 13134, 13156, 13227
 \Hy@SectionHShift 13133, 13142,
 13152, 13223
 \Hy@seminarslidesfalse . . . 7306
 \Hy@seminarslidestruer 7304
 \Hy@setbreaklinks . . . 2479, 2483,
 2495, 7808, 8804
 \Hy@SetCatcodes 181, 231, 3668
 \Hy@SetNewWindow
 3596, 8092, 8128, 9059, 9556,
 10456, 10481
 \Hy@setouterhbox . 10196, 10202
 \Hy@setpagesizetrue 336
 \Hy@setpdfborder . . . 3247, 7986,
 8045, 8076, 8112, 8439, 9022,
 9050, 9077, 9105, 9440, 9461,
 9482, 9501, 9533, 9564, 9580
 \Hy@setpdfversiontrue 2614
 \Hy@setref@link 7504, 7507
 \Hy@slidetitle . 7333, 7335, 7342,
 7350, 7360, 7384, 7386, 7393,
 7401, 7411
 \Hy@StartlinkName . . 7984, 7998
 \Hy@StepCount 346, 5593, 11337,
 11399, 11605, 11817, 11880,
 12158, 12224, 12901, 12906,
 12982
 \Hy@temp 558, 565, 678,
 750, 854, 857, 865, 866, 2422,
 2427, 2428, 2429, 2430, 2431,
 2432, 3177, 3186, 3187, 3188,
 3189, 3190, 3191, 3192, 3219,
 3220, 3221, 3224, 3226, 3229,
 3406, 3407, 3410, 3413, 3416,
 3441, 3449, 3450, 3451, 3452,
 3453, 3454, 3455, 3456, 3457,
 3588, 3589, 3742, 3746, 3747,
 3748, 3749, 3825, 3827, 3832,
 3834, 3837, 3849, 3851, 3856,
 3858, 3864, 3866, 3871, 3873,
 3876, 3918, 3919, 4556, 4560,
 4561, 4572, 4656, 4657, 4658,
 4660, 4664, 4976, 4977, 4978,
 4980, 4984, 4985, 5120, 5136,
 5137, 5138, 5139, 5140, 5141,
 5142, 5143, 5144, 5149, 5150,
 5151, 5152, 5153, 5154, 5155,
 5156, 5157, 5158, 5159, 5573,
 5576, 5585, 5587, 5591, 5595,
 5639, 5641, 6037, 6040, 6043,
 6049, 6161, 6167, 6475, 6481,
 7255, 7256, 8227, 8256, 8258,
 8734, 8739, 8745, 8749, 8752,
 8757, 8788, 8790, 9167, 9210,
 9212, 10034, 10037, 10041,
 10042, 10048, 10049, 10055,
 10083, 10088, 10094, 10098,
 10101, 10106, 10139, 10141,
 10253, 10254, 10262, 10263,
 10367, 10368, 10871, 10876,
 10882, 10886, 10889, 10894,
 10927, 10929, 12448, 12449,
 13053, 13059, 13067, 13082
 \Hy@temp@a 589, 590, 1686, 1688,
 1699, 1701, 1706, 1707, 1710,
 3442, 3444, 7177, 7178, 7179,
 7186, 7214, 7215, 7216, 7225
 \Hy@temp@B 1687, 1688
 \Hy@tempa 2316, 2318,
 2320, 2321, 2323, 2325, 2327,
 2330, 2333, 2334, 2754, 2755,
 2756, 2758, 2759, 2761, 2762,
 2764, 2768, 2772, 2783, 2785,
 2787, 2788, 2790, 2794, 4166,
 4167, 4178, 4182, 4281, 4285,
 4348, 4351, 4360, 4362, 4963,
 4964, 5622, 5624, 5662, 5664,
 5803, 5805, 6245, 6247, 6248,
 6251, 6252, 6253, 6553, 6558,
 6563, 6978, 6979, 6997, 6998,
 7004, 7320, 7321, 7372, 7373,
 8513, 8514, 9286, 9434, 9435,
 10767, 10768, 11039, 11040,
 12786, 12787, 12810, 12812,
 12829, 12830, 12838, 12862,
 12864, 12865, 12867, 12868,
 13250, 13275, 13280, 13283,
 13286
 \Hy@tempb 5623, 5624, 5663, 5664,
 12811, 12812, 12838
 \Hy@tempcolor 9916, 9918, 9931,
 10004, 10006, 10018
 \Hy@TempPageAnchor . . . 6929,
 6936, 6940, 6956
 \Hy@testname
 7972, 7973, 7978, 7980, 7981,
 7995, 9003, 9004, 9009, 9011,
 9013, 9029, 9448, 9449, 9454,
 9458, 9520, 9521, 9526, 9530,

10009, 10010, 10015, 10026	\Hy@vt@PutCatalog . 5709, 5711	\HyC@org@cmd 76
\Hy@texhtfalse 337	\Hy@VTeXversion . . . 5689, 5701, 9478, 9591, 9727, 12934	\HyC@org@optcmd 80, 111
\Hy@texhttrue 2629, 3821	\Hy@Warning	\HyC@org@robustcmd . . 81, 120
\Hy@title 5456, 5460	. 241, 382, 1626, 2338, 2353, 2378, 2458, 2573, 2578, 3094, 3146, 3418, 3465, 3473, 4038, 4363, 4456, 4613, 4968, 5747, 5762, 6970, 7617, 7666, 7974, 8842, 8846, 9005, 9450, 9522, 10011, 10290, 10299, 12795, 12813	\HyC@org@robustoptcmd . . . 82
\Hy@toclevel . . . 6989, 6993, 7006	\Hy@WarningNoLine . 242, 2417, 2485, 2599, 3197, 3235, 3334, 3434, 3652, 3701, 3829, 3838, 3853, 3868, 3877, 5437, 5539, 5703, 5817, 6024, 6980, 7135, 10169	\HyC@package 10, 22, 28, 34, 37, 38
\Hy@toolbartrue 338	\Hy@WarningPageBorderColor 3232, 3234, 3236	\HyC@param 78, 96, 102
\Hy@true . 2249, 2321, 2323, 2788, 2790	\Hy@WarningPageColor . . . 3194, 3196, 3198	\HyC@robustcmd . . 115, 120, 121, 122
\Hy@typexmlfalse 339	\Hy@WarnOptionDisabled . 2350, 2352	\HyC@star 67, 70, 94
\Hy@undefinedname 7969, 7976, 7978, 8999, 9007, 9009, 9422, 9452, 9454, 9524, 9526, 10000, 10013, 10015	\Hy@WarnOptionValue . . . 2331, 2337, 2775, 2797	\HyC@string . . 131, 152, 155, 158
\Hy@unicodefalse . . 340, 655, 664, 2545, 2546, 2554, 3383, 3389, 6039, 6933, 12486	\Hy@windowuitrue 343	\HyC@Toks . . 79, 90, 96, 106, 126
\Hy@unicodetrue 2546, 5737, 5751	\Hy@writebookmark . 2254, 6990, 7340, 7348, 7358, 7391, 7399, 7409, 12772, 12912	\HyCal@do 376, 380
\Hy@usehidkeyfalse 3211	\HyC@@cmd 87, 109, 122	\HyCal@scan 367, 371, 395
\Hy@usehidkeytrue 3215	\HyC@check 68, 71, 74	\HyColor@FieldBColor 5101, 5104
\Hy@UseMaketitleInfos	\HyC@checkcommand . 50, 57, 59	\HyColor@FieldColor 5107
5509, 8268, 8696, 9127, 9808, 10032, 10840	\HyC@checkFailed 146, 157	\HyColor@HyperrefBorderColor 3222
\Hy@UseMaketitleString . . 5490, 5510, 5511	\HyC@checkItem . . 132, 133, 134, 135, 138	\HyColor@HyperrefColor . . 3182
\Hy@UseNameKey 2400, 8234, 8235, 8236, 8237, 8238, 8239, 8240, 8241, 8260, 8764, 8765, 8766, 8767, 8768, 8769, 8770, 8771, 8792, 9174, 9175, 9176, 9177, 9178, 9179, 9180, 9181, 9214, 9780, 9781, 9782, 9783, 9784, 9785, 9786, 9787, 10113, 10114, 10115, 10116, 10117, 10118, 10119, 10120, 10143, 10901, 10902, 10903, 10904, 10905, 10906, 10907, 10908, 10931	\HyC@checklong 45, 53	\HyColor@UseColor . . 4060, 7922, 7933, 8963, 8974
\Hy@usetitlefalse 341	\HyC@checkOk 144, 154	\HyField@@AddToFields . 11716, 11720
\Hy@varioref@undefined . . 6119, 6123, 7636	\HyC@checkPackage . . 12, 16, 18	\HyField@@PDFChoices . . 4851, 4852, 4867
\Hy@VerboseAnchor	\HyC@cmd 62, 75, 87, 95, 118, 131	\HyField@@SetFlag . . 4546, 4548
4230, 7958, 8481, 8496, 8571, 8583, 8809, 9306, 9322, 9397, 9410, 9870, 9884, 10736, 10750, 11009, 11023	\HyC@date 11, 15, 23, 29, 31	\HyField@@UseFlag . . 4536, 4538
\Hy@verbosefalse 342	\HyC@DeclareRobustCommand 114	\HyField@AddToFields . . 11686, 11715, 11802, 11895, 11908, 11935, 11960, 11984, 12006
\Hy@VerboseGlobalTemp . . 4206, 4207, 4208, 4209, 4213	\HyC@def 125	\HyField@AdvanceAnnotCount . 12104, 12134, 12229, 12259, 12288, 12317, 12346, 12373
\Hy@VerboseLinkInfo 4213, 4214, 4217, 4224	\HyC@defcmd 47, 54, 93	\HyField@afields . . 11683, 11705, 11706, 11708, 11742
\Hy@VerboseLinkStart	\HyC@doCheck 99, 130	\HyField@AfterAuxOpen . 11696, 11703, 11721
4202, 8018, 8028, 8511, 8556, 8592, 8604, 9001, 9262, 9285, 9424, 9513, 9902, 10002, 10765, 10814, 11037, 11084	\HyC@edef 125	\HyField@AnnotCount . . . 12102, 12105, 12108
\Hy@VerboseLinkStop 4218, 8003	\HyC@getDate 12, 14	\HyField@AuxAddToFields 11695, 11700, 11704, 11724
	\HyC@meaning 152, 160	\HyField@FlagsAnnot 4706, 4725, 4739, 4752, 4768, 4800
	\HyC@nc@default 103, 105	\HyField@FlagsCheckBox . 4738, 11498, 11999, 12368
	\HyC@nc@noopt 88, 91, 103, 112, 123, 127	\HyField@FlagsChoice . . . 4799, 11377, 11858, 12199
	\HyC@nc@opt 88, 101, 123	\HyField@FlagsPushButton 4724, 11434, 11454, 11479, 11927, 11948, 11978, 12286, 12311, 12342
	\HyC@newcommand 86	\HyField@FlagsRadioButton 4751, 11373, 11854, 12195
	\HyC@next 48, 55, 60, 83	\HyField@FlagsSubmit . . . 4672, 11455, 11949, 12312
	\HyC@noValue . 80, 81, 82, 85, 139	\HyField@FlagsText 4767, 11315, 11795, 12128
	\HyC@optcmd 107, 111	

\HyField@NewBitsetFlag . . . 4504, 4507, 4515	\HyInd@org@wrindex . 7167, 7171, 7181, 7187, 7189, 7192	\HyOrg@addtoreset . . . 7093, 7095, 7122
\HyField@NewFlag . . . 4502, 4578, 4579, 4580, 4581, 4582, 4583, 4584, 4585, 4586, 4587, 4588, 4589, 4590, 4591, 4592, 4593, 4594, 4595, 4596, 4597, 4602, 4603, 4604, 4605, 4606, 4607, 4608, 4609, 4610, 4643, 4645, 4646, 4648, 4649, 4651, 4652, 4653, 4654	\HyInd@pagelink 7268, 7274, 7276, 7279	\HyOrg@appendix . . . 5938, 5944
\HyField@NewFlagOnly . . . 4506, 4644, 4647, 4650	\HyInd@ParenLeft . . . 7150, 7178, 7215	\HyOrg@author . . . 5453, 5466, 5470
\HyField@NewOption 4503, 4509	\HyInd@ParenRight . . . 7151, 7179, 7186, 7216, 7225	\HyOrg@float@makebox . . . 6619, 6621
\HyField@PDFAFlagWarning . . . 4612, 4620, 4624, 4628, 4632, 4636, 4640	\HyInd@removespaces 7282, 7285, 7295	\HyOrg@hyperpage . . . 7153, 7155, 7156
\HyField@PDFChoices 4824, 11412, 11902, 12253	\HyInfo@AddonHandler . . . 3460, 3463	\HyOrg@languageshorthands 824, 839, 850, 860
\HyField@PrintFlags . . . 4553, 4699, 4717, 4731, 4744, 4760, 4792, 4817	\HyInfo@AddonList . . . 3487, 3488, 3522, 3529	\HyOrg@make@df@tag@@ . 7078
\HyField@SetFlag 4545, 4685, 4691, 4696, 4730, 4758	\HyInfo@Addons 3508, 3524, 8292, 9152, 10064, 10068	\HyOrg@make@df@tag@@@ 7079
\HyField@SetKeys . . . 4928, 11312, 11344, 11347, 11366, 11422, 11451, 11469, 11495, 11791, 11824, 11827, 11846, 11914, 11945, 11968, 11995, 12124, 12165, 12168, 12187, 12272, 12308, 12332, 12364	\HyInfo@AddonUnsupportedtrue 8694, 9806, 10838	\HyOrg@maketitle . . . 6489, 6496, 6501
\HyField@TheAnnotCount 12107, 12138, 12143, 12234, 12246, 12261, 12266, 12293, 12299, 12319, 12324, 12348, 12353, 12377, 12382	\HyInfo@do 3462, 3489, 3512	\HyOrg@subequations 6262, 6269
\HyField@UseFlag 4535, 4676, 4677, 4678, 4679, 4680, 4681, 4682, 4683, 4686, 4687, 4688, 4689, 4692, 4693, 4694, 4697, 4708, 4709, 4710, 4711, 4712, 4713, 4714, 4715, 4716, 4727, 4728, 4729, 4741, 4742, 4743, 4754, 4755, 4756, 4757, 4759, 4770, 4771, 4772, 4773, 4774, 4775, 4776, 4777, 4788, 4791, 4802, 4803, 4804, 4805, 4807, 4809, 4810, 4813, 4816	\HyInfo@GenerateAddons . 3506, 8269, 9128, 10033	\HyOrg@title 5452, 5457, 5461
\HyInd@@@@wrindex . . . 7173, 7176, 7207, 7213	\HyInfo@Key . . . 3470, 3471, 3479, 3484, 3489, 3492, 3499, 3513, 3517	\HyOrg@url 4260
\HyInd@@hyperpage . 7253, 7263	\HyInfo@KeyEscaped . 3469, 3470	\hyper@@@anchor 3685, 4270, 4272, 4303, 4305, 4338, 4340, 4453, 5324, 5340, 5357, 6362, 6367, 6377, 6382, 6437, 6440, 6466, 6594, 6597, 6625, 6929, 6936, 6941, 7339, 7347, 7357, 7390, 7398, 7408
\HyInd@@wrindex . . . 7168, 7169	\HyInfo@trapped@false 3410, 3429	\hyper@@@link . . . 4200, 4256, 4293, 4317, 4319, 4343, 6682, 6828, 6829, 6830, 6878, 6880, 6882, 7509, 7524, 7626
\HyInd@EncapChar . . . 2805, 3662, 7163	\HyInfo@trapped@true 3407, 3428	\hyper@@@normalise . . 4169, 4173, 4177
\HyInd@hyperpage . . . 7250, 7252, 7259	\HyInfo@trapped@unknown 3413, 3430	\hyper@@@anchor 4480, 5327, 5342, 5407, 5420, 8006, 8479, 8569, 8865, 9320, 9395, 9868, 10734, 11007
	\HyInfo@TrappedUnsupported 3431, 3435, 8697, 9809, 10841	\hyper@@@anchorend 3688, 5311, 5329, 5344, 5360, 5926, 6089, 6149, 6191, 6210, 6234, 6323, 6676, 6701, 6704, 6724, 6857, 7063, 7089, 8013, 8504, 8587, 8872, 9315, 9417, 9890, 10758, 11030, 12768, 12913, 13144, 13169, 13180, 13210, 13262
	\HyInfo@Value 3483, 3485	\hyper@@@anchorstart 3687, 5311, 5328, 5343, 5359, 5926, 6088, 6149, 6188, 6210, 6234, 6320, 6674, 6699, 6704, 6724, 6857, 7063, 7089, 8009, 8494, 8581, 8868, 9304, 9408, 9882, 10748, 11021, 12768, 12913, 13144, 13169, 13180, 13210, 13262
	\HyLang@addto 3009, 3031, 3062, 3070	\hyper@@@chars 4194, 8041, 8484, 8498, 8518, 8537, 8547, 8561, 8633, 8663, 9271, 9292, 9308, 9325, 9400, 9412, 9495, 10424, 10752, 10772, 10795,
	\HyLang@afrikaans 2807	
	\HyLang@DeclareLang 3023, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060	
	\HyLang@english 2825	
	\HyLang@french 2843	
	\HyLang@german 2861	
	\HyLang@italian 2879	
	\HyLang@magyar 2897	
	\HyLang@portuges 2915	
	\HyLang@russian 2933	
	\HyLang@spanish 2973	
	\HyLang@vietnamese . 2991, 3062, 3070	
	\HyLinguex@OrgB 752, 756	
	\HyLinguex@OrgC 753, 757	
	\HyLinguex@OrgD 754, 758	
	\HyLinguex@Restore . . . 755, 768, 772, 780, 2527	

10805, 10819, 11025, 11044, 11064, 11076, 11089	\hyper@pagetransition 8305, 8376, 9593, 9720, 9947, 9993	\HyPL@@@CheckThePage . 5643, 5661
\hyper@currentanchor 9887, 9896, 9910, 9927	\hyper@quote . 5280, 8486, 8500, 8515, 8520, 8538, 8548, 8562, 9265, 9275, 9288, 9311, 9329, 10740, 10754, 10769, 10775, 10796, 10806, 10820, 11013, 11026, 11041, 11046, 11066, 11077, 11090	\HyPL@@CheckThePage . . 5619, 5621
\hyper@currentlinktype . . . 9911, 9915, 9919	\hyper@readexternallink . . 4354, 4370	\HyPL@Alph 5559
\hyper@hash . . 4146, 4147, 4195, 4399, 4411, 4428, 4431, 5278, 9265	\hyper@refstepcounter 5901, 5904, 5911	\HyPL@alph 5560
\hyper@image . 4266, 4267, 8559, 9544, 9997, 10817, 11087	\hyper@tilde 4155, 4156, 4157, 5279	\HyPL@arabic 5556
\hyper@last 5427, 5432	\hyperbaseurl . . 3200, 3201, 5376	\HyPL@CheckThePage 5571, 5618
\hyper@link . . . 3686, 4352, 5325, 5326, 5341, 5352, 5358, 8027, 8555, 8603, 9037, 9261, 9512, 10001, 10813, 11083	\hypercaltcbp 362, 362	\HyPL@Entry . 5805, 5813, 5821, 5823
\hyper@link@ . . 3693, 4344, 4346, 5323, 5334, 5338, 5349, 5365	\hypercaltcbpdef . . 364, 401, 3562	\HyPL@EveryPage . . . 5561, 5682
\hyper@linkend 3690, 5331, 5346, 5362, 6402, 6668, 6671, 7024, 7028, 7032, 7034, 8026, 8524, 8600, 9036, 9038, 9297, 9470, 9913, 10780, 11050	\hyperdef 4295, 5378	\HyPL@Format 5634, 5635, 5636, 5637, 5638, 5650
\hyper@linkfile 3692, 4424, 5333, 5348, 5364, 8069, 8528, 8661, 9040, 9281, 9474, 10439, 10784, 11054	\HyperDestNameFilter 3644, 4234, 7959, 7981, 8486, 8500, 8520, 8557, 8811, 9012, 9265, 9275, 9293, 9311, 9329, 9401, 9413, 9457, 9529, 10287, 10296, 10740, 10754, 10775, 10815, 11013, 11026, 11046, 11085, 12991, 13055, 13071	\HyPL@found . 5633, 5640, 5644, 5651, 5661, 5663
\hyper@linkstart 3689, 5330, 5345, 5361, 6400, 6664, 6671, 7024, 7028, 7032, 7034, 8017, 8510, 8591, 9000, 9038, 9284, 9423, 9901, 10764, 11036	\HyperFirstAtBeginDocument 5404, 5406, 5428, 5431	\HyPL@Labels . 5550, 5673, 5674, 5676, 5678, 5723, 5724, 5816, 5824, 5825
\hyper@linkurl 3691, 4265, 4399, 4406, 4427, 4431, 5332, 5347, 5363, 8038, 8529, 8531, 8557, 8631, 9068, 9269, 9282, 9492, 9545, 9998, 10421, 10785, 10789, 10815, 11055, 11057, 11085	\hypergetpageref 6082	\HyPL@LastNumber . 5554, 5589, 5612
\hyper@livelink 5325, 5352	\hypergetref 6081	\HyPL@LastPrefix . . . 5555, 5583, 5614
\hyper@makecurrent . 5922, 5946, 6136, 6187, 6209, 6233, 6297, 6397, 6570, 6612	\HyperGlobalCurrentHref . 5967, 5969, 5977, 5978, 5982, 5985, 5989, 5995, 5996, 6000	\HyPL@LastType 5553, 5574, 5613
\hyper@n@rmalise . . . 4161, 4165	\hyperimage . . . 4266, 4486, 7145	\HyPL@page . . 5564, 5566, 5571, 5579
\hyper@nat@current 6665	\hyperindexformat 7152	\HyPL@Prefix . 5579, 5581, 5583, 5597, 5600, 5602, 5614, 5628, 5666
\hyper@nat@anchorend 6676	\hyperlink 4199, 5379, 7291, 7429, 7437, 7452, 7460, 7470, 7478, 7485	\HyPL@Roman 5557
\hyper@nat@anchorstart 6673	\hyperlinkfileprefix . . 3203, 3204, 3205, 10999	\HyPL@roman 5558
\hyper@nat@linkbreak 6670	\HyperLocalCurrentHref . . 5985, 5987, 5993, 5994, 5995, 5996, 5998	\HyPL@SetPageLabels 5672, 5731, 5819
\hyper@nat@linkend 6667	\hyperpage 5385, 7153, 7154, 7156, 7249	\HyPL@storePageLabel . . . 5597, 5599, 5669, 5721, 5800
\hyper@nat@linkstart 6662	\HyperRaiseLinkDefault . . 2256, 2265	\HyPL@thisLabel 5547, 5549, 5563, 5566, 5567
\hyper@normalise . . . 3664, 3669, 4138, 4246, 4249, 4262, 4264, 4266, 4287, 4958	\HyperRaiseLinkHook 2255, 2266	\HyPL@Type . . 5569, 5574, 5578, 5596, 5604, 5613, 5627, 5665
\hyper@pageduration . 8329, 8377, 9704, 9721, 9964, 9994	\HyperRaiseLinkLength . . 2264, 2265, 2268	\HyPL@Useless 5670, 5676
\hyper@pagehidden . . 8353, 8378, 9714, 9722, 9981, 9995	\hyperref . 4275, 4493, 4494, 5381, 7584, 7588, 7598, 7612	\HyPsd@@@autoref . . 1547, 1549, 1552
	\hypersetup 2566, 3047, 3446, 3663, 3665, 5375	\HyPsd@@@CJKdigits 1418, 1421, 1429
	\hypertarget 4268, 5380	\HyPsd@@@nameref . . 1529, 1531, 1534
		\HyPsd@@@pageref . . 1511, 1513, 1516
		\HyPsd@@@ref . . 1495, 1497, 1500
		\HyPsd@@@UTFviii@four . . 2131, 2134
		\HyPsd@@@AppendItalcorr . 1716
		\HyPsd@@@autoref . . . 1544, 1545
		\HyPsd@@@autorefname 1565, 1568
		\HyPsd@@@CJKdigits . 1410, 1412, 1415

\HyPsd@@CJKNumber [1311](#), [1313](#),
[1316](#), [1369](#), [1384](#), [1397](#), [1399](#),
[1403](#)
\HyPsd@@ConvertToUnicode . . .
. [2010](#)
\HyPsd@@GetNextTwoTokens . .
. [2008](#)
\HyPsd@@GlyphProcessWarning
. [1886](#), [1889](#)
\HyPsd@@GreekNum . . [973](#), [982](#),
[1081](#), [1085](#), [1089](#)
\HyPsd@@hspace [1466](#), [1467](#)
\HyPsd@@LetCommand . . [1589](#),
[1610](#)
\HyPsd@@nameref . . . [1526](#), [1527](#)
\HyPsd@@pageref . . . [1508](#), [1509](#)
\HyPsd@@ProtectSpacesFi . [1638](#),
[1642](#), [1660](#), [1666](#), [1671](#)
\HyPsd@@ref [1492](#), [1493](#)
\HyPsd@@RemoveBraces . . [1684](#)
\HyPsd@@RemoveBracesFi [1681](#),
[1684](#)
\HyPsd@@RemoveCmdPrefix . . .
. [1843](#), [1846](#)
\HyPsd@@ReplaceFi . [1913](#), [1919](#),
[1924](#)
\HyPsd@@UTFviii@four . . . [2115](#),
[2120](#)
\HyPsd@add@accent . . [423](#), [1455](#)
\HyPsd@AfterCountRemove [1729](#),
[1800](#)
\HyPsd@AfterDimenRemove . . .
. [1735](#), [1803](#)
\HyPsd@AfterSkipRemove . [1741](#),
[1815](#)
\HyPsd@AMSclassfix . [513](#), [1476](#),
[1478](#)
\HyPsd@AppendItalcrr . . [1700](#),
[1707](#), [1716](#)
\HyPsd@autoref [523](#), [1544](#)
\HyPsd@autorefname . [1556](#), [1562](#)
\HyPsd@babel@danish [869](#)
\HyPsd@babel@dutch [875](#)
\HyPsd@babel@finnish [881](#)
\HyPsd@babel@frenchb [886](#)
\HyPsd@babel@german [891](#)
\HyPsd@babel@macedonian . [898](#)
\HyPsd@babel@ngerman . . . [904](#)
\HyPsd@babel@portuges . . . [910](#)
\HyPsd@babel@russian [915](#)
\HyPsd@babel@slovene [921](#)
\HyPsd@babel@spanish [926](#)
\HyPsd@babel@swedish [936](#)
\HyPsd@babel@ukrainian . . . [942](#)
\HyPsd@babel@usorbian . . . [948](#)
\HyPsd@BabelPatch [499](#), [823](#), [859](#)
\HyPsd@CatcodeWarning . [1745](#),
[1762](#), [1765](#), [1768](#), [1771](#), [1827](#)
\HyPsd@Char [2012](#)
\HyPsd@CharOctByte [2032](#), [2034](#),
[2037](#), [2046](#), [2051](#)
\HyPsd@CharSurrogate . . . [2026](#),
[2043](#)
\HyPsd@CharTwoByte [2024](#), [2031](#)
\HyPsd@CheckCatcodes [576](#), [1722](#)
\HyPsd@CJK@Unicode [1193](#), [1197](#)
\HyPsd@CJKActiveChars . [1133](#),
[1148](#)
\HyPsd@CJKdigit . . . [1422](#), [1432](#)
\HyPsd@CJKdigits . . [1195](#), [1408](#)
\HyPsd@CJKhook [529](#), [1104](#), [1115](#)
\HyPsd@CJKhook@bookmarks .
. [1110](#), [1144](#)
\HyPsd@CJKhook@unicode [1112](#),
[1192](#)
\HyPsd@CJKNumber . [1194](#), [1308](#)
\HyPsd@CJKNumberFour . [1326](#),
[1330](#), [1334](#), [1347](#), [1351](#), [1355](#),
[1361](#)
\HyPsd@CJKNumberLarge . [1339](#),
[1346](#)
\HyPsd@CJKNumberThree [1367](#),
[1371](#), [1377](#)
\HyPsd@CJKNumberTwo . . [1382](#),
[1386](#), [1392](#)
\HyPsd@ConvertToUnicode . [644](#),
[1958](#)
\HyPsd@DecimalToOctal . . [1125](#),
[1156](#)
\HyPsd@DecimalToOctalFirst . .
. [1199](#), [1235](#)
\HyPsd@DecimalToOctalSecond
. . . . [1200](#), [1209](#), [1272](#)
\HyPsd@DefCommand . [559](#), [560](#),
[561](#), [562](#), [1578](#)
\HyPsd@DisableCommands . [803](#),
[805](#)
\HyPsd@DoConvert . . [1960](#), [1970](#)
\HyPsd@DoEscape [1984](#)
\HyPsd@doxspace [616](#), [1931](#)
\HyPsd@empty [601](#), [603](#), [607](#), [608](#),
[610](#), [618](#), [625](#)
\HyPsd@End [576](#), [580](#), [1639](#), [1642](#),
[1645](#), [1648](#), [1651](#), [1664](#), [1674](#),
[1681](#), [1684](#), [1722](#), [1730](#), [1736](#),
[1742](#), [1787](#), [1794](#), [1800](#), [1803](#),
[1815](#)
\HyPsd@EndWithElse [1445](#), [1454](#)
\HyPsd@fi . [1656](#), [1662](#), [1666](#), [1672](#)
\HyPsd@GetNextTwoTokens [2008](#)
\HyPsd@GetOneBye [2003](#)
\HyPsd@GetTwoBytes [1999](#)
\HyPsd@GLYPHERR [581](#), [1442](#),
[1456](#), [1463](#)
\HyPsd@GlyphProcess [583](#), [1874](#),
[1887](#)
\HyPsd@GlyphProcessWarning .
. [1881](#), [1885](#)
\HyPsd@GobbleFiFi . [1447](#), [1453](#)
\HyPsd@GreekNum [962](#), [965](#), [967](#)
\HyPsd@Greeknumeral . [958](#), [964](#)
\HyPsd@greeknumeral . . [957](#), [961](#)
\HyPsd@GreekNumI . [985](#), [1011](#),
[1054](#), [1080](#)
\HyPsd@GreekNumII . [989](#), [1033](#),
[1077](#), [1084](#)
\HyPsd@GreekNumIII [992](#), [1056](#),
[1088](#)
\HyPsd@GreekNumIV [1001](#), [1079](#)
\HyPsd@GreekNumV . [1004](#), [1083](#)
\HyPsd@GreekNumVI [1006](#), [1087](#)
\HyPsd@GreekPatch [496](#), [954](#), [956](#)
\HyPsd@HighA [1203](#), [1212](#)
\HyPsd@HighB [1213](#), [1218](#)
\HyPsd@HighC [1219](#), [1222](#)
\HyPsd@HighD [1215](#), [1227](#)
\HyPsd@hspace [514](#), [1466](#)
\HyPsd@hspacetest . . [1469](#), [1471](#),
[1474](#)
\HyPsd@ifnextchar [545](#), [546](#), [547](#),
[1615](#)
\HyPsd@ignorespaces . . . [527](#), [814](#)
\HyPsd@InitUnicode [777](#)
\HyPsd@inmathwarn . . [422](#), [1439](#)
\HyPsd@ITALCORR . . [537](#), [541](#),
[1463](#)
\HyPsd@langshort@system . . [830](#),
[833](#)
\HyPsd@LanguageShorthands . .
. [825](#), [831](#), [843](#)
\HyPsd@LetCommand . [563](#), [564](#),
[1578](#)
\HyPsd@LetUnexpandableSpace
. . . [532](#), [533](#), [534](#), [535](#), [1459](#),
[1462](#)
\HyPsd@LoadStringEnc . . . [2570](#),
[2590](#), [2592](#), [2596](#), [2598](#), [5742](#)
\HyPsd@LoadUnicode [2519](#), [2524](#),
[2532](#), [2535](#), [2537](#), [2544](#), [5736](#)
\HyPsd@nameref [522](#), [1526](#)
\HyPsd@pageref [521](#), [1508](#)
\HyPsd@pdfencoding . [645](#), [2518](#),
[2521](#), [2553](#), [2565](#), [2568](#), [2569](#),
[2574](#), [2589](#), [5738](#), [5740](#), [5757](#),
[5760](#)
\HyPsd@pdfencoding@auto . [645](#),
[2559](#), [2569](#), [2586](#), [5740](#), [5759](#)
\HyPsd@pdfencoding@pdfdoc . .
. . . . [2552](#), [2574](#), [2587](#)

\HyPsd@pdfencoding@unicode 2556, 2588, 5738, 5756	\HyPsd@UnescapedString . . . 650, 697, 698, 704	\HyTmp@found . 4878, 4888, 4891
\HyPsd@PrerenderUnicode 3344, 3360, 3366, 3372, 3378, 3396, 3402, 3482	\HyPsd@UnexpandableSpace 1462, 1647, 1671, 1806, 1818	\HyTmp@key 4872, 4873
\HyPsd@protected@testopt . 548, 549, 1619	\HyPsd@unichar 2073, 2140, 2146, 2151	\HyTmp@Optitem . . . 4828, 4844, 4871, 4876, 4882, 4903, 4914
\HyPsd@ProtectSpaces 569, 1636, 1657, 1706	\HyPsd@unichar@first@byte 2159, 2179	\HyTmp@optlist 4827, 4842, 4843, 4874, 4875, 4880, 4881, 4889, 4890, 4910, 4912, 4919, 4922
\HyPsd@ref 520, 1492	\HyPsd@unichar@octtwo . . . 2181, 2189, 2195	\HyXeTeX@CheckUnicode . 3330, 3341, 3358, 3364, 3370, 3376, 3394, 3400, 3480, 5770
\HyPsd@RemoveBraces 571, 1678, 1695, 1703, 1709	\HyPsd@unichar@second@byte 2167, 2187	
\HyPsd@RemoveCmdPrefix 1836, 1842	\HyPsd@UnicodeReplacementCharacter 2143, 2178	I
\HyPsd@RemoveMask 579, 1645, 1651, 1664, 1674	\HyPsd@UTFviii . 414, 2061, 2066	\i 13446, 13609, 13612, 13615, 13618, 13815, 13977, 13980, 13983, 13986, 14103, 14108, 14113, 14118, 14122, 14289, 14345
\HyPsd@RemoveSpaceWarning 1810, 1822, 1848	\HyPsd@UTFviii@Othree . . . 2096, 2105	\if . . . 1488, 2243, 5587, 5595, 6251, 6252, 9667, 9670, 9674, 9678, 9682, 9684, 9686, 12593
\HyPsd@ReplaceSpaceWarning 1805, 1817, 1861	\HyPsd@UTFviii@Otwo 2081, 2087	\if@eqnstar 6193, 6201
\HyPsd@Rest . . . 1723, 1783, 1791, 1794, 1801, 1806, 1812, 1818, 1824	\HyPsd@UTFviii@ccxliv@def 2071, 2077	\if@filesw 2211, 4331, 5397, 5441, 5801, 5811, 6031, 6711, 6726, 6742, 6754, 6784, 6807, 6834, 6839, 6858, 7201, 11698, 11722, 12831, 13018, 13098
\HyPsd@RussianPatch . 498, 1097	\HyPsd@UTFviii@ccxliv@undef 2070, 2076	\if@hyperitem 5886, 5899
\HyPsd@SanitizeForOutFile 12830, 12861	\HyPsd@UTFviii@four 2069, 2114	\if@inlabel 6309
\HyPsd@SanitizeOut@BraceLeft 12865, 12871, 12880	\HyPsd@UTFviii@Othree 2068, 2095	\if@Localurl 9252, 9298
\HyPsd@SanitizeOut@BraceRight 12868, 12883, 12892	\HyPsd@UTFviii@Otwo 2067, 2080	\if@mid@expandable 512
\HyPsd@SPACEOPTI . . 573, 588, 589, 591, 593, 595, 596, 635, 637, 1758, 1942	\HyPsd@Warning 1623, 1828, 1849, 1862, 1891, 1897	\if@minipage 6582, 6653
\HyPsd@spaceopti 637, 1905	\HyPsd@XeTeXBigCharsfalse 670, 684, 689	\if@nmbrlist 5873
\HyPsd@SpanishPatch . 497, 1091	\HyPsd@XeTeXBigCharstrue 683, 692, 3359, 3365, 3371, 3377, 3395, 3401, 3481, 12489, 12828	\if@nobreak 6328
\HyPsd@String 570, 572, 575, 577, 582, 584, 1689, 1690, 1700, 1752, 1753, 1757, 1758, 1773, 1774, 1804, 1816, 1875, 1876	\HyPsd@XSPACE 539, 615, 1463	\if@skiphyperref 5887, 5897
\HyPsd@StringSubst . . 585, 587, 593, 599, 602, 605, 608, 627, 630, 632, 1928	\HyPsd@xspace 613, 615, 616	\if@twocolumn 13264
\HyPsd@Subst . 581, 590, 594, 600, 606, 610, 614, 619, 620, 621, 622, 623, 624, 628, 631, 1912, 1929	\HyRef@@StarSetRef . 7552, 7557	\if@twoside 13253
\HyPsd@temp 648, 650, 651, 653, 654, 660, 662, 663, 2551, 2552, 2553, 2556, 2559, 2565, 2577, 2581, 5755, 5756, 5757, 5759, 5760, 5765	\HyRef@autopageref . 7609, 7611	\ifcase 1018, 1040, 1063, 1157, 1206, 1228, 1231, 1237, 1273, 1317, 1433, 2109, 2556, 3143, 4674, 4779, 4908, 4985, 7020, 7178, 7215, 7444, 7636, 9740, 12532, 12609, 12674, 12709, 12743, 12938
\HyPsd@ToBigChar 703, 704, 713	\HyRef@autopagerefname . 7608, 7612, 7614	\ifcat 1724, 1751, 1756, 1761, 1764, 1767, 1770, 4464, 4466
\HyPsd@ToBigChars . . . 657, 695	\HyRef@autoref 7626, 7628	\ifdim 1474, 1804, 1808, 1816, 1820, 2275, 2294, 3649, 3934, 8395, 8399, 8404, 8408, 8415, 8418, 8422, 8425, 9232, 9233, 9238, 9239, 9371, 9374, 9378, 9381, 10207, 10218, 10559, 10560, 10565, 10566, 11339, 11378, 11379, 11819, 11859, 11860, 12160, 12200, 12201
\HyPsd@tocsection . . 1479, 1480, 1481, 1482, 1483, 1484, 1485, 1487	\HyRef@autosetref . . . 7631, 7634	\ifetex@unexpanded 1630
	\HyRef@CaseStar 7695, 7701	\iffalse 690
	\HyRef@currentHtag . 7647, 7665, 7668, 7674, 7681, 7687, 7702	\IfFileExists 5436, 11100
	\HyRef@MakeUppercaseFirstOfFive 7575, 7577	\ifFld@checked 4931, 11660, 12520
	\HyRef@name . 7663, 7664, 7669, 7676, 7694, 7695, 7696, 7698	
	\HyRef@Ref 7581, 7583	
	\HyRef@ShowKeysInit 7704, 7717, 7721	
	\HyRef@ShowKeysRef 7635, 7703	
	\HyRef@StarSetRef . . 7546, 7564, 7567, 7570, 7575	
	\HyRef@StripStar . . . 7662, 7693	
	\HyRef@testreftype . . . 7640, 7659	
	\HyRef@thisref 7637, 7640	

<code>\ifFld@comb</code> 4778	<code>\ifHy@hypertextnames</code> 282, 5952, 6035, 6927, 7337, 7388	<code>\ifHy@useHidKey</code> 3210, 8354, 9715, 9982
<code>\ifFld@combo</code> . 4806, 4811, 11353, 11382, 11833, 11863, 12174, 12204	<code>\ifHy@implicit</code> . . 283, 3792, 13127	<code>\ifHy@usetitle</code> 304, 5451
<code>\ifFld@disabled</code> 4932, 11661	<code>\ifHy@linktocpage</code> 284, 2441, 2451	<code>\ifHy@verbose</code> . . 305, 4203, 4219, 4231, 4554, 6995
<code>\ifFld@edit</code> 4812	<code>\ifHy@localanchorname</code> 285, 5986, 5997	<code>\ifHy@windowui</code> . 306, 8230, 8760, 9170, 9776, 10109, 10897
<code>\ifFld@fileselect</code> 4781	<code>\ifHy@menubar</code> . 286, 8229, 8759, 9169, 9775, 10108, 10896	<code>\ifHyInfo@AddonUnsupported</code> 3458, 3472, 3507
<code>\ifFld@hidden</code> 11316, 11367, 11435, 11456, 11480, 11499, 11559, 11571, 11581, 11664, 11796, 11848, 11928, 11950, 11979, 12000, 12129, 12189, 12287, 12313, 12343, 12369	<code>\ifHy@naturalnames</code> . . 287, 5965, 7338, 7389	<code>\ifHyPsd@XeTeXBigChars</code> . . 688, 690, 693, 696
<code>\ifFld@multiline</code> 4779, 11304, 11566, 11783, 12116	<code>\ifHy@nesting</code> . . 288, 3765, 4269, 4302, 4337, 4462, 5248, 6361, 6376, 6436, 6593	<code>\ifmeasuring@</code> 5910, 5923
<code>\ifFld@multiselect</code> 4850	<code>\ifHy@newwindow</code> 290, 3599, 9478	<code>\ifnum</code> 720, 723, 726, 729, 732, 844, 969, 972, 983, 984, 988, 996, 1000, 1003, 1013, 1035, 1058, 1198, 1309, 1325, 1329, 1349, 1362, 1365, 1378, 1380, 1393, 1395, 1401, 2020, 2023, 2099, 2142, 2145, 2157, 2682, 2685, 2710, 3144, 3145, 3942, 3969, 4833, 4904, 4915, 5570, 5589, 5605, 5701, 7446, 7484, 7826, 7831, 8148, 8155, 8161, 8169, 8988, 8993, 9478, 9591, 9727, 9735, 9737, 9738, 9748, 9751, 9837, 9839, 9944, 10583, 11734, 11894, 12228, 12233, 12244, 12484, 12503, 12532, 12537, 12609, 12615, 12643, 12674, 12680, 12699, 12709, 12714, 12743, 12748, 12776, 12792, 12934, 13004, 13007, 13033, 13036, 13075, 13183, 13201, 13216
<code>\ifFld@password</code> . . . 4780, 11547	<code>\ifHy@newwindowset</code> . . 289, 3597	<code>\ifodd</code> 2123, 2128, 6950
<code>\ifFld@popdown</code> . . . 4598, 11354, 11834, 12175	<code>\ifHy@next</code> 867, 3757, 7166	<code>\ifpdf</code> 2722, 3826, 3888
<code>\ifFld@radio</code> . 11350, 11372, 11596, 11830, 11853, 12171, 12194	<code>\ifHy@ocgcolorlinks</code> . . 291, 3093, 4035, 4045, 5268, 7825, 7843, 7918, 7926, 8876, 8959, 8967	<code>\ifpdfstringunicode</code> 415, 418
<code>\ifFld@readonly</code> . . . 11568, 11578, 11662	<code>\ifHy@pageanchor</code> 292, 6022, 6034, 6049, 6926	<code>\ifportrait</code> 8394
<code>\ifForm@html</code> 4952	<code>\ifHy@pagelabels</code> 293, 5535, 5721, 5799	<code>\ifthenelse</code> 6861
<code>\ifhmode</code> . 2293, 2302, 4240, 6276, 6394, 6403, 6540, 6542	<code>\ifHy@pdfa</code> 308, 3708, 4037, 4387, 4611, 5124, 5160, 5273, 7985, 8057, 8088, 8124, 8451, 9021, 9049, 9076, 9100, 9439, 9460, 9481, 9500, 9532, 9563, 9579, 10311, 11275, 11425, 11473, 11750, 11918, 11972, 12088, 12276, 12336, 12522, 12595, 12733	<code>\iftrue</code> 693, 1637, 1659, 1923, 13185
<code>\ifHy@activeanchor</code> . . . 264, 4477	<code>\ifHy@pdfmarkerror</code> 10158, 10166	<code>\ifvmode</code> 2258, 2274, 2283
<code>\ifHy@backref</code> . . 265, 3780, 4121, 5258, 6835, 6871	<code>\ifHy@pdfpagehidden</code> . 294, 3214, 8357, 9716, 9987	<code>\ifvoid</code> 6143, 6151, 6313
<code>\ifHy@bookmarks</code> 266, 3978	<code>\ifHy@pdfstring</code> . . 295, 788, 5891	<code>\ifvtexhtml</code> 3865, 3894
<code>\ifHy@bookmarksnumbered</code> . 267, 7332, 7383, 12819	<code>\ifHy@plainpages</code> 296, 3775, 6036, 6928	<code>\ifvtexpdf</code> 3905
<code>\ifHy@bookmarksopen</code> . 268, 3968	<code>\ifHy@psize</code> 297	<code>\ifvtexps</code> 3908
<code>\ifHy@breaklinks</code> 269, 2484, 9903, 9935, 10201, 10212	<code>\ifHy@raiselinks</code> . 298, 8533, 8607, 8636, 8666, 10791, 11059	<code>\ifxetex</code> 649, 680, 2724, 3331, 3850, 3891, 3933
<code>\ifHy@centerwindow</code> 270, 8232, 8762, 9172, 9778, 10111, 10899	<code>\ifHy@seminarslides</code> 299	<code>\ignorespaces</code> . . . 527, 6117, 6271, 6472, 6578, 6589, 6592, 6649, 6657, 6719, 6734, 6750, 6759, 6869, 7317, 7369
<code>\ifHy@CJKbookmarks</code> . 271, 1109	<code>\ifHy@setpagesize</code> 300, 8383, 9229, 9368, 10556	<code>\IJ</code> 13442, 14124
<code>\ifHy@colorlinks</code> . 272, 4049, 5263, 10721	<code>\ifHy@setpdfversion</code> . . 2606, 7830	<code>\ij</code> 13651, 14126
<code>\ifHy@displaydoctitle</code> 307, 8233, 8763, 9173, 9779, 10112, 10900	<code>\ifHy@texht</code> 301, 4077, 4114, 5311, 7492	<code>\immediate</code> 5399, 5400, 5401, 5403, 5443, 5714, 5804, 5812, 6046, 6074, 6714, 6729, 6745, 6755, 6785, 6808, 6834,
<code>\ifHy@draft</code> 273, 3684	<code>\ifHy@toolbar</code> . . 302, 8228, 8758, 9168, 9774, 10107, 10895	
<code>\ifHy@DvipdfmxOutlineOpen</code> 3932, 13073	<code>\ifHy@typexml</code> . . 263, 3785, 4052, 4096, 5398, 13022, 13102	
<code>\ifHy@escapeform</code> . . . 276, 12444, 12474	<code>\ifHy@unicode</code> . . . 303, 410, 586, 598, 626, 634, 643, 968, 1128, 1830, 1851, 1864, 1893, 1899, 2141, 2517, 2567, 3332, 5745, 12485	
<code>\ifHy@figures</code> 277, 3760, 5243, 7142		
<code>\ifHy@fitwindow</code> 278, 8231, 8761, 9171, 9777, 10110, 10898		
<code>\ifHy@frenchlinks</code> 279, 4065		
<code>\ifHy@hyperfootnotes</code> . 280, 6336		
<code>\ifHy@hyperindex</code> 281, 3770, 5253, 7149		

6864, 7844, 7859, 7874, 9842,
10580, 11677, 11699, 11740,
12924, 12990, 13021, 13023,
13101, 13103
\incr@eqnum 6162, 6175
\index 516
\indexentry 7204, 7219, 7227, 7231,
7236
\input 771, 779,
2526, 3065, 3073, 3080, 3928,
10498, 10581, 10672, 10834
\InputIfFileExists . . 3667, 13014,
13048, 13093, 13095
\inputlineno 4210, 4469
\insert 6451
\IntCalcAdd 2049
\IntCalcDec 1220
\IntCalcDiv 1214, 1223, 1228, 1331,
1340, 1352, 1369, 1384, 1399,
2033, 2039, 2045
\intcalcDiv . 1204, 2040, 2047, 2050
\IntCalcMod . . 1216, 1225, 1231,
1335, 1341, 1356, 1372, 1387,
1401, 1403, 2035, 2040, 2041,
2047, 2050, 2052
\intcalcMod 1206
\intcalcSub 2027
\interfootnotelinepenalty . . 6454
\interlinepenalty 6454
\item 5868, 5871, 6741, 6753, 6856
\Itemautorefname 7727
\itemautorefname . . . 2810, 2828,
2846, 2864, 2882, 2900, 2918,
2947, 2948, 2976, 2994, 7727,
7728, 7731
\itemindent 6314
\itshape 469

J

\j 14131, 14316, 14380
\jarr 15737
\jeem 15709
\jeh 15745
\jobname 5400, 5436, 5443, 11100,
12923, 13014, 13021, 13048,
13093, 13095, 13101

K

\k 13326, 13668, 13670, 13675,
13677, 13720, 13738, 13757,
13764, 14028, 14030, 14068,
14070, 14115, 14117, 14118,
14253, 14255, 14312, 14314,
14911, 14950, 14953
\kaf 15727
\kasra 15740
\keepPDF@SetupDoc 10725, 10732

\kern 1733, 1805, 1810, 1822, 6314,
6945, 6946, 6947, 6949, 6950,
6955, 13142
\kernel@ifnextchar 546
\kha 15711
\KV@Hyp@draft 2415
\KV@Hyp@nolinks 2415
\kv@key . . 3466, 3469, 3476, 4831,
4834, 4836, 4840, 4844
\kv@parse 4830
\kv@parse@normalized 3491, 3498
\kv@processor@default 3494, 3501
\kv@set@family@handler . . 3459
\kv@value . 3464, 4832, 4839, 4840
\kvsetkeys 3439

L

\L 13435, 14155
\l 13448, 14157
\l@slide . . 7317, 7427, 7432, 7436,
7443
\l@subslide . 7369, 7432, 7439, 7483
\label 515, 6968
\label@C@hyperref . . . 4309, 4311
\label@hyperdef 4295, 4323
\label@hyperref . 4276, 4308, 4490
\labelsep 6868
\labelwidth 6867
\lam 15728
\language@group 494
\languageshorthands 824, 825, 860
\LARGE 476
\Large 477
\large . 480, 7449, 7457, 7467, 7475
\lastbox 6312
\lastpage@putlabel 6017
\lastskip . 2275, 2279, 2286, 2294,
2298, 2305
\LaTeX . . . 439, 440, 11106, 11107
\LaTeXe 440, 11107
\LayoutCheckField . 5199, 11500,
12001, 12374
\LayoutChoiceField . 5196, 11371,
11852, 12193
\LayoutPushButtonField . . 5202,
11429, 11436, 11922, 11929,
12280, 12289
\LayoutTextField . . . 5193, 11318,
11798, 12135
\lccode 719,
1138, 2064, 5084, 7163, 7164,
12848, 12849, 12850, 12851,
12852, 12853, 12854, 12855,
12856, 12857, 12858
\ldots 434
\leavevmode 524, 2253, 3694, 3711, 3751,

4392, 5369, 6393, 6539, 6775,
7587, 7595, 7971, 8042, 8073,
8109, 8532, 8606, 8634, 8664,
9041, 9069, 9263, 9272, 9326,
9475, 9496, 9519, 9550, 9905,
10200, 10425, 10443, 10468,
10790, 11058, 11430, 11437,
11472, 11882, 11903, 11923,
11930, 11951, 11971, 12226,
12257, 12281, 12290, 12315,
12335, 13140
\LetLtxMacro . 5314, 5318, 5386,
5390
\limits 4186
\listofslides 7418
\listslidenam . 7417, 7420, 7422,
7424
\literalps@out 2251, 9831,
9836, 9885, 9891, 9908, 9914,
10176, 10187, 10208, 10210,
10219, 10221, 10496, 10579,
10642, 10832
\lower . . . 8536, 8609, 8638, 8668,
10210, 10794, 11062
\lowercase . 739, 1139, 2065, 2317,
2754, 2784, 3406, 3442, 4503,
4504, 4507, 4512, 4536, 4546,
4600, 4656, 4976, 5016, 5019,
5085, 7165, 9943, 12859
\lslide@flag 7444, 7447, 7465, 7484,
7488
\LT@array 6130
\LT@firsthead 6143, 6151
\LT@p@ftn . 6409, 6412, 6416, 6429
\LT@p@ftntext 6407, 6414
\LT@start 6145, 6155
\ltx@firstofone 12876, 12888
\ltx@firstoftwo 4448
\ltx@gobble 12874, 12886
\ltx@ifpackageloaded 1105
\ltx@ifUndefined . . 493, 536, 611,
646, 762, 763, 764, 868, 874,
880, 885, 890, 897, 903, 909,
914, 920, 925, 935, 941, 947,
953, 1092, 1098, 1475, 1569,
1570, 2205, 2238, 3754, 3755,
3756, 5491, 5852, 5940, 6223,
6677, 7615, 7616, 7660, 7661,
7663, 7664, 8019, 8029, 8414,
9370, 9427, 9514, 9881, 9915,
10003, 10180, 13174, 13184
\ltx@ifundefined 6321
\ltx@LocalAppendToMacro . 248,
251
\ltx@secondoftwo 4446
\ltx@space 3924, 3926
\luatexrevision 8192

\luatexversion 8184, 8189

M

\m@ne 4222, 4518, 6062, 6243,
8997, 13095, 13183, 13198

\make@df@tag@@ 7078, 7080

\make@df@tag@@@ 7079, 7081

\make@stripped@name 5915, 6184,
6206, 6230, 6241

\makeatletter 3, 802, 5435

\MakeButtonField . . 5209, 11431,
11439, 11458, 11477, 11482,

11924, 11933, 11958, 11976,

11982, 12282, 12285, 12314,
12340, 12344

\MakeCheckField . . . 5206, 11502,
12004, 12371

\MakeChoiceField . . 5208, 11414,
11906, 12255

\MakeFieldObject . . 11676, 11759,
11769, 11772

\MakeLowercase 491

\MakeLowercaseUnsupportedInPdfStrings
. 491

\MakeRadioField . . . 5205, 11402,
11893, 12220

\makeslideheading 7327

\makeslidesubheading 7379

\maketag@@@ 7067

\MakeTextField 5207, 11320,
11801, 12132

\maketitle 6489, 6490

\MakeUppercase 490, 7422, 7424,
7578

\MakeUppercaseUnsupportedInPdfStrings
. 490

\MathBSuppress 9273, 9277

\mathdisplay 6165, 6174

\mathdisplay@push . . 6163, 6172

\mathversion 485

\maxdimen 3165, 11681

\MaybeStopEarly 350, 2633, 2687,
3796, 3896, 5832

\mbox 525, 6788, 6811, 7928, 8969

\mddefault 6283

\mdseries 468

\meaning 62, 153,
159, 2214, 5475, 5978, 6248,
13059, 13067, 13082

\measuring@false 5910

\mediaheight . . . 9364, 9366, 9372,
9379

\mediawidth 9375, 9382

\meem 15729

\message 7445

\MessageBreak 383, 1836,
1857, 1870, 1893, 1898, 1900,

2339, 2340, 2354, 2376, 2379,
2381, 2459, 2460, 2486, 2487,
2539, 2540, 2541, 2579, 2580,
2600, 2610, 2776, 3095, 3335,
3419, 3474, 3475, 3654, 3830,
3831, 3839, 3840, 3854, 3855,
3869, 3870, 3878, 3879, 4039,
4557, 4562, 4571, 4614, 4660,
4784, 4897, 4969, 4980, 5540,
5748, 5763, 5764, 6025, 6972,
7002, 7003, 7004, 7005, 7006,
7137, 7975, 9006, 9451, 9523,
10012, 11689, 11691, 12797,
12815, 12926

\MF 443, 11109

\MP 444, 11110

\multiply 8188, 9696, 9731

N

\n 730

\name@of@eq 5884, 5913

\name@of@slide 5885, 5895

\nameref 522, 4109

\nasb 15735

\netscape 8568

\new@ifnextchar 547

\new@pdflink 7956, 8007, 8010

\new@crefstepcounter . 6157, 6189

\newblock 6872

\newcommand 4, 9, 42, 2252, 5373,
5847, 5850, 5853, 5854, 5855,
5857, 5858, 5859, 5860, 5862,
5863, 5864, 5865, 5866, 5867,
5876, 5877, 5878, 5879, 5880,
5881, 6239, 7105, 7304, 7309,
7310, 12896, 12899, 12904

\newcount . . . 351, 352, 4935, 5551,
11410, 11900, 12102, 12251,
12931

\newcounter 5869, 6337, 8875,
12846

\newdimen 348, 4936, 4937

\newif 263, 264, 265, 266, 267,
268, 269, 270, 271, 272, 273,
276, 277, 278, 279, 280, 281,
282, 283, 284, 285, 286, 287,
288, 289, 290, 291, 292, 293,
294, 295, 296, 297, 298, 299,
300, 301, 302, 303, 304, 305,
306, 307, 308, 688, 867, 2606,
3210, 3458, 3932, 4510, 4598,
4931, 4932, 4952, 5886, 5887,
5910, 6193, 9252, 10158

\newlabel . . . 2217, 4333, 5413, 5414,
5422, 5448, 6047, 6075

\newlabelxx 5415, 5416

\newlength 13133

\newline 437, 5496

\newname 5916, 6185, 6207, 6231,
6244, 6253

\newsavebox 8805, 10195

\newtie 13328, 13329, 13712, 13742,
13761, 13777

\newtoks . . . 90, 4998, 10030, 10228,
10229

\newwrite 5442, 13019, 13099

\next 6862, 6863, 6864, 9659, 9661,
9663

\nfss@text . . . 7499, 7519, 7536, 7653

\NG 14173

\ng 14175

\noboundary 15750

\nobreak . . . 2276, 2284, 2295, 2303,
6394, 6540

\nobreakspace . . . 535, 7590, 7619,
7622

\noexpand 22,
93, 95, 108, 116, 169, 171, 172,
173, 176, 206, 708, 812, 1152,
1584, 1601, 1724, 2078, 2282,
2283, 2284, 2287, 2301, 2302,
2303, 2306, 3026, 3028, 3030,
3031, 3047, 3221, 3222, 3224,
3524, 4180, 4283, 4363, 4464,
4466, 4566, 5643, 5644, 5653,
5655, 5658, 5777, 6059, 6060,
6062, 6087, 6088, 6089, 6090,
6091, 6099, 6100, 6101, 6247,
6410, 6418, 6419, 6420, 6421,
6422, 6424, 6549, 6638, 6713,
6728, 6744, 7097, 7099, 7552,
7553, 7669, 7670, 7675, 7677,
7682, 7683, 7688, 7689, 8191,
8746, 10095, 10162, 10639,
10883, 11346, 11347, 11348,
11349, 11826, 11827, 11828,
11829, 12167, 12168, 12169,
12170, 12446

\nofrenchguillemets 554, 556

\NoHy@OrgPageRef . . 5318, 5320,
5390, 5392

\NoHy@OrgRef 5314, 5316, 5386,
5388

\NoHyper 5322

\nohyperpage . . . 5368, 7248, 7250,
7252

\nolinkurl 4262

\nolinkurl@ 4262, 4263

\NomFancyVerbLineautorefname
. 2965

\Nomfootnoteautorefname . 2945

\Nomtheoremautorefname . 2969

\nonumber 6218, 6221

\normalfont 463, 6279

\normalsize 481, 6585, 6656

`\NR@getttitle` 6575
`\null` 6853, 6861, 7541, 7649
`\number` 986, 990, 993, 1001, 1004,
1006, 1311, 1313, 1340, 1341,
2024, 2082, 2083, 2084, 2085,
2089, 2090, 2091, 2092, 2093,
2097, 2098, 2099, 2100, 2101,
2102, 2103, 2107, 2108, 2109,
2110, 2111, 2112, 2115, 2117,
2121, 2122, 2124, 2126, 2128,
2131, 2135, 2136, 2137, 2138,
2147, 2148, 2152, 2153, 2160,
2161, 2165, 2168, 2169, 2170,
2180, 2182, 2183, 2188, 2190,
2191, 2196, 2197, 3544, 3934,
3970, 4524, 7837, 7840, 8596,
8611, 8612, 8623, 8624, 8640,
8641, 8652, 8653, 8670, 8671,
8682, 8683
`\numberline` . . . 6578, 6649, 12820,
12824
`\numberwithin` 7102
`\numexpr` . 2089, 2090, 2091, 2093,
2099, 2107, 2108, 2109, 2110,
2111, 2112, 2116, 2118, 2122,
2124, 2126, 2128, 2132, 2135,
2136, 2138, 2147, 2152, 2169,
2183, 2191, 2197, 3548
`\nun` 15730

O

`\O` 13568, 13936, 14331
`\o` 13636, 14004, 14333
`\obeylines` 10638
`\OBJ@acroform` . . . 11756, 11757
`\OBJ@Helv` . 11737, 11746, 12063
`\OBJ@OCG@print` . . . 7873, 7876,
7884, 7910, 8893, 8895, 8908,
8912, 8921, 8950
`\OBJ@OCG@view` . . . 7858, 7876,
7909, 8877, 8879, 8892, 8912,
8949
`\OBJ@OCGs` . . 7879, 7882, 7888,
7893, 7898, 8909, 8911, 8915,
8919, 8925, 8930, 8935
`\OBJ@pdfdocencoding` . . . 11735,
12044, 12060
`\OBJ@ZaDb` 11736, 11745, 12053
`\OCIRCUMFLEX` . 15573, 15671,
15672, 15673, 15674, 15675
`\ocircumflex` 15566, 15611, 15612,
15613, 15614, 15615
`\oddsidemargin` 6951
`\OE` 13437, 14189
`\oe` 13450, 14191
`\offinterlineskip` 5522
`\OHORN` . . . 15574, 15676, 15677,
15678, 15679, 15680

`\ohorn` . . 2992, 2999, 15567, 15616,
15617, 15618, 15619, 15620
`\oldb` 762
`\oldc` 763
`\oldcontentsline` . 5408, 5411, 5421
`\oldd` 764
`\oldnewlabel` . . . 5413, 5418, 5422
`\OMEGA` 11105
`\on@line` 6999, 7000
`\openout` 5400, 5443, 13021, 13101
`\OpMode` . 2682, 2685, 2696, 2710,
2713, 9748, 9839, 10583

`\or` 1020, 1021, 1022,
1023, 1024, 1025, 1026, 1027,
1028, 1042, 1043, 1044, 1045,
1046, 1047, 1048, 1049, 1050,
1065, 1066, 1067, 1068, 1069,
1070, 1071, 1072, 1073, 1158,
1159, 1160, 1161, 1162, 1163,
1164, 1165, 1166, 1167, 1168,
1169, 1170, 1171, 1172, 1173,
1174, 1175, 1176, 1177, 1178,
1179, 1180, 1181, 1182, 1183,
1184, 1185, 1186, 1187, 1188,
1189, 1207, 1229, 1232, 1238,
1239, 1240, 1241, 1242, 1243,
1244, 1245, 1246, 1247, 1248,
1249, 1250, 1251, 1252, 1253,
1254, 1255, 1256, 1257, 1258,
1259, 1260, 1261, 1262, 1263,
1264, 1265, 1266, 1267, 1268,
1269, 1274, 1275, 1276, 1277,
1278, 1279, 1280, 1281, 1282,
1283, 1284, 1285, 1286, 1287,
1288, 1289, 1290, 1291, 1292,
1293, 1294, 1295, 1296, 1297,
1298, 1299, 1300, 1301, 1302,
1303, 1304, 1305, 1318, 1319,
1320, 1321, 1322, 1434, 1435,
1436, 4684, 4690, 4695, 4909,
7022, 7026, 7464, 7473, 9741,
12939, 12940, 12941, 12942,
12943, 12944, 12945, 12946,
12947, 12948, 12949, 12950,
12951, 12952, 12953, 12954,
12955, 12956, 12957, 12958,
12959, 12960, 12961, 12962,
12963, 12964, 12965, 12966,
12967, 12968, 12969, 12970

P

`\P` 433
`\p@` . 2148, 2153, 4938, 4944, 6285,
8542, 8619, 8648, 8678, 9695,
10800, 11072, 11341, 11821,
12162, 13258, 13259
`\p@equation` 7074

`\PackageError` 61, 2538, 3735, 4388,
4659, 4783, 4979, 5126, 5162,
11426, 11474, 11919, 11973,
12277, 12337
`\PackageInfo` . . . 243, 7821, 7835,
11687
`\PackageWarning` . 241, 2609, 4895
`\PackageWarningNoLine` . . . 242
`\pageautorefname` . . . 2823, 2841,
2859, 2877, 2895, 2913, 2931,
2971, 2989, 3007, 7622, 7744
`\pagename` 7619
`\pageref` . . . 521, 3806, 4106, 5318,
5319, 5390, 5391, 6025, 7608,
7612
`\paperheight` 3647, 8399,
8401, 8404, 8406, 8418, 8419,
9233, 9234, 9371, 9372, 9374,
10560, 10561
`\paperwidth` . . . 8395, 8397, 8408,
8410, 8415, 8416, 9232, 9234,
9375, 10559, 10561
`\par` . 6277, 6577, 6605, 6647, 6657,
6855, 6875
`\paragraphautorefname` . . . 2819,
2837, 2855, 2873, 2891, 2909,
2927, 2960, 2962, 2985, 3003,
7740
`\partautorefname` 2813, 2831, 2849,
2867, 2885, 2903, 2921, 2951,
2979, 2997, 7734
`\partnumberline` . . . 12821, 12825
`\PassOptionsToPackage` . . . 2726,
2765, 2769, 2791, 3678, 3921
`\pdf@addtoks` 10231, 10250, 10256,
10265, 10272, 10276, 10278,
10280, 10282, 10284, 10292,
10301, 10305, 10307, 10309,
10312, 10321, 10325, 10327,
10329, 10331, 10333, 10335,
10337, 10339, 10341, 10343,
10345, 10347, 10349, 10351,
10353, 10355, 10356, 10357,
10358, 10359, 10360, 10361,
10362, 10363, 10364, 10365,
10370
`\pdf@addtoksx` 10225, 10235, 10248
`\pdf@box` . . . 10195, 10202, 10204,
10206, 10207, 10210, 10217
`\pdf@defaulttoks` . . 10162, 10229,
10230, 10240
`\pdf@docset` 10030
`\pdf@endanchor` . 7963, 8007, 8014
`\pdf@escapestring` 7800
`\PDF@FinishDoc` 2636, 2637, 2690,
2691, 3641, 3696, 3799, 3800,
3899, 3900, 5367, 5532, 5533,

[8267](#), [8472](#), [8695](#), [9126](#), [9253](#),
[9807](#), [10031](#), [10839](#), [11000](#)
\pdf@linktype [10180](#), [10184](#), [10245](#),
[10246](#)
\pdf@rect . . . [10172](#), [10186](#), [10199](#)
\PDF@SetupDoc [3640](#),
[3695](#), [5285](#), [5286](#), [5366](#), [8198](#),
[8473](#), [8726](#), [9166](#), [9254](#), [9756](#),
[10082](#), [10727](#), [10870](#), [11001](#)
\PDF@SetupDox [8198](#)
\pdf@strcmp [844](#)
\pdf@toks . . . [10162](#), [10177](#), [10188](#),
[10228](#), [10232](#), [10236](#)
\pdf@type . . . [10164](#), [10168](#), [10177](#),
[10188](#), [10223](#), [10243](#)
\pdfannotlink [7947](#)
\pdfbookmark . . . [2252](#), [5372](#), [5373](#),
[12897](#), [12902](#), [12907](#), [12911](#)
\pdfcatalog [5686](#), [7880](#), [8213](#), [8255](#),
[11757](#)
\PDFdefaults [10239](#)
\pdfdest [7965](#)
\pdfendlink . . . [8004](#), [11801](#), [11893](#),
[11907](#), [11934](#), [11959](#), [11983](#),
[12005](#)
\pdfescapestring [12475](#)
\pdfform [7949](#)
\PDFForm@Check . . [11501](#), [11503](#),
[12002](#), [12003](#), [12375](#), [12379](#),
[12494](#)
\PDFForm@List . . . [11413](#), [11415](#),
[11904](#), [11905](#), [12258](#), [12263](#),
[12601](#)
\PDFForm@Name . . [11794](#), [11847](#),
[11917](#), [11998](#), [12127](#), [12188](#),
[12275](#), [12367](#), [12482](#)
\PDFForm@Push . . . [11438](#), [11440](#),
[11931](#), [11932](#), [12291](#), [12295](#),
[12522](#)
\PDFForm@Radio . . [11401](#), [11405](#),
[11883](#), [11885](#), [12227](#), [12239](#),
[12634](#)
\PDFForm@Reset . . [11481](#), [11483](#),
[11980](#), [11981](#), [12345](#), [12350](#),
[12733](#)
\PDFForm@Submit [11457](#), [11460](#),
[11952](#), [11954](#), [12316](#), [12321](#),
[12701](#)
\PDFForm@Text . . . [11319](#), [11321](#),
[11799](#), [11800](#), [12136](#), [12139](#),
[12666](#)
\pdfhorigin [8391](#)
\pdfinfo [8270](#)
\pdflastform [7950](#)
\pdflastlink [11717](#)
\pdflastobj [7858](#), [7873](#), [7879](#), [11756](#),
[12044](#), [12053](#), [12063](#)
\pdflastxform . . [7950](#), [11679](#), [11681](#)
\pdflinkmargin . . . [7945](#), [7948](#), [7953](#)
\pdfliteral [7929](#), [7931](#), [7936](#)
\pdfm@box [8805](#), [12098](#), [12099](#),
[12100](#), [12131](#), [12142](#), [12219](#),
[12243](#), [12254](#), [12265](#), [12285](#),
[12298](#), [12314](#), [12323](#), [12344](#),
[12352](#), [12370](#), [12381](#)
\pdfmark
[5795](#), [8746](#), [8755](#), [8785](#), [9872](#),
[9892](#), [9922](#), [9954](#), [9971](#), [9983](#),
[10017](#), [10054](#), [10066](#), [10095](#),
[10104](#), [10135](#), [10159](#), [10378](#),
[10392](#), [10407](#), [10419](#), [10426](#),
[10444](#), [10469](#), [10883](#), [10892](#),
[10923](#), [11320](#), [11402](#), [11414](#),
[11439](#), [11458](#), [11482](#), [11502](#),
[13063](#)
\pdfmark@ [10159](#), [10160](#)
\pdfminorversion [7818](#)
\PDFNextPage [10390](#)
\PDFNextPage@ . . . [10390](#), [10391](#)
\pdfobj [7844](#), [7859](#), [7874](#), [11740](#),
[12011](#), [12045](#), [12054](#)
\PDFOpen [10418](#)
\pdfoptionpdfminorversion [7815](#)
\pdfoutline [13111](#)
\pdfpageattr . . . [8309](#), [8313](#), [8314](#),
[8324](#), [8333](#), [8337](#), [8338](#), [8348](#),
[8356](#), [8359](#), [8360](#), [8370](#)
\pdfpageheight [8401](#), [8410](#), [8419](#),
[8426](#)
\pdfpageresources [7907](#)
\pdfpagesattr . . . [8202](#), [8204](#), [8206](#)
\pdfpagewidth . . . [8397](#), [8406](#), [8416](#),
[8423](#)
\PDFPreviousPage [10403](#)
\PDFPreviousPage@ [10404](#), [10406](#)
\pdfrefform [7951](#)
\pdfrefobj [11735](#), [11736](#), [11737](#)
\pdfrefxform [7951](#), [11681](#)
\pdfstartlink [7946](#), [7947](#),
[7999](#), [8043](#), [8074](#), [8110](#), [8437](#),
[11800](#), [11884](#), [11905](#), [11932](#),
[11953](#), [11981](#), [12003](#)
\pdfstringdef [403](#), [675](#), [3361](#), [3367](#),
[3373](#), [3379](#), [3384](#), [3390](#), [3397](#),
[3403](#), [3483](#), [4856](#), [4861](#), [4887](#),
[5499](#), [5579](#), [5581](#), [6040](#), [6934](#),
[12490](#), [12829](#)
\pdfstringdefDisableCommands .
. . . [761](#), [800](#), [5370](#), [5494](#)
\pdfstringdefPostHook . . [671](#), [794](#)
\pdfstringdefPreHook . . [531](#), [794](#),
[806](#), [808](#), [5493](#), [5503](#)
\pdfstringdefWarn . . [436](#), [437](#), [526](#),
[811](#), [1592](#), [1597](#), [1616](#), [1620](#)
\pdftexrevision . . [8158](#), [8166](#), [8177](#)
\pdftexversion . . . [8153](#), [8155](#), [8158](#),
[8161](#), [8164](#), [8165](#), [8169](#), [8175](#),
[8176](#), [11734](#)
\pdfvorigin [8392](#)
\pdfxform [7949](#), [11677](#)
\peh [15743](#)
\penalty [1727](#), [2261](#), [4241](#), [6782](#),
[6805](#)
\phantom [486](#)
\phantomsection [3642](#), [5374](#), [6974](#),
[12766](#), [12817](#), [13202](#)
\Preamble [11101](#)
\PrerenderUnicode [3352](#)
\process@me [5473](#), [5485](#), [5486](#),
[8201](#), [8210](#)
\ProcessKeyvalOptions . . . [3682](#)
\protect [1725](#), [4313](#), [6578](#),
[6649](#), [6713](#), [6728](#), [6744](#), [6860](#),
[6867](#), [6868](#), [7012](#), [7043](#), [7317](#),
[7369](#), [7498](#), [7518](#), [7524](#), [7535](#),
[7652](#), [8483](#), [8573](#), [9324](#), [9399](#),
[10738](#), [11011](#), [12836](#), [13135](#),
[13258](#), [13259](#)
\protected@edef [4348](#), [5639](#), [6245](#),
[6265](#), [7972](#), [9003](#), [9448](#), [9520](#),
[10009](#)
\protected@write [2216](#), [4332](#), [6840](#),
[7203](#), [7218](#), [7226](#), [7230](#), [7235](#),
[12835](#)
\protected@xdef . . [6419](#), [6421](#), [6515](#)
\providecommand
[2233](#), [2234](#), [2741](#), [3120](#), [3121](#),
[3124](#), [3125](#), [3887](#), [4083](#), [4084](#),
[4194](#), [4267](#), [5404](#), [5669](#), [5688](#),
[5813](#), [6678](#), [6679](#), [6694](#), [6772](#),
[7300](#), [7301](#), [7417](#), [7725](#), [7726](#),
[7727](#), [7728](#), [7729](#), [7730](#), [7731](#),
[7732](#), [7733](#), [7734](#), [7735](#), [7736](#),
[7737](#), [7738](#), [7739](#), [7740](#), [7741](#),
[7742](#), [7743](#), [7744](#), [7807](#), [7955](#),
[7967](#), [7968](#), [8471](#), [8567](#), [8568](#),
[8803](#), [8862](#), [8863](#), [8864](#), [9250](#),
[9369](#), [9391](#), [9392](#), [9393](#), [9832](#),
[10196](#), [10197](#), [10494](#), [10502](#),
[10503](#), [10504](#), [10505](#), [10577](#),
[10589](#), [10590](#), [10591](#), [10592](#),
[10636](#), [10677](#), [10678](#), [10679](#),
[10680](#), [10828](#), [10830](#), [10831](#),
[10944](#), [10945](#), [10992](#), [11700](#)
\PushButton [5181](#)
\put@me@back . . . [4459](#), [4472](#), [4482](#)

Q

\qaf [15726](#)
\quotedblbase [13417](#), [13654](#), [15243](#),
[15547](#)

\quotesinglbase . . . 13427, 13656,
15237, 15549

R

\r . 733, 13295, 13307, 13319, 13529,
13594, 13703, 13730, 13749,
13771, 13898, 13962, 14245,
14247, 15207, 15209

\ra 15714

\raff 15736

\raise 2268, 8543, 8620, 8649, 8679,
10221, 10801, 11073

\ReadBookmarks 3681, 3699, 3813,
3987, 4117, 12995, 13030

\real@setref 7495, 7561

\realfootnote 6512

\Ref 7580, 7584, 7589

\ref . . 520, 3805, 4103, 4498, 5314,
5315, 5386, 5387, 6477, 6484,
7599, 11093

\ref@one 4289, 4290

\rEfLiNK 11094, 11095

\refstepcounter 5883, 5890, 6112,
6132, 6157, 6181, 6189, 6641

\rem@ptetc 9944, 9946

\renewcommand 2208, 6620, 7119,
12911

\RequirePackage
. 22, 232, 233, 234, 235, 236,
237, 238, 239, 240, 827, 1103,
1629, 2202, 2591, 3671, 3787,
3788, 4055, 4099, 4122, 4259,
4501, 5356, 5513, 5729, 7747,
9251, 10997, 12921

\RerunFileCheck 12923

\Reset 5190

\reset@font 6788, 6811, 7499, 7519,
7536, 7653

\revtex@checking 6765

\Rightarrow 7451

\rlap 7930, 8971

\rm 474

\rmfamily 464

\Roman 5635

\roman 5636

\romannumeral 818, 819

\rule 6462

S

\sad 15718

\sbox . . . 3348, 5210, 10196, 10204,
11676

\scr@LT@array 6131

\scriptsize 482

\scriptstyle 6778

\scrollmode 1644, 1669, 1679, 1692,
1784, 1916

\scshape 470

\section 7419
\sectionautorefname . . 2816, 2834,
2852, 2870, 2888, 2906, 2924,
2953, 2982, 3000, 7737

\seen 15716

\selectfont 450, 4066, 11765

\setbox 1728,
1734, 1740, 3148, 3154, 5032,
5521, 6312, 7920, 8463, 8534,
8605, 8635, 8665, 8944, 8961,
10792, 11060, 12131, 12219,
12254, 12285, 12314, 12344,
12370

\setkeys . . 2630, 2721, 3338, 3663,
3709, 3920, 4036, 4929, 7827,
10165, 11292, 11532, 11545,
11594, 11637, 11658, 11732,
12073

\setlength 387, 388, 2265,
8391, 8392, 8397, 8401, 8406,
8410, 8416, 8419, 8423, 8426,
9372, 9375, 9379, 9382, 9695,
13152, 13223

\setpdfinkmargin 3531, 3532, 7945

\settowidth . 11338, 11818, 12159

\SetupKeyvalOptions 3672

\sffamily 465

\shadda 15741

\sheen 15717

\shortciteN 6903

\SK@ 7711

\SK@@ref 7711

\SK@ref 7708

\skip@ 1742, 1816, 1817, 1820, 1822,
2279, 2285, 2298, 2304

\slide@cline 7437, 7450, 7458, 7468,
7476

\Slide@contents 7442

\slide@contents 7435

\slide@heading 7313

\slide@subheading 7366

\slide@undottedcline 7428

\slidenumberline 7429, 7437, 7451,
7459, 7469, 7477

\SliTeX 442

\slshape 471

\small 483

\smash 2262

\spacefactor 6394, 6403, 6540, 6542

\special@paper 3643

\SpecialDvipdfmxOutlineOpen .
. 2657, 2659, 3942

\splitmaxdepth 6456

\splittopskip 6455

\SS 13652, 15546

\ss 2863, 13582, 13667, 13950

\st@rredfalse 6164, 6173

\stepcounter . . 5900, 6060, 6264,
6395, 6514, 8987, 12832

\stockheight 3647, 8425,
8426, 9239, 9240, 9378, 9379,
10566, 10567

\stockwidth 8422, 8423, 9238, 9240,
9381, 9382, 10565, 10567

\stop@hyper 5337

\StringEncodingConvertTest 651,
660

\strip@period 2221

\strip@prefix 62, 2214, 5475, 5978,
6248, 13059, 13067, 13082

\strip@pt 392, 399, 3659,
8397, 8401, 8406, 8410, 9698,
12517, 12629, 12657, 12694,
12742

\strip@pt@and@otherjunk . 9891,
9914, 9946

\strutbox 6456

\sub@label 2208

\subeqnarray 6224, 6226

\subequations 6262, 6263

\subfig@oldlabel 2210

\Submit 5187

\SubmitObject 11955

\SubmitPObject 11955

\subparagraphautorefname 2820,
2838, 2856, 2874, 2892, 2910,
2928, 2961, 2963, 2986, 3004,
7741

\subpdfbookmark 12899

\subsection 10824

\subsectionautorefname . . 2817,
2835, 2853, 2871, 2889, 2907,
2925, 2958, 2983, 3001, 7738

\subsubsectionautorefname 2818,
2836, 2854, 2872, 2890, 2908,
2926, 2959, 2984, 3002, 7739

\sukun 15742

\surd 7459

T

\T 15706

\t 13327, 13722, 13741, 13760,
13776

\T@nameref 4110

\T@pageref 4090, 4107, 7597

\T@ref 4085, 4104

\T@temp 6766, 6769

\Ta 15720

\taa 15707

\tableautorefname . . . 2812, 2830,
2848, 2866, 2884, 2902, 2920,
2950, 2978, 2996, 7733

\tagform@ 7073

\tatweel 15724

<code>\tcheh</code>	15744		
<code>\temp@online</code>	6999, 7002		
<code>\TeX</code>	438, 439, 441, 442, 11104, 11106, 11108		
<code>\texorpdfstring</code>	787, 5371		
<code>\textacute</code>	13291, 13303, 13315, 13495, 13726, 13745, 13863		
<code>\textacutedbl</code>	14395		
<code>\textaleph</code>	15361		
<code>\textAlpha</code>	1020, 14415, 14431		
<code>\textalpha</code>	1020, 14484, 14494		
<code>\textampersand</code>	430, 13362, 13793		
<code>\textangstrom</code>	15357		
<code>\textasciicute</code>	13864		
<code>\textasciibreve</code>	13338, 13734, 13753, 14384		
<code>\textasciicaron</code>	13296, 13308, 13320, 13340, 13731, 13750, 14382		
<code>\textasciicircum</code>	13292, 13304, 13316, 13376, 13727, 13746, 13809		
<code>\textasciidieresis</code>	13294, 13306, 13318, 13472, 13729, 13748, 13840		
<code>\textasciigrave</code>	13290, 13302, 13314, 13381, 13725, 13744, 13813		
<code>\textasciimacron</code>	13299, 13311, 13323, 13485, 13736, 13755, 13853		
<code>\textasciitilde</code>	431, 4157, 13391, 13824		
<code>\textasteriskcentered</code>	13801		
<code>\textbackslash</code>	426, 585, 13374, 13807		
<code>\textbaht</code>	15069		
<code>\textbar</code>	13387, 13820		
<code>\textbardbl</code>	15231		
<code>\textBeta</code>	1021, 14433		
<code>\textbeta</code>	1021, 13667, 14496		
<code>\textbf</code>	457		
<code>\textbigcircle</code>	13743, 13762, 15531		
<code>\textblank</code>	15379		
<code>\textbraceleft</code>	424, 13385, 13818		
<code>\textbraceright</code>	425, 13389, 13822		
<code>\textbrokenbar</code>	13468, 13836		
<code>\textbullet</code>	13393, 15249		
<code>\textcdot</code>	13666, 15559		
<code>\textcedilla</code>	13298, 13310, 13322, 13503, 13733, 13752, 13872		
<code>\textcelsius</code>	13653, 15341		
<code>\textcent</code>	13460, 13828		
<code>\textChi</code>	1070, 14473		
<code>\textchi</code>	1070, 14538		
<code>\textcircled</code>	13724, 13743, 13762, 15383, 15385, 15387, 15389, 15391, 15393, 15395, 15397, 15399, 15401, 15403, 15405, 15407, 15409, 15411, 15413, 15415, 15417, 15419, 15421, 15423, 15425, 15427, 15429, 15431, 15433, 15435, 15437, 15439, 15441, 15443, 15445, 15447, 15449, 15451, 15453, 15455, 15457, 15459, 15461, 15463, 15465, 15467, 15469, 15471, 15473, 15475, 15477, 15479, 15481, 15483, 15485, 15487, 15489, 15491, 15493, 15495, 15497, 15499, 15501, 15503, 15505, 15507, 15509, 15511, 15513, 15515, 15517, 15519, 15521, 15523, 15525, 15527		
<code>\textcircledP</code>	15345		
<code>\textcircumflex</code>	13342		
<code>\textcolonmonetary</code>	15323		
<code>\textcolor</code>	489, 11731, 11770, 11773, 12072		
<code>\textcompwordmark</code>	15225		
<code>\textcopyright</code>	13474, 13842		
<code>\textCR</code>	13336, 13783		
<code>\textcurrency</code>	13464, 13832		
<code>\textdagger</code>	13395, 15245		
<code>\textdaggerdbl</code>	13397, 15247		
<code>\textdegree</code>	13487, 13653, 13855		
<code>\textDelta</code>	1023, 14437		
<code>\textdelta</code>	1023, 14500		
<code>\textDigammagreek</code>	14559		
<code>\textdigammagreek</code>	14561		
<code>\textdiscount</code>	15271		
<code>\textdiv</code>	13664, 15557		
<code>\textdivide</code>	13634, 13664, 14002, 15557		
<code>\textdivorced</code>	15537		
<code>\textdollar</code>	428, 13358, 13789		
<code>\textdong</code>	15333		
<code>\textdotaccent</code>	13297, 13309, 13321, 13344, 13732, 13751, 14386		
<code>\textdotbelow</code>	13301, 13313, 13325, 13368, 13740, 13759, 14405		
<code>\textdoublegrave</code>	13735, 13754, 14401		
<code>\textdownarrow</code>	15369		
<code>\texteightinferior</code>	15315		
<code>\texteightsuperior</code>	15283		
<code>\textellipsis</code>	434, 435, 13399, 15251		
<code>\textemdash</code>	619, 13401, 15229		
<code>\textendash</code>	620, 13403, 15227		
<code>\textEpsilon</code>	1024, 14417, 14439		
<code>\textepsilon</code>	1024, 14486, 14502		
<code>\textequalsuperior</code>	15291		
<code>\textestimated</code>	15359		
<code>\textEta</code>	1027, 14419, 14443		
<code>\texteta</code>	1027, 14488, 14506		
<code>\texteuro</code>	13456, 15335		
<code>\textexclamdown</code>	623, 931, 13458, 13826		
<code>\textfi</code>	621, 13431, 15543		
<code>\TextField</code>	5172		
<code>\textfiveinferior</code>	15309		
<code>\textfivesuperior</code>	15277		
<code>\textfl</code>	622, 13433, 15545		
<code>\textflorin</code>	13405, 14281		
<code>\textflq</code>	510, 13660, 15553		
<code>\textflqq</code>	508, 13658, 15551		
<code>\textfourinferior</code>	15307		
<code>\textfoursuperior</code>	15275		
<code>\textfractionsolidus</code>	13407, 15265		
<code>\textfrq</code>	511, 13661, 15554		
<code>\textfrqq</code>	509, 13659, 15552		
<code>\textGamma</code>	1022, 14435		
<code>\textgamma</code>	1022, 14498		
<code>\textglq</code>	506, 13656, 15549		
<code>\textglqq</code>	504, 13654, 15547		
<code>\textgravedbl</code>	14397		
<code>\textgreater</code>	13372, 13805		
<code>\textgrq</code>	507, 13657, 15550		
<code>\textgrqq</code>	505, 13655, 15548		
<code>\textGslash</code>	14300		
<code>\textgslash</code>	14302		
<code>\textguarani</code>	15339		
<code>\textHslash</code>	14096		
<code>\texthslash</code>	14098		
<code>\textHT</code>	13332, 13779		
<code>\texthungarumlaut</code>	13346, 13737, 13756, 14394, 14395		
<code>\textinterrobang</code>	15263		
<code>\textIota</code>	1042, 14421, 14447, 14480		
<code>\textiota</code>	1042, 14490, 14510, 14544		
<code>\textlotadieresis</code>	14429, 14479		
<code>\textit</code>	459		
<code>\textKappa</code>	1043, 14449		
<code>\textkappa</code>	1043, 14512		
<code>\textKoppagreek</code>	1050, 14563		
<code>\textkoppagreek</code>	1050, 14565		
<code>\textkra</code>	14137		
<code>\textLambda</code>	1044, 14451		
<code>\textlambda</code>	1044, 14514		
<code>\textlangle</code>	15375		
<code>\textlatin</code>	492, 5966		
<code>\textlbrackdbl</code>	15539		
<code>\textleftarrow</code>	15363		
<code>\textless</code>	13370, 13803		
<code>\textLF</code>	13334, 13781		
<code>\textlira</code>	15325		
<code>\textlnot</code>	13481, 13849		
<code>\textlogicalnot</code>	13480, 13662, 13848, 15555		
<code>\textlongs</code>	14279, 15211		
<code>\textlquill</code>	15267		

<code>\textmacronbelow</code> .	13300, 13312, 13324, 13379, 13739, 13758, 14407
<code>\textmarried</code>	15535
<code>\textmd</code>	458
<code>\textmho</code>	15355
<code>\textminus</code>	13413, 15371
<code>\textminussuperior</code>	15289
<code>\textMu</code>	1045, 14453
<code>\textmu</code>	1045, 13497, 13866
<code>\textmugreek</code>	14516
<code>\textmultiply</code>	13566, 13663, 13934, 15556
<code>\textmusicalnote</code>	15533
<code>\textnaira</code>	15327
<code>\textnapostrophe</code>	14171
<code>\textneg</code>	13662, 15555
<code>\textnewtie</code>	13742, 13761, 14403
<code>\textnineinferior</code>	15317
<code>\textninesuperior</code>	15285
<code>\textnormal</code>	453
<code>\textnsuperior</code>	15297
<code>\textNu</code>	1046, 14455
<code>\textnu</code>	1046, 14518
<code>\textnumbersign</code>	427, 13356, 13787
<code>\textnumeralsigngreek</code>	997, 14411
<code>\textnumeralsignlowergreek</code>	1014, 1036, 1059, 14413
<code>\textnumero</code>	15343
<code>\textogonek</code>	13348, 13738, 13757, 14390
<code>\textohm</code>	15353
<code>\textOmega</code>	1072, 14427, 14477
<code>\textomega</code>	1072, 14542, 14553
<code>\textOmicron</code>	1048, 14423, 14459
<code>\textomicron</code>	1048, 14522, 14548
<code>\textonehalf</code>	13513, 13882
<code>\textoneinferior</code>	15301
<code>\textonequarter</code>	13511, 13880
<code>\textonesuperior</code>	13505, 13874
<code>\textopenbullet</code>	15529
<code>\textordfeminine</code>	13476, 13844
<code>\textordmasculine</code>	13507, 13876
<code>\textparagraph</code>	433, 13499, 13868
<code>\textparenleft</code>	627, 628, 13364, 13797
<code>\textparenleftinferior</code>	15319
<code>\textparenleftsuperior</code>	15293
<code>\textparenright</code>	13366, 13799
<code>\textparenrightinferior</code>	15321
<code>\textparenrightsuperior</code>	15295
<code>\textpercent</code>	429, 13360, 13791
<code>\textperiodcentered</code>	13501, 13666, 13870, 15559
<code>\textpertenthousand</code>	15255
<code>\textperthousand</code>	13415, 15253
<code>\textpeseta</code>	15329
<code>\textpeso</code>	15337
<code>\textPhi</code>	1069, 14471
<code>\textphi</code>	1069, 14536
<code>\textPi</code>	1049, 14461
<code>\textpi</code>	1049, 14524
<code>\textplusminus</code>	13489, 13665, 13857, 15558
<code>\textplussuperior</code>	15287
<code>\textpm</code>	13665, 15558
<code>\textPsi</code>	1071, 14475
<code>\textpsi</code>	1071, 14540
<code>\textquestiondown</code>	624, 932, 13517, 13886
<code>\textquotedbl</code>	13354, 13785
<code>\textquotedblleft</code>	13419, 13655, 15239, 15548
<code>\textquotedblright</code>	13421, 15241
<code>\textquoteleft</code>	13423, 13657, 15233, 15550
<code>\textquoteright</code>	13425, 15235
<code>\textquotesingle</code>	13795
<code>\texttriangle</code>	15377
<code>\texttrbrackdbl</code>	15541
<code>\textrecipe</code>	15347
<code>\textreferencemark</code>	15261
<code>\textregistered</code>	13483, 13851
<code>\textRho</code>	1065, 14463
<code>\textrho</code>	1065, 14526
<code>\textrightarrow</code>	15367
<code>\texttring</code>	13295, 13307, 13319, 13350, 13730, 13749, 14388
<code>\textrm</code>	454
<code>\textrquill</code>	15269
<code>\textSampigreek</code>	1073, 14567
<code>\textsampigreek</code>	1073, 14569
<code>\textsc</code>	460
<code>\textsection</code>	13470, 13838
<code>\textservicemark</code>	15349
<code>\textseveninferior</code>	15313
<code>\textsevensuperior</code>	15281
<code>\textsf</code>	455, 11770, 11773
<code>\textSigma</code>	1066, 14465
<code>\textsigma</code>	1066, 14530
<code>\textsixinferior</code>	15311
<code>\textsixsuperior</code>	15279
<code>\textsl</code>	461
<code>\textsterling</code>	13462, 13830
<code>\textStigmagreek</code>	1025, 14555
<code>\textstigmagreek</code>	1025, 14557
<code>\textsurd</code>	15373
<code>\TextSymbolUnavailable</code>	13326, 13327, 13329
<code>\textTau</code>	1067, 14467
<code>\texttau</code>	1067, 14532
<code>\textTheta</code>	1028, 14445
<code>\texttheta</code>	1028, 14508
<code>\textthreeinferior</code>	15305
<code>\textthreequarters</code>	13515, 13884
<code>\textthreesuperior</code>	13493, 13861
<code>\texttie</code>	13741, 13760, 14409
<code>\texttilde</code>	3758, 13293, 13305, 13317, 13352, 13728, 13747, 14392
<code>\texttildelow</code>	14399
<code>\texttimes</code>	13663, 15556
<code>\texttrademark</code>	13429, 15351
<code>\textTslash</code>	14229
<code>\texttslash</code>	14231
<code>\texttt</code>	456
<code>\texttwoinferior</code>	15303
<code>\texttwosuperior</code>	13491, 13859
<code>\textunderscore</code>	432, 4151, 4152, 4154, 13378, 13811
<code>\textup</code>	462
<code>\textuparrow</code>	15365
<code>\textUpsilon</code>	1068, 14425, 14469, 14482
<code>\textupsilon</code>	1068, 14534, 14546, 14551
<code>\textupsilonacute</code>	14492, 14550
<code>\textvarsigma</code>	14528
<code>\textvisiblespace</code>	15381
<code>\textwon</code>	15331
<code>\textXi</code>	1047, 14457
<code>\textxi</code>	1047, 14520
<code>\textyen</code>	13466, 13834
<code>\textzeroinferior</code>	15299
<code>\textzerosuperior</code>	15273
<code>\textZeta</code>	1026, 14441
<code>\textzeta</code>	1026, 14504
<code>\TH</code>	13580, 13948
<code>\th</code>	13648, 14016
<code>\thaa</code>	15708
<code>\thebookmark@seq@number</code>	12839
<code>\theequation</code>	5915, 6184, 6206, 6230, 6266
<code>\thefootnote</code>	6354, 6534
<code>\theHchapter</code>	5857, 5858, 5859, 5860, 5942
<code>\theHenumi</code>	5876
<code>\theHenumii</code>	5877
<code>\theHenumiii</code>	5878
<code>\theHenumiv</code>	5879
<code>\theHequation</code>	5847, 5916, 6185, 6207, 6231, 6239, 6266, 6270
<code>\theHfigure</code>	5854, 5858
<code>\theHHfootnote</code>	5880, 5882
<code>\theHHmpfootnote</code>	5882
<code>\theHitem</code>	5870, 5876, 5877, 5878, 5879
<code>\theHlisting</code>	3124
<code>\theHlstlisting</code>	3120
<code>\theHmpfootnote</code>	5881
<code>\theHparagraph</code>	5864, 5865

<code>\theHparentequation</code> . 6265, 6270	<code>\toclevel@chapter</code> 3111	U
<code>\theHpart</code> 5850	<code>\toclevel@figure</code> 3117	<code>\U</code> . . . 13697, 14602, 14625, 14690,
<code>\theHsection</code> . . 5847, 5853, 5860,	<code>\toclevel@listing</code> 3125	14767, 14957, 14959, 14981,
5862, 5866, 5867, 5941	<code>\toclevel@lstlisting</code> 3121	14983, 14993, 14995
<code>\theHslide</code> 7304	<code>\toclevel@paragraph</code> 3115	<code>\u</code> . . . 13696, 13734, 13753, 13773,
<code>\theHslidesection</code> 7309, 7311, 7347,	<code>\toclevel@part</code> 3107, 3109	14024, 14026, 14060, 14062,
7351	<code>\toclevel@section</code> 3112	14080, 14082, 14110, 14112,
<code>\theHslidesubsection</code> . 7310, 7398,	<code>\toclevel@subfigure</code> 2233	14113, 14181, 14183, 14241,
7402	<code>\toclevel@subparagraph</code> . . . 3116	14243
<code>\theHsubequation</code> 6239	<code>\toclevel@subsection</code> 3113	<code>\UHORN</code> . . . 15575, 15686, 15687,
<code>\theHsubparagraph</code> 5865	<code>\toclevel@subsubsection</code> . . . 3114	15688, 15689, 15690
<code>\theHsubsection</code> 5862, 5863	<code>\toclevel@subtable</code> 2234	<code>\uhorn</code> . . 2992, 2999, 15568, 15626,
<code>\theHsubsubsection</code> . . 5863, 5864	<code>\toclevel@table</code> 3118	15627, 15628, 15629, 15630
<code>\theHtable</code> 5855, 5859	<code>\tocparagraph</code> 1485	<code>\UnDef</code> 11094
<code>\theHtheorem</code> 5866	<code>\tocpart</code> 1479	<code>\unhbox</code> 6326, 10197, 12142, 12265,
<code>\theHthm</code> 5867	<code>\tocsection</code> 1482	12298, 12323, 12352, 12381
<code>\thelisting</code> 3124	<code>\tocsubsection</code> 1483	<code>\unhcopy</code> 12243
<code>\thelstlisting</code> 3120	<code>\tocsubsubsection</code> 1484	<code>\unichar</code> 2073
<code>\thempfn</code> . 6343, 6420, 6422, 6515,	<code>\toks</code> 806,	<code>\Unicode</code> 1193
6527	807, 808, 4352, 4354, 4356,	<code>\unrestored@protected@xdef</code> 6343,
<code>\theoremautorefname</code> . 2822, 2840,	4360, 4365, 7509, 7510, 7512,	6354, 6477, 6484, 6527, 6534
2858, 2876, 2894, 2912, 2930,	13155, 13160, 13226, 13231	<code>\unskip</code> . . 6277, 6776, 7587, 7591,
2968, 2988, 3006, 7743	<code>\toks@</code> 171, 208, 366, 369,	7595, 7600
<code>\thepage</code> . 2219, 4315, 5541, 5564,	372, 390, 391, 701, 708, 740,	<code>\upshape</code> 472, 6283
6040, 6048, 6075, 6791, 6814,	741, 1117, 1140, 1143, 1145,	<code>\Url</code> 4261
6843, 6934, 7012, 7043, 7204,	1652, 1653, 3018, 3019, 3021,	<code>\url</code> 4260, 4264
7221, 7227, 7231, 7238, 7501,	3511, 3515, 3516, 3524, 5641,	<code>\url@</code> 4264, 4265
7521, 7538, 7655	5643, 5723, 5725, 5775, 5787,	<code>\use@file</code> . . 4422, 4424, 4428, 4431
<code>\theslideheading</code> 7330	6057, 6061, 6097, 6102, 7074,	<code>\usefont</code> 451
<code>\theslidesection</code> . 7318, 7325, 7333,	7075, 7281, 7286, 7288, 7291,	<code>\usepackage</code> 2631
7339, 7341, 7343, 7349, 7359	13154, 13160, 13225, 13231	<code>\UTFviii@four@octets</code> 2069, 2078
<code>\theslidesubheading</code> . . 7331, 7382	<code>\topmargin</code> 6946	<code>\UTFviii@three@octets</code> 2068
<code>\theslidesubsection</code> . . 7370, 7377,	<code>\trivlist</code> 6280	<code>\UTFviii@two@octets</code> 2067
7384, 7390, 7392, 7394, 7400,	<code>\tryhyper@link</code> 4290, 4292	V
7410	<code>\ttfamily</code> 466	<code>\v</code> . . . 13296, 13308, 13320, 13439,
<code>\This@name</code> 5894, 5895, 5912, 5913	<code>\ttl@b</code> 6108, 6113	13444, 13452, 13454, 13707,
<code>\thispdfpagelabel</code> 5546	<code>\ttl@gobblecontents</code> 6117	13731, 13750, 13772, 14044,
<code>\ThisShouldNotHappen</code> . . 12453	<code>\ttl@Hy@PatchSaveWrite</code> . . 6091,	14046, 14048, 14050, 14072,
<code>\thm@headpunct</code> 6284	6095	14074, 14147, 14149, 14167,
<code>\thm@headsep</code> 6285	<code>\ttl@Hy@refstepcounter</code> . . . 6107	14169, 14201, 14203, 14217,
<code>\thm@notefont</code> 6283	<code>\ttl@Hy@saveanchor</code> . . 6086, 6110	14219, 14225, 14227, 14275,
<code>\thm@postskip</code> 6289	<code>\ttl@Hy@SavedCurrentHref</code> 6090,	14277, 14283, 14285, 14287,
<code>\thm@preskip</code> 6288	6101	14289, 14290, 14292, 14294,
<code>\thm@space@setup</code> 6286	<code>\ttl@Hy@steplink</code> 6084	14296, 14298, 14304, 14306,
<code>\thm@swap</code> 6282	<code>\ttl@savewrite</code> 6097, 6099	14308, 14310, 14316, 14317,
<code>\thmheadnl</code> 6281	<code>\tw@</code> . 13155, 13160, 13226, 13231	14360, 14362
<code>\tiny</code> 484	<code>\typeout</code> . . . 5, 6, 7, 19, 26, 27, 36,	<code>\V@@@footnotetext</code> 6464
<code>\title</code> 5452, 5454	131, 155, 158, 159, 160, 2634,	<code>\V@@footnotetext</code> 6450
<code>\TMP@EnsureCode</code> . . 3997, 4004,	2688, 3793, 3795, 3797, 3897,	<code>\value</code> 6730, 6756, 6950, 7099, 8988,
4005, 4006, 4007, 4008, 4009,	3924, 3926, 4468, 9338, 9342,	8993
4010, 4011, 4012, 4013, 4014,	9345, 9348, 9351, 9354, 9357,	<code>\vbox</code> 5205, 5206, 5207, 5208, 5521,
4015, 4016, 4017, 4018, 4019,	9360, 10995, 11296, 11510,	6944
4020, 4021, 4022, 4023, 4024,	11513, 11516, 11519, 11522,	<code>\vfill</code> 5205, 5206, 5207, 5208
4025, 4026, 4027, 4028, 4029,	11525, 11527, 11528, 11537,	<code>\voffset</code> 6945
4030	11674, 12069, 13252, 15753	<code>\vpageref</code> 7600
<code>\tocappendix</code> 1481		<code>\vphantom</code> 487
<code>\tocchapter</code> 1480		

`\Vr@f` 7586
`\vr@f` 7594
`\vref@pagenum` 6121
`\vref@space` 7587, 7590, 7595
`\vskip` 2285, 2286
`\vss` 6959
`\vTeX@trans@special` .. 9666, 9668,
9671, 9675, 9679, 9683, 9685,
9687, 9691, 9697, 9698, 9701
`\VTeXInitMediaSize` . 9369, 9386
`\VTeXOS` .. 9736, 9737, 9738, 9740
`\VTeXversion` . 5690, 5693, 5696,
9728, 9732

W

`\waw` 15732
`\wawhamza` 15701
`\wd` . 8611, 8623, 8640, 8652, 8670,
8682, 12099
`\write` 4222, 5401, 5403, 5804, 5812,
6046, 6074, 6714, 6729, 6745,
6755, 6785, 6808, 6834, 6864,
11699, 11723, 13023, 13103
`\WriteBookmarks`
.... 3700, 3814, 3966, 3988,
12774, 13016, 13049, 13050,
13092, 13096
`\wwwbrowser` ... 8568, 8642, 8654

X

`\x` 21, 25, 92, 98, 168, 169,
176, 178, 206, 209, 210, 211,
212, 213, 214, 215, 216, 217,
218, 219, 220, 221, 222, 223,
224, 225, 226, 227, 228, 389,
394, 703, 706, 710, 715, 747,

816, 822, 1579, 1607, 2016,
2018, 2280, 2290, 2299, 2309,
2360, 2361, 2366, 2382, 3025,
3035, 3136, 3137, 3140, 3141,
3142, 3146, 3149, 3155, 3514,
3520, 3523, 3526, 3647, 3648,
3653, 3654, 3713, 3714, 3715,
3718, 3721, 3724, 4221, 4227,
4350, 4361, 4365, 4368, 4437,
4438, 4439, 4451, 4519, 4533,
4558, 4562, 4565, 4575, 5474,
5475, 5480, 6058, 6065, 6098,
6105, 6132, 6141, 6143, 6155,
7288, 7289, 7511, 7514, 7549,
7550, 7551, 7553, 7555, 7906,
7914, 8186, 8187, 8190, 8192,
8195, 8812, 8813, 8814, 8816,
8817, 8818, 8820, 8821, 8822,
8824, 8825, 8826, 8828, 8829,
8830, 8832, 8833, 8834, 8836,
8837, 8838, 8840, 8841, 8843,
8849, 8858, 9836, 9841, 9845,
10318, 10319, 11345, 11365,
11825, 11845, 12166, 12186,
13159, 13161, 13230, 13232
`\XeTeXrevision` 3934, 9123
`\XeTeXversion` 3934, 9123
`\XR@cdURL` 2240, 2241
`\XR@addURL` 2240
`\XR@ext`
2468, 2469, 4420, 4423, 5688,
7807, 8471, 8567, 8803, 9250,
10494, 10577, 10636, 10828,
10992
`\XR@URL` 2245
`\xspace` 537, 539

Y

`\y` 718, 721, 724, 727, 730, 73
2362, 2367, 2372, 3142
3144, 3145, 3716, 3719
3725, 3727, 3733, 4440
4442, 4443, 4451, 5475
6130, 6131, 6134, 6141
`\ya`
`\yahamza`

Z

`\z` .. 2364, 2365, 2366, 4443
`\z@` 679, 719, 844, 996
1035, 1058, 1309, 1349
1378, 1393, 1401, 1474
1734, 1740, 1804, 1808
1820, 2275, 2294, 2557
2659, 3148, 3154, 3649
5691, 5694, 6312, 6313
8395, 8399, 8404, 8408
8418, 8422, 8425, 9232
9238, 9239, 9727, 9751
10207, 10218, 10559,
10565, 10566, 11334,
12103, 12155, 12503,
12537, 12609, 12615,
12674, 12680, 12699,
12714, 12743, 12748,
12851, 12852, 12853,
12855, 12856, 12857,
13075, 13196
`\z@skip`
`\za`
`\zay`
`\ZWNJ`