

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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

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

Options This file provides a short option summary.

Bookmark talk, slides Slides for the talk “PDF information and navigation elements with hyperref, pdfTeX and thumbpdf” at 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 hyccheck.tex	7
4	Package options and setup	10
4.1	Save catcodes	10
4.2	Version check	13
4.3	Checks with regular expressions	14
4.4	Compatibility with format dumps	15
4.5	Switches	15
5	Common help macros	17
5.1	Macros for recursions	17
5.2	Babel's protection of shorthand characters	17
5.3	Coordinate transformations	18
6	Dealing with PDF strings	19
6.1	Description of PDF strings	19
6.2	Definition of <code>\pdfstringdef</code>	19
6.2.1	Preprocessing	20
6.2.2	Expansion	25
6.2.3	Postprocessing	26
6.3	Encodings	31
6.3.1	XeTeX	31
6.3.2	Workaround for package linguex	32
6.3.3	PD1 encoding	32
6.3.4	PU encoding	33
6.4	Additional user commands	33
6.4.1	<code>\texorpdfstring</code>	33
6.4.2	Hooks for <code>\pdfstringdef</code>	33
6.5	Help macros for expansion	34
6.5.1	<code>\ignorespaces</code>	34
6.5.2	Babel languages	34
6.5.3	CJK patch	40
6.5.4	CJK bookmarks	40
6.5.5	CJK unicode	42
6.5.6	<code>\@inmathwarn-Patch</code>	46
6.5.7	Unexpandable spaces	47
6.5.8	Marker for commands	48
6.5.9	<code>\hspace fix</code>	48
6.5.10	Fix for AMS classes	48
6.5.11	Reference commands	48
6.5.12	Redefining the defining commands	51
6.5.13	<code>\ifnextchar</code>	52
6.5.14	<code>\@protected@testoptifnextchar</code>	52
6.6	Help macros for postprocessing	52
6.6.1	Generic warning.	52
6.6.2	Protecting spaces	53
6.6.3	Remove grouping braces	54
6.6.4	Catcode check	55

6.6.5	Check for wrong glyphs	58
6.6.6	Replacing tokens	59
6.6.7	Support for package <code>xspace</code>	60
6.6.8	Converting to Unicode	60
6.6.9	Support for UTF-8 input encoding	63
7	Support of other packages	66
7.1	Class memoir	66
7.2	Package subfigure	66
7.3	Package xr and xr-hyper	67
8	Help macros for links	67
9	Options	69
9.1	Help macros	69
9.2	Defining the options	71
10	Options for different drivers	76
11	Options to add extra features	79
12	Language options	80
13	Options to change appearance of links	87
14	Bookmarking	87
15	PDF-specific options	90
15.1	PDF/A	101
15.2	Patch for babel's <code>\texttilde</code>	102
15.2.1	Driver loading	103
15.2.2	Bookmarks	106
16	User hypertext macros	110
17	Underlying basic hypertext macros	115
18	Compatibility with the <i>BT_EX2html</i> package	119
19	Forms creation	120
19.1	Field flags	120
19.1.1	Declarations of field flags	122
19.1.2	Set submit flags	124
19.1.3	Set annot flags in fields	124
19.1.4	Pushbutton field	125
19.1.5	Check box field	125
19.1.6	Radio button field	125
19.1.7	Text fields	126
19.1.8	Choice fields	126
19.2	Choice field	127
19.3	Forms	129
20	Setup	136
21	Low-level utility macros	137

22 Localized nullifying of package	138
23 Package nohyperref	138
24 The Mangling Of Aux and Toc Files	139
25 Title strings	141
26 Page numbers	142
27 Every page	142
27.1 PDF /PageLabels	142
27.1.1 pdfTeX and VTeX	146
27.1.2 xetex	148
27.1.3 pdfmarkbase, dvipdfm, xetex	148
28 Automated L^AT_EX hypertext cross-references	150
29 Package lastpage support	154
30 Package ifthen support	156
31 Package titlesec and titletoc support	156
32 Package varioref support	157
33 Package longtable support	157
34 Equations	158
35 Footnotes	163
36 Float captions	167
37 Bibliographic references	169
37.1 Package harvard	172
37.2 Package chicago	174
38 Page numbers	175
39 Table of contents	176
40 New counters	178
41 AMSL^AT_EX compatibility	178
41.1 \@addtoreset and \numberwithin patches	179
42 Included figures	180
43 hyperindex entries	181
44 Compatibility with foiltex	184
45 Compatibility with seminar slide package	184

46 Configuration files	192
46.1 PS/PDF strings	192
46.2 pdftex	193
46.2.1 Fix for problem with different nesting levels	206
46.3 hypertex	207
46.4 dviwindo	209
46.5 dvipdfm/xetex dvi to PDF converter	214
46.6 VTeX typesetting system	222
46.7 Fix for Adobe bug number 466320	234
46.8 Direct pdfmark support	235
46.9 Rokicki's dvips	249
46.10 VTeX's vtexpdfmark driver	251
46.11 Textures	252
46.12 dvipsone	256
46.13 TeX4ht	259
47 Driver-specific form support	262
47.1 pdfmarks	262
47.2 HyperTeX	269
47.3 TeX4ht	269
47.4 pdfTeX	272
47.5 dvipdfm, xetex	279
47.6 Common forms part	286
48 Bookmarks in the PDF file	293
48.1 Bookmarks	293
48.1.1 Rerun warning	297
48.1.2 Driver stuff	297
49 Compatibility with koma-script classes	303
50 Encoding definition files for encodings of PDF strings	304
50.1 PD1 encoding	304
50.2 PU encoding	312
50.2.1 NFSS2 accents	312
50.2.2 Basic Latin: U+0000 to U+007F	313
50.2.3 Latin-1 Supplement: U+0080 to U+00FF	315
50.2.4 Latin Extended-A: U+0080 to U+017F	318
50.2.5 Latin Extended-B: U+0180 to U+024F	323
50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF	325
50.2.7 Combining Diacritical Marks: U+0300 to U+036F	325
50.2.8 Greek and Coptic: U+0370 to U+03FF	326
50.2.9 Cyrillic: U+0400 to U+04FF	329
50.2.10 Thai: U+0E00 to U+0E7F	339
50.2.11 Latin Extended Additional: U+1E00 to U+1EFF	339
50.2.12 General Punctuation: U+2000 to U+206F	342
50.2.13 Superscripts and Subscripts: U+2070 to U+209F	343
50.2.14 Currency Symbols: U+20A0 to U+20CF	343
50.2.15 Letterlike Symbols: U+2100 to U+214F	344
50.2.16 Arrows: U+2190 to U+21FF	344
50.2.17 Mathematical Operators: U+2200 to U+22FF	344
50.2.18 Miscellaneous Technical: U+2300 to U+23FF	345
50.2.19 Control Pictures: U+2400 to U+243F	345

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF	345
50.2.21 Box Drawing: U+2500 to U+257F	347
50.2.22 Miscellaneous Symbols: U+2600 to U+26FF	347
50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF . .	348
50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F	348
50.2.25 Miscellaneous	348
50.2.26 Aliases	348
50.3 PU encoding, additions for VnT _E X	348
50.4 PU encoding, additions for Arabi	351
51 End of file hycheck.tex	352
52 Index	353

3 File hyccheck.tex

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

```

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

\checklatex Optional argument: release date of  $\LaTeX$ .
4 \newcommand*{\checklatex}[1][]{\%
5 \typeout{}}\%
6 \typeout{* Format: 'LaTeX2e' #1}\%
7 \typeout{\space\space Loaded: '\fmtname' \fmtversion}\%
8 }\%
```

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

```

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

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

```

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

`\HyC@checkPackage`

```

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

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

```

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

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

```

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

`\HyC@checkcommand` The optional star of \LaTeX 's definitions is parsed.

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{hyccheck}{%
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 `\cmdl` 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 \@ifpackagelater{ltxcmds}{2010/10/25}{%}{%
234 \long\def\ltx@LocalAppendToMacro#1#2{%
235 \global\let\LTxcmds@gtemp#1%
236 \ifx\ltx@undefined\LTxcmds@gtemp
237 \global\let\LTxcmds@gtemp\ltx@empty
238 \else
239 \ifx\relax\LTxcmds@gtemp
240 \global\let\LTxcmds@gtemp\ltx@empty
241 \fi
242 \fi
243 \begingroup
244 \toks0\expandafter{\LTxcmds@gtemp#2}%
245 \xdef\LTxcmds@gtemp{\the\toks0}%
246 \endgroup
247 \let#1\LTxcmds@gtemp
248 }%
249 }

250 \RequirePackage{ifpdf}[2006/02/20]
251 \RequirePackage{pdftexcmds}[2009/04/10]
252 \@ifpackagelater{pdftexcmds}{2010/11/04}{%}{%
253 \ltx@ifundefined{pdfdraftmode}{%
254 \let\pdf@ifdraftmode\ltx@secondoftwo
255 }{%
256 \ifpdf
257 \def\pdf@ifdraftmode{%
258 \ifnum\pdfdraftmode=\ltx@one
259 \expandafter\ltx@firstoftwo
260 \else
261 \expandafter\ltx@secondoftwo
262 \fi
263 }%
264 \else
265 \let\pdf@ifdraftmode\ltx@secondoftwo
266 \fi
267 }%
268 }

```

```

269 \RequirePackage{infwarerr}[2010/04/08]
270 \RequirePackage{keyval}[1997/11/10]
271 \RequirePackage{kvsetkeys}[2007/09/29]
272 \RequirePackage{pdfescape}[2007/11/11]
273 \RequirePackage{ifvtex}
274 \RequirePackage{ifxetex}[2006/08/21]
275 \RequirePackage{hycolor}
276 \RequirePackage{letltxmacro}[2008/06/13]
277 \def\Hy@Error{\@PackageError{hyperref}}
278 \def\Hy@Warning{\@PackageWarning{hyperref}}
279 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
280 \def\Hy@Info{\@PackageInfo{hyperref}}
281 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
282 \def\Hy@Message#1{%
283   \GenericWarning{%
284     (hyperref)\@spaces\@spaces\@spaces
285   }{%
286     Package hyperref Message: #1\ltx@gobble
287   }%
288 }

```

4.2 Version check

\Hy@VersionChecked

```

289 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

290 \def\Hy@VersionCheck#1{%
291   \begingroup
292   \ltx@ifundefined{ver@hyperref.sty}{%
293     \Hy@Error{%
294       This should not happen!\MessageBreak
295       Missing hyperref version%
296     }\@ehd
297   }{%
298     \ltx@ifundefined{ver@#1}{%
299       \Hy@Error{%
300         This should not happen!\MessageBreak
301         Missing version of '#1'%
302       }\@ehd
303     }{%
304       \def\x##1##2##3{%
305         \expandafter\expandafter\expandafter\Hy@@VersionCheck
306         \expandafter\expandafter\expandafter##2%
307         \csname ver@##3\endcsname##1##1\@nil
308       }%
309       \x{ }\y{hyperref.sty}%
310       \x{ }\z{#1}%
311       \ifx\y\z
312         \else
313           \Hy@Error{%
314             Version mismatch!\MessageBreak
315             * \y: hyperref.sty\MessageBreak
316             * \z: #1%
317           }\@ehd
318         \fi
319       }%

```

```

320 }%
321 \endgroup
322 \chardef\Hy@VersionChecked=1 %
323 }

```

\Hy@@VersionCheck

```

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

```

4.3 Checks with regular expressions

```

327 \ltx@ifundefined{pdfmatch}{%
328 \def\Hy@Match#1#2#3#4{%
329 }{%
330 \def\Hy@Match#1#2{%
331 \begingroup
332 \edef\~{\ltx@backslashchar\string~}%
333 \edef\.\{\ltx@backslashchar.}%
334 \edef\[\{\ltx@backslashchar[]}%
335 \edef\${\ltx@backslashchar$}%
336 \edef\(\{\ltx@backslashchar(}%
337 \edef\)\{\ltx@backslashchar)}%
338 \edef\|{\ltx@backslashchar|}%
339 \edef\*{\ltx@backslashchar*}%
340 \edef\+{\ltx@backslashchar+}%
341 \edef\?{\ltx@backslashchar?}%
342 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
343 \edef\}\{\ltx@rightbracechar}%
344 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
345 \let\ \ltx@space
346 \ifcase\pdfmatch{#2}{#1} %
347 \endgroup
348 \expandafter\ltx@secondoftwo
349 \or
350 \endgroup
351 \expandafter\ltx@firstoftwo
352 \else
353 \Hy@Warning{%
354 Internal error: Wrong pattern!\MessageBreak
355 --> #2 <--\MessageBreak
356 Pattern check ignored%
357 }%
358 \endgroup
359 \expandafter\ltx@firstoftwo
360 \fi
361 }%
362 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{}{%
363 \begingroup
364 \lccode'0='\{\relax
365 \lowercase{\endgroup
366 \def\ltx@leftbracechar{0}%
367 }%
368 \begingroup
369 \lccode'0='\}\relax
370 \lowercase{\endgroup
371 \def\ltx@rightbracechar{0}%

```

```

372 }%
373 }%
374 }

```

4.4 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 \LaTeX processing.

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

```

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

```

`\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.

```

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

```

`\Hy@AtEndOfPackage`

```

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

```

`\Hy@AtBeginDocumentHook`

```

384 \def\Hy@AtBeginDocumentHook{}

```

`\Hy@AtEndOfPackageHook`

```

385 \def\Hy@AtEndOfPackageHook{}

```

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

```

386 \AtEndOfPackage{%
387   \Hy@AtEndOfPackageHook
388   \let\Hy@AtEndOfPackageHook\@undefined
389   \AfterBeginDocument{%
390     \Hy@AtBeginDocumentHook}%
391   \let\Hy@AtBeginDocumentHook\@undefined
392 }%
393 }

```

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

```

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

```

4.5 Switches

```

395 \newif\ifHy@typexml
396 \newif\ifHy@activeanchor
397 \newif\ifHy@backref
398 \newif\ifHy@bookmarks
399 \newif\ifHy@bookmarksnumbered

```

```

400 \newif\ifHy@bookmarksopen
401 \newif\ifHy@breaklinks
402 \newif\ifHy@centerwindow
403 \newif\ifHy@CJKbookmarks
404 \newif\ifHy@colorlinks
405 \newif\ifHy@draft
406 \let\Hy@finaltrue\Hy@draftfalse
407 \let\Hy@finalfalse\Hy@drafttrue
408 \newif\ifHy@escapeform
409 \newif\ifHy@figures
410 \newif\ifHy@fitwindow
411 \newif\ifHy@frenchlinks
412 \newif\ifHy@hyperfootnotes
413 \newif\ifHy@hyperindex
414 \newif\ifHy@hypertextnames
415 \newif\ifHy@implicit
416 \newif\ifHy@linktocpage
417 \newif\ifHy@localanchorname
418 \newif\ifHy@menubar
419 \newif\ifHy@naturalnames
420 \newif\ifHy@nesting
421 \newif\ifHy@newwindowset
422 \newif\ifHy@newwindow
423 \newif\ifHy@ocgcolorlinks
424 \newif\ifHy@pageanchor
425 \newif\ifHy@pagelabels
426 \newif\ifHy@pdfpagehidden
427 \newif\ifHy@pdfstring
428 \newif\ifHy@plainpages
429 \newif\ifHy@psize
430 \newif\ifHy@raiselinks
431 \newif\ifHy@seminarslides
432 \newif\ifHy@setpagesize
433 \newif\ifHy@texht
434 \newif\ifHy@toolbar
435 \newif\ifHy@unicode
436 \newif\ifHy@usetitle
437 \newif\ifHy@verbose
438 \newif\ifHy@windowui
439 \newif\ifHy@displaydoctitle
440 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

441 \Hy@backreffalse
442 \Hy@bookmarksnumberedfalse
443 \Hy@bookmarksopenfalse
444 \Hy@bookmarkstrue
445 \Hy@breaklinksfalse
446 \Hy@centerwindowfalse
447 \Hy@CJKbookmarksfalse
448 \Hy@escapeformfalse
449 \Hy@figuresfalse
450 \Hy@fitwindowfalse
451 \Hy@hyperfootnotesttrue
452 \Hy@hyperindextrue
453 \Hy@hypertextnamestrue
454 \Hy@implicittrue
455 \Hy@linktocpagefalse

```



```

456 \Hy@localanchornamefalse
457 \Hy@menubartrue
458 \Hy@naturalnamesfalse
459 \Hy@nestingfalse
460 \Hy@newwindowsetfalse
461 \Hy@newwindowfalse
462 \Hy@pageanchortrue
463 \Hy@pagelabelstrue
464 \Hy@pdfpagehiddenfalse
465 \Hy@pdfstringfalse
466 \Hy@plainpagesfalse
467 \Hy@raiselinksfalse
468 \Hy@setpagesizetrue
469 \Hy@texhtfalse
470 \Hy@toolbartrue
471 \Hy@typexmlfalse
472 \Hy@unicodedefalse
473 \Hy@usetitlefalse
474 \Hy@verbosefalse
475 \Hy>windowuitrue
476 \Hy@displaydoctitlefalse
477 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

480 \newdimen\@linkdim
481 \let\Hy@driver\@empty
482 \let\MaybeStopEarly\relax
483 \newcount\Hy@linkcounter
484 \newcount\Hy@pagecounter
485 \Hy@linkcounter0
486 \Hy@pagecounter0

```

5.1 Macros for recursions

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

```

487 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
488 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

489 \let\Hy@ReturnEnd\@empty
490 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
491 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

492 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
493 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

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

`\hypercalscbp`

```
494 \begingroup\expandafter\expandafter\expandafter\endgroup
495 \expandafter\ifx\csname dimexpr\endcsname\relax
496   \def\hypercalscbpdef#1#2{%
497     \begingroup
498       \toks@{}%
499       \HyCal@scan#2\hypercalscbp\@nil
500     \expandafter\endgroup
501     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
502   }%
503 \def\HyCal@scan#1\hypercalscbp#2\@nil{%
504   \toks@\expandafter{\the\toks@ #1}%
505   \ifx\#2\%
506     \else
507       \Hy@ReturnAfterFi{%
508         \HyCal@do#2\@nil
509       }%
510     \fi
511   }%
512 \def\HyCal@do#1#2\@nil{%
513   \ifpackageloaded{calc}{}%
514   \Hy@Warning{%
515     For calculations \string\hypercalscbp\space needs\MessageBreak
516     package calc or e-TeX%
517   }%
518 }%
519 \setlength{\dimen@}{#1}%
```

```

520 \setlength{\dimen@}{0.99626401\dimen@}%
521 \edef\x{%
522   \toks@{%
523     \the\toks@
524     \strip@pt\dimen@
525   }%
526   }\x
527   \HyCal@scan#2\@nil
528 }%
529 \else
530 \def\hypercalcbp#1{%
531   \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
532 }%
533 \def\hypercalcbpdef{\def}%
534 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in `PDFDocEncoding`, which is a superset of `ISOLatin1` and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
536 \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.

```
537 \escapechar'\%
```

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

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

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

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

```
541 \edef\3{\string\3}%
```

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

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

```
542 \ifHy@unicode
```

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

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

```
545 \fontencoding{PU}%
```

```
546 \HyPsd@UTFviii
```

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

```
548 \else
```

```
549 \fontencoding{PD1}%
```

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

```
551 \fi
```

```
552 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
```

```
553 \enc@update
```

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

```
554 \let\@inmathwarn\pdfstringdef
```

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

```
555 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
556 \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.

```
557 \let\{\textbraceleft
558 \let\}\textbraceright
559 \let\\\textbackslash
560 \let\#\textnumbersign
561 \let\$\textdollar
562 \let\%\textpercent
563 \let\&\textampersand
564 % \let\~\textasciitilde
565 \let\_ \textunderscore
566 \let\P\textparagraph
567 \let\ldots\textellipsis
568 \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.

```
569 \def\\\pdfstringdefWarn\\}%
570 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
571 \def\TeX{\TeX}%
572 \def\LaTeX{\LaTeX}%
573 \def\LaTeXe{%
```

```

574 \LaTeX2%
575 \ifHy@unicode\textepsilon\else e\fi
576 }%
577 \def\TeX{%
578 \ifHy@unicode\textepsilon\else e\fi
579 -\TeX%
580 }%
581 \def\SliTeX{Sli\TeX}%
582 \def\MF{Metafont}%
583 \def\MP{Metapost}%

```

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

```

584 \let\fontencoding\@gobble
585 \let\fontfamily\@gobble
586 \let\fontseries\@gobble
587 \let\fontshape\@gobble
588 \let\fontsize\@gobbletwo
589 \let\selectfont\@empty
590 \let\usefont\@gobblefour
591 \let\emph\@firstofone
592 \let\textnormal\@firstofone
593 \let\textrm\@firstofone
594 \let\textsf\@firstofone
595 \let\texttt\@firstofone
596 \let\textbf\@firstofone
597 \let\textmd\@firstofone
598 \let\textit\@firstofone
599 \let\textsc\@firstofone
600 \let\textsl\@firstofone
601 \let\textup\@firstofone
602 \let\normalfont\@empty
603 \let\rmfamily\@empty
604 \let\sfamily\@empty
605 \let\ttfamily\@empty
606 \let\bfseries\@empty
607 \let\mdseries\@empty
608 \let\itshape\@empty
609 \let\scshape\@empty
610 \let\slshape\@empty
611 \let\upshape\@empty
612 \let\em\@empty
613 \let\rm\@empty
614 \let\Huge\@empty
615 \let\LARGE\@empty
616 \let\Large\@empty
617 \let\footnotesize\@empty
618 \let\huge\@empty
619 \let\large\@empty
620 \let\normalsize\@empty
621 \let\scriptsize\@empty
622 \let\small\@empty
623 \let\tiny\@empty
624 \let\mathversion\@gobble
625 \let\phantom\@gobble
626 \let\vphantom\@gobble
627 \let\hphantom\@gobble

```

Environments.

```
628 \def\begin#1{\csname#1\endcsname}%
629 \def\end#1{\csname end#1\endcsname}%
```

Package color.

```
630 \def\textcolor##1##{\@secondoftwo}%
```

Upper- and lowercase.

```
631 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
632 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%
```

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

```
633 \let\foreignlanguage\@secondoftwo
634 \let\textlatin\@firstofone
635 \ltx@ifundefined{language@group}{-}{%
636 \csname HyPsd@babel@language@group\endcsname
637 }%
638 \HyPsd@GreekPatch
639 \HyPsd@SpanishPatch
640 \HyPsd@RussianPatch
641 \HyPsd@BabelPatch
642 \let\@safe@activestrue\relax
643 \let\@safe@activesfalse\relax
```

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

```
644 \let\cyr\relax
```

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

```
645 \let\es@roman\@Roman
```

Package german.

```
646 \let\glqq\textglqq
647 \let\grqq\textgrqq
648 \let\glq\textglq
649 \let\grq\textgrq
650 \let\flqq\textflqq
651 \let\frqq\textfrqq
652 \let\flq\textflq
653 \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}
```

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

AMS classes.

```
655 \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.

```
656 \let\hspace\HyPsd@hspace
```

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

```
657 \let\label\@gobble
658 \let\index\@gobble
659 \let\glossary\@gobble
660 \let\href\HyPsd@href
661 \let\@mkboth\@gobbletwo
```

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

```
662 \let\ref\HyPsd@ref
663 \let\pageref\HyPsd@pageref
664 \let\nameref\HyPsd@nameref
665 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
666 \let\leavevmode\@empty
667 \let\mbox\@empty
```

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

```
668 \def\halign{\pdfstringdef\Warn\halign\@gobble}%
669 \let\ignorespaces\HyPsd@ignorespaces
670 \let\Hy@SectionAnchorHref\@gobble
```

Patch for `cjk` bookmarks.

```
671 \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`).

```
672 \Hy@pdfstringtrue
673 \pdfstringdefPreHook
```

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

```
674 \HyPsd@LetUnexpandableSpace\space
675 \HyPsd@LetUnexpandableSpace\%
676 \HyPsd@LetUnexpandableSpace~%
677 \HyPsd@LetUnexpandableSpace\nobreakspace
```


Package xspace.

```
678 \ltx@ifundefined{@xspace}{%
679 \let\xspace\HyPsd@ITALCORR
680 }{%
681 \let\xspace\HyPsd@XSPACE
682 }%
683 \let\/\HyPsd@ITALCORR
684 \let\bgroup\/%
685 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

```
687 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
688 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
689 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
690 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

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

6.2.2 Expansion

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

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

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

\edef This version uses this standard form for expansion. It is stronger than L^AT_EX's \protected@edef. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of L^AT_EX doesn't work within an \edef, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old

texts. Now there are possibilities to write code that gives correct PDF strings (see `\texorpdfstring`). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with `\csname`. However a PDF reader isn't T_EX, so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features xspace support is possible and grouping characters can be used without problems, because they are removed silently.

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

```
692 \begingroup
693 \let\GenericError\@gobblefour
694 \let\GenericWarning\@gobbletwo
695 \let\GenericInfo\@gobbletwo
```

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

```
696 \ifx\nofrenchguillemets\@undefined
697 \else
698 \nofrenchguillemets
699 \fi
```

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

```
700 \let\Hy@temp\xdef
701 \let\def\HyPsd@DefCommand
702 \let\gdef\HyPsd@DefCommand
703 \let\edef\HyPsd@DefCommand
704 \let\xdef\HyPsd@DefCommand
705 \let\futurelet\HyPsd@LetCommand
706 \let\let\HyPsd@LetCommand
707 \Hy@temp#1{#2}%
708 \endgroup
```

6.2.3 Postprocessing

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

```
709 \ifx#1\@empty
710 \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.

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

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

```

711 \HyPsd@ProtectSpaces#1%
712 \let\HyPsd@String\@empty
713 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
714 \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.

```

715 \let\HyPsd@SPACEOPTI\relax
716 {%
717 \let\HyPsd@String\@empty
718 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
719 \global\let#1\HyPsd@String
720}%
721 \expandafter\HyPsd@RemoveMask\expandafter
722 |\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.

```

723 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
724 \let\HyPsd@String\@empty
725 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
726 \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.

```
727 \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.

```
728 \ifHy@unicode
729 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
730 \HyPsd@SPACEOPTI#1%
731 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
732 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
733 {\HyPsd@SPACEOPTI\80\273}#1%
734 \else
735 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
736 \expandafter\HyPsd@Subst\expandafter{%
737 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
738 \string\273}\HyPsd@SPACEOPTI\273}#1%
739 \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.

```
740 \ifHy@unicode
741 \HyPsd@StringSubst{\)}{\80\051}#1%
742 \HyPsd@Subst){\80\051}#1%
743 \let\HyPsd@empty\relax
744 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
745 {\HyPsd@empty\80\051}#1%
746 \else
747 \HyPsd@StringSubst{\)}{\051}#1%
748 \HyPsd@Subst){\051}#1%
749 \let\HyPsd@empty\relax
750 \HyPsd@StringSubst{\051}\HyPsd@empty\string\)}#1%
751 \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`.

```

752 \expandafter\HyPsd@Subst\expandafter{\}\HyPsd@empty#1%
753 \ltx@ifundefined{@xspace}{%
754 }{%
755 \let\HyPsd@xspace\relax
756 \expandafter\HyPsd@Subst\expandafter
757 {\HyPsd@XSPACE}\HyPsd@xspace#1%
758 \let\HyPsd@xspace\HyPsd@doxspace
759 }%
760 \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.

```

761 \HyPsd@Subst{---}\textemdash#1%
762 \HyPsd@Subst{--}\textendash#1%
763 % \HyPsd@Subst{fi}\textfi#1%
764 % \HyPsd@Subst{fl}\textfl#1%
765 \HyPsd@Subst{!'}\textexclamdown#1%
766 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

767 \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.

```

768 \ifHy@unicode
769 \HyPsd@StringSubst{\textparenleft#1%
770 \HyPsd@Subst(\textparenleft#1%
771 \else
772 \HyPsd@StringSubst{\{050\}#1%
773 \HyPsd@Subst(\{050\}#1%
774 \HyPsd@StringSubst{\050\}\string\{)#1%
775 \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.

```

776 \ifHy@unicode
777 \edef\HyPsd@SPACEOPTI{\80\040}%
778 \else

```

```

779 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
780 \fi
781 \xdef#1{#1\@empty}%
782 \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.

```

783 \endgroup
784 \begingroup
785 \ifHy@unicode
786 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

787 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
788 \ltx@ifundefined{StringEncodingConvertTest}{%
789 }{%
790 \EdefUnescapeString\HyPsd@temp#1%
791 \ifxetex
792 \let\HyPsd@UnescapedString\HyPsd@temp
793 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
794 {utf16be}{ascii-print}{%
795 \EdefEscapeString\HyPsd@temp\HyPsd@temp
796 \global\let#1\HyPsd@temp
797 \HyPsd@EscapeTeX#1%
798 \Hy@unicodefalse
799 }{%
800 \HyPsd@ToBigChars#1%
801 }%
802 \else
803 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
804 {utf16be}{pdfdoc}{%
805 \EdefEscapeString\HyPsd@temp\HyPsd@temp
806 \global\let#1\HyPsd@temp
807 \HyPsd@EscapeTeX#1%
808 \Hy@unicodefalse
809 }{%}%
810 \fi
811 }%
812 \fi
813 \fi
814 \HyPsd@XeTeXBigCharsfalse

```

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

```

815 \pdfstringdefPostHook#1%
816 \endgroup
817 }

```

\Hy@pdfstringdef

```

818 \def\Hy@pdfstringdef#1#2{%
819 \pdfstringdef\Hy@gtemp{#2}%
820 \let#1\Hy@gtemp
821 }

```

6.3 Encodings

6.3.1 XeTeX

```
822 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
823 \catcode\z@=12 %
824 \ifxetex
825   \expandafter\@firstofone
826 \else
827   \let\HyPsd@XeTeXBigCharstrue\@empty
828   \let\HyPsd@XeTeXBigCharsfalse\@empty
829   \expandafter\@gobble
830 \fi
831 {%
832   \newif\ifHyPsd@XeTeXBigChars
833   \def\HyPsd@XeTeXBigCharsfalse{%
834     \global\let\ifHyPsd@XeTeXBigChars\iffalse
835   }%
836   \def\HyPsd@XeTeXBigCharstrue{%
837     \global\let\ifHyPsd@XeTeXBigChars\iftrue
838   }%
839   \def\HyPsd@ToBigChars#1{%
840     \ifHyPsd@XeTeXBigChars
841       \EdefEscapeHex\HyPsd@UnescapedString{%
842         \expandafter\@gobbletwo\HyPsd@UnescapedString
843       }%
844       \begingroup
845         \toks@{%
846           \escapechar=92\relax
847           \let\x\HyPsd@ToBigChar
848           \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
849           \relax\relax\relax\relax\relax\relax\relax
850         \edef\x{%
851           \endgroup
852           \gdef\noexpand#1{\the\toks@}%
853         }%
854         \x
855       \fi
856     }%
857   \def\HyPsd@ToBigChar#1#2#3#4{%
858     \ifx\relax#1\relax
859       \let\x\relax
860     \else
861       \count@=#1#2#3#4\relax
862       \let\y\@empty
863       \lcode\z@=\count@
864       \ifnum\count@=40 % (
865         \let\y\@backslashchar
866       \else
867         \ifnum\count@=41 % )
868         \let\y\@backslashchar
869       \else
870         \ifnum\count@=92 % backslash
871         \let\y\@backslashchar
872       \else
873         \ifnum\count@=10 % newline
874         \edef\y##1{\string\n}%
875       \else
```

```

876         \ifnum\count@=13 % carriage return
877         \edef\y###1{\string\r}%
878         \fi
879     \fi
880 \fi
881 \fi
882 \fi
883 \lowercase{%
884     \toks@\expandafter{%
885         \the\expandafter\toks@
886         \y
887         ^^@%
888     }%
889 }%
890 \fi
891 \x
892 }%
893 }
894 \Hy@temp

```

6.3.2 Workaround for package linguex

```

895 \ifpackageloaded{linguex}{%
896     \let\HyLinguex@OrgB\b
897     \let\HyLinguex@OrgC\c
898     \let\HyLinguex@OrgD\d
899     \def\HyLinguex@Restore{%
900         \let\b\HyLinguex@OrgB
901         \let\c\HyLinguex@OrgC
902         \let\d\HyLinguex@OrgD
903     }%
904     \Hy@AtEndOfPackage{%
905         \pdfstringdefDisableCommands{%
906             \ltx@ifundefined{oldb}{-}{\let\b\oldb}%
907             \ltx@ifundefined{oldc}{-}{\let\c\oldc}%
908             \ltx@ifundefined{oldd}{-}{\let\d\oldd}%
909         }%
910     }%
911 }{%
912     \let\HyLinguex@Restore\relax
913 }%

```

6.3.3 PD1 encoding

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

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

```

914 \ifundefined{T@PD1}{%
915     \input{pd1enc.def}%
916     \HyLinguex@Restore
917 }{}
918 \DeclareFontFamily{PD1}{pdf}{}
919 \DeclareFontShape{PD1}{pdf}{m}{n}{<-> cmr10 }{}
920 \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`.

```

921 \def\HyPsd@InitUnicode{%
922   \ifundefined{T@PU}{%
923     \input{puenc.def}%
924     \HyLinguex@Restore
925   }{}%
926   \DeclareFontFamily{PU}{pdf}{}%
927   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
928   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
929   \let\HyPsd@InitUnicode\relax
930 }
```

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.

```

931 \def\texorpdfstring{%
932   \ifHy@pdfstring
933     \expandafter\@secondoftwo
934   \else
935     \expandafter\@firstoftwo
936   \fi
937 }
```

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`.

```

938 \@ifundefined{pdfstringdefPreHook}{%
939   \let\pdfstringdefPreHook\@empty
940 }{}
941 \@ifundefined{pdfstringdefPostHook}{%
942   \let\pdfstringdefPostHook\@gobble
943 }{}

```

`\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`.

```
944 \def\pdfstringdefDisableCommands{%
945   \begingroup
946   \makeatletter
947   \HyPsd@DisableCommands
948 }
```

`\HyPsd@DisableCommands`

```
949 \long\def\HyPsd@DisableCommands#1{%
950   \toks0=\expandafter{\pdfstringdefPreHook}%
951   \toks1={#1}%
952   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
953   \endgroup
954 }
```

`\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`.

```
955 \def\pdfstringdefWarn#1{%
956   \expandafter\noexpand\csname<>-string#1\endcsname
957 }
```

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.

```
958 \begingroup
959   \catcode0=12 %
960   \def\x{\endgroup
961     \def\HyPsd@ignorespaces{%
962       \romannumeral\expandafter'\expandafter^^@%
963       \romannumeral'^^@%
964     }%
965   }%
966 \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`.

```

967 \def\HyPsd@BabelPatch{%
968   \let\HyOrg@languageshorthands\languageshorthands
969   \let\languageshorthands\HyPsd@LanguageShorthands
970 }
971 \begingroup\expandafter\expandafter\expandafter\endgroup
972 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
973   \let\HyPsd@langshort@system\@empty
974   \def\HyPsd@LanguageShorthands#1{%
975     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
976       \HyPsd@langshort@system
977     \expandafter\@gobble
978   \else
979     \expandafter\@firstofone
980   \fi
981   {%
982     \HyOrg@languageshorthands{#1}%
983   }%
984 }%
985 \else
986   \def\HyPsd@LanguageShorthands#1{%
987     \ifnum\pdf@strcmp{#1}{system}=\z@
988       \expandafter\@gobble
989     \else
990       \expandafter\@firstofone
991     \fi
992     {%
993       \HyOrg@languageshorthands{#1}%
994     }%
995   }%
996 \fi
997 \def\Hy@temp{%
998   \@ifpackageloaded{babel}{%
999     \@ifpackagelater{babel}{2008/03/16}{%
1000       \let\Hy@temp\@empty
1001     }{%
1002       \def\HyPsd@BabelPatch{%
1003         \let\HyOrg@languageshorthands\languageshorthands
1004       }%
1005     }%
1006   }{%
1007 }
1008 \Hy@temp
1009 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
1010 \newif\ifHy@next

```

Nothing to do for english.

```

1011 \ltx@ifundefined{danish@sh@"@sel}{-}{%
1012   \def\HyPsd@babel@danish{%
1013     \declare@shorthand{danish}{-}{-}%
1014     \declare@shorthand{danish}{-}{-}%
1015   }%
1016 }
1017 \ltx@ifundefined{dutch@sh@"@sel}{-}{%

```

```

1018 \def\HyPsd@babel@dutch{%
1019   \declare@shorthand{dutch}{"}{|}%
1020   \declare@shorthand{dutch}{"}{~}{-}%
1021 }%
1022 }
1023 \ltx@ifundefined{finnish@sh@}{@sel}{%}{%
1024   \def\HyPsd@babel@finnish{%
1025     \declare@shorthand{finnish}{"}{|}%
1026   }%
1027 }
1028 \ltx@ifundefined{french@sh@}{@sel}{%}{%
1029   \def\HyPsd@babel@frenchb{%
1030     \def\guill@spacing{ }%
1031   }%
1032 }
1033 \ltx@ifundefined{german@sh@}{@sel}{%}{%
1034   \def\HyPsd@babel@german{%
1035     \declare@shorthand{german}{"}{f}{f}%
1036     \declare@shorthand{german}{"}{|}%
1037     \declare@shorthand{german}{"}{~}{-}%
1038   }%
1039 }
1040 \ltx@ifundefined{macedonian@sh@}{@sel}{%}{%
1041   \def\HyPsd@babel@macedonian{%
1042     \declare@shorthand{macedonian}{"}{|}%
1043     \declare@shorthand{macedonian}{"}{~}{-}%
1044   }%
1045 }{}
1046 \ltx@ifundefined{ngerman@sh@}{@sel}{%}{%
1047   \def\HyPsd@babel@ngerman{%
1048     \declare@shorthand{ngerman}{"}{|}%
1049     \declare@shorthand{ngerman}{"}{~}{-}%
1050   }%
1051 }
1052 \ltx@ifundefined{portuges@sh@}{@sel}{%}{%
1053   \def\HyPsd@babel@portuges{%
1054     \declare@shorthand{portuges}{"}{|}%
1055   }%
1056 }
1057 \ltx@ifundefined{russian@sh@}{@sel}{%}{%
1058   \def\HyPsd@babel@russian{%
1059     \declare@shorthand{russian}{"}{|}%
1060     \declare@shorthand{russian}{"}{~}{-}%
1061   }%
1062 }
1063 \ltx@ifundefined{slovene@sh@}{@sel}{%}{%
1064   \def\HyPsd@babel@slovene{%
1065     \declare@shorthand{slovene}{"}{|}%
1066   }%
1067 }

```

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

```

1068 \ltx@ifundefined{spanish@sh@}{@sel}{%}{%
1069   \def\HyPsd@babel@spanish{%
1070     \declare@shorthand{spanish}{<<}{\guillemotleft}%
1071     \declare@shorthand{spanish}{>>}{\guillemotright}%
1072     \declare@shorthand{spanish}{"}{=}{-}%
1073     \declare@shorthand{spanish}{"}{~}{-}%

```

```

1074 \declare@shorthand{spanish}{!}{\textexclamdown}%
1075 \declare@shorthand{spanish}{?}{\textquestiondown}%
1076 }%
1077 }
1078 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
1079 \def\HyPsd@babel@swedish{%
1080 \declare@shorthand{swedish}{"}{|}{}%
1081 \declare@shorthand{swedish}{~}{-}{}%
1082 }%
1083 }
1084 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
1085 \def\HyPsd@babel@ukrainian{%
1086 \declare@shorthand{ukrainian}{"}{|}{}%
1087 \declare@shorthand{ukrainian}{~}{-}{}%
1088 }%
1089 }
1090 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
1091 \def\HyPsd@babel@usorbian{%
1092 \declare@shorthand{usorbian}{f}{f}{f}%
1093 \declare@shorthand{usorbian}{"}{|}{}%
1094 }%
1095 }
1096 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
1097 \let\HyPsd@GreekPatch\@empty
1098 }{%
1099 \def\HyPsd@GreekPatch{%
1100 \let\greeknumeral\HyPsd@greeknumeral
1101 \let\Greeknnumeral\HyPsd@Greeknnumeral
1102 }%
1103 }
1104 \def\HyPsd@greeknumeral#1{%
1105 \HyPsd@GreekNum\@firstoftwo{#1}%
1106 }
1107 \def\HyPsd@Greeknnumeral#1{%
1108 \HyPsd@GreekNum\@secondoftwo{#1}%
1109 }
1110 \def\HyPsd@GreekNum#1#2{%
1111 \ifHy@unicode
1112 \ifnum#2<\@ne
1113 \@arabic{#2}%
1114 \else
1115 \ifnum#2<1000000 %
1116 \HyPsd@@GreekNum#1{#2}%
1117 \else
1118 \@arabic{#2}%
1119 \fi
1120 \fi
1121 \else
1122 \@arabic{#2}%
1123 \fi
1124 }
1125 \def\HyPsd@@GreekNum#1#2{%
1126 \ifnum#2<\@m
1127 \ifnum#2<10 %
1128 \expandafter\HyPsd@GreekNumI
1129 \expandafter\@gobble\expandafter#1\number#2%
1130 \else

```

```

1131 \ifnum#2<100 %
1132 \expandafter\HyPsd@GreekNumII
1133 \expandafter\@gobble\expandafter#1\number#2%
1134 \else
1135 \expandafter\HyPsd@GreekNumIII
1136 \expandafter\@gobble\expandafter#1\number#2%
1137 \fi
1138 \fi
1139 \ifnum#2>\z@
1140 \textnumeralsigngreek
1141 \fi
1142 \else
1143 \ifnum#2<\@M
1144 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1145 \else
1146 \ifnum#2<100000 %
1147 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1148 \else
1149 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1150 \fi
1151 \fi
1152 \fi
1153 }
1154 \def\HyPsd@GreekNumI#1#2#3{%
1155 #1{%
1156 \ifnum#3>\z@
1157 \textnumeralsignlowergreek
1158 \fi
1159 }%
1160 \expandafter#2%
1161 \ifcase#3 %
1162 {}{}%
1163 \or\textalpha\textAlpha
1164 \or\textbeta\textBeta
1165 \or\textgamma\textGamma
1166 \or\textdelta\textDelta
1167 \or\textepsilon\textEpsilon
1168 \or\textstigmagreek\textStigmagreek
1169 \or\textzeta\textZeta
1170 \or\texteta\textEta
1171 \or\texttheta\textTheta
1172 \else
1173 {}{}%
1174 \fi
1175 }
1176 \def\HyPsd@GreekNumII#1#2#3#4{%
1177 #1{%
1178 \ifnum#3>\z@
1179 \textnumeralsignlowergreek
1180 \fi
1181 }%
1182 \expandafter#2%
1183 \ifcase#3 %
1184 {}{}%
1185 \or\textiota\textIota
1186 \or\textkappa\textKappa
1187 \or\textlambda\textLambda

```

```

1188 \or\textmu\textMu
1189 \or\textnu\textNu
1190 \or\textxi\textXi
1191 \or\textomicron\textOmicron
1192 \or\textpi\textPi
1193 \or\textkoppagreek\textKoppagreek
1194 \else
1195   {}{}%
1196 \fi
1197 \HyPsd@GreekNumI#1#2#4%
1198 }
1199 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1200   #1{%
1201     \ifnum#3>\z@
1202       \textnumeralsignlowergreek
1203     \fi
1204   }%
1205   \expandafter#2%
1206   \ifcase#3 %
1207     {}{}%
1208   \or\extrho\textRho
1209   \or\textsigma\textSigma
1210   \or\texttau\textTau
1211   \or\textupsilon\textUpsilon
1212   \or\textphi\textPhi
1213   \or\textchi\textChi
1214   \or\textpsi\textPsi
1215   \or\textomega\textOmega
1216   \or\textsampigreek\textSampigreek
1217   \else
1218     {}{}%
1219   \fi
1220   \HyPsd@GreekNumII#1#2#4#5%
1221 }
1222 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1223   \HyPsd@GreekNumI\@firstofone#1#2%
1224   \HyPsd@@GreekNum#1{#3#4#5}%
1225 }
1226 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1227   \HyPsd@GreekNumII\@firstofone#1#2#3%
1228   \HyPsd@@GreekNum#1{#4#5#6}%
1229 }
1230 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1231   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1232   \HyPsd@@GreekNum#1{#5#6#7}%
1233 }
1234 \def\HyPsd@SpanishPatch{%
1235   \ltx@ifundefined{es@save@dot}{%
1236     }{%
1237       \let\es@save@dot
1238     }%
1239 }

```

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

```

1240 \def\HyPsd@RussianPatch{%
1241   \ltx@ifundefined{russian@sh@"@-@}{%

```

```

1242 }{%
1243   \@namedef{russian@sh@"@-@}{-}%
1244 }%
1245 }

```

6.5.3 CJK patch

```

1246 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1247 \def\HyPsd@CJKhook{%
1248   \ltx@ifpackageloaded{CJK}{%
1249     \let\CJK@kern\relax
1250     \let\CJKkern\relax
1251     \let\CJK@CJK\relax
1252     \ifHy@CJKbookmarks
1253       \HyPsd@CJKhook@bookmarks
1254     \fi
1255     \HyPsd@CJKhook@unicode
1256   }{}%
1257 }

```

6.5.4 CJK bookmarks

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

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

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

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

```

1258 \begingroup
1259   \catcode"7F=\active
1260   \toks@{%
1261     \let\CJK@ignorespaces\empty
1262     \def\CJK@char#1{\@gobbletwo}%
1263     \let\CJK@charx\@gobblefour
1264     \let\CJK@punctchar\@gobblefour
1265     \def\CJK@punctcharx#1{\@gobblefour}%
1266     \catcode"7F=\active
1267     \def^^7f#1^^7f#2^^7f{%
1268       \string #1\HyPsd@DecimalToOctal{#2}%
1269     }%
1270     % ... ?
1271     \ifHy@unicode
1272       \def\Hy@cjkpu{\80}%
1273     \else
1274       \let\Hy@cjkpu\@empty
1275     \fi
1276     \HyPsd@CJKActiveChars
1277   }%
1278   \count@=127 %
1279   \@whilenum\count@<255 \do{%
1280     \advance\count@ by 1 %

```



```

1281 \lccode'\~=\count@
1282 \lowercase{%
1283 \toks@\expandafter{\the\toks@ ~}%
1284 }%
1285 }%
1286 \toks@\expandafter{\the\toks@ !}%
1287 \xdef\HyPsd@CJKhook@bookmarks{%
1288 \the\toks@
1289 }%
1290 \endgroup

```

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

```

1291 \def\HyPsd@CJKActiveChars#1{%
1292 \ifx#1!%
1293 \let\HyPsd@CJKActiveChars\relax
1294 \else
1295 \edef#1{\noexpand\Hy@cjku\string#1}%
1296 \fi
1297 \HyPsd@CJKActiveChars
1298 }

```

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

```

1299 \def\HyPsd@DecimalToOctal#1{%
1300 \ifcase #1 %
1301 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1302 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1303 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1304 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1305 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1306 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1307 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1308 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1309 \or @\or A\or B\or C\or D\or E\or F\or G%
1310 \or H\or I\or J\or K\or L\or M\or N\or O%
1311 \or P\or Q\or R\or S\or T\or U\or V\or W%
1312 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1313 \or \140\or a\or b\or c\or d\or e\or f\or g%
1314 \or h\or i\or j\or k\or l\or m\or n\or o%
1315 \or p\or q\or r\or s\or t\or u\or v\or w%
1316 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1317 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1318 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1319 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1320 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1321 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1322 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1323 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1324 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1325 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1326 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1327 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1328 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1329 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1330 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1331 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1332 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%

```

```

1333 \fi
1334 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1335 \def\HyPsd@CJKhook@unicode{%
1336 \let\Unicode\HyPsd@CJK@Unicode
1337 \let\CJKnumber\HyPsd@CJKnumber
1338 \let\CJKdigits\HyPsd@CJKdigits
1339 }

```

\HyPsd@CJK@Unicode

```

1340 \def\HyPsd@CJK@Unicode#1#2{%
1341 \ifnum#1<256 %
1342 \HyPsd@DecimalToOctalFirst{#1}%
1343 \HyPsd@DecimalToOctalSecond{#2}%
1344 \else
1345 \933%
1346 \expandafter\expandafter\expandafter\HyPsd@HighA
1347 \intcalcDiv{#1}{4}!%
1348 \933%
1349 \ifcase\intcalcMod{#1}{4} %
1350 4\or 5\or 6\or 7%
1351 \fi
1352 \HyPsd@DecimalToOctalSecond{#2}%
1353 \fi
1354 }

1355 \def\HyPsd@HighA#1!{%
1356 \expandafter\expandafter\expandafter\HyPsd@HighB
1357 \IntCalcDiv#1!64!!%
1358 \expandafter\expandafter\expandafter\HyPsd@HighD
1359 \IntCalcMod#1!64!!%
1360 }
1361 \def\HyPsd@HighB#1!{%
1362 \expandafter\expandafter\expandafter\HyPsd@HighC
1363 \IntCalcDec#1!!%
1364 }
1365 \def\HyPsd@HighC#1!{%
1366 \IntCalcDiv#1!4!%
1367 \@backslashchar
1368 \IntCalcMod#1!4!%
1369 }
1370 \def\HyPsd@HighD#1!{%
1371 \ifcase\IntCalcDiv#1!8! %
1372 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1373 \fi
1374 \ifcase\IntCalcMod#1!8! %
1375 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1376 \fi
1377 }
1378 \def\HyPsd@DecimalToOctalFirst#1{%
1379 \9%
1380 \ifcase#1 %
1381 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1382 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%

```

```

1383 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1384 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1385 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1386 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1387 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1388 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1389 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1390 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1391 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1392 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1393 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1394 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1395 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1396 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1397 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1398 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1399 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1400 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1401 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1402 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1403 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1404 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1405 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1406 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1407 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1408 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1409 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1410 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1411 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1412 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1413 \fi
1414 }
1415 \def\HyPsd@DecimalToOctalSecond#1{%
1416 \ifcase #1 %
1417 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1418 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1419 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1420 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1421 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1422 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1423 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1424 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1425 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1426 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1427 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1428 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1429 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1430 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1431 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1432 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1433 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1434 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1435 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1436 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1437 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1438 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1439 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%

```

```

1440 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1441 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1442 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1443 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1444 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1445 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1446 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1447 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1448 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1449 \fi
1450 }

1451 \def\HyPsd@CJKnumber#1{%
1452 \ifnum#1<\z@
1453 \CJK@minus
1454 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1455 \else
1456 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1457 \fi
1458 }

1459 \def\HyPsd@@CJKnumber#1{%
1460 \ifcase#1 %
1461 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1462 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1463 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1464 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1465 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1466 \CJK@ten\CJK@nine
1467 \else
1468 \ifnum#1<10000 %
1469 \HyPsd@CJKnumberFour#1!\@empty{20}%
1470 \@empty
1471 \else
1472 \ifnum#1<100000000 %
1473 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1474 \IntCalcDiv#1!10000!%
1475 !}{20}%
1476 \CJK@tenthousand
1477 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1478 \IntCalcMod#1!10000!%
1479 !\CJK@zero{10}%
1480 \@empty
1481 \else
1482 \expandafter\HyPsd@CJKnumberLarge
1483 \number\IntCalcDiv#1!100000000!\expandafter!%
1484 \number\IntCalcMod#1!100000000!!%
1485 \fi
1486 \fi
1487 \fi
1488 }

1489 \def\HyPsd@CJKnumberLarge#1!#2!{%
1490 \HyPsd@CJKnumberFour#1!}{20}%
1491 \CJK@hundredmillion
1492 \ifnum#2=\z@
1493 \else
1494 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1495 \IntCalcDiv#2!10000!%
1496 !\CJK@zero{10}%

```

```

1497 \CJK@tenthousand
1498 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1499 \IntCalcMod#2!10000!%
1500 !\CJK@zero{10}%
1501 \@empty
1502 \fi
1503 }
1504 \def\HyPsd@CJKnumberFour#1!#2#3{%
1505 \ifnum#1=\z@
1506 \expandafter\@gobble
1507 \else
1508 \ifnum#1<1000 %
1509 #2%
1510 \HyPsd@CJKnumberThree#1!#{#3}%
1511 \else
1512 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1513 \CJK@thousand
1514 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1515 \IntCalcMod#1!1000!%
1516 !\CJK@zero{10}%
1517 \fi
1518 \fi
1519 }
1520 \def\HyPsd@CJKnumberThree#1!#2#3{%
1521 \ifnum#1=\z@
1522 \else
1523 \ifnum#1<100 %
1524 #2%
1525 \HyPsd@CJKnumberTwo#1!#{#3}%
1526 \else
1527 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1528 \CJK@hundred
1529 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1530 \IntCalcMod#1!100!%
1531 !\CJK@zero{10}%
1532 \fi
1533 \fi
1534 }
1535 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1536 \ifnum#1=\z@
1537 \else
1538 \ifnum#1<#3 %
1539 #2%
1540 \HyPsd@@CJKnumber{#1}%
1541 \else
1542 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1543 \CJK@ten
1544 \ifnum\IntCalcMod#1!10!=\z@
1545 \else
1546 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1547 \fi
1548 \fi
1549 \fi
1550 }

1551 \def\HyPsd@CJKdigits#1{%
1552 \ifx*#1\relax
1553 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero

```

```

1554 \else
1555   \HyPsd@@@CJKdigits\CJK@null{#1}%
1556 \fi
1557 }
1558 \def\HyPsd@@@CJKdigits#1#2{%
1559   \ifx\#2\%
1560   \else
1561     \HyPsd@@@CJKdigits#1#2\@nil
1562   \fi
1563 }%
1564 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1565   \HyPsd@CJKdigit#1{#2}%
1566   \ifx\#3\%
1567     \expandafter\@gobble
1568   \else
1569     \expandafter\@firstofone
1570   \fi
1571   {%
1572     \HyPsd@@@CJKdigits#1#3\@nil
1573   }%
1574 }
1575 \def\HyPsd@CJKdigit#1#2{%
1576   \ifcase#2 %
1577     #1\or
1578     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1579     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1580   \fi
1581 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

\def\@current@cmd#1{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typeset@protect
    \@inmathwarn#1%
    \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
      \expandafter\ifx\csname ?\string#1\endcsname\relax
        \expandafter\def\csname ?\string#1\endcsname{%
          \TextSymbolUnavailable#1%
        }%
      \fi
    \global\expandafter\let
      \csname\cf@encoding\string#1\expandafter\endcsname
      \csname ?\string#1\endcsname

```

```

\fi
\csname\cf@encoding\string#1%
\expandafter\endcsname
\else
\noexpand#1%
\fi}
\gdef\TextSymbolUnavailable#1{%
\@latex@error{%
Command \protect#1 unavailable in encoding \cf@encoding%
}\@eha}
\def\@inmathwarn#1{%
\ifmmode
\@latex@warning{Command \protect#1 invalid in math mode}%
\fi}

1582 \def\HyPsd@inmathwarn#1#2{%
1583 \ifx#2\expandafter
1584 \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1585 \HyPsd@GLYPHERR
1586 \expandafter\@gobble\string#1%
1587 >%
1588 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1589 \else
1590 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1591 \fi
1592 \else
1593 \expandafter#2%
1594 \fi
1595 }
1596 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1597 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent

1598 \def\HyPsd@add@accent#1#2{%
1599 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1600 #2%
1601 }%

```

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`.

```

1602 \def\HyPsd@LetUnexpandableSpace#1{%
1603 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1604 }

```

`\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.

```

1605 \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.

```
1606 \edef\HyPsd@XSPACE{\string#\string X}
1607 \edef\HyPsd@ITALCORR{\string#\string I}
1608 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1609 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1610 \def\HyPsd@@hspace#1*#2\END{%
1611   \ifx\#2\%
1612     \HyPsd@hspacetest{#1}%
1613   \else
1614     \expandafter\HyPsd@hspacetest
1615   \fi
1616 }
```

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

```
1617 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1618 \ltx@ifundefined{tocsection}{%
1619   \let\HyPsd@AMSclassfix\relax
1620 }{%
1621   \def\HyPsd@AMSclassfix{%
1622     \let\tocpart\HyPsd@tocsection
1623     \let\tocchapter\HyPsd@tocsection
1624     \let\tocappendix\HyPsd@tocsection
1625     \let\tocsection\HyPsd@tocsection
1626     \let\tocsubsection\HyPsd@tocsection
1627     \let\tocsubsubsection\HyPsd@tocsection
1628     \let\tocparagraph\HyPsd@tocsection
1629   }%
1630   \def\HyPsd@tocsection#1#2#3{%
1631     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1632     #3%
1633   }%
1634 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1635 \def\HyPsd@href#1#{\@secondoftwo}
```

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

```
1636 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```


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

```
1637 \def\HyPsd@@ref#1*#2\END{%
1638   \ifx\#2\%
1639     \HyPsd@@@ref{#1}%
1640   \else
1641     \expandafter\HyPsd@@@ref
1642   \fi
1643 }
```

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

```
1644 \def\HyPsd@@@ref#1{%
1645   \expandafter\ifx\csname r@#1\endcsname\relax
1646     ??%
1647   \else
1648     \expandafter\expandafter\expandafter
1649     \@car\csname r@#1\endcsname\@nil
1650   \fi
1651 }
```

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

```
1652 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```
1653 \def\HyPsd@@pageref#1*#2\END{%
1654   \ifx\#2\%
1655     \HyPsd@@@pageref{#1}%
1656   \else
1657     \expandafter\HyPsd@@@pageref
1658   \fi
1659 }
```

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

```
1660 \def\HyPsd@@@pageref#1{%
1661   \expandafter\ifx\csname r@#1\endcsname\relax
1662     ??%
1663   \else
1664     \expandafter\expandafter\expandafter\expandafter
1665     \expandafter\expandafter\expandafter\@car
1666     \expandafter\expandafter\expandafter\@gobble
1667     \csname r@#1\endcsname{}\@nil
1668   \fi
1669 }
```

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

```
1670 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1671 \def\HyPsd@@nameref#1*#2\END{%
1672   \ifx\#2\%
1673     \HyPsd@@@nameref{#1}%
1674   \else
1675     \expandafter\HyPsd@@@nameref
1676   \fi
1677 }
```

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

```

1678 \def\HyPsd@@@nameref#1{%
1679   \expandafter\ifx\csname r@#1\endcsname\relax
1680     ??%
1681   \else
1682     \expandafter\expandafter\expandafter\expandafter
1683     \expandafter\expandafter\expandafter\@car
1684     \expandafter\expandafter\expandafter\@gobbletwo
1685     \csname r@#1\endcsname\}\}\@nil
1686   \fi
1687 }
```

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

```

1688 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```

1689 \def\HyPsd@@autoref#1*#2\END{%
1690   \ifx\#2\%
1691     \HyPsd@@@autoref{#1}%
1692   \else
1693     \expandafter\HyPsd@@@autoref
1694   \fi
1695 }
```

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

```

1696 \def\HyPsd@@@autoref#1{%
1697   \expandafter\ifx\csname r@#1\endcsname\relax
1698     ??%
1699   \else
1700     \expandafter\expandafter\expandafter\HyPsd@autorefname
1701     \csname r@#1\endcsname\}\}\}\@nil
1702     \expandafter\expandafter\expandafter
1703     \@car\csname r@#1\endcsname\@nil
1704   \fi
1705 }
```

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

```

1706 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1707   \ifx\#4\%
1708   \else
1709     \HyPsd@@autorefname#4.\@nil
1710   \fi
1711 }
```

`\HyPsd@@autorefname`

```

1712 \def\HyPsd@@autorefname#1.#2\@nil{%
1713   \ltx@ifundefined{#1autorefname}{%
1714     \ltx@ifundefined{#1name}{%
1715     }{%
1716       \csname#1name\endcsname\space
1717     }%
1718   }{%
1719     \csname#1autorefname\endcsname\space
1720   }%
1721 }
```

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
1722 \begingroup
1723   \def\x#1#2{%
1724     \endgroup
1725     \let#1\def
1726     \def\HyPsd@DefCommand##1##2##3{%
1727       #1%
1728       \expandafter\noexpand
1729         \csname\expandafter\@gobble\string##1\@empty\endcsname
1730       \@gobble
1731     }%
1732     \let#2\let
1733     \def\HyPsd@LetCommand##1{%
1734       \expandafter\ifx\csname##1\expandafter\endcsname
1735         \csname iftrue\endcsname
1736       \pdfstringdefWarn\let
1737       \expandafter\@gobble
1738     \else
1739       \expandafter\ifx\csname##1\expandafter\endcsname
1740         \csname iffalse\endcsname
1741       \pdfstringdefWarn\let
1742       \expandafter\expandafter\expandafter\@gobble
1743     \else
1744       #2%
1745       \expandafter\noexpand
1746       \csname##1\expandafter\expandafter\expandafter\endcsname

```

```

1747     \fi
1748     \fi
1749   }%
1750 }%
1751 \expandafter\x\csname <def>-command\expandafter\endcsname
1752     \csname <let>-command\endcsname
1753 \def\HyPsd@LetCommand#1{%
1754   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1755     \expandafter\expandafter\expandafter{%
1756     \expandafter\@gobble\string#1\@empty
1757   }%
1758 }

```

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).

```

1759 \def\HyPsd@ifnextchar#1{%
1760   \pdfstringdefWarn#1%
1761   \expandafter\@gobbletwo\@gobble
1762 }

```

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`.

```

1763 \def\HyPsd@protected@testopt#1{%
1764   \pdfstringdefWarn#1%
1765   \@gobbletwo
1766 }

```

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:

```

1767 \def\HyPsd@Warning#1{%
1768   \begingroup
1769     \def\space{ }%
1770     \Hy@Warning{#1}%
1771   \endgroup
1772 }

```

6.6.2 Protecting spaces

```

1773 \RequirePackage{etexcmds}[2007/09/09]
1774 \ifetex@unexpanded
1775   \expandafter\@secondoftwo
1776 \else
1777   \expandafter\@firstoftwo
1778 \fi
1779 {%

```

`\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`.

```

1780   \def\HyPsd@ProtectSpaces#1{%
1781     \iftrue
1782       \expandafter\HyPsd@@ProtectSpacesFi
1783       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1784     \fi
1785   }%

```

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

```

1786   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1787     \fi
1788     \ifx\scrollmode#2\scrollmode
1789       \HyPsd@RemoveMask#1\HyPsd@End#3%
1790     \else
1791       \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1792       \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1793     \fi
1794   }%

```

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.

```

1795   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1796     \toks@ \expandafter{#1}%
1797     \xdef#2{\the\toks@}%
1798   }%

1799 }{%
1800   \let\HyPsd@fi\fi
1801   \def\HyPsd@ProtectSpaces#1{%
1802     \xdef#1{%
1803       \iftrue
1804         \expandafter\HyPsd@@ProtectSpacesFi
1805         \expandafter|\expandafter\@empty#1| %
1806       \HyPsd@fi
1807     }%
1808     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1809   }%
1810   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1811     \fi
1812     \etex@unexpanded{#1}%
1813     \ifx\scrollmode#2\scrollmode
1814     \else
1815       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%

```

```

1816 \HyPsd@fi
1817 }%
1818 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1819 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1820 }%
1821 }

```

6.6.3 Remove grouping braces

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

```

1822 \def\HyPsd@RemoveBraces#1{%
1823 \ifx\scrollmode#1\scrollmode
1824 \else
1825 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1826 \fi
1827 }

```

`\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`.

```

1828 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1829 \fi
1830 \def\Hy@temp@A{#1#2}%
1831 \def\Hy@temp@B{#3}%
1832 \ifx\Hy@temp@A\Hy@temp@B
1833 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1834 \HyPsd@String#1%
1835 }%
1836 \ifx\scrollmode#2\scrollmode
1837 \else
1838 \Hy@ReturnAfterFiFiEnd{%
1839 \HyPsd@RemoveBraces{#2}%
1840 }%
1841 \fi
1842 \else
1843 \def\Hy@temp@A{#1}%
1844 \HyPsd@AppendItalcrr\HyPsd@String
1845 \ifx\Hy@temp@A\@empty
1846 \Hy@ReturnAfterElseFiFiEnd{%
1847 \HyPsd@RemoveBraces{#2}%
1848 }%
1849 \else
1850 \HyPsd@ProtectSpaces\Hy@temp@A
1851 \HyPsd@AppendItalcrr\Hy@temp@A
1852 \Hy@ReturnAfterFiFiEnd{%
1853 \expandafter\HyPsd@RemoveBraces\expandafter
1854 {\Hy@temp@A#2}%
1855 }%
1856 \fi
1857 \fi

```

```

1858 \Hy@ReturnEnd
1859 }

```

\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.

```

1860 \def\HyPsd@AppendItalcrr#1{%
1861   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1}%
1862 }
1863 \def\HyPsd@@AppendItalcrr#1#2{%
1864   \expandafter\def\expandafter#2\expandafter{#2#1}%
1865 }

```

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).

```

1866 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1867   \global\let\HyPsd@Rest\relax
1868   \ifcat\relax\noexpand#1\relax
1869     \ifx#1\protect
1870     \else
1871       \ifx#1\penalty
1872         \setbox\z@=\hbox{%
1873           \afterassignment\HyPsd@AfterCountRemove
1874           \count@=#2\HyPsd@End
1875         }%
1876       \else
1877         \ifx#1\kern
1878           \setbox\z@=\hbox{%
1879             \afterassignment\HyPsd@AfterDimenRemove
1880             \dimen@=#2\HyPsd@End
1881           }%
1882         \else
1883           \ifx#1\hskip
1884             \setbox\z@=\hbox{%
1885               \afterassignment\HyPsd@AfterSkipRemove
1886               \skip@=#2\HyPsd@End
1887             }%
1888           \else
1889             \HyPsd@CatcodeWarning{#1}%
1890           \fi
1891         \fi
1892       \fi
1893     \else
1894       \ifcat#1A% letter
1895       \expandafter\def\expandafter\HyPsd@String\expandafter{%

```

```

1897     \HyPsd@String#1%
1898   }%
1899 \else
1900   \ifcat#1 % SPACE
1901     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1902       \HyPsd@String\HyPsd@SPACEOPTI
1903     }%
1904 \else
1905   \ifcat$#1%
1906     \HyPsd@CatcodeWarning{math shift}%
1907 \else
1908   \ifcat&#1%
1909     \HyPsd@CatcodeWarning{alignment tab}%
1910 \else
1911   \ifcat^#1%
1912     \HyPsd@CatcodeWarning{superscript}%
1913 \else
1914   \ifcat_#1%
1915     \HyPsd@CatcodeWarning{subscript}%
1916 \else
1917   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1918     \HyPsd@String#1%
1919   }%
1920 \fi
1921 \fi
1922 \fi
1923 \fi
1924 \fi
1925 \fi
1926 \fi
1927 \ifx\HyPsd@Rest\relax
1928   \ifx\scrollmode#2\scrollmode
1929 \else
1930   \Hy@ReturnAfterFiFiEnd{%
1931     \HyPsd@CheckCatcodes#2\HyPsd@End
1932   }%
1933 \fi
1934 \else
1935   \ifx\HyPsd@Rest\@empty
1936 \else
1937   \Hy@ReturnAfterFiFiEnd{%
1938     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1939   }%
1940 \fi
1941 \fi
1942 \Hy@ReturnEnd
1943 }

```

Remove counts, dimens, skips.

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

```

1944 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1945   \gdef\HyPsd@Rest{#1}%
1946 }

```

`\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.

```

1947 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
1948 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1949 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1950 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1951 \else
1952 \ifdim\dimen@=\z@
1953 \else
1954 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1955 \fi
1956 \gdef\HyPsd@Rest{#1}%
1957 \fi
1958 }

```

`\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).

```

1959 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1960 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1961 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1962 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1963 \else
1964 \ifdim\skip@=\z@
1965 \else
1966 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1967 \fi
1968 \gdef\HyPsd@Rest{#1}%
1969 \fi
1970 }

```

Catcode warnings.

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

```

1971 \def\HyPsd@CatcodeWarning#1{%
1972 \HyPsd@Warning{%
1973 Token not allowed in a PDF string (%
1974 \ifHy@unicode
1975 Unicode%
1976 \else
1977 PDFDocEncoding%
1978 \fi
1979 ):%
1980 \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1981 }%
1982 }
1983 \begingroup
1984 \catcode‘\|=0 %
1985 \catcode‘\|=12 %
1986 |gdef|HyPsd@RemoveCmdPrefix#1{%
1987 |expandafter|HyPsd@@RemoveCmdPrefix
1988 |string#1|@empty\<>-|@empty|@empty
1989 }%
1990 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1991 |endgroup

```

`\HyPsd@RemoveSpaceWarning`

```

1992 \def\HyPsd@RemoveSpaceWarning#1{%
1993   \HyPsd@Warning{%
1994     Token not allowed in a PDF string (%)
1995     \ifHy@unicode
1996       Unicode%
1997     \else
1998       PDFDocEncoding%
1999     \fi
2000   }:%
2001   \MessageBreak #1\MessageBreak
2002   removed%
2003 }%
2004 }

```

\HyPsd@ReplaceSpaceWarning

```

2005 \def\HyPsd@ReplaceSpaceWarning#1{%
2006   \HyPsd@Warning{%
2007     Token not allowed in a PDF string (%)
2008     \ifHy@unicode
2009       Unicode%
2010     \else
2011       PDFDocEncoding%
2012     \fi
2013   }:%
2014   \MessageBreak #1\MessageBreak
2015   replaced by space%
2016 }%
2017 }

```

6.6.5 Check for wrong glyphs

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

```

2018 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2019   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2020     \HyPsd@String#1%
2021   }%
2022   \ifx\#2\%
2023   \else
2024     \Hy@ReturnAfterFi{%
2025       \HyPsd@GlyphProcessWarning#2\@empty
2026     }%
2027   \fi
2028 }
2029 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2030   \HyPsd@@@GlyphProcessWarning#1++>%
2031   \HyPsd@GlyphProcess#2\@empty
2032 }
2033 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2034   \ifx\#2\%
2035     \HyPsd@Warning{%
2036       Glyph not defined in %
2037       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2038       removing ‘\@backslashchar#1’%
2039     }%
2040   \else
2041     \HyPsd@Warning{%

```

```

2042     Composite letter '@backslashchar#1+#2'\MessageBreak
2043     not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2044     \MessageBreak
2045     removing '@backslashchar#1'%
2046   }%
2047 \fi
2048 }

```

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`.

```

2049 \def\HyPsd@spaceopti#1{ % first space
2050   \ifx\HyPsd@spaceopti#1%
2051     \040%
2052   \else
2053     #1%
2054   \fi
2055 }%

```

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.

2056 \def\HyPsd@Subst#1#2#3{%
2057   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2058     \fi
2059     ##1%
2060     \ifx\scrollmode##2\scrollmode
2061     \else
2062       #2%
2063       \HyPsd@@ReplaceFi##2\END
2064     \fi
2065   }%
2066 \xdef#3{%
2067   \iftrue
2068     \expandafter\HyPsd@@ReplaceFi#3#1\END
2069   \fi
2070 }%
2071 }

```

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

```

2072 \def\HyPsd@StringSubst#1{%
2073   \expandafter\HyPsd@Subst\expandafter{\string#1}%
2074 }

```

`\HyPsd@EscapeTeX`

```

2075 \begingroup
2076 \lccode'\!='\%%
2077 \lccode'\|='\%%

```

```

2078 \lccode'\(=\{\%
2079 \lccode'\)=\}%
2080 \lccode'0=\ltx@zero
2081 \lccode'1=\ltx@zero
2082 \lccode'3=\ltx@zero
2083 \lccode'4=\ltx@zero
2084 \lccode'5=\ltx@zero
2085 \lccode'7=\ltx@zero
2086 \lowercase{\endgroup
2087 \def\HyPsd@EscapeTeX#1{%
2088   \HyPsd@Subst!{|045}#1%
2089   \HyPsd@Subst({|173}#1%
2090   \HyPsd@Subst){|175}#1%
2091 }%
2092 }

```

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.

```

2093 \def\HyPsd@doxspace#1{%
2094   \ifx#1\relax\else
2095     \ifx#1.\else
2096       \ifx#1:\else
2097         \ifx#1,\else
2098           \ifx#1;\else
2099             \ifx#1!\else
2100               \ifx#1?\else
2101                 \ifx#1/\else
2102                   \ifx#1-\else
2103                     \ifx#1'\else
2104                       \HyPsd@SPACEOPTI
2105                     \fi
2106                   \fi
2107                 \fi
2108               \fi
2109             \fi
2110           \fi
2111         \fi
2112       \fi
2113     \fi
2114   \fi
2115   #1%
2116 }%

```

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.

```

2117 \begingroup
2118 \catcode'\|=0 %
2119 \catcode'\=12 %

```

`\HyPsd@ConvertToUnicode`

```

2120 |gdef|HyPsd@ConvertToUnicode#1{%
2121 |xdef#1{%
2122 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2123 }%
2124 |ifx#1|@empty
2125 |else
2126 |xdef#1{%
2127 \376\377%
2128 #1%
2129 }%
2130 |fi
2131 }%

```

\HyPsd@DoConvert

```

2132 |gdef|HyPsd@DoConvert#1{%
2133 |ifx#1|@empty
2134 |else
2135 |Hy@ReturnAfterFi{%
2136 |ifx#1\%%
2137 \%%
2138 |expandafter|HyPsd@DoEscape
2139 |else
2140 |HyPsd@Char{#1}%
2141 |expandafter|HyPsd@DoConvert
2142 |fi
2143 }%
2144 |fi
2145 }%

```

\HyPsd@DoEscape

```

2146 |gdef|HyPsd@DoEscape#1{%
2147 |ifx#19%
2148 |expandafter|HyPsd@GetTwoBytes
2149 |else
2150 |Hy@ReturnAfterFi{%
2151 |ifx#18%
2152 00%
2153 |expandafter|HyPsd@GetTwoBytes
2154 |else
2155 #1%
2156 |expandafter|HyPsd@GetOneByte
2157 |fi
2158 }%
2159 |fi
2160 }%

```

\HyPsd@GetTwoBytes

```

2161 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2162 #1\#2#3#4%
2163 |HyPsd@DoConvert
2164 }%

```

\HyPsd@GetOneByte

```

2165 |gdef|HyPsd@GetOneByte#1#2{%
2166 #1#2%
2167 |HyPsd@DoConvert
2168 }%

```

2169 |endgroup

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

```
2170 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2171   \xdef#4{#4#1#2}%
2172   \HyPsd@@ConvertToUnicode#3\END#4%
2173 }
```

\HyPsd@Char

```
2174 \begingroup
2175   \catcode0=9 %
2176   \catcode'\^=7 %
2177   \catcode'\^^=12 %
2178   \def\x{^^^0000}%
2179 \expandafter\endgroup
2180 \ifx\x\@empty
2181   \def\HyPsd@Char#1{%
2182     \ifnum'#1<128 %
2183       \@backslashchar 000#1%
2184     \else
2185       \ifnum'#1<65536 %
2186         \expandafter\HyPsd@CharTwoByte\number'#1!%
2187       \else
2188         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2189         \intcalcSub{'#1}{65536}!%
2190       \fi
2191     \fi
2192   }%
2193 \def\HyPsd@CharTwoByte#1!{%
2194   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2195   \IntCalcDiv#1!256!!%
2196   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2197   \IntCalcMod#1!256!!%
2198 }%
2199 \def\HyPsd@CharOctByte#1!{%
2200   \@backslashchar
2201   \IntCalcDiv#1!64!%
2202   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2203   \IntCalcMod#1!8!%
2204 }%
2205 \def\HyPsd@CharSurrogate#1!{%
2206   \@backslashchar 33%
2207   \IntCalcDiv#1!262144!%
2208   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2209   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2210   \@backslashchar 33%
2211   \expandafter\expandafter\expandafter\IntCalcAdd
2212   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2213   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2214   \IntCalcMod#1!256!!%
2215 }%
2216 \else
2217   \def\HyPsd@Char#1{%
2218     \@backslashchar 000#1%
2219   }%
2220 \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

2221 \begingroup\expandafter\expandafter\expandafter\endgroup
2222 \expandafter\ifx\csname numexpr\endcsname\relax
2223   \let\HyPsd@UTFviii\relax
2224 \else
2225   \begingroup
2226     \lccode'\~='^f4\relax
2227   \lowercase{\endgroup
2228     \def\HyPsd@UTFviii{%
2229       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2230       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2231       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2232       \ifx~\HyPsd@UTFviii@ccxliv@undef
2233         \let~\HyPsd@UTFviii@ccxliv@def
2234       \fi
2235       \let\unichar\HyPsd@unichar
2236     }%
2237   }%
2238   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2239   \edef\HyPsd@UTFviii@ccxliv@def{%
2240     \noexpand\UTFviii@four@octets\string ^f4%
2241   }%
```

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.

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

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

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

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

$$(5)$$

```

2242 \def\HyPsd@UTFviii@two#1#2{%
2243   \expandafter\HyPsd@UTFviii@@two
2244   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2245   \number'#1\expandafter| %
2246   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2247   \number'#2 \@nil
2248 }%
2249 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2250   \expandafter\8%
2251   \number\numexpr #1-48\expandafter\relax
2252   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2253   \number\numexpr #3-8*%
```

```

2254 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2255 \number\dimexpr #4-8*#3\relax
2256 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2257 \def\HyPsd@UTFviii@three#1#2#3{%
2258 \expandafter\HyPsd@UTFviii@three
2259 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2260 \number'#1\expandafter| %
2261 \number\ifnum\dimexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2262 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2263 \number'#2\expandafter| %
2264 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2265 \number'#3 \@nil
2266 }%
2267 \def\HyPsd@UTFviii@four#1#2#3#4#5#6#7\@nil{%
2268 \expandafter\9%
2269 \number\dimexpr #1-56\expandafter\relax
2270 \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2271 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2272 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2273 \number\dimexpr #6-16\expandafter\relax
2274 \number\dimexpr #7-8*#6\relax
2275 }%

```

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

```

```

2276 \def\HyPsd@UTFviii@four#1#2#3#4{%
2277 \expandafter\HyPsd@UTFviii@four\number
2278 \dimexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2279 \expandafter|\number
2280 \dimexpr'#2-16*\dimexpr.0625\dimexpr'#3sp| %
2281 }%
2282 \def\HyPsd@UTFviii@four#1#2#3#4{%
2283 \933\number\dimexpr.25\dimexpr'#1sp\relax\relax
2284 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr'#1sp\endcsname
2285 \ifodd#2 %
2286 \number\dimexpr(#2-1)/2\relax
2287 \else
2288 \number\dimexpr#2/2\relax
2289 \fi

```



```

2290 \number\numexpr\ifodd#2 4+\fi
2291 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2292 \933%
2293 \expandafter\HyPsd@@@UTFviii@four\number
2294 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2295 }%
2296 \def\HyPsd@@@UTFviii@four#1|#2{%
2297 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2298 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2299 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2300 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2301 }%

```

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

```

2302 \def\HyPsd@unichar#1{%
2303 \ifHy@unicode
2304 \ifnum#1>"10FFFF %
2305 \HyPsd@UnicodeReplacementCharacter % illegal
2306 \else
2307 \ifnum#1>"FFFF %

```

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

```

2308 \expandafter\HyPsd@unichar\expandafter{%
2309 \number\numexpr 55296+%
2310 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2311 \relax\relax\relax
2312 }%

```

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

```

2313 \expandafter\HyPsd@unichar\expandafter{%
2314 \number\numexpr#1-9216%
2315 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2316 \relax\relax\relax
2317 }%
2318 \else
2319 \ifnum#1>"7FF %
2320 \9%
2321 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2322 \number
2323 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2324 }%
2325 \else
2326 \8%
2327 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2328 \fi
2329 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2330 \number
2331 \numexpr#1-256*\number
2332 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2333 }%
2334 \fi
2335 \fi
2336 \else
2337 .% unsupported (Unicode -> PDF Doc Encoding)
2338 \fi
2339 }%
2340 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2341 \def\HyPsd@unichar@first@byte#1{%
2342 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2343 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2344 \number
2345 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2346 \relax\relax\relax
2347 }%
2348 }%
2349 \def\HyPsd@unichar@second@byte#1{%
2350 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2351 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2352 \number
2353 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2354 \relax\relax\relax
2355 }%
2356 }%
2357 \def\HyPsd@unichar@octtwo#1{%
2358 \number\dimexpr.125\dimexpr#1sp\relax\relax
2359 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2360 \relax\relax\relax
2361 }%
2362 \fi

```

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

```

2363 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2364 \ifx\@gobble#1%
2365 \else
2366 [Please insert \textbackslash PrerenderUnicode%
2367 \textbraceleft#1\textbraceright\space
2368 into preamble]%
2369 \fi
2370 }%

```

7 Support of other packages

7.1 Class memoir

```

2371 \@ifclassloaded{memoir}{%
2372 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}}%
2373 }{}

```

7.2 Package subfigure

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

```

2374 \@ifpackageloaded{subfigure}{%
2375 \ltx@ifundefined{sub@label}{%
2376 \Hy@hypertextnamesfalse
2377 }{%
2378 \renewcommand*{\sub@label}[1]{%
2379 \@bsphack
2380 \subfig@oldlabel{#1}%
2381 \if@filesw
2382 \begingroup
2383 \edef\@currentlabstr{%
2384 \expandafter\strip@prefix\meaning\@currentlabelname
2385 }%

```

```

2386 \protected@write\@auxout{}\{}%
2387 \string\newlabel{sub@#1}\{}%
2388 {\@nameuse{@@thesub\@capytype}}%
2389 {\thepage}%
2390 {\%
2391 \expandafter\strip@period\@currentlabstr
2392 \relax.\relax\@@@%
2393 }%
2394 {\@currentHref}%
2395 {\}%
2396 }%
2397 }%
2398 \endgroup
2399 \fi
2400 \@esphack
2401 }%
2402 \@ifpackagelater{subfigure}{2002/03/26}\{}%
2403 \providecommand*\@toclevel@subfigure{1}%
2404 \providecommand*\@toclevel@subtable{1}%
2405 }%
2406 }%
2407 }\}

```

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:

```

2408 \ltx@ifundefined{XR@addURL}\{}%
2409 }\{}%

```

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.

```

2410 \def\xr@addURL#1{\xr@@dURL#1\}\}\}\%
2411 \def\xr@@dURL#1#2#3#4#5\{\%
2412 {#1}\{#2}%
2413 \if!#4!%
2414 \else
2415 {#3}\{#4}\{XR@URL}%
2416 \fi
2417 }%
2418 }

2419 \def\Hy@true{true}
2420 \def\Hy@false{false}

```

Providing dummy definitions.

```

2421 \let\literalps@out\@gobble
2422 \newcommand\pdfbookmark[3]{}
2423 \def\Acrobatmenu#1#2{\leavevmode#2}
2424 \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

```
2425 \let\HyperRaiseLinkHook\@empty
2426 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2427 \newcount\Hy@SavedSpaceFactor
2428 \def\Hy@SaveSpaceFactor{%
2429   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2430 }
2431 \def\Hy@RestoreSpaceFactor{%
2432   \relax
2433   \ifhmode
2434     \ifnum\Hy@SavedSpaceFactor>\z@
2435       \spacefactor=\Hy@SavedSpaceFactor
2436     \fi
2437   \fi
2438 }
2439 \def\Hy@SaveSavedSpaceFactor{%
2440   \edef\Hy@RestoreSavedSpaceFactor{%
2441     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2442   }%
2443 }
2444 \def\Hy@raisedlink#1{%
2445   \ifvmode
2446     #1%
2447   \else
2448     \Hy@SaveSpaceFactor
2449     \penalty\@M
2450     \smash{%
2451       \begin{group}
2452         \let\HyperRaiseLinkLength\@tempdima
2453         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2454         \HyperRaiseLinkHook
2455         \expandafter\endgroup
2456         \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2457           \Hy@RestoreSpaceFactor
2458           #1%
2459           \Hy@SaveSpaceFactor
2460         }%
2461       }%
2462     \Hy@RestoreSpaceFactor
2463   \fi
2464 }
```

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

```
2465 \def\Hy@SaveLastskip{%
2466   \let\Hy@RestoreLastskip\relax
2467   \ifvmode
2468     \ifdim\lastskip=\z@
2469       \let\Hy@RestoreLastskip\nobreak
2470     \else
```

```

2471 \begingroup
2472 \skip@=-\lastskip
2473 \edef\x{%
2474 \endgroup
2475 \def\noexpand\Hy@RestoreLastskip{%
2476 \noexpand\ifvmode
2477 \noexpand\nobreak
2478 \vskip\the\skip@
2479 \vskip\the\lastskip\relax
2480 \noexpand\fi
2481 }%
2482 }%
2483 \x
2484 \fi
2485 \else
2486 \ifhmode
2487 \ifdim\lastskip=\z@
2488 \let\Hy@RestoreLastskip\nobreak
2489 \else
2490 \begingroup
2491 \skip@=-\lastskip
2492 \edef\x{%
2493 \endgroup
2494 \def\noexpand\Hy@RestoreLastskip{%
2495 \noexpand\ifhmode
2496 \noexpand\nobreak
2497 \hskip\the\skip@
2498 \hskip\the\lastskip\relax
2499 \noexpand\fi
2500 }%
2501 }%
2502 \x
2503 \fi
2504 \fi
2505 \fi
2506 }%

```

9 Options

```

2507 \SetupKeyvalOptions{%
2508 family=Hyp,%
2509 prefix=HyOpt%
2510 }

```

9.1 Help macros

\Hy@boolkey

```

2511 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2512 \def\Hy@@boolkey[#1]#2#3{%
2513 \edef\Hy@tempa{#3}%
2514 \lowercase\expandafter{%
2515 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2516 }%
2517 \ifx\Hy@tempa\@empty
2518 \let\Hy@tempa\Hy@true
2519 \fi
2520 \ifx\Hy@tempa\Hy@true

```

```

2521 \else
2522 \ifx\Hy@tempa\Hy>false
2523 \else
2524 \let\Hy@tempa\relax
2525 \fi
2526 \fi
2527 \ifx\Hy@tempa\relax
2528 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2529 \else
2530 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2531 \csname Hy@#2\Hy@tempa\endcsname
2532 \fi
2533 }

```

\Hy@WarnOptionValue

```

2534 \def\Hy@WarnOptionValue#1#2#3{%
2535 \Hy@Warning{%
2536 Unexpected value ‘#1’\MessageBreak
2537 of option ‘#2’ instead of\MessageBreak
2538 #3%
2539 }%
2540 }

```

\Hy@DisableOption

```

2541 \def\Hy@DisableOption#1{%
2542 \@ifundefined{KV@Hyp@#1@default}{%
2543 \define@key{Hyp}{#1}%
2544 }{%
2545 \define@key{Hyp}{#1}[]%
2546 }%
2547 {\Hy@WarnOptionDisabled{#1}}%
2548 }

```

\Hy@WarnOptionDisabled

```

2549 \def\Hy@WarnOptionDisabled#1{%
2550 \Hy@Warning{%
2551 Option ‘#1’ has already been used,\MessageBreak
2552 setting the option has no effect%
2553 }%
2554 }

```

\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.

```

2555 \def\Hy@CheckOptionValue#1#2#3{%
2556 \begingroup
2557 \edef\x{#1}%
2558 \@onelevel@sanitize\x
2559 \let\y=y%
2560 \def\do##1##2{%
2561 \def\z{##1}%
2562 \@onelevel@sanitize\z
2563 \ifx\x\z
2564 \let\y=n%
2565 \let\do\@gobbletwo
2566 \fi
2567 }%
2568 #3%

```

```

2569 \ifx\y y%
2570 \def\do##1##2{%
2571   * '##1'%
2572   \ifx\\##2\\\else\space(##2)\fi
2573   \MessageBreak
2574 }%
2575 \Hy@Warning{%
2576   Values of option '#2':\MessageBreak
2577   ##3%
2578   * An empty value disables the option.\MessageBreak
2579   Unknown value '\x'%
2580 }%
2581 \fi
2582 \endgroup
2583 }

```

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

```

2584 \def\Hy@DefNameKey#1{%
2585   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2586 }

```

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

```

2587 \def\Hy@@DefNameKey#1#2#3{%
2588   \define@key{Hyp}{#2}{%
2589     \edef#1{##1}%
2590     \ifx#1\@empty
2591     \else
2592       \Hy@CheckOptionValue{##1}{#2}{#3}%
2593     \fi
2594   }%
2595   \let#1\@empty
2596 }

```

`\Hy@UseNameKey`

```

2597 \def\Hy@UseNameKey#1#2{%
2598   \ifx#2\@empty
2599   \else
2600     /#1/#2%
2601   \fi
2602 }

```

9.2 Defining the options

```

2603 \define@key{Hyp}{implicit}[true]{%
2604   \Hy@boolkey{implicit}{#1}%
2605 }
2606 \define@key{Hyp}{draft}[true]{%
2607   \Hy@boolkey{draft}{#1}%
2608 }
2609 \define@key{Hyp}{final}[true]{%
2610   \Hy@boolkey{final}{#1}%
2611 }

```

```

2612 \let\KV@Hyp@nolinks\KV@Hyp@draft
2613 \def\Hy@ObsoletePaperOption#1{%
2614   \Hy@WarningNoLine{%
2615     Option '#1' is no longer used%
2616   }%
2617   \define@key{Hyp}{#1}[true]{}%
2618 }
2619 \def\Hy@temp#1{%
2620   \define@key{Hyp}{#1}[true]{%
2621     \Hy@ObsoletePaperOption{#1}%
2622   }%
2623 }
2624 \Hy@temp{a4paper}
2625 \Hy@temp{a5paper}
2626 \Hy@temp{b5paper}
2627 \Hy@temp{letterpaper}
2628 \Hy@temp{legalpaper}
2629 \Hy@temp{executivepaper}

2630 \define@key{Hyp}{setpagesize}[true]{%
2631   \Hy@boolkey{setpagesize}{#1}%
2632 }
2633 \define@key{Hyp}{debug}[true]{%
2634   \Hy@boolkey[debug]{verbose}{#1}%
2635 }
2636 \define@key{Hyp}{linktocpage}[true]{%
2637   \Hy@boolkey{linktocpage}{#1}%
2638   \ifHy@linktocpage
2639     \let\Hy@linktoc\Hy@linktoc@page
2640   \else
2641     \let\Hy@linktoc\Hy@linktoc@section
2642   \fi
2643 }
2644 \chardef\Hy@linktoc@none=0 %
2645 \chardef\Hy@linktoc@section=1 %
2646 \chardef\Hy@linktoc@page=2 %
2647 \chardef\Hy@linktoc@all=3 %
2648 \ifHy@linktocpage
2649   \let\Hy@linktoc\Hy@linktoc@page
2650 \else
2651   \let\Hy@linktoc\Hy@linktoc@section
2652 \fi
2653 \define@key{Hyp}{linktoc}{%
2654   \@ifundefined{Hy@linktoc@#1}{%
2655     \Hy@Warning{%
2656       Unexpected value '#1' of\MessageBreak
2657       option 'linktoc' instead of 'none',\MessageBreak
2658       'section', 'page' or 'all'%
2659     }%
2660   }{%
2661     \expandafter\let\expandafter\Hy@linktoc
2662     \csname Hy@linktoc@#1\endcsname
2663   }%
2664 }
2665 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2666 \let\XR@ext\relax
2667 \define@key{Hyp}{verbose}[true]{%
2668   \Hy@boolkey{verbose}{#1}%

```



```

2669 }
2670 \define@key{Hyp}{typexml}[true]{%
2671   \Hy@boolkey{typexml}{#1}%
2672 }

```

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.

```

2673 \define@key{Hyp}{raiselinks}[true]{%
2674   \Hy@boolkey{raiselinks}{#1}%
2675 }

```

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

```

2676 \def\Hy@setbreaklinks#1{%
2677   \csname breaklinks#1\endcsname
2678 }

2679 \def\Hy@breaklinks@unsupported{%
2680   \ifx\Hy@setbreaklinks@gobble
2681     \ifHy@breaklinks
2682       \Hy@WarningNoLine{%
2683         You have enabled option 'breaklinks'.\MessageBreak
2684         But driver '\Hy@driver.def' does not support this.\MessageBreak
2685         Expect trouble with the link areas of broken links%
2686       }%
2687     \fi
2688   \fi
2689 }

2690 \define@key{Hyp}{breaklinks}[true]{%
2691   \Hy@boolkey{breaklinks}{#1}%
2692   \let\Hy@setbreaklinks@gobble
2693 }

2694 \define@key{Hyp}{localanchorname}[true]{%
2695   \Hy@boolkey{localanchorname}{#1}%
2696 }

```

Determines whether an automatic anchor is put on each page

```

2697 \define@key{Hyp}{pageanchor}[true]{%
2698   \Hy@boolkey{pageanchor}{#1}%
2699 }

```

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.

```

2700 \define@key{Hyp}{plainpages}[true]{%
2701   \Hy@boolkey{plainpages}{#1}%
2702 }

```

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

```

2703 \define@key{Hyp}{naturalnames}[true]{%
2704   \Hy@boolkey{naturalnames}{#1}%
2705 }

```

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

```

2706 \define@key{Hyp}{hypertexnames}[true]{%
2707   \Hy@boolkey{hypertexnames}{#1}%
2708 }

```

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

```

2709 \define@key{Hyp}{nesting}[true]{%
2710   \Hy@boolkey{nesting}{#1}%
2711 }

2712 \define@key{Hyp}{unicode}[true]{%
2713   \Hy@boolkey{unicode}{#1}%
2714   \ifHy@unicode
2715     \def\HyPsd@pdfencoding{unicode}%
2716     \HyPsd@LoadUnicode
2717   \else
2718     \def\HyPsd@pdfencoding{pdfdoc}%
2719   \fi
2720 }

2721 \def\HyPsd@LoadUnicode{%
2722   \@ifundefined{T@PU}{%
2723     \input{puenc.def}%
2724     \HyLinguex@Restore
2725   }{}%
2726   \DeclareFontFamily{PU}{pdf}{}%
2727   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2728   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2729   \global\let\HyPsd@LoadUnicode\relax
2730 }

2731 \Hy@AtBeginDocument{%
2732   \ifx\HyPsd@LoadUnicode\relax
2733   \else
2734     \def\HyPsd@LoadUnicode{%
2735       \Hy@Error{%
2736         Unicode support for bookmarks is not available.\MessageBreak
2737         Activate unicode support by using one of the options\MessageBreak
2738         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2739         in the preamble%
2740       }\@ehc
2741       \global\let\HyPsd@LoadUnicode\relax
2742       \global\Hy@unicodedefalse
2743       \global\let\Hy@unicodetrue\Hy@unicodedefalse
2744     }%
2745   \fi
2746 }

2747 \define@key{Hyp}{pdfencoding}{%
2748   \edef\HyPsd@temp{#1}%
2749   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2750     \let\HyPsd@pdfencoding\HyPsd@temp
2751     \Hy@unicodedefalse
2752   \else
2753     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2754       \z@
2755     \else
2756       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2757         \z@
2758       \else
2759         \@ne
2760       \fi
2761     \fi
2762     \let\HyPsd@pdfencoding\HyPsd@temp
2763     \hypersetup{unicode}%
2764     \ifHy@unicode
2765       \def\HyPsd@pdfencoding{#1}%

```

```

2766 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2767 \HyPsd@LoadStringEnc
2768 \fi
2769 \else
2770 \Hy@Warning{Cannot switch to unicode bookmarks}%
2771 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2772 \fi
2773 \else
2774 \@onelevel@sanitize\HyPsd@temp
2775 \Hy@Warning{%
2776 Values of option 'pdfencoding':\MessageBreak
2777 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2778 Ignoring unknown value '\HyPsd@temp'%
2779 }%
2780 \fi
2781 \fi
2782 }
2783 \def\HyPsd@pdfencoding@auto{auto}
2784 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2785 \def\HyPsd@pdfencoding@unicode{unicode}
2786 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2787 \def\HyPsd@LoadStringEnc{%
2788 \RequirePackage{stringenc}[2009/12/15]%
2789 \let\HyPsd@LoadStringEnc\relax
2790 }
2791 \Hy@AtBeginDocument{%
2792 \@ifpackageloaded{stringenc}{%
2793 \let\HyPsd@LoadStringEnc\relax
2794 }{%
2795 \def\HyPsd@LoadStringEnc{%
2796 \Hy@WarningNoLine{%
2797 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2798 in the preamble or load the package there%
2799 }%
2800 }%
2801 }%
2802 }
2803 \def\hypersetup{\kvsetkeys{Hyp}}
2804 \newif\ifHy@setpdfversion
2805 \define@key{Hyp}{pdfversion}{%
2806 \@ifundefined{Hy@pdfversion@#1}{%
2807 \PackageWarning{hyperref}{%
2808 Unsupported PDF version '#1'.\MessageBreak
2809 Valid values: 1.2 until 1.9%
2810 }%
2811 }{%
2812 \Hy@setpdfversiontrue
2813 \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2814 }%
2815 }
2816 \@namedef{Hy@pdfversion@1.2}{2}%
2817 \@namedef{Hy@pdfversion@1.3}{3}%
2818 \@namedef{Hy@pdfversion@1.4}{4}%
2819 \@namedef{Hy@pdfversion@1.5}{5}%
2820 \@namedef{Hy@pdfversion@1.6}{6}%
2821 \@namedef{Hy@pdfversion@1.7}{7}%
2822 \@namedef{Hy@pdfversion@1.8}{8}%

```

```

2823 \@namedef{Hy@pdfversion@1.9}{9}%
2824 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2825 \newif\ifHy@DviMode
2826 \let\Hy@DviErrMsg\ltx@empty
2827 \ifpdf
2828   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2829 \else
2830   \ifxetex
2831     \def\Hy@DviErrMsg{XeTeX is running}%
2832   \else
2833     \ifvtex
2834       \ifvtexdvi
2835         \Hy@DviModetrue
2836       \else
2837         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2838       \fi
2839     \else
2840       \Hy@DviModetrue
2841     \fi
2842   \fi
2843 \fi
2844 \def\HyOpt@CheckDvi#1{%
2845   \ifHy@DviMode
2846     \expandafter\ltx@firstofone
2847   \else
2848     \Hy@Error{%
2849       Wrong DVI mode driver option ‘#1’,\MessageBreak
2850       because \Hy@DviErrMsg
2851     }\@ehc
2852     \expandafter\ltx@gobble
2853   \fi
2854 }
2855 \DeclareVoidOption{tex4ht}{%
2856   \Hy@texhttrue
2857   \kvsetkeys{Hyp}{colorlinks=true}%
2858   \def\BeforeTeXIVht{\RequirePackage{color}}}%
2859 \def\Hy@driver{htex4ht}%
2860 \def\MaybeStopEarly{%
2861   \Hy@Message{Stopped early}%
2862   \Hy@AtBeginDocument{%
2863     \PDF@FinishDoc
2864     \gdef\PDF@FinishDoc{}%
2865   }%
2866   \endinput
2867 }%
2868 }
2869 \DeclareVoidOption{pdftex}{%
2870   \ifpdf
2871     \def\Hy@driver{hpdftex}%
2872   \else
2873     \Hy@Error{%
2874       Wrong driver option ‘pdftex’,\MessageBreak
2875       because pdfTeX in PDF mode is not detected%
2876     }\@ehc

```

```

2877 \fi
2878 }
2879 \DeclareVoidOption{nativepdf}{%
2880 \HyOpt@CheckDvi{nativepdf}{%
2881 \def\Hy@driver{hdvips}%
2882 }%
2883 }
2884 \DeclareVoidOption{dvipdfm}{%
2885 \HyOpt@CheckDvi{dvipdfm}{%
2886 \def\Hy@driver{hdvipdfm}%
2887 }%
2888 }
2889 \DeclareVoidOption{dvipdfmx}{%
2890 \HyOpt@CheckDvi{dvipdfmx}{%
2891 \def\Hy@driver{hdvipdfm}%
2892 }%
2893 }
2894 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2895 \expandafter\ifx\csname if#1\expandafter\endcsname
2896 \csname iftrue\endcsname
2897 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2898 \else
2899 \chardef\SpecialDvipdfmxOutlineOpen\z@
2900 \fi
2901 }
2902 \DeclareVoidOption{xetex}{%
2903 \ifxetex
2904 \def\Hy@driver{hxetex}%
2905 \else
2906 \Hy@Error{%
2907 Wrong driver option 'xetex',\MessageBreak
2908 because XeTeX is not detected%
2909 }\@ehc
2910 \fi
2911 }
2912 \DeclareVoidOption{pdfmark}{%
2913 \HyOpt@CheckDvi{pdfmark}{%
2914 \def\Hy@driver{hdvips}%
2915 }%
2916 }
2917 \DeclareVoidOption{dvips}{%
2918 \HyOpt@CheckDvi{dvips}{%
2919 \def\Hy@driver{hdvips}%
2920 }%
2921 }
2922 \DeclareVoidOption{hypertex}{%
2923 \HyOpt@CheckDvi{hypertex}{%
2924 \def\Hy@driver{hypertex}%
2925 }%
2926 }
2927 \let\Hy@MaybeStopNow\relax
2928 \DeclareVoidOption{vtex}{%
2929 \ifvtex
2930 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2931 \def\Hy@driver{hvtex}%
2932 \else
2933 \ifnum\OpMode=10\relax

```

```

2934 \def\Hy@driver{hvtexhtm}%
2935 \def\MaybeStopEarly{%
2936   \Hy@Message{Stopped early}%
2937   \Hy@AtBeginDocument{%
2938     \PDF@FinishDoc
2939     \gdef\PDF@FinishDoc{}}%
2940   }%
2941   \endinput
2942 }%
2943 \else
2944   \Hy@Error{%
2945     Wrong driver option 'vtex',\MessageBreak
2946     because of wrong OpMode (\the\OpMode)%
2947   }\@ehc
2948 \fi
2949 \fi
2950 \else
2951   \Hy@Error{%
2952     Wrong driver option 'vtex',\MessageBreak
2953     because VTeX is not running%
2954   }\@ehc
2955 \fi
2956 }
2957 \DeclareVoidOption{vtexpdfmark}{%
2958   \ifvtex
2959     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2960     \def\Hy@driver{hvtexmrk}%
2961   \else
2962     \Hy@Error{%
2963       Wrong driver option 'vtexpdfmark',\MessageBreak
2964       because of wrong OpMode (\the\OpMode)%
2965     }\@ehc
2966   \fi
2967 \else
2968   \Hy@Error{%
2969     Wrong driver option 'vtexpdfmark,\MessageBreak
2970     because VTeX is not running%
2971   }\@ehc
2972 \fi
2973 }
2974 \DeclareVoidOption{dviwindo}{%
2975   \HyOpt@CheckDvi{dviwindo}{%
2976     \def\Hy@driver{hdviwind}%
2977     \kvsetkeys{Hyp}{colorlinks}%
2978     \PassOptionsToPackage{dviwindo}{color}%
2979   }%
2980 }
2981 \DeclareVoidOption{dvipsone}{%
2982   \HyOpt@CheckDvi{dvipsone}{%
2983     \def\Hy@driver{hdvipson}%
2984   }%
2985 }
2986 \DeclareVoidOption{textures}{%
2987   \HyOpt@CheckDvi{textures}{%
2988     \def\Hy@driver{htexture}%
2989   }%
2990 }

```

```

2991 \DeclareVoidOption{latex2html}{%
2992   \HyOpt@CheckDvi{latex2html}{%
2993     \Hy@AtBeginDocument{\@@@latex2htmlX}%
2994   }%
2995 }

```

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

```

2996 \DeclareVoidOption{ps2pdf}{%
2997   \HyOpt@CheckDvi{ps2pdf}{%
2998     \def\Hy@driver{hdvips}%
2999   }%
3000 }

3001 \let\HyOpt@DriverFallback\ltx@empty
3002 \define@key{Hyp}{driverfallback}{%
3003   \ifHy@DviMode
3004     \def\HyOpt@DriverFallback{#1}%
3005     \Hy@Match\HyOpt@DriverFallback{%
3006       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3007       latex2html|tex4ht)$%
3008     }{}%
3009     \let\HyOpt@DriverFallback\ltx@empty
3010   }%
3011 \fi
3012 }

```

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.

```

3013 \define@key{Hyp}{hyperfigures}[true]{%
3014   \Hy@boolkey[hyperfigures]{figures}{#1}%
3015 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3016 \define@key{Hyp}{hyperfootnotes}[true]{%
3017   \Hy@boolkey[hyperfootnotes]{#1}%
3018 }

```

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

```

3019 \def\back@none{none}
3020 \def\back@section{section}
3021 \def\back@page{page}
3022 \def\back@slide{slide}
3023 \define@key{Hyp}{backref}[section]{%
3024   \lowercase{\def\Hy@tempa{#1}}%
3025   \ifx\Hy@tempa\@empty
3026     \let\Hy@tempa\back@section
3027   \fi
3028   \ifx\Hy@tempa\Hy@false
3029     \let\Hy@tempa\back@none
3030   \fi
3031   \ifx\Hy@tempa\back@slide
3032     \let\Hy@tempa\back@section
3033   \fi
3034   \ifx\Hy@tempa\back@page
3035     \PassOptionsToPackage{hyperpageref}{backref}%
3036     \Hy@backreftrue
3037   \else

```

```

3038 \ifx\Hy@tempa\back@section
3039 \PassOptionsToPackage{hyperref}{backref}%
3040 \Hy@backreftrue
3041 \else
3042 \ifx\Hy@tempa\back@none
3043 \Hy@backreffalse
3044 \else
3045 \Hy@WarnOptionValue{#1}{backref}{%
3046 'section', 'slide', 'page', 'none',\MessageBreak
3047 or 'false'}%
3048 \fi
3049 \fi
3050 \fi
3051 }
3052 \define@key{Hyp}{pagebackref}[true]{%
3053 \edef\Hy@tempa{#1}%
3054 \lowercase\expandafter{%
3055 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3056 }%
3057 \ifx\Hy@tempa\@empty
3058 \let\Hy@tempa\Hy>true
3059 \fi
3060 \ifx\Hy@tempa\Hy>true
3061 \PassOptionsToPackage{hyperpageref}{backref}%
3062 \Hy@backreftrue
3063 \else
3064 \ifx\Hy@tempa\Hy>false
3065 \Hy@backreffalse
3066 \else
3067 \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
3068 \fi
3069 \fi
3070 }

```

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

```

3071 \define@key{Hyp}{hyperindex}[true]{%
3072 \Hy@boolkey{hyperindex}{#1}%
3073 }

```

Configuration of encap char.

```

3074 \define@key{Hyp}{encap}[|]{%
3075 \def\HyInd@EncapChar{#1}%
3076 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3077 \def\HyLang@afrikaans{%
3078 \def\equationautorefname{Vergelyking}%
3079 \def\footnoteautorefname{Voetnota}%
3080 \def\itemautorefname{Item}%
3081 \def\figureautorefname{Figuur}%
3082 \def\tableautorefname{Tabel}%
3083 \def\partautorefname{Deel}%
3084 \def\appendixautorefname{Bylae}%
3085 \def\chapterautorefname{Hoofstuk}%

```



```

3086 \def\sectionautorefname{Afdeling}%
3087 \def\subsectionautorefname{Subafdeling}%
3088 \def\subsubsectionautorefname{Subsubafdeling}%
3089 \def\paragraphautorefname{Paragraaf}%
3090 \def\subparagraphautorefname{Subparagraaf}%
3091 \def\FancyVerbLineautorefname{Lyn}%
3092 \def\theoremautorefname{Teorema}%
3093 \def\pageautorefname{Bladsy}%
3094 }
3095 \def\HyLang@english{%
3096 \def\equationautorefname{Equation}%
3097 \def\footnoteautorefname{footnote}%
3098 \def\itemautorefname{item}%
3099 \def\figureautorefname{Figure}%
3100 \def\tableautorefname{Table}%
3101 \def\partautorefname{Part}%
3102 \def\appendixautorefname{Appendix}%
3103 \def\chapterautorefname{chapter}%
3104 \def\sectionautorefname{section}%
3105 \def\subsectionautorefname{subsection}%
3106 \def\subsubsectionautorefname{subsubsection}%
3107 \def\paragraphautorefname{paragraph}%
3108 \def\subparagraphautorefname{subparagraph}%
3109 \def\FancyVerbLineautorefname{line}%
3110 \def\theoremautorefname{Theorem}%
3111 \def\pageautorefname{page}%
3112 }
3113 \def\HyLang@french{%
3114 \def\equationautorefname{'Equation}%
3115 \def\footnoteautorefname{note}%
3116 \def\itemautorefname{item}%
3117 \def\figureautorefname{Figure}%
3118 \def\tableautorefname{Tableau}%
3119 \def\partautorefname{Partie}%
3120 \def\appendixautorefname{Appendice}%
3121 \def\chapterautorefname{chapitre}%
3122 \def\sectionautorefname{section}%
3123 \def\subsectionautorefname{sous-section}%
3124 \def\subsubsectionautorefname{sous-sous-section}%
3125 \def\paragraphautorefname{paragraphe}%
3126 \def\subparagraphautorefname{sous-paragraphe}%
3127 \def\FancyVerbLineautorefname{ligne}%
3128 \def\theoremautorefname{Th\'eor\'eme}%
3129 \def\pageautorefname{page}%
3130 }
3131 \def\HyLang@german{%
3132 \def\equationautorefname{Gleichung}%
3133 \def\footnoteautorefname{Fu\ss note}%
3134 \def\itemautorefname{Punkt}%
3135 \def\figureautorefname{Abbildung}%
3136 \def\tableautorefname{Tabelle}%
3137 \def\partautorefname{Teil}%
3138 \def\appendixautorefname{Anhang}%
3139 \def\chapterautorefname{Kapitel}%
3140 \def\sectionautorefname{Abschnitt}%
3141 \def\subsectionautorefname{Unterabschnitt}%
3142 \def\subsubsectionautorefname{Unterunterabschnitt}%

```

```

3143 \def\paragraphautorefname{Absatz}%
3144 \def\subparagraphautorefname{Unterabsatz}%
3145 \def\FancyVerbLineautorefname{Zeile}%
3146 \def\theoremautorefname{Theorem}%
3147 \def\pageautorefname{Seite}%
3148 }
3149 \def\HyLang@italian{%
3150 \def\equationautorefname{Equazione}%
3151 \def\footnoteautorefname{nota}%
3152 \def\itemautorefname{punto}%
3153 \def\figureautorefname{Figura}%
3154 \def\tableautorefname{Tabella}%
3155 \def\partautorefname{Parte}%
3156 \def\appendixautorefname{Appendice}%
3157 \def\chapterautorefname{Capitolo}%
3158 \def\sectionautorefname{sezione}%
3159 \def\subsectionautorefname{sottosezione}%
3160 \def\subsubsectionautorefname{sottosottosezione}%
3161 \def\paragraphautorefname{paragrafo}%
3162 \def\subparagraphautorefname{sottoparagrafo}%
3163 \def\FancyVerbLineautorefname{linea}%
3164 \def\theoremautorefname{Teorema}%
3165 \def\pageautorefname{Pag.\@}%
3166 }
3167 \def\HyLang@magyar{%
3168 \def\equationautorefname{Egyenlet}%
3169 \def\footnoteautorefname{[\'abjegyzet}%
3170 \def\itemautorefname{Elem}%
3171 \def\figureautorefname{\'Abra}%
3172 \def\tableautorefname{T\'abl\'azat}%
3173 \def\partautorefname{R\'esz}%
3174 \def\appendixautorefname{F\'uggel\'ek}%
3175 \def\chapterautorefname{fejezet}%
3176 \def\sectionautorefname{szakasz}%
3177 \def\subsectionautorefname{alszakasz}%
3178 \def\subsubsectionautorefname{alalszakasz}%
3179 \def\paragraphautorefname{bekezd\'es}%
3180 \def\subparagraphautorefname{albekezd\'es}%
3181 \def\FancyVerbLineautorefname{sor}%
3182 \def\theoremautorefname{T\'etel}%
3183 \def\pageautorefname{oldal}%
3184 }
3185 \def\HyLang@portuges{%
3186 \def\equationautorefname{Equa\c c\~ao}%
3187 \def\footnoteautorefname{Nota de rodap\'e}%
3188 \def\itemautorefname{Item}%
3189 \def\figureautorefname{Figura}%
3190 \def\tableautorefname{Tabela}%
3191 \def\partautorefname{Parte}%
3192 \def\appendixautorefname{Ap\^endice}%
3193 \def\chapterautorefname{Cap\'itulo}%
3194 \def\sectionautorefname{Se\c c\~ao}%
3195 \def\subsectionautorefname{Subse\c c\~ao}%
3196 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3197 \def\paragraphautorefname{par\'agrafo}%
3198 \def\subparagraphautorefname{subpar\'agrafo}%
3199 \def\FancyVerbLineautorefname{linha}%

```


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

```
3224 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrI.}%
3225 % \def\appendixautorefname{%
3226 % \cyr\cyrp\cyrr\cyri\cyrI\cyro\cyrzh\cyre\cyrn\cyri\cyre
3227 % }%
```

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.

```
3228 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3229 \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.

```
3230 \def\paragraphautorefname{\cyr\cyrp.}%
3231 \def\subparagraphautorefname{\cyr\cyrp.}%
```

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

```
3232 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3233 % \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.

```
3234 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3235 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3236 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3237 % \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 ...

```
3238 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3239 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3240 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3241 \def\pageautorefname{\cyr\cyrs.}%
3242 }
```

```
3243 \def\HyLang@spanish{%
3244 \def\equationautorefname{Ecuaci'on}%
3245 \def\footnoteautorefname{Nota a pie de p'agina}%
3246 \def\itemautorefname{Elemento}%
3247 \def\figureautorefname{Figura}%
3248 \def\tableautorefname{Tabla}%
3249 \def\partautorefname{Parte}%
```

```

3250 \def\appendixautorefname{Ap\'endice}%
3251 \def\chapterautorefname{Cap\'itulo}%
3252 \def\sectionautorefname{Secci\'on}%
3253 \def\subsectionautorefname{Subsecci\'on}%
3254 \def\subsubsectionautorefname{Subsubsecci\'on}%
3255 \def\paragraphautorefname{P\'arrafo}%
3256 \def\subparagraphautorefname{Subp\'arrafo}%
3257 \def\FancyVerbLineautorefname{L\'inea}%
3258 \def\theoremautorefname{Teorema}%
3259 \def\pageautorefname{P\'agina}%
3260 }
3261 \def\HyLang@vietnamese{%
3262 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr\'inh}%
3263 \def\footnoteautorefname{Ch\'u th\'ich}%
3264 \def\itemautorefname{m\du{c}}%
3265 \def\figureautorefname{H\'inh}%
3266 \def\tableautorefname{B\h{a}ng}%
3267 \def\partautorefname{Ph\'acircumflex{}n}%
3268 \def\appendixautorefname{Ph\du{l}\du{c}}%
3269 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
3270 \def\sectionautorefname{m\du{c}}%
3271 \def\subsectionautorefname{m\du{c}}%
3272 \def\subsubsectionautorefname{m\du{c}}%
3273 \def\paragraphautorefname{\dj{ }o\da{n}}%
3274 \def\subparagraphautorefname{\dj{ }o\da{n}}%
3275 \def\FancyVerbLineautorefname{d\'ong}%
3276 \def\theoremautorefname{DJ{}\di{nh l\'y}}%
3277 \def\pageautorefname{Trang}%
3278 }

```

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

```

3279 \def\HyLang@addto#1#2{%
3280   #2%
3281   \@temptokena{#2}%
3282   \ifx#1\relax
3283     \let#1\@empty
3284   \fi
3285   \ifx#1\@undefined
3286     \edef#1{\the\@temptokena}%
3287   \else
3288     \toks@\expandafter{#1}%
3289     \edef#1{\the\toks@\the\@temptokena}%
3290   \fi
3291   \@temptokena{}\toks@\@temptokena
3292 }
3293 \def\HyLang@DeclareLang#1#2#3{%
3294   \@ifpackagewith{babel}{#1}{%
3295     \expandafter\HyLang@addto
3296     \csname extras#1\expandafter\endcsname
3297     \csname HyLang@#2\endcsname
3298     \begingroup
3299     \edef\x{\endgroup
3300       #3%
3301     }%
3302     \x
3303     \@namedef{HyLang@#1@done}{}%

```

```

3304 }{}%
3305 \begingroup
3306 \edef\x##1##2{%
3307   \noexpand\ifx##2\relax
3308     \errmessage{No definitions for language #2' found!}%
3309   \noexpand\fi
3310 \endgroup
3311 \noexpand\define@key{Hyp}{#1}[]{}%
3312 \noexpand\@ifundefined{HyLang@#1@done}{}%
3313 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3314 #3%
3315 \noexpand\@namedef{HyLang@#1@done}{}%
3316 }{}%
3317 }%
3318 }%
3319 \expandafter\x\csname extras#1\expandafter\endcsname
3320 \csname HyLang@#2\endcsname
3321 }
3322 \HyLang@DeclareLang{english}{english}{}
3323 \HyLang@DeclareLang{UKenglish}{english}{}
3324 \HyLang@DeclareLang{british}{english}{}
3325 \HyLang@DeclareLang{USenglish}{english}{}
3326 \HyLang@DeclareLang{american}{english}{}
3327 \HyLang@DeclareLang{german}{german}{}
3328 \HyLang@DeclareLang{austrian}{german}{}
3329 \HyLang@DeclareLang{ngerman}{german}{}
3330 \HyLang@DeclareLang{naustrian}{german}{}
3331 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3332 \HyLang@DeclareLang{brazil}{portuges}{}
3333 \HyLang@DeclareLang{brazilian}{portuges}{}
3334 \HyLang@DeclareLang{portuguese}{portuges}{}
3335 \HyLang@DeclareLang{spanish}{spanish}{}
3336 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3337 \HyLang@DeclareLang{french}{french}{}
3338 \HyLang@DeclareLang{frenchb}{french}{}
3339 \HyLang@DeclareLang{francais}{french}{}
3340 \HyLang@DeclareLang{acadian}{french}{}
3341 \HyLang@DeclareLang{canadien}{french}{}
3342 \HyLang@DeclareLang{italian}{italian}{}
3343 \HyLang@DeclareLang{magyar}{magyar}{}
3344 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3345 \DeclareVoidOption{vietnamese}{%
3346   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3347   \Hy@AtEndOfPackage{%
3348     \@ifundefined{T@PU}{}{}%
3349     \input{puvnenc.def}%
3350   }%
3351 }%
3352 }
3353 \DeclareVoidOption{vietnam}{%
3354   \HyLang@addto\extravietnam\HyLang@vietnamese
3355   \Hy@AtEndOfPackage{%
3356     \@ifundefined{T@PU}{}{}%
3357     \input{puvnenc.def}%
3358   }%
3359 }%

```

```
3360 }
```

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

```
3361 \DeclareVoidOption{arabic}{}%
3362 \Hy@AtEndOfPackage{%
3363   \ifundefined{T@PU}{-}{%
3364     \input{puarenc.def}%
3365   }%
3366 }%
3367 }
```

13 Options to change appearance of links

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

```
3368 \define@key{Hyp}{colorlinks}[true]{%
3369   \Hy@boolkey{colorlinks}{#1}%
3370 }
3371 \DeclareVoidOption{hidelinks}{}%
3372 \Hy@colorlinksfalse
3373 \Hy@ocgcolorlinksfalse
3374 \Hy@frenchlinksfalse
3375 \def\Hy@colorlink##1{\begingroup}%
3376 \def\Hy@endcolorlink{\endgroup}%
3377 \def\@pdfborder{0 0 0}%
3378 \let\@pdfborderstyle\ltx@empty
3379 }
3380 \define@key{Hyp}{ocgcolorlinks}[true]{%
3381   \Hy@boolkey{ocgcolorlinks}{#1}%
3382 }
3383 \Hy@AtBeginDocument{%
3384   \begingroup
3385   \ifundefined{OBJ@OCG@view}{%
3386     \ifHy@ocgcolorlinks
3387       \Hy@Warning{%
3388         Driver does not support ‘ocgcolorlinks’,\MessageBreak
3389         using ‘colorlinks’ instead%
3390       }%
3391     \fi
3392   }{}%
3393   \endgroup
3394 }
3395 \define@key{Hyp}{frenchlinks}[true]{%
3396   \Hy@boolkey{frenchlinks}{#1}%
3397 }
```

14 Bookmarking

```
3398 \begingroup\expandafter\expandafter\expandafter\endgroup
3399 \expandafter\ifx\csname chapter\endcsname\relax
3400   \def\toclevel@part{0}%
3401 \else
3402   \def\toclevel@part{-1}%
3403 \fi
3404 \def\toclevel@chapter{0}
3405 \def\toclevel@section{1}
```

```

3406 \def\toclevel@subsection{2}
3407 \def\toclevel@subsubsection{3}
3408 \def\toclevel@paragraph{4}
3409 \def\toclevel@subparagraph{5}
3410 \def\toclevel@figure{0}
3411 \def\toclevel@table{0}
3412 \ifpackageloaded{listings}{%
3413   \providecommand*\theHlstlisting{\thelstlisting}%
3414   \providecommand*\toclevel@lstlisting{0}%
3415 }{}
3416 \ifpackageloaded{listing}{%
3417   \providecommand*\theHlisting{\thelisting}%
3418   \providecommand*\toclevel@listing{0}%
3419 }{}

3420 \define@key{Hyp}{bookmarks}[true]{%
3421   \Hy@boolkey{bookmarks}{#1}%
3422 }

3423 \define@key{Hyp}{bookmarksopen}[true]{%
3424   \Hy@boolkey{bookmarksopen}{#1}%
3425 }

```

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.

```

3426 \let\Hy@bookmarksdepth\c@tocdepth
3427 \define@key{Hyp}{bookmarksdepth}[]{}%
3428 \begingroup
3429   \edef\x{#1}%
3430   \ifx\x\empty
3431     \global\let\Hy@bookmarksdepth\c@tocdepth
3432   \else
3433     \ifundefined{toclevel@\x}{%
3434       \@onelevel@sanitize\x
3435       \edef\y{\expandafter\@car\x\@nil}%
3436       \ifcase 0\expandafter\ifx\y-1\fi
3437         \expandafter\ifnum\expandafter\y>47 %
3438         \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
3439       \Hy@Warning{Unknown document division name (\x)}%
3440     \else
3441       \setbox\z@=\hbox{%
3442         \count@=\x
3443         \xdef\Hy@bookmarksdepth{\the\count@}%
3444       }%
3445     \fi
3446   }{}%
3447   \setbox\z@=\hbox{%
3448     \count@=\csname toclevel@\x\endcsname
3449     \xdef\Hy@bookmarksdepth{\the\count@}%
3450   }%

```



```

3451 }%
3452 \fi
3453 \endgroup
3454 }

```

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

```

3455 \define@key{Hyp}{bookmarksopenlevel}{%
3456 \def\@bookmarksopenlevel{#1}%
3457 }
3458 \def\@bookmarksopenlevel{\maxdimen}
3459 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3460 \define@key{Hyp}{bookmarkstype}{%
3461 \def\Hy@bookmarkstype{#1}%
3462 }
3463 \def\Hy@bookmarkstype{toc}

```

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

```

3464 \define@key{Hyp}{bookmarksnumbered}[true]{%
3465 \Hy@boolkey{bookmarksnumbered}{#1}%
3466 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3467 \define@key{Hyp}{CJKbookmarks}[true]{%
3468 \Hy@boolkey{CJKbookmarks}{#1}%
3469 }

3470 \def\Hy@temp#1{%
3471 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3472 }
3473 \def\Hy@@temp#1#2#3{%
3474 \define@key{Hyp}{#2color}{%
3475 \HyColor@HyperrefColor{##1}#1%
3476 }%
3477 \def#1{#3}%
3478 }
3479 \Hy@temp{link}{red}
3480 \Hy@temp{anchor}{black}
3481 \Hy@temp{cite}{green}
3482 \Hy@temp{file}{cyan}
3483 \Hy@temp{url}{magenta}
3484 \Hy@temp{menu}{red}
3485 \Hy@temp{run}{\@filecolor}
3486 \define@key{Hyp}{pagecolor}{%
3487 \Hy@WarningPageColor
3488 }
3489 \def\Hy@WarningPageColor{%
3490 \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3491 \global\let\Hy@WarningPageColor\relax
3492 }
3493 \define@key{Hyp}{allcolors}{%
3494 \HyColor@HyperrefColor{#1}\@linkcolor
3495 \HyColor@HyperrefColor{#1}\@anchorcolor
3496 \HyColor@HyperrefColor{#1}\@citecolor
3497 \HyColor@HyperrefColor{#1}\@filecolor
3498 \HyColor@HyperrefColor{#1}\@urlcolor
3499 \HyColor@HyperrefColor{#1}\@menucolor
3500 \HyColor@HyperrefColor{#1}\@runcolor
3501 }

```

```

3502 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3503 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3504 \let\@baseurl\@empty
3505 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3506 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3507 \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.

```

3508 \let\@pdfpagetransition\relax
3509 \define@key{Hyp}{pdfpagetransition}{%
3510   \def\@pdfpagetransition{#1}%
3511 }

```

`\@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.

```

3512 \let\@pdfpageduration\relax
3513 \define@key{Hyp}{pdfpageduration}{%
3514   \def\@pdfpageduration{#1}%
3515   \Hy@Match\@pdfpageduration{%
3516     ^([|0-9]+\.\?[0-9]*|[0-9]*\.[0-9]+)$%
3517   }{ }{%
3518     \Hy@Warning{%
3519       Invalid value '\@pdfpageduration'\MessageBreak
3520       of option 'pdfpageduration'\MessageBreak
3521       is replaced by an empty value%
3522     }%
3523     \let\@pdfpageduration\ltx@empty
3524   }%
3525 }

```

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.

```

3526 \newif\ifHy@useHidKey
3527 \Hy@useHidKeyfalse
3528 \define@key{Hyp}{pdfpagehidden}[true]{%
3529   \Hy@boolkey{pdfpagehidden}{#1}%
3530   \ifHy@pdfpagehidden
3531     \global\Hy@useHidKeytrue
3532   \fi
3533 }

```

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).

```

3534 \def\Hy@ColorList{cite,file,link,menu,run,url}

```

```

3535 \@for\Hy@temp:=\Hy@ColorList\do{%
3536   \edef\Hy@temp{%
3537     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3538       \noexpand\HyColor@HyperrefBorderColor
3539         {##1}%
3540       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3541         {hyperref}%
3542       {\Hy@temp bordercolor}%
3543     }%
3544   }%
3545   \Hy@temp
3546 }
3547 \define@key{Hyp}{pagebordercolor}{%
3548   \Hy@WarningPageBorderColor
3549 }
3550 \def\Hy@WarningPageBorderColor{%
3551   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3552   \global\let\Hy@WarningPageBorderColor\relax
3553 }
3554 \define@key{Hyp}{allbordercolors}{%
3555   \def\Hy@temp##1##2{%
3556     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3557   }%
3558   \Hy@temp\@citebordercolor{cite}%
3559   \Hy@temp\@filebordercolor{file}%
3560   \Hy@temp\@linkbordercolor{link}%
3561   \Hy@temp\@menubordercolor{menu}%
3562   \Hy@temp\@runbordercolor{run}%
3563   \Hy@temp\@urlbordercolor{url}%
3564 }
3565 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3566 \Hy@DefNameKey{pdfhighlight}{%
3567   \do{/I}{Invert}%
3568   \do{/N}{None}%
3569   \do{/O}{Outline}%
3570   \do{/P}{Push}%
3571 }
3572 \define@key{Hyp}{pdfborder}{%
3573   \let\Hy@temp\@pdfborder
3574   \def\@pdfborder{#1}%
3575   \Hy@Match\@pdfborder{%
3576     ^\HyPat@NonNegativeReal/ %
3577     \HyPat@NonNegativeReal/ %
3578     \HyPat@NonNegativeReal/%
3579     ( ?[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3580   }{}{%
3581     \Hy@Warning{%
3582       Invalid value '\@pdfborder'\MessageBreak
3583       for option 'pdfborder'\MessageBreak
3584       Option setting is ignored%
3585     }%
3586     \let\@pdfborder\Hy@temp
3587   }%
3588 }
3589 \define@key{Hyp}{pdfborderstyle}{%
3590   \let\Hy@temp\@pdfborderstyle
3591   \def\@pdfborderstyle{#1}%

```

```

3592 \Hy@Match\@pdfborderstyle{%
3593   ^%
3594   ( */Type */Border%
3595   | */W +\HyPat@NonNegativeReal/%
3596   | */S */[SDBIU]%
3597   | */D *[\ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)?]%
3598   )* *$%
3599 }{}{%
3600   \Hy@Warning{%
3601     Invalid value '\@pdfborderstyle'\MessageBreak
3602     for option 'pdfborderstyle'\MessageBreak
3603     Option setting is ignored%
3604   }%
3605   \let\@pdfborderstyle\Hy@temp
3606 }%
3607 }
3608 \def\Hy@setpdfborder{%
3609   \ifx\@pdfborder\@empty
3610   \else
3611     /Border[\@pdfborder]%
3612   \fi
3613   \ifx\@pdfborderstyle\@empty
3614   \else
3615     /BS<<\@pdfborderstyle>>%
3616   \fi
3617 }
3618 \Hy@DefNameKey{pdfpagemode}{%
3619   \do{UseNone}{}%
3620   \do{UseOutlines}{}%
3621   \do{UseThumbs}{}%
3622   \do{FullScreen}{}%
3623   \do{UseOC}{PDF 1.5}%
3624   \do{UseAttachments}{PDF 1.6}%
3625 }
3626 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3627   \do{UseNone}{}%
3628   \do{UseOutlines}{}%
3629   \do{UseThumbs}{}%
3630   \do{FullScreen}{}%
3631   \do{UseOC}{PDF 1.5}%
3632   \do{UseAttachments}{PDF 1.6}%
3633 }
3634 \Hy@DefNameKey{pdfdirection}{%
3635   \do{L2R}{Left to right}%
3636   \do{R2L}{Right to left}%
3637 }
3638 \Hy@DefNameKey{pdfviewarea}{%
3639   \do{MediaBox}{}%
3640   \do{CropBox}{}%
3641   \do{BleedBox}{}%
3642   \do{TrimBox}{}%
3643   \do{ArtBox}{}%
3644 }
3645 \Hy@DefNameKey{pdfviewclip}{%
3646   \do{MediaBox}{}%
3647   \do{CropBox}{}%
3648   \do{BleedBox}{}%

```

```

3649 \do{TrimBox}{}%
3650 \do{ArtBox}{}%
3651 }
3652 \Hy@DefNameKey{pdfprintarea}{%
3653 \do{MediaBox}{}%
3654 \do{CropBox}{}%
3655 \do{BleedBox}{}%
3656 \do{TrimBox}{}%
3657 \do{ArtBox}{}%
3658 }
3659 \Hy@DefNameKey{pdfprintclip}{%
3660 \do{MediaBox}{}%
3661 \do{CropBox}{}%
3662 \do{BleedBox}{}%
3663 \do{TrimBox}{}%
3664 \do{ArtBox}{}%
3665 }
3666 \Hy@DefNameKey{pdfprintscaling}{%
3667 \do{AppDefault}{}%
3668 \do{None}{}%
3669 }
3670 \Hy@DefNameKey{pdfduplex}{%
3671 \do{Simplex}{}%
3672 \do{DuplexFlipShortEdge}{}%
3673 \do{DuplexFlipLongEdge}{}%
3674 }
3675 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3676 \do{true}{}%
3677 \do{false}{}%
3678 }
3679 \define@key{Hyp}{pdfprintpagerange}{%
3680 \def\@pdfprintpagerange{#1}%
3681 }
3682 \Hy@DefNameKey{pdfnumcopies}{%
3683 \do{2}{two copies}%
3684 \do{3}{three copies}%
3685 \do{4}{four copies}%
3686 \do{5}{five copies}%
3687 }
3688 \define@key{Hyp}{pdfusetitle}[true]{%
3689 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3690 }
3691 \def\HyXeTeX@CheckUnicode{%
3692 \ifxetex
3693 \ifHy@unicode
3694 \else
3695 \Hy@WarningNoLine{%
3696 XeTeX driver only supports unicode.\MessageBreak
3697 Enabling option 'unicode'%
3698 }%
3699 \kvsetkeys{Hyp}{unicode}%
3700 \fi
3701 \else
3702 \let\HyXeTeX@CheckUnicode\relax
3703 \fi
3704 }
3705 \def\HyPsd@PrerenderUnicode#1{%

```

```

3706 \begingroup
3707 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3708 \else
3709 \sbox0{%
3710 \let\GenericInfo\@gobbletwo
3711 \let\GenericWarning\@gobbletwo
3712 \let\GenericError\@gobblefour
3713 \PrerenderUnicode{#1}%
3714 }%
3715 \fi
3716 \endgroup
3717 }
3718 \define@key{Hyp}{pdftitle}{%
3719 \HyXeTeX@CheckUnicode
3720 \HyPsd@XeTeXBigCharstrue
3721 \HyPsd@PrerenderUnicode{#1}%
3722 \pdfstringdef\@pdftitle{#1}%
3723 }
3724 \define@key{Hyp}{pdfauthor}{%
3725 \HyXeTeX@CheckUnicode
3726 \HyPsd@XeTeXBigCharstrue
3727 \HyPsd@PrerenderUnicode{#1}%
3728 \pdfstringdef\@pdfauthor{#1}%
3729 }
3730 \define@key{Hyp}{pdfproducer}{%
3731 \HyXeTeX@CheckUnicode
3732 \HyPsd@XeTeXBigCharstrue
3733 \HyPsd@PrerenderUnicode{#1}%
3734 \pdfstringdef\@pdfproducer{#1}%
3735 }
3736 \define@key{Hyp}{pdfcreator}{%
3737 \HyXeTeX@CheckUnicode
3738 \HyPsd@XeTeXBigCharstrue
3739 \HyPsd@PrerenderUnicode{#1}%
3740 \pdfstringdef\@pdfcreator{#1}%
3741 }
3742 \define@key{Hyp}{pdfcreationdate}{%
3743 \begingroup
3744 \Hy@unicodedefalse
3745 \pdfstringdef\@pdfcreationdate{#1}%
3746 \endgroup
3747 }
3748 \define@key{Hyp}{pdfmoddate}{%
3749 \begingroup
3750 \Hy@unicodedefalse
3751 \pdfstringdef\@pdfmoddate{#1}%
3752 \endgroup
3753 }
3754 \define@key{Hyp}{pdfsubject}{%
3755 \HyXeTeX@CheckUnicode
3756 \HyPsd@XeTeXBigCharstrue
3757 \HyPsd@PrerenderUnicode{#1}%
3758 \pdfstringdef\@pdfsubject{#1}%
3759 }
3760 \define@key{Hyp}{pdfkeywords}{%
3761 \HyXeTeX@CheckUnicode
3762 \HyPsd@XeTeXBigCharstrue

```

```

3763 \HyPsd@PrerenderUnicode{#1}%
3764 \pdfstringdef\@pdfkeywords{#1}%
3765 }
3766 \define@key{Hyp}{pdftrapped}{%
3767 \lowercase{\edef\Hy@temp{#1}}%
3768 \ifx\Hy@temp\HyInfo@trapped@true
3769 \def\@pdftrapped{True}%
3770 \else
3771 \ifx\Hy@temp\HyInfo@trapped@false
3772 \def\@pdftrapped{False}%
3773 \else
3774 \ifx\Hy@temp\HyInfo@trapped@unknown
3775 \def\@pdftrapped{Unknown}%
3776 \else
3777 \ifx\Hy@temp\@empty
3778 \else
3779 \Hy@Warning{%
3780 Unsupported value '#1'\MessageBreak
3781 for option 'pdftrapped'%
3782 }%
3783 \fi
3784 \def\@pdftrapped{}%
3785 \fi
3786 \fi
3787 \fi
3788 }
3789 \def\HyInfo@trapped@true{true}
3790 \def\HyInfo@trapped@false{false}
3791 \def\HyInfo@trapped@unknown{unknown}
3792 \def\HyInfo@TrappedUnsupported{%
3793 \ifx\@pdftrapped\@empty
3794 \else
3795 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3796 \gdef\HyInfo@TrappedUnsupported{}%
3797 \fi
3798 }
3799 \define@key{Hyp}{pdfinfo}{%
3800 \kvsetkeys{pdfinfo}{#1}%
3801 }
3802 \def\Hy@temp#1{%
3803 \lowercase{\Hy@temp@A{#1}}{#1}%
3804 }
3805 \def\Hy@temp@A#1#2{%
3806 \define@key{pdfinfo}{#2}{%
3807 \hypersetup{pdf#1={##1}}%
3808 }%
3809 }
3810 \Hy@temp{Title}
3811 \Hy@temp{Author}
3812 \Hy@temp{Keywords}
3813 \Hy@temp{Subject}
3814 \Hy@temp{Creator}
3815 \Hy@temp{Producer}
3816 \Hy@temp{CreationDate}
3817 \Hy@temp{ModDate}
3818 \Hy@temp{Trapped}
3819 \newif\ifHyInfo@AddonUnsupported

```

```

3820 \kv@set@family@handler{pdfinfo}{%
3821   \HyInfo@AddonHandler{#1}{#2}%
3822 }
3823 \let\HyInfo@do\relax
3824 \def\HyInfo@AddonHandler#1#2{%
3825   \ifx\kv@value\relax
3826     \Hy@Warning{%
3827       Option 'pdfinfo': ignoring key '\kv@key' without value%
3828     }%
3829   \else
3830     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3831     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3832     \expandafter\ifx\cname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3833     \ifHyInfo@AddonUnsupported
3834       \Hy@Warning{%
3835         This driver does not support additional\MessageBreak
3836         information entries, therefore\MessageBreak
3837         '\kv@key' is ignored%
3838       }%
3839     \else
3840       \define@key{pdfinfo}{\HyInfo@Key}{%
3841         \HyXeTeX@CheckUnicode
3842         \HyPsd@XeTeXBigCharstrue
3843         \HyPsd@PrerenderUnicode{##1}%
3844         \pdfstringdef\HyInfo@Value{##1}%
3845         \expandafter\let\cname HyInfo@Value@\HyInfo@Key\endcsname
3846         \HyInfo@Value
3847       }%
3848       \edef\HyInfo@AddonList{%
3849         \HyInfo@AddonList
3850         \HyInfo@do{\HyInfo@Key}%
3851       }%
3852       \kv@parse@normalized{%
3853         \HyInfo@Key={#2}%
3854       }{%
3855         \kv@processor@default{pdfinfo}%
3856       }%
3857     \fi
3858   \else
3859     \kv@parse@normalized{%
3860       \HyInfo@Key={#2}%
3861     }{%
3862       \kv@processor@default{pdfinfo}%
3863     }%
3864   \fi
3865 \fi
3866 }
3867 \def\HyInfo@GenerateAddons{%
3868   \ifHyInfo@AddonUnsupported
3869     \def\HyInfo@Addons{}%
3870   \else
3871     \begingroup
3872     \toks@{}%
3873     \def\HyInfo@do##1{%
3874       \EdefEscapeName\HyInfo@Key{##1}%
3875       \edef\x{%
3876         \toks@{

```



```

3877         \the\toks@
3878         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3879     }%
3880 }%
3881 \x
3882 }%
3883 \HyInfo@AddonList
3884 \edef\x{\endgroup
3885     \def\noexpand\HyInfo@Addons{\the\toks@}%
3886 }%
3887 \x
3888 \fi
3889 }
3890 \def\HyInfo@AddonList{}

3891 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3892 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3893 \let\setpdfinkmargin\@gobble
3894 \def\calculate@pdfview#1 #2\{\%
3895     \def\@pdfview{#1}%
3896     \ifx\#2\%
3897         \def\@pdfviewparams{-32768}%
3898     \else
3899         \def\@pdfviewparams{#2}%
3900     \fi
3901 }

3902 \begingroup\expandafter\expandafter\expandafter\endgroup
3903 \expandafter\ifx\csname numexpr\endcsname\relax
3904     \def\Hy@number#1{%
3905         \expandafter\@firstofone\expandafter{\number#1}%
3906     }%
3907 \else
3908     \def\Hy@number#1{%
3909         \the\numexpr#1\relax
3910     }%
3911 \fi

3912 \define@key{Hyp}{pdfstartpage}{%
3913     \ifx\#1\%
3914         \def\@pdfstartpage{}%
3915     \else
3916         \def\@pdfstartpage{\Hy@number{#1}}%
3917     \fi
3918 }%

3919 \define@key{Hyp}{pdfstartview}{%
3920     \ifx\#1\%
3921         \def\@pdfstartview{}%
3922     \else
3923         \hypercalcbpdef\@pdfstartview{/#1}%
3924     \fi
3925 }

3926 \def\HyPat@NonNegativeReal/{%
3927     \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3928 }

3929 \define@key{Hyp}{pdfremotestartview}{%
3930     \ifx\#1\%
3931         \def\@pdfremotestartview{/Fit}%
3932     \else
3933         \hypercalcbpdef\@pdfremotestartview{#1}%

```

```

3934 \edef\@pdfremotestartview{\@pdfremotestartview}%
3935 \Hy@Match\@pdfremotestartview{%
3936   ~(XYZ -?(null|\HyPat@NonNegativeReal/) %
3937     -?(null|\HyPat@NonNegativeReal/) %
3938     (null|\HyPat@NonNegativeReal/)|%
3939     Fit(|B|%
3940     (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
3941     R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
3942     \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
3943   )$%
3944 }~}%
3945 \Hy@Warning{%
3946   Invalid value '\@pdfremotestartview'\MessageBreak
3947   of 'pdfremotestartview'\MessageBreak
3948   is replaced by 'Fit'%
3949 }%
3950 \let\@pdfremotestartview\@empty
3951 }%
3952 \ifx\@pdfremotestartview\@empty
3953   \def\@pdfremotestartview{/Fit}%
3954 \else
3955   \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3956 \fi
3957 \fi
3958 }
3959 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3960 \define@key{Hyp}{pdftoolbar}[true]{%
3961   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3962 }
3963 \define@key{Hyp}{pdfmenubar}[true]{%
3964   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3965 }
3966 \define@key{Hyp}{pdfwindowui}[true]{%
3967   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3968 }
3969 \define@key{Hyp}{pdffitwindow}[true]{%
3970   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3971 }
3972 \define@key{Hyp}{pdfcenterwindow}[true]{%
3973   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3974 }
3975 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3976   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3977 }
3978 \define@key{Hyp}{pdfa}[true]{%
3979   \Hy@boolkey[pdfa]{#1}%
3980 }
3981 \define@key{Hyp}{pdfnewwindow}[true]{%
3982   \def\Hy@temp{#1}%
3983   \ifx\Hy@temp\@empty
3984     \Hy@newwindowsetfalse
3985   \else
3986     \Hy@newwindowsettrue
3987     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3988   \fi
3989 }
3990 \def\Hy@SetNewWindow{%

```

```

3991 \ifHy@newwindowset
3992 /NewWindow %
3993 \ifHy@newwindow true\else false\fi
3994 \fi
3995 }
3996 \Hy@DefNameKey{pdfpagelayout}{%
3997 \do{SinglePage}{}%
3998 \do{OneColumn}{}%
3999 \do{TwoColumnLeft}{}%
4000 \do{TwoColumnRight}{}%
4001 \do{TwoPageLeft}{PDF 1.5}%
4002 \do{TwoPageRight}{PDF 1.5}%
4003 }
4004 \define@key{Hyp}{pdflang}{%
4005 \def\@pdflang{#1}%
4006 }
4007 \define@key{Hyp}{pdfpagelabels}[true]{%
4008 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
4009 }
4010 \define@key{Hyp}{pdfescapeform}[true]{%
4011 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
4012 }

```

Default values:

```

4013 \def\@linkbordercolor{1 0 0}
4014 \def\@urlbordercolor{0 1 1}
4015 \def\@menubordercolor{1 0 0}
4016 \def\@filebordercolor{0 .5 .5}
4017 \def\@runbordercolor{0 .7 .7}
4018 \def\@citebordercolor{0 1 0}
4019 \def\@pdfhighlight{/I}
4020 \def\@pdftitle{}
4021 \def\@pdfauthor{}
4022 \let\@pdfproducer\relax
4023 \def\@pdfcreator{LaTeX with hyperref package}
4024 \def\@pdfcreationdate{}
4025 \def\@pdfmoddate{}
4026 \def\@pdfsubject{}
4027 \def\@pdfkeywords{}
4028 \def\@pdftrapped{}
4029 \def\@pdfpagescrop{}
4030 \def\@pdfstartview{/Fit}
4031 \def\@pdfremotestartview{/Fit}
4032 \def\@pdfstartpage{1}
4033 \def\@pdfprintpagerange{}
4034 \def\@pdflang{}
4035 \let\PDF@SetupDoc\@empty
4036 \let\PDF@FinishDoc\@empty
4037 \let\phantomsection\@empty
4038 \let\special@paper\@empty
4039 \def\HyperDestNameFilter#1{#1}
4040 \Hy@AtBeginDocument{%
4041 \begingroup
4042 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4043 \dimen@=\x\relax
4044 \ifdim\dimen@>\z@
4045 \else
4046 \dimen@=11in\relax

```

```

4047 \Hy@WarningNoLine{%
4048   Height of page (\expandafter\string\x) %
4049   is invalid (\the\x),\MessageBreak
4050   using 11in%
4051 }%
4052 \fi
4053 \dimen@=0.99626401\dimen@
4054 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4055 \endgroup
4056 }
4057 \def\HyInd@EncapChar{\|}

```

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

```

4058 \let\hyper@normalise\ExecuteOptions
4059 \let\ExecuteOptions\hypersetup
4060 \Hy@RestoreCatcodes
4061 \InputIfFileExists{hyperref.cfg}{-}{-}
4062 \Hy@SetCatcodes
4063 \let\ExecuteOptions\hyper@normalise
4064 \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.

```

4065 \SetupKeyvalOptions{family=Hyp}
4066 \DeclareLocalOptions{%
4067   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4068 }

```

Add option tex4ht if package tex4ht is loaded.

```

4069 \@ifpackageloaded{tex4ht}{-%
4070   \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
4071   \PassOptionsToPackage{tex4ht}{hyperref}%
4072 }%
4073 }{}

4074 \let\ReadBookmarks\relax
4075 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

4076 \Hy@AtBeginDocument{%
4077   \ifHy@draft
4078     \let\hyper@@anchor\@gobble
4079     \gdef\hyper@link#1#2#3{#3}%
4080     \let\hyper@anchorstart\@gobble
4081     \let\hyper@anchorend\@empty
4082     \let\hyper@linkstart\@gobbletwo
4083     \let\hyper@linkend\@empty
4084     \def\hyper@linkurl#1#2{#1}%
4085     \def\hyper@linkfile#1#2#3{#1}%
4086     \def\hyper@link@{#1}#2#3{}%
4087     \def\Acrobatmenu#1#2{\leavevmode#2}%
4088     \let\PDF@SetupDoc\@empty
4089     \let\PDF@FinishDoc\@empty
4090     \let\@fifthoffive\@secondoftwo
4091     \let\@secondoffive\@secondoftwo
4092     \let\ReadBookmarks\relax
4093     \let\WriteBookmarks\relax

```

```

4094 \Hy@WarningNoLine{Draft mode on}%
4095 \fi
4096 \Hy@DisableOption{draft}%
4097 \Hy@DisableOption{nolinks}%
4098 \Hy@DisableOption{final}%
4099 }

```

15.1 PDF/A

```

4100 \Hy@DisableOption{pdfa}

4101 \ifHy@pdfa
4102 \kvsetkeys{Hyp}{pdfversion=1.4}%
4103 \def\Hy@Acrobatmenu#1#2{%
4104   \leavevmode
4105   \begingroup
4106     \edef\x{#1}%
4107     \@onelevel@sanitize\x
4108     \ifx\x\Hy@NextPage
4109       \let\y=Y%
4110     \else
4111       \ifx\x\Hy@PrevPage
4112         \let\y=Y%
4113       \else
4114         \ifx\x\Hy@FirstPage
4115           \let\y=Y%
4116         \else
4117           \ifx\x\Hy@LastPage
4118             \let\y=Y%
4119           \else
4120             \let\y=N%
4121           \fi
4122         \fi
4123       \fi
4124     \fi
4125   \expandafter\endgroup
4126   \ifx\y Y%
4127   \else
4128     \Hy@Error{%
4129       PDF/A: Named action ‘#1’ is not permitted%
4130     }\@ehc
4131     {#2}%
4132     \expandafter\@gobble
4133   \fi
4134 }%
4135 \def\Hy@temp#1{%
4136   \expandafter\def\csname Hy@#1\endcsname{#1}%
4137   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4138 }%
4139 \Hy@temp{NextPage}%
4140 \Hy@temp{PrevPage}%
4141 \Hy@temp{FirstPage}%
4142 \Hy@temp{LastPage}%
4143 \else
4144 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4145 \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.

```
4146 \Hy@nextfalse
4147 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4148 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4149 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
4150 \ifHy@next
4151   \let\texttilde\~%
4152 \fi

4153 \def\Hy@wrapper@babel#1#2{%
4154   \begingroup
4155     \Hy@safe@activetrue
4156     \set@display@protect
4157     \edef\x{#2}%
4158     \@onelevel@sanitize\x
4159     \toks@{#1}%
4160     \edef\x{\endgroup\the\toks@{\x}}%
4161     \x
4162 }
4163 \def\Hy@WrapperDef#1{%
4164   \begingroup
4165     \escapechar=\m@ne
4166     \xdef\Hy@gtemp{%
4167       \expandafter\noexpand\csname HyWrap@string#1\endcsname
4168     }%
4169   \endgroup
4170   \edef#1{%
4171     \noexpand\Hy@wrapper@babel
4172     \expandafter\noexpand\Hy@gtemp
4173   }%
4174   \expandafter\def\Hy@gtemp
4175 }

4176 \ifHy@figures
4177   \Hy@Info{Hyper figures ON}%
4178 \else
4179   \Hy@Info{Hyper figures OFF}%
4180 \fi
4181 \ifHy@nesting
4182   \Hy@Info{Link nesting ON}%
4183 \else
4184   \Hy@Info{Link nesting OFF}%
4185 \fi
4186 \ifHy@hyperindex
4187   \Hy@Info{Hyper index ON}%
4188 \else
4189   \Hy@Info{Hyper index OFF}%
4190 \fi
4191 \ifHy@plainpages
4192   \Hy@Info{Plain pages ON}%
4193 \else
4194   \Hy@Info{Plain pages OFF}%
4195 \fi
4196 \ifHy@backref
4197   \Hy@Info{Backreferencing ON}%
4198 \else
```

```

4199 \Hy@Info{Backreferencing OFF}%
4200 \fi
4201 \ifHy@typexml
4202 \Hy@AtEndOfPackage{%
4203 \RequirePackage{color}%
4204 \RequirePackage{nameref}%
4205 }%
4206 \fi
4207 \Hy@DisableOption{typexml}
4208 \ifHy@implicit
4209 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4210 \else
4211 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4212 \def\MaybeStopEarly{%
4213 \Hy@Message{Stopped early}%
4214 \Hy@AtBeginDocument{%
4215 \PDF@FinishDoc
4216 \gdef\PDF@FinishDoc{}%
4217 }%
4218 \endinput
4219 }%
4220 \Hy@AtBeginDocument{%
4221 \let\autoref\ref
4222 \let\autopageref\pageref
4223 \ifx\@pdfpagemode\@empty
4224 \gdef\@pdfpagemode{UseNone}%
4225 \fi
4226 \global\Hy@backreffalse
4227 }%
4228 \Hy@AtEndOfPackage{%
4229 \global\let\ReadBookmarks\relax
4230 \global\let\WriteBookmarks\relax
4231 }%
4232 \fi
4233 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

4234 \Hy@AtEndOfPackage{%
4235 \@ifpackageloaded{tex4ht}{%
4236 \def\Hy@driver{htex4ht}%
4237 \Hy@texhttrue
4238 }{}%

```

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.

```

4239 \ifx\Hy@driver\@empty
4240 \else
4241 \def\Hy@temp{hpdfTeX}%
4242 \ifpdf
4243 \ifx\Hy@driver\Hy@temp
4244 \else
4245 \Hy@WarningNoLine{%
4246 Wrong driver ‘\Hy@driver.def’;\MessageBreak
4247 pdfTeX is running in PDF mode.\MessageBreak
4248 Forcing driver ‘\Hy@temp.def’%
4249 }%
4250 \let\Hy@driver\Hy@temp

```

```

4251 \fi
4252 \else
4253 \ifx\Hy@driver\Hy@temp
4254 \Hy@WarningNoLine{%
4255   Wrong driver ‘\Hy@driver.def’;\MessageBreak
4256   pdfTeX is not running in PDF mode.\MessageBreak
4257   Using default driver%
4258 }%
4259 \let\Hy@driver\@empty
4260 \fi
4261 \fi
4262 \fi
4263 \ifHy@texht
4264 \else
4265 \ifx\Hy@driver\@empty
4266 \else
4267 \def\Hy@temp{hxtex}%
4268 \ifxetex
4269 \ifx\Hy@driver\Hy@temp
4270 \else
4271 \Hy@WarningNoLine{%
4272   Wrong driver ‘\Hy@driver.def’;\MessageBreak
4273   XeTeX is running.\MessageBreak
4274   Forcing driver ‘\Hy@temp.def’ for XeTeX%
4275 }%
4276 \let\Hy@driver\Hy@temp
4277 \fi
4278 \fi
4279 \fi
4280 \fi
4281 \ifx\Hy@driver\@empty
4282 \else
4283 \def\Hy@temp{hvtexhtm}%
4284 \ifvtexhtml
4285 \ifx\Hy@driver\Hy@temp
4286 \else
4287 \Hy@WarningNoLine{%
4288   Wrong driver ‘\Hy@driver.def’;\MessageBreak
4289   VTeX is running in HTML mode.\MessageBreak
4290   Forcing driver ‘\Hy@temp.def’%
4291 }%
4292 \let\Hy@driver\Hy@temp
4293 \fi
4294 \else
4295 \ifx\Hy@driver\Hy@temp
4296 \Hy@WarningNoLine{%
4297   Wrong driver ‘\Hy@driver.def’;\MessageBreak
4298   VTeX is not running in HTML mode.\MessageBreak
4299   Using default driver%
4300 }%
4301 \let\Hy@driver\@empty
4302 \fi
4303 \fi
4304 \fi

```

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

```

4305 \def\HyOpt@DriverType{%
4306 \ifx\Hy@driver\@empty

```



```

4307 \def\HyOpt@DriverType{ (autodetected)}%
4308 \providecommand*{\Hy@defaultdriver}{hypertex}%
4309 \ifpdf
4310 \def\Hy@driver{hpdfTeX}%
4311 \else
4312 \ifxetex
4313 \def\Hy@driver{hxetex}%
4314 \else
4315 \ifvtexhtml
4316 \def\Hy@driver{hvtexhtm}%
4317 \def\MaybeStopEarly{%
4318 \Hy@Message{Stopped early}%
4319 \Hy@AtBeginDocument{%
4320 \PDF@FinishDoc
4321 \gdef\PDF@FinishDoc{}}%
4322 }%
4323 \endinput
4324 }%
4325 \else
4326 \ifvtexpdf
4327 \def\Hy@driver{hvtex}%
4328 \else
4329 \ifvtexps
4330 \def\Hy@driver{hvtex}%
4331 \else
4332 \ifx\HyOpt@DriverFallback\ltx@empty
4333 \let\Hy@driver\Hy@defaultdriver
4334 \def\HyOpt@DriverType{ (default)}%
4335 \else
4336 \begingroup
4337 \toks@{\expandafter{\HyOpt@DriverFallback}}%
4338 \edef\x{\endgroup
4339 \noexpand\kvsetkeys{Hyp}{\the\toks@}}%
4340 }%
4341 \x
4342 \ifx\Hy@driver\ltx@empty
4343 \let\Hy@driver\Hy@defaultdriver
4344 \def\HyOpt@DriverType{ (default)}%
4345 \else
4346 \def\HyOpt@DriverType{ (fallback)}%
4347 \fi
4348 \fi
4349 \fi
4350 \fi
4351 \fi
4352 \fi
4353 \fi
4354 \ifx\Hy@driver\Hy@defaultdriver
4355 \def\Hy@temp{hdvwind}%
4356 \ifx\Hy@temp\Hy@driver
4357 \kvsetkeys{Hyp}{colorlinks}%
4358 \PassOptionsToPackage{dviwindo}{color}%
4359 \fi
4360 \fi
4361 \fi
4362 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4363 \chardef\Hy@VersionChecked=0 %

```

```

4364 \input{\Hy@driver.def}%
4365 \ifcase\Hy@VersionChecked
4366   \Hy@VersionCheck{\Hy@driver.def}%
4367 \fi
4368 \let\@unprocessedoptions\relax
4369 \Hy@RestoreCatcodes
4370 \Hy@DisableOption{tex4ht}%
4371 \Hy@DisableOption{pdftex}%
4372 \Hy@DisableOption{nativepdf}%
4373 \Hy@DisableOption{dvipdfm}%
4374 \Hy@DisableOption{dvipdfmx}%
4375 \Hy@DisableOption{dvipdfmx-outline-open}%
4376 \Hy@DisableOption{pdfmark}%
4377 \Hy@DisableOption{dvips}%
4378 \Hy@DisableOption{hypertex}%
4379 \Hy@DisableOption{vtex}%
4380 \Hy@DisableOption{vtexpdfmark}%
4381 \Hy@DisableOption{dviwindo}%
4382 \Hy@DisableOption{dvipsone}%
4383 \Hy@DisableOption{textures}%
4384 \Hy@DisableOption{latex2html}%
4385 \Hy@DisableOption{ps2pdf}%
4386 \Hy@DisableOption{xetex}%
4387 \Hy@DisableOption{pdfversion}%
4388 }

```

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.

```

4389 \newif\ifHy@DvipdfmxOutlineOpen
4390 \ifxetex
4391   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4392   \else
4393     \chardef\SpecialDvipdfmxOutlineOpen\@ne
4394     \Hy@DvipdfmxOutlineOpentrue
4395   \fi
4396 \fi
4397 \begingroup\expandafter\expandafter\expandafter\endgroup
4398 \expandafter\ifx\cname SpecialDvipdfmxOutlineOpen\endcsname\relax
4399 \else
4400   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4401     \Hy@DvipdfmxOutlineOpentrue
4402   \fi
4403 \fi

```

15.2.2 Bookmarks

```

4404 \def\WriteBookmarks{0}
4405 \def\@bookmarkopenstatus#1{%
4406   \ifHy@bookmarksopen

```

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

```

4407   \ifnum#1<\expandafter\@firstofone\expandafter
4408     {\number\@bookmarksopenlevel} % explicit space
4409   \else
4410     -%
4411   \fi
4412 \else

```

```

4413 -%
4414 \fi
4415 }
4416 \ifHy@bookmarks
4417 \Hy@Info{Bookmarks ON}%
4418 \ifx\@pdfpagemode\@empty
4419 \def\@pdfpagemode{UseOutlines}%
4420 \fi
4421 \else
4422 \def\@bookmarkopenstatus#1{%
4423 \Hy@Info{Bookmarks OFF}%
4424 \Hy@AtEndOfPackage{%
4425 \global\let\ReadBookmarks\relax
4426 \global\let\WriteBookmarks\relax
4427 }%
4428 \ifx\@pdfpagemode\@empty
4429 \def\@pdfpagemode{UseNone}%
4430 \fi
4431 \fi
4432 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
4433 \def\Hy@CatcodeWrapper#1{%
4434 \def\Hy@endWrap{%
4435 \def\TMP@EnsureCode##1##2{%
4436 \edef\Hy@endWrap{%
4437 \Hy@endWrap
4438 \catcode##1 \the\catcode##1\relax
4439 }%
4440 \catcode##1 ##2\relax
4441 }%
4442 \TMP@EnsureCode{10}{12}% ^^J
4443 \TMP@EnsureCode{33}{12}% !
4444 \TMP@EnsureCode{34}{12}% "
4445 \TMP@EnsureCode{36}{3}% $ (math)
4446 \TMP@EnsureCode{38}{4}% & (alignment)
4447 \TMP@EnsureCode{39}{12}% '
4448 \TMP@EnsureCode{40}{12}% (
4449 \TMP@EnsureCode{41}{12}% )
4450 \TMP@EnsureCode{42}{12}% *
4451 \TMP@EnsureCode{43}{12}% +
4452 \TMP@EnsureCode{44}{12}% ,
4453 \TMP@EnsureCode{45}{12}% -
4454 \TMP@EnsureCode{46}{12}% .
4455 \TMP@EnsureCode{47}{12}% /
4456 \TMP@EnsureCode{58}{12}% :
4457 \TMP@EnsureCode{59}{12}% ;
4458 \TMP@EnsureCode{60}{12}% <
4459 \TMP@EnsureCode{61}{12}% =
4460 \TMP@EnsureCode{62}{12}% >
4461 \TMP@EnsureCode{63}{12}% ?
4462 \TMP@EnsureCode{91}{12}% [
4463 \TMP@EnsureCode{93}{12}% ]
4464 \TMP@EnsureCode{94}{7}% ^ (superscript)
4465 \TMP@EnsureCode{95}{8}% _ (subscript)
4466 \TMP@EnsureCode{96}{12}% '
4467 \TMP@EnsureCode{124}{12}% |
4468 \TMP@EnsureCode{126}{13}% ~ (active)

```

```

4469 #1\relax
4470 \Hy@EndWrap
4471 }

```

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

```

4472 \Hy@AtBeginDocument{%
4473   \ifHy@ocgcolorlinks
4474     \kvsetkeys{Hyp}{colorlinks}%
4475     \ifHy@pdfa
4476       \Hy@Warning{%
4477         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4478         using 'colorlinks' instead of 'ocgcolorlinks'%
4479       }%
4480     \Hy@ocgcolorlinksfalse
4481   \fi
4482 \fi
4483 \ifHy@ocgcolorlinks
4484 \else
4485   \Hy@DisableOption{ocgcolorlinks}%
4486 \fi
4487 \ifHy@colorlinks
4488   \def\@pdfborder{0 0 0}%
4489   \let\@pdfborderstyle\@empty
4490   \ifHy@typexml
4491   \else
4492     \Hy@CatcodeWrapper{%
4493       \RequirePackage{color}%
4494     }%
4495   \fi
4496   \def\Hy@colorlink#1{%
4497     \begingroup
4498     \HyColor@UseColor#1%
4499   }%
4500   \def\Hy@endcolorlink{\endgroup}%
4501   \Hy@Info{Link coloring ON}%
4502 \else
4503   \ifHy@frenchlinks
4504     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4505     \def\Hy@endcolorlink{\endgroup}%
4506     \Hy@Info{French linking ON}%
4507   \else

```

for grouping consistency:

```

4508     \def\Hy@colorlink#1{\begingroup}%
4509     \def\Hy@endcolorlink{\endgroup}%
4510     \Hy@Info{Link coloring OFF}%
4511   \fi
4512 \fi
4513 \Hy@DisableOption{colorlinks}%
4514 \Hy@DisableOption{frenchlinks}%
4515 \ifHy@texht
4516   \long\def\@firstoffive#1#2#3#4#5{#1}%
4517   \long\def\@secondoffive#1#2#3#4#5{#2}%
4518   \long\def\@thirdoffive#1#2#3#4#5{#3}%
4519   \long\def\@fourthoffive#1#2#3#4#5{#4}%
4520   \long\def\@fifthoffive#1#2#3#4#5{#5}%
4521   \providecommand*\@safe@activestrue{}%
4522   \providecommand*\@safe@activesfalse{}%

```

```

4523 \def\T@ref#1{%
4524   \Hy@safe@activetrue
4525   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4526   \Hy@safe@activesfalse
4527 }%
4528 \def\T@pageref#1{%
4529   \Hy@safe@activetrue
4530   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4531   \Hy@safe@activesfalse
4532 }%
4533 \else
4534   \ifHy@typexml
4535   \else
4536     \Hy@CatcodeWrapper{%
4537       \RequirePackage{nameref}%
4538     }%
4539   \fi
4540 \fi
4541 \DeclareRobustCommand\ref{%
4542   \@ifstar\@refstar\T@ref
4543 }%
4544 \DeclareRobustCommand\pageref{%
4545   \@ifstar\@pagerefstar\T@pageref
4546 }%
4547 % \ifclassloaded{memoir}{%
4548 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4549 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4550 %   }%
4551 % } \ltx@secondoftwo
4552 % {%
4553 %   \DeclareRobustCommand*{\nameref}{%
4554 %     \@ifstar\@mem@titlerefno link\@mem@titleref
4555 %   }%
4556 % }{%
4557   \DeclareRobustCommand*{\nameref}{%
4558     \@ifstar\@namerefstar\T@nameref
4559   }%
4560 % }%
4561 }
4562 \Hy@AtBeginDocument{%
4563   \ifHy@texht
4564   \else
4565     \Hy@CatcodeWrapper\ReadBookmarks
4566   \fi
4567 }
4568 \ifHy@backref
4569   \RequirePackage{backref}%
4570 \else
4571   \let\Hy@backout\@gobble
4572 \fi
4573 \Hy@DisableOption{backref}
4574 \Hy@DisableOption{pagebackref}
4575 \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.

```
4576 \begingroup
4577   \endlinechar=-1 %
4578   \catcode'\^^A=14 %
4579   \catcode'\^^M\active
4580   \catcode'\%\active
4581   \catcode'\#\active
4582   \catcode'\_\active
4583   \catcode'\$\active
4584   \catcode'\&\active
4585   \gdef\hyper@normalise{^^A
4586     \begingroup
4587       \catcode'\^^M\active
4588       \def^^M{ }^^A
4589       \catcode'\%\active
4590       \let%\@percentchar
4591       \let%\@percentchar
4592       \catcode'\#\active
4593       \def#{\hyper@hash}^^A
4594       \def\#{\hyper@hash}^^A
4595       \@makeother\&^^A
4596       \edef&{\string&}^^A
4597       \edef\&{\string&}^^A
4598       \edef\textunderscore{\string_}^^A
4599       \let\_ \textunderscore
4600       \catcode'\_\active
4601       \let\_ \textunderscore
4602       \let~\hyper@tilde
4603       \let~\hyper@tilde
4604       \let\textasciitilde\hyper@tilde
4605       \let\\ \@backslashchar
4606       \edef$\string$}^^A
4607       \Hy@safe@activetrue
4608       \hyper@n@rmalise
4609     }^^A
4610     \catcode'\#=6 ^^A
4611     \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4612     \gdef\hyper@n@rmalise#1#2{^^A
4613       \def\Hy@tempa{#2}^^A
4614       \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4615         \Hy@ReturnAfterElseFi{^^A
4616           \hyper@@normalise{#1}^^A
4617         }^^A
4618       \else
4619         \Hy@ReturnAfterFi{^^A
4620           \hyper@@normalise{#1}{#2}^^A
4621         }^^A
4622       \fi
4623     }^^A
4624     \gdef\hyper@@normalise#1#2{^^A
```

```

4625 \edef\Hy@tempa{^^A
4626 \endgroup
4627 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4628 }^^A
4629 \Hy@tempa
4630 }^^A
4631 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4632 #1^^A
4633 \ifx\limits#2\limits
4634 \else
4635 \Hy@ReturnAfterFi{^^A
4636 \Hy@RemovePercentCr #2\@nil
4637 }^^A
4638 \fi
4639 }^^A
4640 \endgroup
4641 \providecommand*\hyper@chars{%
4642 \let\#\hyper@hash
4643 \let\%\@percentchar
4644 \Hy@safe@activetrue
4645 }

4646 \def\hyperlink#1#2{%
4647 \hyper@@link{#1}{#2}%
4648 }

4649 \def\Hy@VerboseLinkStart#1#2{%
4650 \ifHy@verbose
4651 \begingroup
4652 \Hy@safe@activetrue
4653 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4654 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4655 \xdef\Hy@VerboseGlobalTemp{%
4656 \Hy@VerboseGlobalTemp, %
4657 line \the\inputlineno
4658 }%
4659 \endgroup
4660 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4661 \@onelevel@sanitize\Hy@VerboseLinkInfo
4662 \fi
4663 }

4664 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4665 \def\Hy@VerboseLinkStop{%
4666 \ifHy@verbose
4667 \begingroup
4668 \edef\x{\endgroup
4669 \write\m@ne{%
4670 Package 'hyperref' Info: %
4671 End of reference \Hy@VerboseLinkInfo.%
4672 }%
4673 }%
4674 \x
4675 \fi
4676 }

4677 \def\Hy@VerboseAnchor#1{%
4678 \ifHy@verbose
4679 \begingroup
4680 \Hy@safe@activetrue

```

```

4681 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4682 \endgroup
4683 \fi
4684 }

4685 \def\Hy@AllowHyphens{%
4686 \relax
4687 \ifhmode
4688 \penalty\@M
4689 \hskip\z@skip
4690 \fi
4691 }

4692 \DeclareRobustCommand*\href{[1][]{}%
4693 \begingroup
4694 \setkeys{href}{#1}%
4695 \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4696 }
4697 \def\Hy@href#{%
4698 \hyper@normalise\href@
4699 }
4700 \begingroup
4701 \catcode'\$=6 %
4702 \catcode'\#=12 %
4703 \gdef\href@\$1{\expandafter\href@split$1##\\}%
4704 \gdef\href@split$1#\$2#\$3\\$4{%
4705 \hyper@@link{$1}{$2}{$3}{$4}%
4706 \endgroup
4707 }%
4708 \endgroup

```

Option ‘page’.

```

4709 \define@key{href}{page}{%
4710 \def\Hy@href@page{#1}%
4711 }
4712 \let\Hy@href@page\@empty
4713 \newcount\c@Hy@tempcnt
4714 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4715 \def\Hy@MakeRemoteAction{%
4716 \ifx\Hy@href@page\@empty
4717 \def\Hy@href@page{0}%
4718 \else
4719 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4720 \ifnum\c@Hy@tempcnt<\@ne
4721 \Hy@Warning{%
4722 Invalid page number (\theHy@tempcnt)\MessageBreak
4723 for remote PDF file.\MessageBreak
4724 Using page 1%
4725 }%
4726 \def\Hy@href@page{0}%
4727 \else
4728 \global\advance\c@Hy@tempcnt\m@ne
4729 \edef\Hy@href@page{\theHy@tempcnt}%
4730 \fi
4731 \fi

```

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

```

4732 \ifx\Hy@href@nextactionraw\@empty

```



```

4733 \else
4734 \Hy@newwindowsettrue
4735 \Hy@newwindowtrue
4736 \fi
4737 }

```

Option ‘pdfremotestartview’.

```

4738 \define@key{href}{pdfremotestartview}{%
4739 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4740 }

```

Option ‘pdfnewwindow’.

```

4741 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4742 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4743 \newif\ifHy@href@ismap
4744 \define@key{href}{ismap}[true]{%
4745 \ltx@ifundefined{Hy@href@ismap#1}{%
4746 \Hy@Error{%
4747 Invalid value (#1) for key ‘ismap’.\MessageBreak
4748 Permitted values are ‘true’ or ‘false’.\MessageBreak
4749 Ignoring ‘ismap’%
4750 }\@ehc
4751 }{%
4752 \csname Hy@href@ismap#1\endcsname
4753 }%
4754 }

```

Option ‘nextactionraw’.

```

4755 \let\Hy@href@nextactionraw\@empty
4756 \define@key{href}{nextactionraw}{%
4757 \edef\Hy@href@nextactionraw{#1}%
4758 \ifx\Hy@href@nextactionraw\@empty
4759 \else
4760 \Hy@Match\Hy@href@nextactionraw{%
4761 ^(\HyPat@ObjRef/|<<.*[/S[/].+>>|}%
4762 \[( ?\HyPat@ObjRef/|<<.*[/S[/].+>>)+ ?)]$}%
4763 }{ }{%
4764 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
4765 \Hy@href@nextactionraw\MessageBreak
4766 The action is discarded%
4767 }%
4768 }%
4769 \ifx\Hy@href@nextactionraw\@empty
4770 \else
4771 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4772 \fi
4773 \fi
4774 }
4775 \def\HyPat@ObjRef/{.+}

```

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

```

4776 \RequirePackage{url}
4777 \let\HyOrg@url\url
4778 \def\Hurl{\begingroup \Url}
4779 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4780 \def\nolinkurl@#1{\Hurl{#1}}
4781 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4782 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

```

```

4783 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4784 \providecommand\hyper@image[2]{#2}

4785 \def\hypertarget#1#2{%
4786   \ifHy@nesting
4787     \hyper@@anchor{#1}{#2}%
4788   \else
4789     \hyper@@anchor{#1}{\relax}#2%
4790   \fi
4791 }

```

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

```

4792 \DeclareRobustCommand*\hyperref{%
4793   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4794 }

4795 \def\Hy@babelnormalise#1[#2]{%
4796   \begingroup
4797     \Hy@safe@activetrue
4798     \edef\Hy@tempa{%
4799       \endgroup
4800       \noexpand#1[#2]}%
4801   }%
4802   \Hy@tempa
4803 }

4804 \def\@hyperref{\hyper@normalise\@hyperref}
4805 \def\@hyperref#1#2#3{%
4806   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4807   \expandafter\tryhyper@link\ref@one\{#1}%
4808 }

4809 \def\tryhyper@link#1\#2{%
4810   \hyper@@link{#2}{#1}%
4811 }

4812 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
4813 \def\@hyperdef#1#2#3{%, category, name, text
4814   \ifx\#1\%
4815     \def\Hy@AnchorName{#2}%
4816   \else
4817     \def\Hy@AnchorName{#1.#2}%
4818   \fi
4819   \ifHy@nesting
4820     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4821   \else
4822     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4823   \fi
4824 }

```

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

```

4825 \def\label@hyperref[#1]{%
4826   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4827 }%
4828 \def\label@@hyperref#1#2#3{%
4829   \ifx#1\relax

```

```

4830 \protect\G@refundefinedtrue
4831 \@latex@warning{%
4832   Hyper reference '#2' on page \thepage \space undefined%
4833 }%
4834 \hyper@@link@{??}{#3}%
4835 \else
4836 \hyper@@link@{\expandafter\@fifthoffive#1}%
4837 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4838 \fi
4839 }
4840 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4841                               % anchor text
4842 \@bsphack
4843 \ifx\#2\%
4844 \def\Hy@AnchorName{#3}%
4845 \else
4846 \def\Hy@AnchorName{#2.#3}%
4847 \fi
4848 \if@filesw
4849 \protected@write\@auxout@{ {%
4850 \string\newlabel{#1}{#2}{#3}{\Hy@AnchorName}}}%
4851 }%
4852 \fi
4853 \@esphack
4854 \ifHy@nesting
4855 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4856 \else
4857 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4858 \fi
4859 }

```

17 Underlying basic hypertext macros

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

```

4860 \def\hyper@@link@{\let\Hy@reserved@a\relax
4861 \ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4862 }
4863 \def\hyper@link@[#1]#2#3#4{%
4864 \begingroup
4865 \protected@edef\Hy@tempa{#2}%
4866 \Hy@safe@activestrue
4867 \edef\x{#3}%
4868 \ifx\Hy@tempa\@empty
4869 \toks0{\hyper@link{#1}}%
4870 \else
4871 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4872 \fi
4873 \toks2{%
4874 \Hy@safe@activesfalse
4875 #4%
4876 }%
4877 \edef\Hy@tempa{\the\toks2}%
4878 \edef\x{\endgroup

```

```

4879 \ifx\Hy@tempa\@empty
4880 \noexpand\Hy@Warning{Suppressing empty link}%
4881 \else
4882 \the\toks0 {\x}{\the\toks2}%
4883 \fi
4884 }%
4885 \x
4886 }

```

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.

```

4887 \def\hyper@readexternallink#1\|#2#3#4{%
4888 \begingroup
4889 \let\\\relax
4890 \expandafter\endgroup
4891 \expandafter\@hyper@@readexternallink#1\#{#2}{#3}{#4}%
4892 }
4893 \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.

```

4894 \@hyper@readexternallink{#2}{#3}{#4}#1::\#{#1}%
4895 }

```

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

```

4896 \def\@pdftempwordfile{file}%
4897 \def\@pdftempwordrun{run}%
4898 \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:

```

4899 \ifx\\\#6\\\%
4900 \@hyper@linkfile file:#7\\\#{#3}{#2}{#7}%
4901 \else
4902 \ifx\\\#4\\\%
4903 \@hyper@linkfile file:#7\\\#{#3}{#2}{#7}%
4904 \else

```

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

```

4905 \def\@pdftempa{#4}%
4906 \ifx\@pdftempa\@pdftempwordfile
4907 \@hyper@linkfile#7\\\#{#3}{#2}{#7}%
4908 \else

```

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

```
4909     \ifx\@pdftempa\@pdftempwordrun
4910     \ifHy@pdfa
4911         \Hy@Error{%
4912             PDF/A: Launch action is prohibited%
4913         }\@ehc
4914     \begingroup
4915         \leavevmode
4916         #2%
4917     \endgroup
4918 \else
4919     \@hyper@launch#7\{\#3}\{\#2}%
4920 \fi
4921 \else
```

otherwise its a URL

```
4922     \hyper@linkurl{\#3}\{\#7\ifx\#2\\\else\hyper@hash#2\fi}%
4923 \fi
4924 \fi
4925 \fi
4926 \fi
4927 }
```

By default, turn run: into file:

```
4928 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4929 \hyper@linkurl{\#2}\{\#1}%
4930 \Hy@linkfileprefix
4931 #1%
4932 \ifx\#3\\\%
4933 \else
4934     \hyper@hash
4935     #3%
4936 \fi
4937 }%
4938 }
```

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

```
4939 \def\@hyper@linkfile file:#1\#2#3#4{%
4940     %file url,link string, name, original uri
4941     \filename@parse{\#1}%
4942     \ifx\filename@ext\relax
4943         \edef\filename@ext{\XR@ext}%
4944     \fi
4945     \def\use@file{\filename@area\filename@base.\filename@ext}%
4946     \Hy@IfStringEndsWith\filename@ext\XR@ext{%
4947         \hyper@linkfile{\#2}\{\use@file}\{\#3}%
4948     }{%
4949         \ifx\@baseurl\@empty
4950             \hyper@linkurl{\#2}\{\#4\ifx\#3\\\else\hyper@hash#3\fi}%
4951         }%
4952     }%
4953 \else
4954     \hyper@linkurl{\#2}\{\use@file\ifx\#3\\\else\hyper@hash#3\fi}%
4955 \fi
4956 }%
4957 }

4958 \def\Hy@IfStringEndsWith#1#2{%
```

```

4959 \begingroup
4960 \edef\x{#1}%
4961 \@onelevel@sanitize\x
4962 \edef\x{.\x$}%
4963 \edef\y{#2}%
4964 \@onelevel@sanitize\y
4965 \edef\y{.\y$}%
4966 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4967   \endgroup
4968   \ifx\relax##2\relax
4969     \expandafter\ltx@secondoftwo
4970   \else
4971     \expandafter\ltx@firstoftwo
4972   \fi
4973 }%
4974 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4975 }

4976 \def\Hy@StringLocalhost{localhost}
4977 \@onelevel@sanitize\Hy@StringLocalhost
4978 \def\Hy@CleanupFile#1{%
4979   \edef#1{#1}%
4980   \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}}%
4981 }
4982 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
4983   \begingroup
4984   \toks@{\endgroup}%
4985   \def\x{#1}%
4986   \ifx\x\@empty
4987     \def\x{#2}%
4988   \ifx\x\@empty
4989     \toks@{\endgroup\def#5{/#3}}%
4990   \else
4991     \@onelevel@sanitize\x
4992     \ifx\x\Hy@StringLocalhost
4993       \toks@{\endgroup\def#5{/#3}}%
4994     \fi
4995   \fi
4996   \fi
4997   \the\toks@
4998 }

```

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.

```

4999 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5000 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5001   \ifx\#1\%
5002     #2\Hy@Warning{Ignoring empty anchor}%
5003   \else
5004     \def\anchor@spot{#2#3}%
5005     \let\put@me@back\@empty
5006     \ifx\relax#2\relax
5007     \else

```

```

5008 \ifHy@nesting
5009 \else
5010 \ifcat a\noexpand#2\relax
5011 \else
5012 \ifcat 0\noexpand#2 \relax
5013 \else
5014 % \typeout{Anchor start is not alphanumeric %
5015 % on input line\the\inputlineno%
5016 % }%
5017 \let\anchor@spot\@empty
5018 \def\put@me@back{#2#3}%
5019 \fi
5020 \fi
5021 \fi
5022 \fi
5023 \ifHy@activeanchor
5024 \anchor@spot
5025 \else
5026 \hyper@anchor{#1}%
5027 \fi
5028 \expandafter\put@me@back
5029 \fi
5030 \let\anchor@spot\@empty
5031 }
5032 \def\anchor@spot{}

```

18 Compatibility with the *LT_EX2html* package

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

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

```

5033 \let\htmladding\hyperimage
5034 \def\htmladdnormallink#1#2{\href{#2}{#1}}
5035 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5036 \def\htmlref#1#2{% anchor text, label
5037 \label@hyperref[{#2}]{#1}%
5038 }

```

This is really too much. The *LT_EX2html* package defines its own `\hyperref` command, with a different syntax. Was this always here? Its weird, anyway. We interpret it in the 'printed' way, since we are about fidelity to the page.

```

5039 \def\@latextohtmlX{%
5040 \let\hhyperref\hyperref
5041 \def\hyperref##1##2##3##4{% anchor text for HTML
5042 % text to print before label in print
5043 % label
5044 % post-label text in print
5045 ##2\ref{##4}##3%
5046 }%
5047 }

```

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.

```
5048 \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
5049 \def\HyField@NewFlag#1#2{%
5050 \lowercase{\HyField@NewOption{#2}}}%
5051 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5052 }
```

```
\HyField@NewFlagOnly
5053 \def\HyField@NewFlagOnly#1#2{%
5054 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5055 }
```

```
\HyField@NewOption #1: option name
5056 \def\HyField@NewOption#1{%
5057 \expandafter\newif\csname ifFld@#1\endcsname
5058 \define@key{Field}{#1}[true]{%
5059 \lowercase{\Field@boolkey{##1}}{#1}%
5060 }%
5061 }
```

\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
5062 \def\HyField@NewBitsetFlag#1#2#3#4{%
5063 \begingroup
5064 \count@=#4\relax
5065 \advance\count@\m@ne
5066 \def\x##1{%
5067 \endgroup
5068 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5069 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5070 \expandafter\edef\csname HyField@#3@##1\endcsname{%
5071 (\number#4) #2%
5072 }%
5073 \else
5074 \expandafter\edef\csname HyField@#3@##1\endcsname{%
```



```

5075     \csname HyField@#3@#1\endcsname
5076     /#2%
5077     }%
5078     \fi
5079     }%
5080 \expandafter\x\expandafter{\the\count@}%
5081 }

```

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

```

5082 \def\HyField@UseFlag#1#2{%
5083   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5084 }

```

\HyField@@UseFlag

```

5085 \def\HyField@@UseFlag#1#2{%
5086   \bitsetSetValue{HyField@#2}{%
5087     \csname HyField@#2@#1\endcsname
5088   }{%
5089     \csname ifFld@#1\endcsname 1\else 0\fi
5090   }%
5091 }

```

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

```

5092 \def\HyField@SetFlag#1#2{%
5093   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5094 }

```

\HyField@@SetFlag

```

5095 \def\HyField@@SetFlag#1#2{%
5096   \bitsetSetValue{HyField@#2}{%
5097     \csname HyField@#2@#1\endcsname
5098   }{1}%
5099 }

```

\HyField@PrintFlags

```

5100 \def\HyField@PrintFlags#1#2{%
5101   \ifHy@verbose
5102     \begingroup
5103     \let\Hy@temp\@empty
5104     \let\MessageBreak\relax
5105     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5106     \bitsetGetSetBitList{HyField@#1}\do{%
5107       \edef\Hy@temp{%
5108         \Hy@temp
5109         \csname HyField@#1@\x\endcsname\MessageBreak
5110       }%
5111       }%
5112   \edef\x{\endgroup
5113     \noexpand\Hy@Info{%
5114       Field flags: %
5115       \expandafter\ifx\@car#1\@nil S\else/\fi
5116       #1 %
5117       \bitsetGetDec{HyField@#1} %
5118       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5119     \Hy@temp
5120     for #2%

```

```

5121     }%
5122   }\x
5123 \fi
5124 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5125 \HyField@NewFlag{Ff}{ReadOnly}{1}
5126 \HyField@NewFlag{Ff}{Required}{2}
5127 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5128 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5129 \HyField@NewFlag{Ff}{Radio}{16}
5130 \HyField@NewFlag{Ff}{Pushbutton}{17}
5131 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5132 \HyField@NewFlag{Ff}{Multiline}{13}
5133 \HyField@NewFlag{Ff}{Password}{14}
5134 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5135 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5136 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5137 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5138 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5139 \HyField@NewFlag{Ff}{Combo}{18}
5140 \HyField@NewFlag{Ff}{Edit}{19}
5141 \HyField@NewFlag{Ff}{Sort}{20}
5142 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5143 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5144 \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.

```

5145 \newif\ifFld@popdown
5146 \define@key{Field}{popdown}[true]{%
5147   \lowercase{\Field@boolkey{#1}}{popdown}%
5148 }

```

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.

```

5149 \HyField@NewFlag{F}{Invisible}{1}
5150 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5151 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5152 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5153 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5154 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5155 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5156 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5157 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

```

```

5158 \ifHy@pdfa
5159 \def\HyField@PDFAFlagWarning#1#2{%
5160   \Hy@Warning{%
5161     PDF/A: Annotation flag '#1' must\MessageBreak
5162     be set to '#2'%
5163   }%
5164 }%
5165 \Fld@invisiblefalse
5166 \def\Fld@invisibletrue{%
5167   \HyField@PDFAFlagWarning{invisible}{false}%
5168 }%
5169 \Fld@hiddenfalse
5170 \def\Fld@hiddentruetrue{%
5171   \HyField@PDFAFlagWarning{hidden}{false}%
5172 }%
5173 \Fld@printtrue
5174 \def\Fld@printfalse{%
5175   \HyField@PDFAFlagWarning{print}{true}%
5176 }%
5177 \Fld@nozoomtrue
5178 \def\Fld@nozoomfalse{%
5179   \HyField@PDFAFlagWarning{nozoom}{true}%
5180 }%
5181 \Fld@norotatefalse
5182 \def\Fld@norotatefalse{%
5183   \HyField@PDFAFlagWarning{norotate}{true}%
5184 }%
5185 \Fld@noviewfalse
5186 \def\Fld@noviewtrue{%
5187   \HyField@PDFAFlagWarning{noview}{false}%
5188 }%
5189 \fi

```

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

```

5190 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5191 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5192 \HyField@NewFlag{Submit}{GetMethod}{4}
5193 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5194 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5195 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5196 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5197 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5198 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5199 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5200 \HyField@NewFlag{Submit}{ExclFKey}{12}
5201 \HyField@NewFlag{Submit}{EmbedForm}{14}

5202 \define@key{Field}{export}{%
5203   \lowercase{\def\Hy@temp{#1}}%
5204   \@ifundefined{Fld@export@Hy@temp}{%
5205     \@onelevel@sanitize\Hy@temp
5206     \Hy@Error{%
5207       Unknown export format '\Hy@temp'\MessageBreak
5208       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5209     }%
5210   }%
5211   \let\Fld@export\Hy@temp
5212 }%

```

```

5213 }
5214 \def\Fld@export{fdf}
5215 \@namedef{Fld@export@fdf}{0}%
5216 \@namedef{Fld@export@html}{1}%
5217 \@namedef{Fld@export@xfdf}{2}%
5218 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5219 \def\HyField@FlagsSubmit{%
5220   \bitsetReset{HyField@Submit}%
5221   \ifcase\@nameuse{Fld@export@Fld@export} %
5222     % FDF
5223     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5224     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5225     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5226     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5227     \HyField@UseFlag{Submit}{CanonicalFormat}%
5228     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5229     \HyField@UseFlag{Submit}{ExclFKey}%
5230     \HyField@UseFlag{Submit}{EmbedForm}%
5231   \or % HTML
5232     \HyField@SetFlag{Submit}{ExportFormat}%
5233     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5234     \HyField@UseFlag{Submit}{GetMethod}%
5235     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5236     \HyField@UseFlag{Submit}{CanonicalFormat}%
5237   \or % XFDF
5238     \HyField@SetFlag{Submit}{XFDF}%
5239     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5240     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5241     \HyField@UseFlag{Submit}{CanonicalFormat}%
5242   \or % PDF
5243     \HyField@SetFlag{Submit}{SubmitPDF}%
5244     \HyField@UseFlag{Submit}{GetMethod}%
5245   \fi
5246   \HyField@PrintFlags{Submit}{submit button field}%
5247   \bitsetIsEmpty{HyField@Submit}{%
5248     \def\Fld@submitflags{%
5249     }{%
5250       \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
5251   }%
5252 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5253 \def\HyField@FlagsAnnot#1{%
5254   \bitsetReset{HyField@F}%
5255   \HyField@UseFlag{F}{Invisible}%
5256   \HyField@UseFlag{F}{Hidden}%
5257   \HyField@UseFlag{F}{Print}%
5258   \HyField@UseFlag{F}{NoZoom}%
5259   \HyField@UseFlag{F}{NoRotate}%
5260   \HyField@UseFlag{F}{NoView}%

```

```

5261 \HyField@UseFlag{F}{Locked}%
5262 \HyField@UseFlag{F}{ToggleNoView}%
5263 \HyField@UseFlag{F}{LockedContents}%
5264 \HyField@PrintFlags{F}{#1}%
5265 \bitsetIsEmpty{HyField@F}{%
5266   \def\Fld@annotflags{%
5267   }{%
5268   \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5269 }%
5270 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5271 \def\HyField@FlagsPushButton{%
5272 \HyField@FlagsAnnot{push button field}%
5273 \bitsetReset{HyField@Ff}%
5274 \HyField@UseFlag{Ff}{ReadOnly}%
5275 \HyField@UseFlag{Ff}{Required}%
5276 \HyField@UseFlag{Ff}{NoExport}%
5277 \HyField@SetFlag{Ff}{Pushbutton}%
5278 \HyField@PrintFlags{Ff}{push button field}%
5279 \bitsetIsEmpty{HyField@Ff}{%
5280   \def\Fld@flags{%
5281   }{%
5282   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5283 }%
5284 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5285 \def\HyField@FlagsCheckBox{%
5286 \HyField@FlagsAnnot{check box field}%
5287 \bitsetReset{HyField@Ff}%
5288 \HyField@UseFlag{Ff}{ReadOnly}%
5289 \HyField@UseFlag{Ff}{Required}%
5290 \HyField@UseFlag{Ff}{NoExport}%
5291 \HyField@PrintFlags{Ff}{check box field}%
5292 \bitsetIsEmpty{HyField@Ff}{%
5293   \def\Fld@flags{%
5294   }{%
5295   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5296 }%
5297 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5298 \def\HyField@FlagsRadioButton{%
5299 \HyField@FlagsAnnot{radio button field}%
5300 \bitsetReset{HyField@Ff}%
5301 \HyField@UseFlag{Ff}{ReadOnly}%
5302 \HyField@UseFlag{Ff}{Required}%
5303 \HyField@UseFlag{Ff}{NoExport}%
5304 \HyField@UseFlag{Ff}{NoToggleToOff}%

```

```

5305 \HyField@SetFlag{Ff}{Radio}%
5306 \HyField@UseFlag{Ff}{RadiosInUnison}%
5307 \HyField@PrintFlags{Ff}{radio button field}%
5308 \bitsetIsEmpty{HyField@Ff}{%
5309   \def\Fld@flags{%
5310   }{%
5311     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5312   }%
5313 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5314 \def\HyField@FlagsText{%
5315   \HyField@FlagsAnnot{text field}%
5316   \bitsetReset{HyField@Ff}%
5317   \HyField@UseFlag{Ff}{ReadOnly}%
5318   \HyField@UseFlag{Ff}{Required}%
5319   \HyField@UseFlag{Ff}{NoExport}%
5320   \HyField@UseFlag{Ff}{Multiline}%
5321   \HyField@UseFlag{Ff}{Password}%
5322   \HyField@UseFlag{Ff}{FileSelect}%
5323   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5324   \HyField@UseFlag{Ff}{DoNotScroll}%
5325   \ifFld@comb
5326     \ifcase0\ifFld@multiline
5327       \else\ifFld@password
5328       \else\ifFld@fileselect
5329       \else 1\fi\fi\fi\relax
5330     \Hy@Error{%
5331       Field option ‘comb’ cannot used together with\MessageBreak
5332       ‘multiline’, ‘password’, or ‘fileselect’%
5333     }\@ehc
5334   \else
5335     \HyField@UseFlag{Ff}{Comb}%
5336   \fi
5337 \fi
5338 \HyField@UseFlag{Ff}{RichText}%
5339 \HyField@PrintFlags{Ff}{text field}%
5340 \bitsetIsEmpty{HyField@Ff}{%
5341   \def\Fld@flags{%
5342   }{%
5343     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5344   }%
5345 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5346 \def\HyField@FlagsChoice{%
5347   \HyField@FlagsAnnot{choice field}%
5348   \bitsetReset{HyField@Ff}%
5349   \HyField@UseFlag{Ff}{ReadOnly}%
5350   \HyField@UseFlag{Ff}{Required}%
5351   \HyField@UseFlag{Ff}{NoExport}%
5352   \HyField@UseFlag{Ff}{Combo}%

```

```

5353 \ifFld@combo
5354 \HyField@UseFlag{Ff}{Edit}%
5355 \fi
5356 \HyField@UseFlag{Ff}{Sort}%
5357 \HyField@UseFlag{Ff}{MultiSelect}%
5358 \ifFld@combo
5359 \ifFld@edit
5360 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5361 \fi
5362 \fi
5363 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5364 \HyField@PrintFlags{Ff}{choice field}%
5365 \bitsetIsEmpty{HyField@Ff}{%
5366 \def\Fld@flags{%
5367 }{%
5368 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5369 }%
5370 }

```

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.

```

5371 \def\HyField@PDFChoices#1{%
5372 \begingroup
5373 \gdef\Fld@choices{%
5374 \def\HyTmp@optlist{%
5375 \let\HyTmp@optitem\relax
5376 \count@=0 %
5377 \kv@parse{#1}{%
5378 \Hy@pdfstringdef\kv@key\kv@key
5379 \ifx\kv@value\relax
5380 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5381 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
5382 \else
5383 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5384 \fi
5385 \else
5386 \Hy@pdfstringdef\kv@value\kv@value
5387 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
5388 \fi
5389 \edef\HyTmp@optlist{%
5390 \HyTmp@optlist
5391 \HyTmp@optitem{\the\count@}{\kv@key}0%
5392 }%
5393 \advance\count@ by 1 %
5394 \@gobbletwo
5395 }%
5396 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5397 \ifFld@multiselect
5398 \HyField@@PDFChoices{DV}\Fld@default
5399 \HyField@@PDFChoices{V}\Fld@value
5400 \else
5401 \ifx\Fld@default\relax
5402 \else
5403 \pdfstringdef\Hy@gtemp\Fld@default

```

```

5404     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5405     \fi
5406     \ifx\Fld@value\relax
5407     \else
5408         \pdfstringdef\Hy@gtemp\Fld@value
5409         \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5410     \fi
5411 \fi
5412 \endgroup
5413 }

```

\HyField@@PDFChoices

```

5414 \def\HyField@@PDFChoices#1#2{%
5415     \ifx#2\relax
5416     \else
5417         \count@=0 %
5418         \def\HyTmp@optitem##1##2##3{%
5419             \def\HyTmp@key{##2}%
5420             \ifx\HyTmp@key\Hy@gtemp
5421                 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5422                     \HyTmp@optlist
5423                     \HyTmp@optitem{##1}{##2}1%
5424                 }%
5425                 \let\HyTmp@found=Y%
5426             \else
5427                 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5428                     \HyTmp@optlist
5429                     \HyTmp@optitem{##1}{##2}##3%
5430                 }%
5431             \fi
5432         }%
5433         \expandafter\comma@parse\expandafter{#2}{%
5434             \pdfstringdef\Hy@gtemp\comma@entry
5435             \let\HyTmp@found=N %
5436             \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5437             \HyTmp@optlist
5438             \ifx\HyTmp@found Y%
5439                 \advance\count@ by 1 %
5440             \else
5441                 \@onelevel@sanitize\comma@entry
5442                 \PackageWarning{hyperref}{%
5443                     \string\ChoiceBox: Ignoring value '\comma@entry',%
5444                     \MessageBreak
5445                     it cannot be found in the choices%
5446                 }%
5447             \fi
5448             \@gobble
5449         }%
5450         \def\HyTmp@optitem##1##2##3{%
5451             \ifnum##3=1 %
5452                 (##2)%
5453             \fi
5454         }%
5455         \ifcase\count@
5456         \or
5457             \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5458         \else

```



```

5459 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]]}%
5460 \ifx#1V%
5461 \def\HyTmp@optitem##1##2##3{%
5462 \ifnum##3=1 %
5463 \@firstofone{ ##1}%
5464 \fi
5465 }%
5466 \edef\HyTmp@optlist{\HyTmp@optlist}%
5467 \xdef\Fld@choices{%
5468 \Fld@choices
5469 /I[\expandafter\@firstofone\HyTmp@optlist]%
5470 }%
5471 \fi
5472 \fi
5473 \fi
5474 }

```

19.3 Forms

\HyField@SetKeys

```

5475 \def\HyField@SetKeys{%
5476 \kvsetkeys{Field}%
5477 }

5478 \newif\ifFld@checked
5479 \newif\ifFld@disabled
5480 \Fld@checkedfalse
5481 \Fld@disabledfalse
5482 \newcount\Fld@menulength
5483 \newdimen\Fld@Width
5484 \newdimen\Fld@charsize
5485 \Fld@charsize=10\p@
5486 \def\Fld@maxlen{0}
5487 \def\Fld@align{0}
5488 \def\Fld@color{0 0 0 rg}
5489 \def\Fld@bcolor{1 1 1}
5490 \def\Fld@bordercolor{1 0 0}
5491 \def\Fld@bordersep{1\p@}
5492 \def\Fld@borderwidth{1}
5493 \def\Fld@borderstyle{S}
5494 \def\Fld@cbsymbol{4}
5495 \def\Fld@radiosymbol{H}
5496 \def\Fld@rotation{0}
5497 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
5498 \def\endForm{\@endForm}
5499 \newif\ifForm@html
5500 \Form@htmlfalse
5501 \def\Form@boolkey#1#2{%
5502 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5503 }
5504 \define@key{Form}{action}{%
5505 \hyper@normalise\Hy@DefFormAction{#1}%
5506 }
5507 \def\Hy@DefFormAction{\def\Form@action}
5508 \def\enc@html{html}
5509 \define@key{Form}{encoding}{%
5510 \def\Hy@tempa{#1}%

```

```

5511 \ifx\Hy@tempa\enc@@html
5512 \Form@htmltrue
5513 \def\Fld@export{html}%
5514 \else
5515 \Hy@Warning{%
5516   Form 'encoding' key with \MessageBreak
5517   unknown value '#1'%
5518 }%
5519 \Form@htmlfalse
5520 \fi
5521 }
5522 \define@key{Form}{method}{%
5523 \lowercase{\def\Hy@temp{#1}}%
5524 \@ifundefined{Form@method@\Hy@temp}{%
5525 \@onelevel@sanitize\Hy@temp
5526 \Hy@Error{%
5527   Unknown method '\Hy@temp'\MessageBreak
5528   Known values are 'post' and 'get'%
5529 } \@ehc
5530 }{%
5531 \let\Form@method\Hy@temp
5532 \ifcase\@nameuse{Form@method@\Hy@temp} %
5533 \Fld@getmethodfalse
5534 \else
5535 \Fld@getmethodtrue
5536 \fi
5537 }%
5538 }
5539 \def\Form@method{}
5540 \@namedef{Form@method@post}{0}
5541 \@namedef{Form@method@get}{1}

5542 \newif\ifHyField@NeedAppearances
5543 \def\HyField@NeedAppearancesfalse{%
5544 \global\let\ifHyField@NeedAppearances\iffalse
5545 }
5546 \def\HyField@NeedAppearancetrue{%
5547 \global\let\ifHyField@NeedAppearances\iftrue
5548 }
5549 \HyField@NeedAppearancetrue
5550 \define@key{Form}{NeedAppearances}[true]{%
5551 \edef\Hy@tempa{#1}%
5552 \ifx\Hy@tempa\Hy@true
5553 \HyField@NeedAppearancetrue
5554 \else
5555 \ifx\Hy@tempa\Hy@false
5556 \HyField@NeedAppearancesfalse
5557 \else
5558 \Hy@Error{%
5559   Unexpected value '\Hy@tempa'\MessageBreak
5560   of option 'NeedAppearances' instead of\MessageBreak
5561   'true' or 'false'%
5562 } \@ehc
5563 \fi
5564 \fi
5565 }
5566 \def\Field@boolkey#1#2{%
5567 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname

```

```

5568 }
5569 \ifHy@texht
5570 \newtoks\Field@toks
5571 \Field@toks={ }%
5572 \def\Field@addtoks#1#2{%
5573   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
5574   \@processme
5575 }%
5576 \else
5577 \def\Hy@WarnHTMLFieldOption#1{%
5578   \Hy@Warning{%
5579     HTML field option '#1'\MessageBreak
5580     is ignored%
5581   }%
5582 }%
5583 \fi
5584 \def\Fld@checkequals#1=#2=#3\{\%
5585 \def\@currDisplay{#1}%
5586 \ifx\#2\%
5587   \def\@currValue{#1}%
5588 \else
5589   \def\@currValue{#2}%
5590 \fi
5591 }
5592 \define@key{Field}{loc}{%
5593   \def\Fld@loc{#1}%
5594 }
5595 \define@key{Field}{checked}[true]{%
5596   \lowercase{\Field@boolkey{#1}}{checked}%
5597 }
5598 \define@key{Field}{disabled}[true]{%
5599   \lowercase{\Field@boolkey{#1}}{disabled}%
5600 }
5601 \ifHy@texht
5602 \define@key{Field}{accesskey}{%
5603   \Field@addtoks{accesskey}{#1}%
5604 }%
5605 \define@key{Field}{tabkey}{%
5606   \Field@addtoks{tabkey}{#1}%
5607 }%
5608 \else
5609 \define@key{Field}{accesskey}{%
5610   \Hy@WarnHTMLFieldOption{accesskey}%
5611 }%
5612 \define@key{Field}{tabkey}{%
5613   \Hy@WarnHTMLFieldOption{tabkey}%
5614 }%
5615 \fi
5616 \define@key{Field}{name}{%
5617   \def\Fld@name{#1}%
5618 }
5619 \let\Fld@altname\relax
5620 \define@key{Field}{altname}{%
5621   \def\Fld@altname{#1}%
5622 }
5623 \let\Fld@mappingname\relax
5624 \define@key{Field}{mappingname}{%

```

```

5625 \def\Fld@mappingname{#1}%
5626 }
5627 \define@key{Field}{width}{%
5628 \def\Fld@width{#1}%
5629 \Field@Width#1\setbox0=\hbox{m}%
5630 }
5631 \define@key{Field}{maxlen}{%
5632 \def\Fld@maxlen{#1}%
5633 }
5634 \define@key{Field}{menulength}{%
5635 \Fld@menulength=#1\relax
5636 }
5637 \define@key{Field}{height}{%
5638 \def\Fld@height{#1}%
5639 }
5640 \define@key{Field}{charsize}{%
5641 \Fld@charsize#1%
5642 }
5643 \define@key{Field}{borderwidth}{%
5644 \def\Fld@borderwidth{#1}%
5645 }
5646 \define@key{Field}{borderstyle}{%
5647 \let\Hy@temp\Fld@borderstyle
5648 \def\Fld@borderstyle{#1}%
5649 \Hy@Match\Fld@borderstyle{%
5650 ~[SDBIU]$%
5651 }{}{%
5652 \Hy@Warning{%
5653 Invalid value '\@pdfborderstyle'\MessageBreak
5654 for option 'pdfborderstyle'. Valid values:\MessageBreak
5655 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5656 \space\space I (Inset), U (Underline)\MessageBreak
5657 Option setting is ignored%
5658 }%
5659 \let\Fld@borderstyle\Hy@temp
5660 }%
5661 }
5662 \define@key{Field}{bordersep}{%
5663 \def\Fld@bordersep{#1}%
5664 }
5665 \define@key{Field}{default}{%
5666 \def\Fld@default{#1}%
5667 }
5668 \define@key{Field}{align}{%
5669 \def\Fld@align{#1}%
5670 }
5671 \define@key{Field}{value}{%
5672 \def\Fld@value{#1}%
5673 }
5674 \define@key{Field}{checkboxsymbol}{%
5675 \Fld@DingDef\Fld@cbsymbol{#1}%
5676 }
5677 \define@key{Field}{radiosymbol}{%
5678 \Fld@DingDef\Fld@radiosymbol{#1}%
5679 }
5680 \def\Fld@DingDef#1#2{%
5681 \def\Fld@temp{#2}%

```

```

5682 \Fld@@DingDef#2\ding{}}\@nil
5683 \let#1\Fld@temp
5684 }
5685 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5686 \expandafter\def\expandafter\Fld@temp\expandafter{%
5687 \Fld@temp
5688 #1%
5689 }%
5690 \ifx\#3\%
5691 \expandafter\@gobble
5692 \else
5693 \begingroup
5694 \lccode'0=#2\relax
5695 \lowercase{\endgroup
5696 \expandafter\def\expandafter\Fld@temp\expandafter{%
5697 \Fld@temp
5698 0%
5699 }%
5700 }%
5701 \expandafter\@firstofone
5702 \fi
5703 {%
5704 \Fld@@DingDef#3\@nil
5705 }%
5706 }

5707 \define@key{Field}{rotation}{%
5708 \def\Fld@rotation{#1}%
5709 }

5710 \define@key{Field}{backgroundcolor}{%
5711 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5712 }
5713 \define@key{Field}{bordercolor}{%
5714 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5715 }
5716 \define@key{Field}{color}{%
5717 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5718 }

5719 \def\Fld@onclick@code{}
5720 \def\Fld@format@code{}
5721 \def\Fld@validate@code{}
5722 \def\Fld@calculate@code{}
5723 \def\Fld@keystroke@code{}
5724 \def\Fld@onfocus@code{}
5725 \def\Fld@onblur@code{}
5726 \def\Fld@onmousedown@code{}
5727 \def\Fld@onmouseup@code{}
5728 \def\Fld@onenter@code{}
5729 \def\Fld@onexit@code{}
5730 \def\Hy@temp#1{%
5731 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5732 }
5733 \def\Hy@@temp#1#2{%
5734 \ifHy@pdfa
5735 \define@key{Field}{#2}{%
5736 \Hy@Error{%
5737 PDF/A: Additional action '#2' is prohibited%

```

```

5738     }\@ehc
5739  }%
5740 \else
5741   \define@key{Field}{#2}{%
5742     \def#1{##1}%
5743   }%
5744 \fi
5745 }
5746 \Hy@temp{keystroke}
5747 \Hy@temp{format}
5748 \Hy@temp{validate}
5749 \Hy@temp{calculate}
5750 \Hy@temp{onfocus}
5751 \Hy@temp{onblur}
5752 \Hy@temp{onenter}
5753 \Hy@temp{onexit}
5754 \ifHy@texht
5755   \def\Hy@temp#1{%
5756     \define@key{Field}{#1}{%
5757       \Field@addtoks{#1}{##1}%
5758     }%
5759   }%
5760 \else
5761   \def\Hy@temp#1{%
5762     \define@key{Field}{#1}{%
5763       \Hy@WarnHTMLFieldOption{#1}%
5764     }%
5765   }%
5766 \fi
5767 \Hy@temp{ondblclick}
5768 \Hy@temp{onmousedown}
5769 \Hy@temp{onmouseup}
5770 \Hy@temp{onmouseover}
5771 \Hy@temp{onmousemove}
5772 \Hy@temp{onmouseout}
5773 \Hy@temp{onkeydown}
5774 \Hy@temp{onkeyup}
5775 \Hy@temp{onselect}
5776 \Hy@temp{onchange}
5777 \Hy@temp{onkeypress}
5778 \ifHy@texht
5779   \define@key{Field}{onclick}{%
5780     \Field@addtoks{onclick}{#1}%
5781   }%
5782 \else
5783   \ifHy@pdfa
5784     \define@key{Field}{onclick}{%
5785       \Hy@Error{%
5786         PDF/A: Action 'onclick' is prohibited%
5787       }\@ehc
5788     }%
5789   \else
5790     \define@key{Field}{onclick}{%
5791       \def\Fld@onclick@code{#1}%
5792     }%
5793   \fi
5794 \fi

```

```

5795 \DeclareRobustCommand\TextField{%
5796   \ifnextchar[{\@TextField}{\@TextField[]}%
5797 }
5798 \DeclareRobustCommand\ChoiceMenu{%
5799   \ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5800 }
5801 \DeclareRobustCommand\CheckBox{%
5802   \ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5803 }
5804 \DeclareRobustCommand\PushButton{%
5805   \ifnextchar[{\@PushButton}{\@PushButton[]}%
5806 }
5807 \DeclareRobustCommand\Gauge{%
5808   \ifnextchar[{\@Gauge}{\@Gauge[]}%
5809 }
5810 \DeclareRobustCommand\Submit{%
5811   \ifnextchar[{\@Submit}{\@Submit[]}%
5812 }
5813 \DeclareRobustCommand\Reset{%
5814   \ifnextchar[{\@Reset}{\@Reset[]}%
5815 }
5816 \def\LayoutTextField#1#2{% label, field
5817   #1 #2%
5818 }
5819 \def\LayoutChoiceField#1#2{% label, field
5820   #1 #2%
5821 }
5822 \def\LayoutCheckField#1#2{% label, field
5823   #1 #2%
5824 }
5825 \def\LayoutPushButtonField#1{% button
5826   #1%
5827 }
5828 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5829 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5830 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5831 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5832 \def\MakeButtonField#1{%
5833   \sbox0{%
5834     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5835   }%
5836   \@tempdima\ht0 %
5837   \advance\@tempdima by \Fld@borderwidth bp %
5838   \advance\@tempdima by \Fld@borderwidth bp %
5839   \ht0\@tempdima
5840   \@tempdima\dp0 %
5841   \advance\@tempdima by \Fld@borderwidth bp %
5842   \advance\@tempdima by \Fld@borderwidth bp %
5843   \dp0\@tempdima
5844   \box0\relax
5845 }
5846 \def\DefaultHeightofSubmit{14pt}
5847 \def\DefaultWidthofSubmit{2cm}
5848 \def\DefaultHeightofReset{14pt}
5849 \def\DefaultWidthofReset{2cm}
5850 \def\DefaultHeightofCheckBox{\baselineskip}
5851 \def\DefaultWidthofCheckBox{\baselineskip}

```

```

5852 \def\DefaultHeightofChoiceMenu{\baselineskip}
5853 \def\DefaultWidthofChoiceMenu{\baselineskip}
5854 \def\DefaultHeightofText{\baselineskip}
5855 \def\DefaultHeightofTextMultiline{4\baselineskip}
5856 \def\DefaultWidthofText{3cm}
5857 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5858 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5859 \def\DefaultOptionsofPushButton{print}
5860 \def\DefaultOptionsofCheckBox{print}
5861 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5862 \def\DefaultOptionsofListBox{print}
5863 \def\DefaultOptionsofComboBox{print,edit,sort}
5864 \def\DefaultOptionsofPopdownBox{print}
5865 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5866 \ifHy@figures
5867 \Hy@Info{Hyper figures ON}%
5868 \else
5869 \Hy@Info{Hyper figures OFF}%
5870 \fi
5871 \ifHy@nesting
5872 \Hy@Info{Link nesting ON}%
5873 \else
5874 \Hy@Info{Link nesting OFF}%
5875 \fi
5876 \ifHy@hyperindex
5877 \Hy@Info{Hyper index ON}%
5878 \else
5879 \Hy@Info{Hyper index OFF}%
5880 \fi
5881 \ifHy@backref
5882 \Hy@Info{backreferencing ON}%
5883 \else
5884 \Hy@Info{backreferencing OFF}%
5885 \fi
5886 \ifHy@colorlinks
5887 \Hy@Info{Link coloring ON}%
5888 \else
5889 \Hy@Info{Link coloring OFF}%
5890 \fi
5891 \ifHy@ocgcolorlinks
5892 \Hy@Info{Link coloring with OCG ON}%
5893 \else
5894 \Hy@Info{Link coloring with OCG OFF}%
5895 \fi
5896 \ifHy@pdfa
5897 \Hy@Info{PDF/A mode ON}%
5898 \else
5899 \Hy@Info{PDF/A mode OFF}%
5900 \fi

```


21 Low-level utility macros

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

```
5901 \edef\hyper@hash{\string#}  
5902 \edef\hyper@tilde{\string~}  
5903 \edef\hyper@quote{\string"}
```

Support \label before \begin{document}.

```
5904 \def\@currentHref{Doc-Start}  
5905 \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.

```
5906 \Hy@AtBeginDocument{%  
5907   \Hy@pdfstringtrue  
5908   \PDF@SetupDoc  
5909   \let\PDF@SetupDoc\@empty  
5910   \Hy@DisableOption{pdfpagescrop}%  
5911   \Hy@DisableOption{pdfpagemode}%  
5912   \Hy@DisableOption{pdfnonfullscreenpagemode}%  
5913   \Hy@DisableOption{pdfdirection}%  
5914   \Hy@DisableOption{pdfviewarea}%  
5915   \Hy@DisableOption{pdfviewclip}%  
5916   \Hy@DisableOption{pdfprintarea}%  
5917   \Hy@DisableOption{pdfprintclip}%  
5918   \Hy@DisableOption{pdfprintscaling}%  
5919   \Hy@DisableOption{pdfduplex}%  
5920   \Hy@DisableOption{pdfpicktraybypdfsize}%  
5921   \Hy@DisableOption{pdfprintpagerange}%  
5922   \Hy@DisableOption{pdfnumcopies}%  
5923   \Hy@DisableOption{pdfstartview}%  
5924   \Hy@DisableOption{pdfstartpage}%  
5925   \Hy@DisableOption{pdftoolbar}%  
5926   \Hy@DisableOption{pdfmenubar}%  
5927   \Hy@DisableOption{pdfwindowui}%  
5928   \Hy@DisableOption{pdfitwindow}%  
5929   \Hy@DisableOption{pdfcenterwindow}%  
5930   \Hy@DisableOption{pdfdisplaydoctitle}%  
5931   \Hy@DisableOption{pdfpagelayout}%  
5932   \Hy@DisableOption{pdflang}%  
5933   \Hy@DisableOption{baseurl}%  
5934   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi  
5935   \Hy@pdfstringfalse  
5936 }
```

Ignore star from referencing macros:

```
5937 \LetLtxMacro\NoHy@OrgRef\ref  
5938 \DeclareRobustCommand*\ref{%  
5939   \@ifstar\NoHy@OrgRef\NoHy@OrgRef  
5940 }  
5941 \LetLtxMacro\NoHy@OrgPageRef\pageref  
5942 \DeclareRobustCommand*\pageref{%  
5943   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef  
5944 }
```

22 Localized nullifying of package

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

```
5945 \def\NoHyper{%
5946   \def\hyper@link@{##1}##2##3##4{##4}%
5947   \def\hyper@@anchor##1{%
5948     \global\let\hyper@livelink\hyper@link
5949     \gdef\hyper@link##1##2##3{##3}%
5950     \def\hyper@anchor##1{%
5951       \def\hyper@anchorstart##1{%
5952         \let\hyper@anchorend\@empty
5953         \def\hyper@linkstart##1##2{%
5954           \let\hyper@linkend\@empty
5955           \def\hyper@linkurl##1##2{##1}%
5956           \def\hyper@linkfile##1##2##3{##1}%
5957           \def\hyper@link@{##1}##2##3{%
5958             \let\Hy@backout\@gobble
5959         }
5960       \def\stop@hyper{%
5961         \def\hyper@link@{##1}##2##3##4{##4}%
5962         \let\Hy@backout\@gobble
5963         \def\hyper@@anchor##1{%
5964           \def\hyper@link##1##2##3{##3}%
5965           \def\hyper@anchor##1{%
5966             \def\hyper@anchorstart##1{%
5967               \let\hyper@anchorend\@empty
5968               \def\hyper@linkstart##1##2{%
5969                 \let\hyper@linkend\@empty
5970                 \def\hyper@linkurl##1##2{##1}%
5971                 \def\hyper@linkfile##1##2##3{##1}%
5972                 \def\hyper@link@{##1}##2##3{%
5973               }
5974             \def\endNoHyper{%
5975               \global\let\hyper@link\hyper@livelink
5976             }
5977           }
5978         }
5979       }
5980     }
5981   }
5982 }
5983 \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:

```
5978 (*nohyperref)
5979 \RequirePackage{letltxmacro}[2008/06/13]
5980 \let\hyper@@anchor\@gobble
5981 \def\hyper@link##1##2##3{##3}%
5982 \let\hyper@anchorstart\@gobble
5983 \let\hyper@anchorend\@empty
5984 \let\hyper@linkstart\@gobbletwo
```

```

5985 \let\hyper@linkend\@empty
5986 \def\hyper@linkurl#1#2{#1}%
5987 \def\hyper@linkfile#1#2#3{#1}%
5988 \def\hyper@link@{#1}#2#3{}%
5989 \let\PDF@SetupDoc\@empty
5990 \let\PDF@FinishDoc\@empty
5991 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5992 \def\Acrobatmenu#1#2{\leavevmode#2}
5993 \let\pdfstringdefDisableCommands\@gobbletwo
5994 \let\texorpdfstring\@firstoftwo
5995 \let\pdfbookmark\@undefined
5996 \newcommand\pdfbookmark[3]{}{}
5997 \let\phantomsection\@empty
5998 \let\hypersetup\@gobble
5999 \let\hyperbaseurl\@gobble
6000 \newcommand*{\href}[3]{}{#3}
6001 \let\hyperdef\@gobbletwo
6002 \let\hyperlink\@gobble
6003 \let\hypertarget\@gobble
6004 \def\hyperref{%
6005   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6006 }
6007 \long\def\@gobbleopt[#1]{}
6008 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6009 \LetLtxMacro\NoHy@OrgRef\ref
6010 \DeclareRobustCommand*\ref{%
6011   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6012 }
6013 \LetLtxMacro\NoHy@OrgPageRef\pageref
6014 \DeclareRobustCommand*\pageref{%
6015   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6016 }
6017 \</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}

```

6018 \<*package>
6019 \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.

```

6020 \if@filesw
6021   \ifHy@typexml
6022     \immediate\closeout\@mainaux
6023     \immediate\openout\@mainaux\jobname.aux\relax
6024     \immediate\write\@auxout{<relaxxml>\relax}%
6025   \fi
6026   \immediate\write\@auxout{%
6027     \string\providecommand\string\HyperFirstAtBeginDocument{%

```

```

6028 \string\AtBeginDocument}^^J%
6029 \string\HyperFirstAtBeginDocument{%
6030 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6031 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6032 \string\gdef\string\contentsline%
6033 \string#1\string#2\string#3\string#4{%
6034 \string\oldcontentsline%
6035 {\string#1}{\string#2}{\string#3}}^^J%
6036 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6037 \string\gdef\string\newlabel\string#1\string#2{%
6038 \string\newlabelxx{\string#1}\string#2}^^J%
6039 \string\gdef\string\newlabelxx%
6040 \string#1\string#2\string#3\string#4\string#5\string#6{%
6041 \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.

```

6042 \string\AtEndDocument{%
6043 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6044 \string\let\string\contentsline\string\oldcontentsline^^J%
6045 \string\let\string\newlabel\string\oldnewlabel^^J%
6046 \string\fi%
6047 }^^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.

```

6048 \string\fi%
6049 }^^J%
6050 \string\global\string\let\string\hyper@last\relax^^J%
6051 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6052 }%
6053 \fi
6054 \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.

```

6055 \ifx\hyper@last\@undefined
6056 \def\@starttoc#1{%
6057 \begingroup
6058 \makeatletter
6059 \IfFileExists{\jobname.#1}{%
6060 \Hy@WarningNoLine{%
6061 old #1 file detected, not used; run LaTeX again%
6062 }%
6063 }{}%
6064 \if@filesw
6065 \expandafter\newwrite\csname tf@#1\endcsname
6066 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6067 \fi
6068 \@nobreakfalse
6069 \endgroup
6070 }%
6071 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}}%
6072 \fi
6073 }

```

25 Title strings

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

```

6074 \ifHy@usetitle
6075   \let\HyOrg@title\title
6076   \let\HyOrg@author\author
6077   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6078   \def\Hy@scanopttitle[#1]{%
6079     \gdef\Hy@title{#1}%
6080     \HyOrg@title{#1}%
6081   }%
6082   \def\Hy@scantitle#1{%
6083     \gdef\Hy@title{#1}%
6084     \HyOrg@title{#1}%
6085   }%
6086   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6087   \def\Hy@scanoptauthor[#1]{%
6088     \gdef\Hy@author{#1}%
6089     \HyOrg@author{#1}%
6090   }%
6091   \def\Hy@scanauthor#1{%
6092     \gdef\Hy@author{#1}%
6093     \HyOrg@author{#1}%
6094   }%

```

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.

```

6095 \begingroup
6096   \def\process@me#1\@nil#2{%
6097     \expandafter\let\expandafter\x\csname @#2\endcsname
6098     \edef\y{\expandafter\strip@prefix\meaning\x}%
6099     \def\c##1#1##2\@nil{%
6100       \ifx\\##1\\%
6101         \else
6102           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6103             \expandafter{x}%
6104         \fi
6105       }%
6106     \expandafter\c\y\relax#1\@nil
6107   }%
6108   \expandafter\process@me\string\@latex@\@nil{title}%
6109   \expandafter\process@me\string\@latex@\@nil{author}%
6110 \endgroup
6111 \fi
6112 \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.

```

6113 \def\Hy@UseMaketitleString#1{%

```

```

6114 \ltx@ifundefined{Hy@#1}{ }{%
6115   \begingroup
6116   \let\Hy@saved@hook\pdfstringdefPreHook
6117   \pdfstringdefDisableCommands{%
6118     \expandafter\let\expandafter\\csname Hy@newline@#1\endcsname
6119     \let\newline\\%
6120   }%
6121   \expandafter\ifx\csname @pdf#1\endcsname\@empty
6122     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6123       \csname Hy@#1\endcsname\@empty
6124     }%
6125   \fi
6126   \global\let\pdfstringdefPreHook\Hy@saved@hook
6127 \endgroup
6128 }%
6129 }
6130 \def\Hy@newline@title#1{ #1}
6131 \def\Hy@newline@author#1{, #1}
6132 \def\Hy@UseMaketitleInfos{%
6133   \Hy@UseMaketitleString{title}%
6134   \Hy@UseMaketitleString{author}%
6135 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6136 \RequirePackage{atbegshi}[2007/09/09]
6137 \def\Hy@EveryPageHook{}
6138 \def\Hy@EveryPageBoxHook{}
6139 \def\Hy@FirstPageHook{}
6140 \AtBeginShipout{%
6141   \Hy@EveryPageHook
6142   \ifx\Hy@EveryPageBoxHook\@empty
6143     \else
6144       \setbox\AtBeginShipoutBox=\vbox{%
6145         \offinterlineskip
6146         \Hy@EveryPageBoxHook
6147         \box\AtBeginShipoutBox
6148       }%
6149     \fi
6150 }
6151 \AtBeginShipoutFirst{%
6152   \Hy@FirstPageHook
6153 }
6154 \g@addto@macro\Hy@FirstPageHook{%
6155   \PDF@FinishDoc
6156   \gdef\PDF@FinishDoc{ }%
6157 }

```

27.1 PDF /PageLabels

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

```

6158 \ifHy@pagelabels
6159 \begingroup\expandafter\expandafter\expandafter\endgroup
6160 \expandafter\ifx\csname thepage\endcsname\relax
6161 \Hy@pagelabelsfalse
6162 \Hy@WarningNoLine{%
6163   Option 'pdfpagelabels' is turned off\MessageBreak
6164   because \string\thepage\space is undefined%
6165 }%
6166 \csname fi\endcsname
6167 \csname iffalse\expandafter\endcsname
6168 \fi

```

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

```

6169 \def\thispdfpagelabel#1{%
6170   \gdef\HyPL@thisLabel{#1}%
6171 }%
6172 \global\let\HyPL@thisLabel\relax

```

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

```

6173 \def\HyPL@Labels{}%

```

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

```

6174 \newcount\Hy@abspage
6175 \Hy@abspage=0 %

```

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

```

6176 \def\HyPL@LastType{init}%
6177 \def\HyPL@LastNumber{0}%
6178 \def\HyPL@LastPrefix{}%

```

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

```

6179 \def\HyPL@arabic{D}%
6180 \def\HyPL@Roman{R}%
6181 \def\HyPL@roman{r}%
6182 \def\HyPL@Alph{A}%
6183 \def\HyPL@alph{a}%

6184 \def\HyPL@SlidesSetPage{}%
6185 \ltx@ifclassloaded{slides}{%
6186   \def\HyPL@SlidesSetPage{%
6187     \advance\c@page\ltx@one
6188     \ifnum\value{page}>\ltx@one
6189       \protected@edef\HyPL@SlidesOptionalPage{%
6190         \Hy@SlidesFormatOptionalPage{\thepage}%
6191       }%
6192     \else
6193       \def\HyPL@SlidesOptionalPage{}%
6194     \fi
6195     \advance\c@page-\ltx@one
6196     \def\HyPL@page{%
6197       \csname the\Hy@SlidesPage\endcsname
6198       \HyPL@SlidesOptionalPage
6199     }%
6200   }%
6201 }{}%

```

`\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.

```

6202 \def\HyPL@EveryPage{%
6203   \begingroup
6204   \ifx\HyPL@thisLabel\relax
6205     \let\HyPL@page\thepage
6206     \HyPL@SlidesSetPage
6207   \else
6208     \let\HyPL@page\HyPL@thisLabel
6209     \global\let\HyPL@thisLabel\relax
6210   \fi
6211   \let\HyPL@Type\relax
6212   \ifnum\the\c@page>0 %
6213     \ifx\HyPL@SlidesSetPage\tx@empty
6214       \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6215     \fi
6216   \fi
6217   \let\Hy@temp Y%
6218   \ifx\HyPL@Type\HyPL@LastType
6219   \else
6220     \let\Hy@temp N%
6221   \fi
6222   \ifx\HyPL@Type\relax
6223     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6224   \else
6225     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6226   \fi
6227   \ifx\HyPL@Prefix\HyPL@LastPrefix
6228   \else
6229     \let\Hy@temp N%
6230   \fi
6231   \if Y\Hy@temp
6232     \advance\c@page by -1 %
6233     \ifnum\HyPL@LastNumber=\the\c@page\relax
6234     \else
6235       \let\Hy@temp N%
6236     \fi
6237     \Hy@StepCount\c@page
6238   \fi
6239   \if N\Hy@temp
6240     \ifx\HyPL@Type\relax
6241       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6242     \else
6243       \HyPL@StorePageLabel{%
6244         \ifx\HyPL@Prefix\@empty
6245         \else
6246           /P(\HyPL@Prefix)%
6247         \fi
6248         /S/\csname HyPL\HyPL@Type\endcsname
6249         \ifnum\the\c@page=1 %
6250         \else
6251           \space/St \the\c@page
6252         \fi
6253       }%
6254     \fi
6255   \fi
6256   \xdef\HyPL@LastNumber{\the\c@page}%

```



```

6257 \global\let\HyPL@LastType\HyPL@Type
6258 \global\let\HyPL@LastPrefix\HyPL@Prefix
6259 \endgroup
6260 \Hy@GlobalStepCount\Hy@abspage
6261 }%

```

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

```

6262 \def\HyPL@CheckThePage#1\@nil{%
6263 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6264 }%

```

`\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`.

```

6265 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6266 \def\Hy@tempa{#4}%
6267 \def\Hy@tempb{\csname\endcsname\c@page}%
6268 \ifx\Hy@tempa\Hy@tempb
6269 \expandafter\ifx\csname HyPL#3\endcsname\relax
6270 \else
6271 \def\HyPL@Type{#3}%
6272 \def\HyPL@Prefix{#2}%
6273 \fi
6274 \else
6275 \begingroup
6276 \let\Hy@next\endgroup
6277 \let\HyPL@found\@undefined
6278 \def\arabic{\HyPL@Format{arabic}}%
6279 \def\Roman{\HyPL@Format{Roman}}%
6280 \def\roman{\HyPL@Format{roman}}%
6281 \def\Alph{\HyPL@Format{Alph}}%
6282 \def\alph{\HyPL@Format{alph}}%
6283 \protected@edef\Hy@temp{#1}%
6284 \ifx\HyPL@found\relax
6285 \toks@{\expandafter{\Hy@temp}}%
6286 \edef\Hy@next{\endgroup
6287 \noexpand\HyPL@@CheckThePage\the\toks@
6288 \noexpand\HyPL@found\relax\noexpand\@nil
6289 }%
6290 \fi
6291 \Hy@next
6292 \fi
6293 }%

```

`\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`.

```

6294 \def\HyPL@Format#1#2{%
6295 \ifx\HyPL@found\@undefined
6296 \expandafter\ifx\csname c@#2\endcsname\c@page
6297 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6298 \else
6299 \expandafter\noexpand\csname#1\endcsname{#2}%
6300 \fi

```

```

6301 \else
6302 \expandafter\noexpand\csname#1\endcsname{#2}%
6303 \fi
6304 }%

```

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

```

6305 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6306 \def\Hy@tempa{#3}%
6307 \def\Hy@tempb{\HyPL@found\relax}%
6308 \ifx\Hy@tempa\Hy@tempb
6309 \def\HyPL@Type{#2}%
6310 \def\HyPL@Prefix{#1}%
6311 \fi
6312 }%

```

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

```

6313 \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`.

```

6314 \def\HyPL@Useless{0<</S/D>>}%
6315 \@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.

```

6316 \def\HyPL@SetPageLabels{%
6317 \@onelevel@sanitize\HyPL@Labels
6318 \ifx\HyPL@Labels\@empty
6319 \else
6320 \ifx\HyPL@Labels\HyPL@Useless
6321 \else
6322 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6323 \fi
6324 \fi
6325 }%

6326 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6327 \fi

```

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

```

6328 \Hy@DisableOption{pdfpagelabels}
6329 </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`

```

6330 <*pdfTeX>
6331 \pdf@ifdraftmode{%
6332 \let\Hy@PutCatalog\ltx@gobble
6333 }{%
6334 \let\Hy@PutCatalog\pdfcatalog
6335 }
6336 </pdfTeX>

```

The code for VTeX is more complicate, because it does not allow the direct access to the /Catalog object. The command scans its argument and looks for a /PageLabels entry.

VTeX 6.59g is the first version, that implements \special{!pdfpagelabels...}. For this version \VTeXversion reports 660.

```

6337 < *vtex>
6338 \providecommand*{\XR@ext}{pdf}
6339 \edef\Hy@VTeXversion{%
6340   \ifx\VTeXversion\@undefined
6341     \z@
6342   \else
6343     \ifx\VTeXversion\relax
6344       \z@
6345     \else
6346       \VTeXversion
6347     \fi
6348   \fi
6349 }
6350 \begingroup
6351   \ifnum\Hy@VTeXversion<660 %
6352     \gdef\Hy@PutCatalog#1{%
6353       \Hy@WarningNoLine{%
6354         VTeX 6.59g or above required for pdfpagelabels%
6355       }%
6356     }%
6357   \else
6358     \gdef\Hy@PutCatalog#1{%
6359       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6360     }%
6361     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6362       \ifx\#2\%
6363         \else
6364           \immediate\special{!pdfpagelabels #2}%
6365         \fi
6366       }%
6367     \fi
6368 \endgroup
6369 < /vtex>

6370 < *pdftex | vtex>

```

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

```

6371 \ifHy@pagelabels
6372   \def\HyPL@StorePageLabel#1{%
6373     \toks@\expandafter{\HyPL@Labels}%
6374     \xdef\HyPL@Labels{%
6375       \the\toks@
6376       \the\Hy@abspage<<#1>>%
6377     }%
6378   }%

```

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.

```

6379 \RequirePackage{atveryend}[2009/12/07]%
6380 \AtVeryEndDocument{%
6381   \HyPL@SetPageLabels
6382 }%

```

```

6383 \fi
6384 </pdfTEX | vTeX>

```

27.1.2 xetex

```

6385 <*xetex>
6386 \HyPsd@LoadUnicode
6387 \Hy@unicodetrue
6388 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6389 \else
6390 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6391 \fi
6392 \HyPsd@LoadStringEncoding
6393 \define@key{Hyp}{unicode}[true]{%
6394 \Hy@boolkey{unicode}{#1}%
6395 \ifHy@unicode
6396 \else
6397 \Hy@Warning{%
6398 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6399 option setting 'unicode=false'%
6400 }%
6401 \Hy@unicodetrue
6402 \fi
6403 }
6404 \define@key{Hyp}{pdfencoding}{%
6405 \edef\HyPsd@temp{#1}%
6406 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6407 \let\HyPsd@pdfencoding\HyPsd@temp
6408 \else
6409 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6410 \let\HyPsd@pdfencoding\HyPsd@temp
6411 \else
6412 \Hy@Warning{%
6413 XeTeX driver only supports\MessageBreak
6414 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6415 setting 'pdfencoding=\HyPsd@temp'%
6416 }%
6417 \fi
6418 \fi
6419 }
6420 \let\HyXeTeX@CheckUnicode\relax
6421 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6422 <*pdfmarkbase>
6423 \beginngroup
6424 \@ifundefined{headerps@out}{%
6425 \toks@{\expandafter{\Hy@FirstPageHook}%
6426 \xdef\Hy@FirstPageHook{%
6427 \noexpand\headerps@out{%
6428 systemdict /pdfmark known%
6429 {%
6430 userdict /?pdfmark systemdict /exec get put%
6431 }{%
6432 userdict /?pdfmark systemdict /pop get put %
6433 userdict /pdfmark systemdict /cleartomark get put%
6434 }%

```

```

6435     ifelse%
6436     }%
6437     \the\toks@
6438     }%
6439     }%
6440 \endgroup
6441 \</pdfmarkbase>

```

\Hy@PutCatalog

```

6442 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
6443 \<*pdfmarkbase>
6444 \def\Hy@PutCatalog#1{%
6445   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
6446 }
6447 \</pdfmarkbase>

6448 \<*pdfmarkbase | dvipdfm | xetex>
6449 \ifHy@pagelabels

```

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

```

6450 \def\HyPL@StorePageLabel#1{%
6451   \if@filesw
6452     \begingroup
6453     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6454     \immediate\write\@mainaux{%
6455       \string\HyPL@Entry{\Hy@tempa}%
6456     }%
6457     \endgroup
6458   \fi
6459 }%

```

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.

```

6460 \Hy@AtBeginDocument{%
6461   \if@filesw
6462     \immediate\write\@mainaux{%
6463       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6464     }%
6465   \fi
6466   \ifx\HyPL@Labels\@empty
6467     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6468   \else
6469     \HyPL@SetPageLabels
6470   \fi
6471   \let\HyPL@Entry\@gobble
6472 }%

```

\HyPL@Entry

```

6473 \def\HyPL@Entry#1{%
6474   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6475     \HyPL@Labels
6476     #1%
6477   }%
6478 }%

6479 \fi
6480 \</pdfmarkbase | dvipdfm | xetex>

```

```

6481 <*package>
6482 \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

```

6483 \def\Hy@CounterExists#1{%
6484   \begingroup\expandafter\expandafter\expandafter\endgroup
6485   \expandafter\ifx\csname c@#1\endcsname\relax
6486     \expandafter\@gobble
6487   \else
6488     \begingroup\expandafter\expandafter\expandafter\endgroup
6489     \expandafter\ifx\csname the#1\endcsname\relax
6490       \expandafter\expandafter\expandafter\@gobble
6491     \else
6492       \expandafter\expandafter\expandafter\@firstofone
6493     \fi
6494   \fi
6495 }
6496 \Hy@CounterExists{section}{%
6497   \newcommand\theHequation{\theHsection.\arabic{equation}}}%
6498 }
6499 \Hy@CounterExists{part}{%
6500   \newcommand\theHpart{\arabic{part}}}%
6501 }
6502 \ltx@ifundefined{thechapter}{%
6503   \newcommand\theHsection   {\arabic{section}}}%
6504   \newcommand\theHfigure    {\arabic{figure}}}%
6505   \newcommand\theHtable     {\arabic{table}}}%
6506 }{%
6507   \newcommand\theHchapter   {\arabic{chapter}}}%
6508   \newcommand\theHfigure    {\theHchapter.\arabic{figure}}}%
6509   \newcommand\theHtable     {\theHchapter.\arabic{table}}}%
6510   \newcommand\theHsection   {\theHchapter.\arabic{section}}}%
6511 }
6512 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
6513 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6514 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
6515 \newcommand\theHsubparagraph{\theHparagraph.\arabic{subparagraph}}

```

```

6516 \newcommand\theHtheorem    {\theHsection.\arabic{theorem}}
6517 \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.

```

6518 \let\H@item\item
6519 \newcounter{Item}
6520 \def\theHItem{\arabic{Item}}
6521 \def\item{%
6522   \@hyper@itemfalse
6523   \if@nmbrlist\@hyper@itemtrue\fi
6524   \H@item
6525 }

6526 \newcommand\theHenumi    {\theHItem}
6527 \newcommand\theHenumii   {\theHItem}
6528 \newcommand\theHenumiii  {\theHItem}
6529 \newcommand\theHenumiv   {\theHItem}
6530 \newcommand\theHHfootnote {\arabic{Hfootnote}}
6531 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
6532 \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.

```

6533 \let\H@refstepcounter\refstepcounter
6534 \edef\name@of@eq{equation}%
6535 \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.

```

6536 \newif\if@hyper@item
6537 \newif\if@skiphyperref
6538 \@hyper@itemfalse
6539 \@skiphyperreffalse
6540 \def\refstepcounter#1{%
6541   \ifHy@pdfstring
6542   \else
6543     \H@refstepcounter{#1}%
6544     \edef\This@name{#1}%
6545     \ifx\This@name\name@of@slide
6546     \else
6547       \if@skiphyperref
6548       \else
6549         \if@hyper@item
6550           \stepcounter{Item}%
6551           \hyper@refstepcounter{Item}%
6552           \@hyper@itemfalse
6553         \else
6554           \hyper@refstepcounter{#1}%
6555         \fi
6556       \fi
6557     \fi
6558   \fi
6559 }
6560 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```
6561 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}
```

`\hyper@refstepcounter`

```
6562 \def\hyper@refstepcounter#1{%
6563   \edef\This@name{#1}%
6564   \ifx\This@name\name@of@eq
6565     \ifundefined{theHequation}{%
6566       \make@stripped@name{\theequation}%
6567       \let\theHequation\newname
6568     }{}%
6569   \fi
6570   \ifundefined{theH#1}{%
6571     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6572   }{}%
6573   \hyper@makecurrent{#1}%
6574   \ifmeasuring@
6575   \else
6576     \Hy@raisedlink{%
6577       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6578     }%
6579   \fi
6580 }
```

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`.

```
6581 \begingroup\expandafter\expandafter\expandafter\endgroup
6582 \expandafter\ifx\csname chapter\endcsname\relax
6583   \def\Hy@chapterstring{section}%
6584 \else
6585   \def\Hy@chapterstring{chapter}%
6586 \fi
6587 \def\Hy@appendixstring{appendix}
6588 \def\Hy@chapapp{\Hy@chapterstring}
6589 \ltx@ifundefined{appendix}{%
6590 }{%
6591   \let\HyOrg@appendix\appendix
6592   \def\appendix{%
6593     \ltx@ifundefined{chapter}%
6594     {\gdef\theHsection{\Alph{section}}}%
6595     {\gdef\theHchapter{\Alph{chapter}}}%
6596     \xdef\Hy@chapapp{\Hy@appendixstring}%
6597     \HyOrg@appendix
6598   }%
6599 }
```

`\Hy@Test@alph`

```
6600 \def\Hy@Test@alph#1{%
6601   \ifcase#1\or
6602     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6603     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
```



```

6604   u\or v\or w\or x\or y\or z%
6605   \else
6606   \@ctrerr
6607   \fi
6608 }

```

\Hy@Test@Alph

```

6609 \def\Hy@Test@Alph#1{%
6610   \ifcase#1\or
6611     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6612     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6613     U\or V\or W\or X\or Y\or Z%
6614   \else
6615     \@ctrerr
6616   \fi
6617 }

```

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

```

6618 \def\hyper@makecurrent#1{%
6619   \begingroup
6620   \edef\Hy@param{#1}%
6621   \ifx\Hy@param\Hy@chapterstring
6622     \let\Hy@param\Hy@chapapp
6623   \fi
6624   \ifHy@hypertextnames
6625     \let\@number\@firstofone
6626     \def\@fnsymbol##1{\fnsymbol\number##1}%
6627     \def\@arabic##1{\number##1}%
6628     \ifx\@alph\Hy@Test@alph
6629       \else
6630         \def\@alph{alph\number}%
6631       \fi
6632     \ifx\@Alph\Hy@Test@Alph
6633       \else
6634         \def\@Alph{Alph\number}%
6635       \fi
6636     \ifHy@naturalnames
6637       \let\textlatin\@firstofone
6638       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6639     \else
6640       \xdef\HyperGlobalCurrentHref{%
6641         \csname
6642           the%
6643           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6644           #1%
6645         \endcsname
6646       }%
6647     \fi
6648     \xdef\HyperGlobalCurrentHref{%
6649       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6650     }%
6651   \else
6652     \Hy@GlobalStepCount\Hy@linkcounter
6653     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6654   \fi
6655   \endgroup

```

```

6656 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6657 \ifHy@localanchorname
6658   \let\@currentHref\HyperLocalCurrentHref
6659 \else
6660   \global\let\@currentHref\HyperGlobalCurrentHref
6661 \fi
6662 }

```

`\Hy@MakeCurrentHref`

```

6663 \def\Hy@MakeCurrentHref#1{%
6664   \edef\HyperLocalCurrentHref{#1}%
6665   \@onelevel@sanitize\HyperLocalCurrentHref
6666   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6667   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6668   \ifHy@localanchorname
6669     \let\@currentHref\HyperLocalCurrentHref
6670   \else
6671     \global\let\@currentHref\HyperGlobalCurrentHref
6672   \fi
6673 }

```

`\Hy@MakeCurrentHrefAuto`

```

6674 \def\Hy@MakeCurrentHrefAuto#1{%
6675   \Hy@GlobalStepCount\Hy@linkcounter
6676   \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6677 }

```

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

```

6678 \def\@currentHlabel{\@currentHref}

6679 \@ifpackageloaded{fancyvrb}{%
6680   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
6681     \def\FV@StepLineNo{%
6682       \FV@SetLineNo
6683       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6684       \FV@SetLineNo
6685     }%
6686   }%
6687 }{}

```

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`

```

6688 \Hy@AtBeginDocument{%
6689   \@ifclassloaded{revtex4}{%
6690     \@namedef{ver@lastpage.sty}{1994/06/25}%
6691   }{}%

```

```

6692 \@ifpackageloaded{lastpage}{%
6693   \ifHy@pageanchor
6694   \else
6695     \Hy@WarningNoLine{%
6696       The \string\pageref{LastPage} link doesn't work\MessageBreak
6697       with disabled option 'pageanchor'%
6698     }%
6699   \fi
6700 \def\lastpage@putlabel{%
6701   \addtocounter{page}{-1}%
6702   \if@filesw
6703     \begingroup
6704       \let\@number\@firstofone
6705       \ifHy@pageanchor
6706         \ifHy@hypertextnames
6707           \ifHy@plainpages
6708             \def\Hy@temp{\arabic{page}}%
6709           \else
6710             \Hy@unicodefalse
6711             \pdfstringdef\Hy@temp{\thepage}%
6712           \fi
6713         \else
6714           \def\Hy@temp{\the\Hy@pagecounter}%
6715         \fi
6716       \fi
6717       \immediate\write\@auxout{%
6718         \string\newlabel
6719         {LastPage}{\the\Hy@temp}{\thepage}{\thepage}{%
6720           \ifHy@pageanchor page.\Hy@temp\fi}{}}%
6721       }%
6722     \endgroup
6723   \fi
6724   \addtocounter{page}{1}%
6725 }%
6726 \@ifclassloaded{revtex4}{%
6727   \begingroup
6728     \toks@{\expandafter{\lastpage@putlabel}%
6729     \edef\x{\endgroup
6730       \def\noexpand\lastpage@putlabel{%
6731         \noexpand\stepcounter{page}%
6732         \the\toks@
6733         \noexpand\addtocounter{page}\noexpand\m@ne
6734       }%
6735     }%
6736     \x
6737   }{}%
6738 }{}%
6739 }
6740 \</package>
6741 \<*check>
6742 \checkpackage{lastpage}[1994/06/25]
6743 \checkcommand\def\lastpage@putlabel{%
6744   \addtocounter{page}{-1}%
6745   \immediate\write\@auxout{%
6746     \string\newlabel{LastPage}{\the\Hy@temp}{\thepage}{\thepage}{%
6747     }%
6748   \addtocounter{page}{1}%

```

```

6749 }
6750 </check>
6751 <*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.

```

6752 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
6753 \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:

```

6754 \@ifpackageloaded{titlesec}{%
6755   \def\ttl@Hy@steplink#1{%
6756     \Hy@MakeCurrentHrefAuto{#1*}%
6757   \edef\ttl@Hy@saveanchor{%
6758     \noexpand\Hy@raisedlink{%
6759       \noexpand\hyper@anchorstart{\@currentHref}%
6760       \noexpand\hyper@anchorend
6761       \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6762       \noexpand\ttl@Hy@PatchSaveWrite
6763     }%
6764   }%
6765 }%
6766 \def\ttl@Hy@PatchSaveWrite{%
6767   \begingroup
6768   \toks@{\expandafter{\ttl@savewrite}}%
6769   \edef\x{\endgroup
6770     \def\noexpand\ttl@savewrite{%
6771       \let\noexpand\@currentHref
6772       \noexpand\ttl@Hy@SavedCurrentHref
6773       \the\toks@
6774     }%
6775   }%
6776   \x
6777 }%
6778 \def\ttl@Hy@refstepcounter#1{%
6779   \let\ttl@b\Hy@raisedlink
6780   \def\Hy@raisedlink##1{%
6781     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6782   }%
6783   \refstepcounter{#1}%
6784   \let\Hy@raisedlink\ttl@b
6785 }%
6786 }{}

```

Package titletoc support:

```

6787 \@ifpackageloaded{titletoc}{%
6788   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6789 }{}

```

32 Package varioref support

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

```
6790 \def\Hy@varioref@undefined{{??}{??}{}}{}{}
6791 \@ifpackageloaded{varioref}{%
6792   \def\vref@pagenum#1#2{%
6793     \@ifundefined{r@#2}{%
6794       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6795     }{}%
6796     \edef#1{\getpagerefnumber{#2}}%
6797   }%
6798 }
```

Package varioref redefines \refstepcounter, thus it needs fixing, if the package is loaded *after* hyperref.

```
6799 \def\Hy@varioref@refstepcounter#1{%
6800   \stepcounter{#1}%
6801   \protected@edef\@currentlabel{%
6802     \csname p@#1\expandafter\endcsname\csname the#1\endcsname
6803   }%
6804 }
6805 \AtBeginDocument{%
6806   \ifx\refstepcounter\Hy@varioref@refstepcounter
6807     \let\H@refstepcounter\refstepcounter
6808     \let\refstepcounter\Hy@saved@refstepcounter
6809   \fi
6810 }
```

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

```
6811 \@ifpackageloaded{longtable}{%
6812   \begingroup
6813     \def\y{\LT@array}%
6814     \@ifundefined{scr@LT@array}{%
6815       \@ifundefined{adl@LT@array}{\def\y{\adl@LT@array}}%
6816     }{\def\y{\scr@LT@array}}%
6817     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6818       \expandafter\endgroup
6819       \expandafter\def\y[##1]##2{%
6820         \H@refstepcounter{#1}%
6821         \hyper@makecurrent{table}%
6822         \let\Hy@LT@currentHref\@currentHref
6823         #2\@sharp###3#4%
6824       }%
6825     }%
6826     \expandafter\expandafter\expandafter\x\y{#1}{#2}\@nil
```

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

```
6827   \begingroup
6828     \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
```

```

6829 \endgroup
6830 \def\LT@start{%
6831   #1%
6832   \ifvoid\LT@foot#2\fi
6833   \let\@currentHref\Hy@LT@currentHref
6834   \Hy@raisedlink{%
6835     \hyper@anchorstart{\@currentHref}\hyper@anchorend
6836   }%
6837   #3%
6838 }%
6839 }%
6840 \expandafter\x\LT@start\@nil
6841 }{}

```

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.

```

6842 \let\new@refstepcounter\refstepcounter
6843 \let\H@equation\equation
6844 \let\H@endequation\endequation

6845 \ifpackageloaded{amsmath}{%
6846   \long\def\Hy@temp{%
6847     \incr@eqnum
6848     \mathdisplay@push
6849     \st@rredfalse \global\@eqnswtrue
6850     \mathdisplay{equation}%
6851   }%
6852   \ifx\Hy@temp\equation
6853     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6854       \csname iftrue\endcsname
6855   \else
6856     \long\def\equation{%
6857       \mathdisplay@push
6858       \st@rredfalse \global\@eqnswtrue
6859       \mathdisplay{equation}%
6860       \incr@eqnum
6861     }%
6862   \fi
6863 \fi
6864 }{}%
6865 \def\equation{%
6866   \let\refstepcounter\H@refstepcounter
6867   \H@equation
6868   \@ifundefined{theHequation}{%
6869     \make@stripped@name{\theequation}%
6870     \let\theHequation\newname
6871   }{}%
6872   \hyper@makecurrent{equation}%
6873   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6874   \let\refstepcounter\new@refstepcounter
6875 }%

```

```

6876 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6877 }

```

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.

```

6878 \newif\if@eqnstar
6879 \@eqnstarfalse
6880 \let\H@eqnarray\eqnarray
6881 \let\H@endeqnarray\endeqnarray
6882 \def\eqnarray{%
6883   \let\Hy@reserved@a\relax
6884   \def\@currentHref{}%
6885   \H@eqnarray
6886   \if@eqnstar
6887   \else
6888     \ifx\\ \@currentHref\\%
6889     \else
6890       \@ifundefined{theHequation}{%
6891         \make@stripped@name{\theequation}%
6892         \let\theHequation\newname
6893       }{}%
6894       \hyper@makecurrent{equation}%
6895       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6896     \fi
6897   \fi
6898 }
6899 \def\endeqnarray{%
6900   \H@endeqnarray
6901 }

```

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.

```

6902 \@namedef{eqnarray*}{%
6903   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6904 }
6905 \@namedef{endeqnarray*}{%
6906   \nonumber\endeqnarray\@eqnstarfalse
6907 }

```

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

```

6908 \ltx@ifundefined{subeqnarray}{}{%
6909   \let\H@subeqnarray\subeqnarray
6910   \let\H@endsubeqnarray\endsubeqnarray
6911   \def\subeqnarray{%
6912     \let\Hy@reserved@a\relax
6913     \H@subeqnarray
6914     \@ifundefined{theHequation}{%
6915       \make@stripped@name{\theequation}%
6916       \let\theHequation\newname
6917     }{}%
6918     \hyper@makecurrent{equation}%
6919     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
6920   }%
6921   \def\endsubeqnarray{%
6922     \H@endsubeqnarray

```

```

6923 }%
6924 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6925 }

```

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

```

6926 \def\make@stripped@name#1{%
6927   \begingroup
6928   \escapechar\m@ne
6929   \global\let\newname\@empty
6930   \protected@edef\Hy@tempa{#1}%
6931   \edef\@tempb{%
6932     \noexpand\@tfor\noexpand\Hy@tempa:=%
6933     \expandafter\strip@prefix\meaning\Hy@tempa
6934   }%
6935   \@tempb\do{%
6936     \if{\Hy@tempa\else
6937       \if}\Hy@tempa\else
6938       \xdef\newname{\newname\Hy@tempa}%
6939     \fi
6940   }%
6941 }%
6942 \endgroup
6943 }

```

Support for amsmath's subequations:

```

6944 \begingroup\expandafter\expandafter\expandafter\endgroup
6945 \expandafter\ifx\csname subequations\endcsname\relax
6946 \else
6947   \let\HyOrg@subequations\subequations
6948   \def\subequations{%
6949     \stepcounter{equation}%
6950     \protected@edef\theHparentequation{%
6951       \ifundefined{theHequation}\theequation\theHequation
6952     }%
6953     \addtocounter{equation}{-1}%
6954     \HyOrg@subequations
6955     \def\theHequation{\theHparentequation\alph{equation}}%
6956     \ignorespaces
6957   }%
6958 \fi

```

Support for package amsthm (Daniel Müllner):

```

6959 \ifpackageloaded{amsthm}{%

```

Class amsbook uses a different definition of \@thm, where two lines are added (thanks to Dan Luecking for his analysis):

```

\let\thm@indent\indent % indent
\thm@headfont{\scshape}% heading font small caps

6960 \def\Hy@temp#1#2#3{%
6961   \ifhmode\unskip\unskip\par\fi
6962   \normalfont
6963   \trivlist
6964   \let\thmheadnl\relax
6965   \let\thm@swap\@gobble
6966   \let\thm@indent\indent % indent
6967   \thm@headfont{\scshape}% heading font small caps
6968   \thm@notefont{\fontseries\mddefault\upshape}%

```



```

6969 \thm@headpunct{.}% add period after heading
6970 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6971 \thm@space@setup
6972 #1% style overrides
6973 \@topsep \thm@preskip % used by thm head
6974 \@topsepadd \thm@postskip % used by \@endparenv
6975 \def\@tempa{#2}\ifx\@empty\@tempa
6976 \def\@tempa{\@oparg{\@begintheorem{#3}{}}}%
6977 \else
6978 \refstepcounter{#2}%
6979 \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
6980 \fi
6981 \@tempa
6982 }%
6983 \ifx\Hy@temp\@thm
6984 \def\@thm#1#2#3{%
6985 \ifhmode
6986 \unskip\unskip\par
6987 \fi
6988 \normalfont
6989 \trivlist
6990 \let\thmheadnl\relax
6991 \let\thm@swap\@gobble
6992 \let\thm@indent\indent % indent
6993 \thm@headfont{\scshape}% heading font small caps
6994 \thm@notefont{\fontseries\mddefault\upshape}%
6995 \thm@headpunct{.}% add period after heading
6996 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6997 \thm@space@setup
6998 #1% style overrides
6999 \@topsep \thm@preskip % used by thm head
7000 \@topsepadd \thm@postskip % used by \@endparenv
7001 \def\@dth@counter{#2}%
7002 \ifx\@empty\@dth@counter
7003 \def\@tempa{%
7004 \@oparg{\@begintheorem{#3}{}}}%
7005 }%
7006 \else
7007 \H@refstepcounter{#2}%
7008 \hyper@makecurrent{#2}%
7009 \let\Hy@dth@currentHref\@currentHref
7010 \def\@tempa{%
7011 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}}%
7012 }%
7013 \fi
7014 \@tempa
7015 }%
7016 \else
7017 \def\@thm#1#2#3{%
7018 \ifhmode
7019 \unskip\unskip\par
7020 \fi
7021 \normalfont
7022 \trivlist
7023 \let\thmheadnl\relax
7024 \let\thm@swap\@gobble
7025 \thm@notefont{\fontseries\mddefault\upshape}%

```

```

7026 \thm@headpunct{.}% add period after heading
7027 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7028 \thm@space@setup
7029 #1% style overrides
7030 \@topsep \thm@preskip % used by thm head
7031 \@topsepadd \thm@postskip % used by \@endpary
7032 \def\dth@counter{#2}%
7033 \ifx\@empty\dth@counter
7034 \def\@tempa{%
7035 \oparg{\@begintheorem{#3}{}}{}%
7036 }%
7037 \else
7038 \H@refstepcounter{#2}%
7039 \hyper@makecurrent{#2}%
7040 \let\Hy@dth@currentHref\@currentHref
7041 \def\@tempa{%
7042 \oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7043 }%
7044 \fi
7045 \@tempa
7046 }%
7047 \fi
7048 \dth@everypar={%
7049 \@minipagefalse
7050 \global\@newlistfalse
7051 \noparitemfalse
7052 \if@inlabel
7053 \global\@inlabelfalse
7054 \begingroup
7055 \setbox\z@\lastbox
7056 \ifvoid\z@
7057 \kern-\itemindent
7058 \fi
7059 \endgroup
7060 \ifx\@empty\dth@counter
7061 \else
7062 \Hy@raisedlink{%
7063 \hyper@anchorstart{%
7064 \ltx@ifundefined{Hy@dth@currentHref}%
7065 \@currentHref\Hy@dth@currentHref
7066 }\hyper@anchorend
7067 }%
7068 \fi
7069 \unhbox\@labels
7070 \fi
7071 \if@nobreak
7072 \clubpenaltyfalse \clubpenalty\@M
7073 \else
7074 \clubpenalty\clubpenalty \everypar{}%
7075 \fi
7076 }%
7077 }{}

```

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.

```

7078 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
7079 \ifHy@hyperfootnotes
7080   \newcounter{Hfootnote}%
7081   \let\H@@footnotetext\@footnotetext
7082   \let\H@@footnotemark\@footnotemark
7083   \def\xfootnotenext[#1]{%
7084     \begingroup
7085       \csname c@\@mpfn\endcsname #1\relax
7086       \unrestored@protected@xdef\@thefnmark{\thempfn}%
7087     \endgroup
7088     \ifx\@footnotetext\@mpfootnotetext
7089       \expandafter\H@@mpfootnotetext
7090     \else
7091       \expandafter\H@@footnotetext
7092     \fi
7093   }%
7094   \def\@xfootnotemark[#1]{%
7095     \begingroup
7096       \c@footnote #1\relax
7097       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7098     \endgroup
7099     \H@@footnotemark
7100   }%
7101   \let\H@@mpfootnotetext\@mpfootnotetext
7102   \long\def\@mpfootnotetext#1{%
7103     \H@@mpfootnotetext{%
7104       \ifHy@nesting
7105         \expandafter\hyper@@anchor\expandafter{%
7106           \Hy@footnote@currentHref
7107         }{#1}%
7108       \else
7109         \Hy@raisedlink{%
7110           \expandafter\hyper@@anchor\expandafter{%
7111             \Hy@footnote@currentHref
7112           }{\relax}%
7113         }#1%
7114       \fi
7115     }%
7116   }%
7117   \long\def\@footnotetext#1{%
7118     \H@@footnotetext{%
7119       \ifHy@nesting
7120         \expandafter\hyper@@anchor\expandafter{%
7121           \Hy@footnote@currentHref
7122         }{#1}%
7123       \else
7124         \Hy@raisedlink{%
7125           \expandafter\hyper@@anchor\expandafter{%
7126             \Hy@footnote@currentHref
7127           }{\relax}%

```

```

7128 }%
7129 \let\@currentHref\Hy@footnote@currentHref
7130 \let\@currentlabelname\@empty
7131 #1%
7132 \fi
7133 }%
7134 }%

```

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.

```

7135 \def\@footnotemark{%
7136 \leavevmode
7137 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7138 \stepcounter{Hfootnote}%
7139 \global\let\Hy@saved@currentHref\@currentHref
7140 \hyper@makecurrent{Hfootnote}%
7141 \global\let\Hy@footnote@currentHref\@currentHref
7142 \global\let\@currentHref\Hy@saved@currentHref
7143 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7144 \@makefnmark
7145 \hyper@linkend
7146 \ifhmode\spacefactor\@x@sf\fi
7147 \relax
7148 }%

```

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

```

7149 \@ifpackageloaded{longtable}{%
7150 \CheckCommand*\LT@p@ftntext}[1]{%
7151 \edef\@tempa{%
7152 \the\LT@p@ftn
7153 \noexpand\footnotetext[\the\c@footnote]%
7154 }%
7155 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7156 }%
7157 \long\def\LT@p@ftntext#1{%
7158 \edef\@tempa{%
7159 \the\LT@p@ftn
7160 \begingroup
7161 \noexpand\c@footnote=\the\c@footnote\relax
7162 \noexpand\protected@xdef\noexpand\@thefnmark{%
7163 \noexpand\thempfn
7164 }%
7165 \noexpand\Hy@LT@footnotetext{%
7166 \Hy@footnote@currentHref
7167 }%
7168 }%
7169 \global\LT@p@ftn\expandafter{%
7170 \@tempa{#1}%
7171 \endgroup
7172 }%
7173 }%
7174 \long\def\Hy@LT@footnotetext#1#2{%
7175 \H@@@footnotetext{%

```

```

7176 \ifHy@nesting
7177 \hyper@@anchor{#1}{#2}%
7178 \else
7179 \Hy@raisedlink{%
7180 \hyper@@anchor{#1}{\relax}%
7181 }%
7182 \def\@currentHref{#1}%
7183 \let\@currentlabelname\@empty
7184 #2%
7185 \fi
7186 }%
7187 }%
7188 }{}%

```

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

```

7189 \@ifpackageloaded{fancyvrb}{%
7190 \def\V@@footnotetext{%
7191 \insert\footins\bgroup
7192 \csname reset@font\endcsname
7193 \footnotesize
7194 \interlinepenalty\interfootnotelinepenalty
7195 \splittopskip\footnotesep
7196 \splitmaxdepth\dp\strutbox
7197 \floatingpenalty \@MM
7198 \hsize\columnwidth
7199 \@parboxrestore
7200 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7201 \@makefnmark{}%
7202 \rule{\z@}{\footnotesep}%
7203 \bgroup
7204 \aftergroup\V@@@footnotetext
7205 \Hy@raisedlink{%
7206 \expandafter\hyper@@anchor\expandafter{%
7207 \Hy@footnote@currentHref
7208 }{\relax}%
7209 }%
7210 \let\@currentHref\Hy@footnote@currentHref
7211 \let\@currentlabelname\@empty
7212 \ignorespaces
7213 }%
7214 }{}%

```

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

```

7215 \def\Hy@temp#1{%
7216 \begingroup
7217 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7218 \endgroup
7219 \@footnotemark
7220 }%
7221 \ifx\Hy@temp\footref
7222 \def\footref#1{%
7223 \begingroup
7224 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7225 \endgroup
7226 \H@@@footnotemark
7227 }%
7228 \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.

```

7229 \let\HyOrg@maketitle\maketitle
7230 \def\maketitle{%
7231   \let\Hy@saved@footnotemark\@footnotemark
7232   \let\Hy@saved@footnotetext\@footnotetext
7233   \let\@footnotemark\H@@footnotemark
7234   \let\@footnotetext\H@@footnotetext
7235   \ifnextchar[\Hy@maketitle@optarg{% ]
7236     \HyOrg@maketitle
7237     \Hy@maketitle@end
7238   }%
7239 }%
7240 \def\Hy@maketitle@optarg[#1]{%
7241   \HyOrg@maketitle[#1]}%
7242   \Hy@maketitle@end
7243 }%
7244 \def\Hy@maketitle@end{%
7245   \ifx\@footnotemark\H@@footnotemark
7246     \let\@footnotemark\Hy@saved@footnotemark
7247   \fi
7248   \ifx\@footnotetext\H@@footnotetext
7249     \let\@footnotetext\Hy@saved@footnotetext
7250   \fi
7251 }%
```

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

```

7252 \def\realfootnote{%
7253   \ifnextchar[\@xfootnote{%
7254     \stepcounter{\@mpfn}%
7255     \protected@xdef\@thefnmark{\thempfn}%
7256     \H@@footnotemark\H@@footnotetext
7257   }%
7258 }%

7259 \fi
7260 \Hy@DisableOption{hyperfootnotes}

7261 </package>
7262 <*check>
7263 \checklatex
7264 \checkcommand\def\@xfootnotenext[#1]{%
7265   \begingroup
7266     \csname c@\@mpfn\endcsname #1\relax
7267     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7268   \endgroup
7269   \@footnotetext
7270 }
7271 \checkcommand\def\@xfootnotemark[#1]{%
7272   \begingroup
7273     \c@footnote #1\relax
7274     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7275   \endgroup
7276   \@footnotemark
7277 }
7278 \checkcommand\def\@footnotemark{%
7279   \leavevmode
7280   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
```

```

7281 \@makefnmark
7282 \ifhmode\spacefactor\@x@sf\fi
7283 \relax
7284 }
7285 </check>
7286 <*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.

```

7287 \def\caption{%
7288   \ifx\@captype\@undefined
7289     \@latex@error{\noexpand\caption outside float}\@ehd
7290     \expandafter\@gobble
7291   \else
7292     \H@refstepcounter\@captype
7293     \let\Hy@tempa\@caption
7294     \@ifundefined{float@caption}{%
7295       {%
7296         \expandafter\ifx\csname @float@c@\@captype\endcsname
7297           \float@caption
7298         \let\Hy@tempa\Hy@float@caption
7299       \fi
7300     }%
7301     \expandafter\@firstofone
7302   \fi
7303   {\@dblarg{\Hy@tempa\@captype}}}%
7304 }
7305 \long\def\@caption#1[#2]#3{%
7306   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7307     \csname iftrue\endcsname
7308     \global\let\@currentHref\hc@currentHref
7309   \else
7310     \hyper@makecurrent{\@captype}%
7311   \fi
7312   \@ifundefined{NR@gettitle}{%
7313     \def\@currentlabelname{#2}%
7314   }{%
7315     \NR@gettitle{#2}%
7316   }%
7317   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7318     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7319   }%
7320   \begingroup
7321     \@parboxrestore
7322     \if@minipage
7323       \@setminipage
7324     \fi
7325     \normalsize
7326     \expandafter\ifx\csname if@capstart\expandafter\endcsname
7327       \csname iftrue\endcsname
7328       \global\@capstartfalse
7329       \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7330     \else
7331       \@makecaption{\csname fnum@#1\endcsname}{%

```

```
7332 \ignorespaces
```

If we cannot have nesting, the anchor is empty.

```
7333 \ifHy@nesting
7334 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7335 \else
7336 \Hy@raisedlink{%
7337 \expandafter\hyper@@anchor\expandafter{%
7338 \@currentHref
7339 }{\relax}%
7340 }%
7341 #3%
7342 \fi
7343 }%
7344 \fi
7345 \par
7346 \endgroup
7347 }
```

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.

```
7348 \let\Hy@float@caption\@caption
7349 \ifpackageloaded{float}{%
7350 \def\Hy@float@caption{%
7351 \ifx\Hy@float@currentHref\@undefined
7352 \hyper@makecurrent{\@cuptype}%
7353 \global\let\Hy@float@currentHref\@currentHref
7354 \else
7355 \let\@currentHref\Hy@float@currentHref
7356 \fi
7357 \float@caption
7358 }%
7359 \let\HyOrg@float@makebox\float@makebox
7360 \renewcommand{\float@makebox}[1]{%
7361 \HyOrg@float@makebox{%
7362 #1\relax
7363 \ifx\Hy@float@currentHref\@undefined
7364 \else
7365 \expandafter\hyper@@anchor\expandafter{%
7366 \Hy@float@currentHref
7367 }{\relax}%
7368 \global\let\Hy@float@currentHref\@undefined
7369 \fi
7370 }%
7371 }%
7372 }-{}
7373 </package>
7374 <*check>
7375 \checklatex[1999/06/01 - 2000/06/01]
7376 \checkcommand\def\caption{%
7377 \ifx\@cuptype\@undefined
7378 \@latex@error{\noexpand\caption outside float}\@ehd
7379 \expandafter\@gobble
7380 \else
7381 \refstepcounter\@cuptype
7382 \expandafter\@firstofone
7383 \fi
7384 {\@dblarg{\@caption\@cuptype}}}%
```



```

7385 }
7386 \checkcommand\long\def\@caption#1[#2]#3{%
7387   \par
7388   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7389     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7390   }%
7391   \begingroup
7392   \@parboxrestore
7393   \if@minipage
7394     \setminipage
7395   \fi
7396   \normalsize
7397   \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7398 \endgroup
7399 }
7400 \</check>
7401 \<*package>

```

37 Bibliographic references

This is not very robust, since many styles redefine these things. The package used to redefine `\@citex` and the like; then we tried adding the `hyperref` call explicitly into the `.aux` file. Now we redefine `\bibcite`; this still breaks some citation packages so we have to work around them. But this remains extremely dangerous. Any or all of *achemso* and *drftcite* may break.

However, 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.

```

7402 \def\hyper@natlinkstart#1{%
7403   \Hy@backout{#1}%
7404   \hyper@linkstart{cite}{cite.#1}%
7405   \def\hyper@nat@current{#1}%
7406 }
7407 \def\hyper@natlinkend{%
7408   \hyper@linkend
7409 }
7410 \def\hyper@natlinkbreak#1#2{%
7411   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7412 }
7413 \def\hyper@natanchorstart#1{%
7414   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7415 }
7416 \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.

```

7417 \ltx@ifundefined{NAT@parse}{%
7418   \providecommand*\@extra@binfo{}%
7419   \providecommand*\@extra@b@citeb{}%
7420   \def\bibcite#1#2{%
7421     \@newl@bel{b}{#1\@extra@binfo}{%
7422       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
7423     }%
7424   }%

```

```
7425 \gdef\@extra@binfo{}%
```

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

```
7426 \let\Hy@bibcite\bibcite
7427 \begingroup
7428 \ifundefined{bbl@cite@choice}{-}%
7429 \g@addto@macro\bbl@cite@choice{%
7430 \let\bibcite\Hy@bibcite
7431 }%
7432 }%
7433 \endgroup
```

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

```
7434 \providecommand*{\@BIBLABEL}{\@biblabel}%
7435 \def\@bibitem[#1]#2{%
7436 \@skiphyperreftrue
7437 \H@item[%
7438 \ifx\Hy@raisedlink\@empty
7439 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7440 \@BIBLABEL{#1}%
7441 \hyper@anchorend
7442 \else
7443 \Hy@raisedlink{%
7444 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7445 }%
7446 \@BIBLABEL{#1}%
7447 \fi
7448 \hfill
7449 ]%
7450 \@skiphyperreffalse
7451 \if@filesw
7452 \begingroup
7453 \let\protect\noexpand
7454 \immediate\write\@auxout{%
7455 \string\bibcite{#2}{#1}%
7456 }%
7457 \endgroup
7458 \fi
7459 \ignorespaces
7460 }%
```

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

```
7461 \def\@bibitem#1{%
7462 \@skiphyperreftrue\H@item\@skiphyperreffalse
7463 \Hy@raisedlink{%
7464 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7465 }%
7466 \if@filesw
7467 \begingroup
7468 \let\protect\noexpand
7469 \immediate\write\@auxout{%
7470 \string\bibcite{#1}{\the\value{\@listctr}}}%
7471 }%
7472 \endgroup
7473 \fi
7474 \ignorespaces
7475 }%
```

```

7476 }{}
7477 </package>
7478 <*check>
7479 \checklatex
7480 \checkcommand\def\@bibitem[#1]#2{%
7481   \item[\@biblabel{#1}\hfill]%
7482   \if@filesw
7483     {%
7484       \let\protect\noexpand
7485       \immediate\write\@auxout{%
7486         \string\bibcite{#2}{#1}%
7487       }%
7488     }%
7489   \fi
7490   \ignorespaces
7491 }
7492 \checkcommand\def\@bibitem#1{%
7493   \item
7494   \if@filesw
7495     \immediate\write\@auxout{%
7496       \string\bibcite{#1}{\the\value{\@listctr}}%
7497     }%
7498   \fi
7499   \ignorespaces
7500 }
7501 </check>
7502 <*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.

```

7503 \@ifclassloaded{revtex}{%
7504   \Hy@Info{*** compatibility with revtex **** }%
7505   \def\revtex@checking#1#2{%
7506     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
7507     \expandafter\def\csname b@#1\endcsname{#2}%
7508     \@SetMaxRnhefLabel{#1}%
7509     \expandafter\let\csname b@#1\endcsname\T@temp
7510   }%

```

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

```

7511 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
7512 \providecommand*{\@extra@b@citeb}{}%
7513 \def\CITE[#1]#2{%
7514   \let\@citea\@empty
7515   \leavevmode
7516   \unskip
7517   $^{}%
7518   \scriptstyle
7519   \CITE{%
7520     \@for\@citeb:=#2\do{%
7521       \@citea
7522       \def\@citea{,\penalty\@m\ }%
7523       \edef\@citeb{\expandafter\@firstofone\@citeb}%
7524       \if@filesw
7525         \immediate\write\@auxout{\string\citation{\@citeb}}%

```

```

7526 \fi
7527 \@ifundefined{b@\@citeb\extra@b@citeb}{%
7528 \mbox{\reset@font\bfseries ?}%
7529 \G@refundefinedtrue
7530 \@latex@warning{%
7531 Citation ‘\@citeb’ on page \thepage \space undefined%
7532 }%
7533 }{%
7534 {\csname b@\@citeb\@extra@b@citeb\endcsname}%
7535 }%
7536 }%
7537 }{#1}%
7538 }$%
7539 }%

```

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.

```

7540 \def\@citex[#1]#2{%
7541 \let\@citea\@empty
7542 \@cite{%
7543 \@for\@citeb:=#2\do{%
7544 \@citea
7545 \def\@citea{,\penalty\@m\ }%
7546 \edef\@citeb{\expandafter\@firstofone\@citeb}%
7547 \if@filesw
7548 \immediate\write\@auxout{\string\citation{\@citeb}}%
7549 \fi
7550 \@ifundefined{b@\@citeb\@extra@b@citeb}{%
7551 \mbox{\reset@font\bfseries ?}%
7552 \G@refundefinedtrue
7553 \@latex@warning{%
7554 Citation ‘\@citeb’ on page \thepage \space undefined%
7555 }%
7556 }{%
7557 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
7558 }%
7559 }%
7560 }{#1}%
7561 }%
7562 }{}

```

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.

```

7563 \@ifpackageloaded{harvard}{%
7564 \Hy@AtBeginDocument{%
7565 \Hy@Info{*** compatibility with harvard **** }%
7566 \Hy@raiselinksfalse
7567 \def\harvardcite#1#2#3#4{%
7568 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
7569 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
7570 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%

```

```

7571 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7572 }%
7573 \def\HAR@citetoaux#1{%
7574 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7575 \ifHy@backref
7576 \ifx\@empty\@currentlabel
7577 \else
7578 \@bsphack
7579 \if@filesw
7580 \protected@write\@auxout{}{%
7581 \string\@writefile{brf}{%
7582 \string\backcite{#1}{%
7583 {\thepage}{\@currentlabel}{\@currentHref}%
7584 }%
7585 }%
7586 }%
7587 \fi
7588 \@esphack
7589 \fi
7590 \fi
7591 }%
7592 \def\harvarditem{%
7593 \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7594 }%
7595 \def\@harvarditem[#1]#2#3#4#5\par{%
7596 \item[]%
7597 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7598 \if@filesw
7599 \begingroup
7600 \def\protect##1{\string ##1\space}%
7601 \ifthenelse{\equal{#1}{\null}}{%
7602 {\def\next{{#4}{#2}{#2}{#3}}}%
7603 {\def\next{{#4}{#2}{#1}{#3}}}%
7604 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7605 \endgroup
7606 \fi
7607 \protect\hspace*{-\labelwidth}%
7608 \protect\hspace*{-\labelsep}%
7609 \ignorespaces
7610 #5%
7611 \ifHy@backref
7612 \newblock
7613 \backref{\csname br@#4\endcsname}%
7614 \fi
7615 \par
7616 }%

```

\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:

```

7617 \long\def\HAR@checkcitations#1#2#3#4{%
7618 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
7619 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7620 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
7621 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7622 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
7623 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa

```

```

7624     \else
7625     \@tempswatrue
7626     \fi
7627     \else
7628     \@tempswatrue
7629     \fi
7630     \else
7631     \@tempswatrue
7632     \fi
7633   }%
7634 }%

7635 }{}

```

37.2 Package chicago

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

```

7636 \@ifpackageloaded{chicago}{%

```

\citeN

```

7637 \def\citeN{%
7638   \def\@citesep{-1000}%
7639   \def\@cite##1##2{##1}%
7640   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7641   \@citedata@opt
7642 }%

```

\shortciteN

```

7643 \def\shortciteN{%
7644   \def\@citesep{-1000}%
7645   \def\@cite##1##2{##1}%
7646   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7647   \@citedata@opt
7648 }%

```

\@citedata@opt

```

7649 \def\@citedata@opt{%
7650   \let\@cite@opt\@empty
7651   \ifnextchar [{%
7652     \@tempswatrue
7653     \@citedatax@opt
7654   }{%
7655     \@tempswafalse
7656     \@citedatax[]%
7657   }%
7658 }%

```

\@citedatax@opt

```

7659 \def\@citedatax@opt[#1]{%
7660   \def\@cite@opt{, #1}%
7661   \@citedatax[{#1}]%
7662 }%

7663 }{}

```

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.

```
7664 \ltx@ifclassloaded{slides}{%
7665   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%
7666   \def\Hy@PageAnchorSlidesPlain{%
7667     \advance\c@page\ltx@one
7668     \edef\Hy@TempPageAnchor{%
7669       \noexpand\hyper@@anchor{%
7670         page.\the\c@slide.\the\c@overlay.\the\c@note%
7671         \ifnum\c@page=\ltx@one
7672           \else
7673             .\the\c@page
7674           \fi
7675         }%
7676       }%
7677     \advance\c@page-\ltx@one
7678   }%
7679   \def\Hy@PageAnchorSlide{%
7680     \advance\c@page\ltx@one
7681     \ifnum\c@page>\ltx@one
7682       \ltx@ifundefined{theHpage}{%
7683         \protected@edef\Hy@TheSlideOptionalPage{%
7684           \Hy@SlidesFormatOptionalPage{\thepage}%
7685         }%
7686       }{%
7687         \protected@edef\Hy@TheSlideOptionalPage{%
7688           \Hy@SlidesFormatOptionalPage{\theHpage}%
7689         }%
7690       }%
7691     \else
7692       \def\Hy@TheSlideOptionalPage{}%
7693     \fi
7694     \advance\c@page-\ltx@one
7695     \pdfstringdef\@the@H@page{%
7696       \csname
7697         the%
7698         \ltx@ifundefined{theH\Hy@SlidesPage}{\theH}%
7699         \Hy@SlidesPage
7700       \endcsname
7701     \Hy@TheSlideOptionalPage
7702   }%
7703   \ltx@gobblethree
7704 }%
7705 \def\Hy@SlidesPage{slide}%
7706 \g@addto@macro\slide{%
7707   \def\Hy@SlidesPage{slide}%
7708 }%
7709 \g@addto@macro\overlay{%
7710   \def\Hy@SlidesPage{overlay}%
7711 }%
7712 \g@addto@macro\note{%
```

```

7713 \def\Hy@SlidesPage{note}%
7714 }%
7715 }{%
7716 \def\Hy@PageAnchorSlidesPlain{}%
7717 \def\Hy@PageAnchorSlide{}%
7718 }
7719 \def\Hy@EveryPageAnchor{%
7720 \Hy@DistillerDestFix
7721 \ifHy@pageanchor
7722 \ifHy@hypertextnames
7723 \ifHy@plainpages
7724 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7725 \Hy@PageAnchorSlidesPlain
7726 \else
7727 \begingroup
7728 \let\@number\@firstofone
7729 \Hy@unicodedefalse
7730 \Hy@PageAnchorSlide
7731 \pdfstringdef\@the@H@page{\thepage}%
7732 \endgroup
7733 \EdefUnescapeString\@the@H@page{\@the@H@page}%
7734 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7735 \fi
7736 \else
7737 \Hy@GlobalStepCount\Hy@pagecounter
7738 \def\Hy@TempPageAnchor{%
7739 \hyper@@anchor{page.\the\Hy@pagecounter}%
7740 }%
7741 \fi
7742 \vbox to 0pt{%
7743 \kern\voffset
7744 \kern\topmargin
7745 \kern-1bp\relax
7746 \hbox to 0pt{%
7747 \kern\hoffset
7748 \kern\ifodd\value{page}%
7749 \oddsidemargin
7750 \else
7751 \evensidemargin
7752 \fi
7753 \kern-1bp\relax
7754 \Hy@TempPageAnchor\relax
7755 \hss
7756 }%
7757 \vss
7758 }%
7759 \fi
7760 }
7761 \g@addto@macro\Hy@EveryPageBoxHook{%
7762 \Hy@EveryPageAnchor
7763 }

```

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.

```

7764 \def\addcontentsline#1#2#3{% toc extension, type, tag
7765 \begingroup
7766 \let\label\@gobble
7767 \ifx\@currentHref\@empty
7768 \Hy@Warning{%
7769   No destination for bookmark of \string\addcontentsline,%
7770   \MessageBreak destination is added%
7771 }%
7772 \phantomsection
7773 \fi
7774 \expandafter\ifx\csname toplevel@#2\endcsname\relax
7775 \begingroup
7776 \def\Hy@tempa{#1}%
7777 \ifx\Hy@tempa\Hy@bookmarkstype
7778 \Hy@WarningNoLine{%
7779   bookmark level for unknown #2 defaults to 0%
7780 }%
7781 \else
7782 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7783 \fi
7784 \endgroup
7785 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7786 \fi
7787 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
7788 \Hy@writebookmark{\csname the#2\endcsname}%
7789 {#3}%
7790 {\@currentHref}%
7791 {\Hy@toplevel}%
7792 {#1}%
7793 \ifHy@verbose
7794 \begingroup
7795 \def\Hy@tempa{#3}%
7796 \@onelevel@sanitize\Hy@tempa
7797 \let\temp@online\on@line
7798 \let\on@line\@empty
7799 \Hy@Info{%
7800   bookmark\temp@online:\MessageBreak
7801   thecounter {\csname the#2\endcsname}\MessageBreak
7802   text {\Hy@tempa}\MessageBreak
7803   reference {\@currentHref}\MessageBreak
7804   toplevel {\Hy@toplevel}\MessageBreak
7805   type {#1}%
7806 }%
7807 \endgroup
7808 \fi
7809 \addtocontents{#1}{%
7810   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7811 }%
7812 \endgroup
7813 }
7814 \def\contentsline#1#2#3#4{%
7815 \ifx\\#4\\%
7816 \csname l@#1\endcsname{#2}{#3}%
7817 \else
7818 \ifcase\Hy@linktoc % none
7819 \csname l@#1\endcsname{#2}{#3}%

```

```

7820 \or % section
7821 \csname l@#1\endcsname{%
7822 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7823 }{#3}%
7824 \or % page
7825 \csname l@#1\endcsname{#{#2}}{%
7826 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7827 }%
7828 \else % all
7829 \csname l@#1\endcsname{%
7830 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7831 }{%
7832 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7833 }%
7834 \fi
7835 \fi
7836 }

7837 </package>
7838 <*check>
7839 \checklatex
7840 \checkcommand\def\addcontentsline#1#2#3{%
7841 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7842 }
7843 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7844 </check>
7845 <*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.

```

7846 \let\H@definecounter\@definecounter
7847 \def\@definecounter#1{%
7848 \H@definecounter{#1}%
7849 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7850 }

```

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.

```

7851 \let\H@newctr\@newctr
7852 \def\@newctr#1[#2]{%
7853 \H@newctr#1[{#2}]%
7854 \expandafter\def\csname theH#1\endcsname{%
7855 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7856 }%
7857 }

```

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.

```

7858 \ifpackageloaded{amsmath}{%
7859   \def\Hy@make@anchor{%
7860     \Hy@MakeCurrentHrefAuto{AMS}%
7861     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7862   }%
7863   \def\Hy@make@df@tag@@#1{%
7864     \gdef\df@tag{%
7865       \maketag@@@{\Hy@make@anchor#1}%
7866       \def\@currentlabel{#1}%
7867     }%
7868   }%
7869   \def\Hy@make@df@tag@@@#1{%
7870     \gdef\df@tag{%
7871       \tagform@{\Hy@make@anchor#1}%
7872       \toks@\@xp{\p@equation{#1}}%
7873       \edef\@currentlabel{the\toks@}%
7874     }%
7875   }%
7876   \let\HyOrg@make@df@tag@@\make@df@tag@@
7877   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7878   \let\make@df@tag@@\Hy@make@df@tag@@
7879   \let\make@df@tag@@@\Hy@make@df@tag@@@
7880 }{}

```

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

```

7881 \ifpackagewith{hyperref}{pdfTeX}{%
7882   \let\H@seteqlabel\@seteqlabel
7883   \def\@seteqlabel#1{%
7884     \H@seteqlabel{#1}%
7885     \xdef\@currentHref{AMS.the\Hy@linkcounter}%
7886     \Hy@raisedlink{%
7887       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7888     }%
7889   }%
7890 }{}

```

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.

```

7891 \let\HyOrg@addtoreset\@addtoreset
7892 \def\@addtoreset#1#2{%
7893   \HyOrg@addtoreset{#1}{#2}%
7894   \expandafter\xdef\csname theH#1\endcsname{%
7895     \expandafter\noexpand

```

```

7896     \csname the\@ifundefined{theH#2}{H#2\endcsname
7897     .\noexpand\the\noexpand\value{#1}%
7898   }%
7899 }

```

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

```

7900 </package>
7901 <*check>
7902 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7903 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7904   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7905     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7906       \@addtoreset{#2}{#3}%
7907       \exp\xdef\csname the#2\endcsname{%
7908         \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7909       }%
7910     }%
7911   }%
7912 }%
7913 </check>
7914 <*package>
7915 \@ifpackageloaded{amsmath}{%
7916   \@ifpackagelater{amsmath}{1999/12/14}{%
7917     \renewcommand*{\numberwithin}[3][\arabic]{%
7918       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7919         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7920           \HyOrg@addtoreset{#2}{#3}%
7921           \exp\xdef\csname the#2\endcsname{%
7922             \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7923           }%
7924           \exp\xdef\csname theH#2\endcsname{%
7925             \exp\xnx
7926             \csname the\@ifundefined{theH#3}{H#3\endcsname
7927             .\@nx#1{#2}%
7928           }%
7929         }%
7930       }%
7931     }%
7932 }{%
7933   \Hy@WarningNoLine{%
7934     \string\numberwithin\space of package 'amsmath' %
7935     only fixed\MessageBreak
7936     for version 2000/06/06 v2.12 or newer%
7937   }%
7938 }%
7939 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7940 \ifHy@figures
7941   \let\Hy@Gin@setfile\Gin@setfile
7942   \def\Gin@setfile#1#2#3{%
7943     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7944   }%

```

```

7945 \fi
7946 \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 emboldening 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.

```

7947 \ifHy@hyperindex
7948 \def\HyInd@ParenLeft{({}%
7949 \def\HyInd@ParenRight{)}}%
7950 \def\hyperindexformat#1#2{%
7951 \let\HyOrg@hyperpage\hyperpage
7952 \let\hyperpage\@firstofone
7953 #1{\HyOrg@hyperpage{#2}}%
7954 \let\hyperpage\HyOrg@hyperpage
7955 }%
7956 \Hy@nextfalse
7957 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7958 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7959 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7960 \begingroup
7961 \lccode'\|=\expandafter\HyInd@EncapChar\relax
7962 \lccode'\|/\|=\|/\relax
7963 \lowercase{\endgroup
7964 \ifHy@next
7965 \let\HyInd@org@wrindex\@wrindex
7966 \def\@wrindex#1#2{\HyInd@@wrindex{#1}#2||\|}%
7967 \def\HyInd@@wrindex#1#2|#3|#4\|{%
7968 \|x\|#3\|
7969 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7970 \else
7971 \HyInd@@@wrindex{#1}{#2}#3\|
7972 \fi
7973 }%
7974 \def\HyInd@@@wrindex#1#2#3#4\|{%
7975 \def\Hy@temp@A{#3}%
7976 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7977 \|x\Hy@temp@A\HyInd@ParenRight 1\fi
7978 \relax
7979 \HyInd@org@wrindex{#1}{%
7980 #2|hyperindexformat{/#3#4}%
7981 }%
7982 \else
7983 \|x\|#4\|
7984 \|x\Hy@temp@A\HyInd@ParenRight
7985 \HyInd@org@wrindex{#1}{#2|#3}%
7986 \else
7987 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%

```

```

7988     \fi
7989     \else
7990         \HyInd@org@wrindex{#1}{%
7991             #2|#3hyperindexformat{/#4}%
7992         }%
7993     \fi
7994     \fi
7995 }%
7996 \else
7997     \def\@wrindex#1{\@@wrindex#1||\}%
7998     \def\@@wrindex#1|#2|#3\{%
7999         \if@filesw
8000             \ifx\#2\%
8001                 \protected@write\@indexfile{}\{%
8002                     \string\indexentry{#1|hyperpage}{\thepage}%
8003                 }%
8004             \else
8005                 \HyInd@@@wrindex{#1}#2\%
8006             \fi
8007         \fi
8008     \endgroup
8009     \@esphack
8010 }%
8011 \def\HyInd@@@wrindex#1#2#3\{%
8012     \def\Hy@temp@A{#2}%
8013     \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8014         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8015         \relax
8016     \protected@write\@indexfile{}\{%
8017         \string\indexentry{%
8018             #1|hyperindexformat{/#2#3}%
8019         }\thepage}%
8020     }%
8021 \else
8022     \ifx\#3\%
8023         \ifx\Hy@temp@A\HyInd@ParenRight
8024             \protected@write\@indexfile{}\{%
8025                 \string\indexentry{#1|#2}{\thepage}%
8026             }%
8027         \else
8028             \protected@write\@indexfile{}\{%
8029                 \string\indexentry{#1|#2hyperpage}{\thepage}%
8030             }%
8031         \fi
8032     \else
8033         \protected@write\@indexfile{}\{%
8034             \string\indexentry{%
8035                 #1|#2hyperindexformat{/#3}%
8036             }\thepage}%
8037     }%
8038     \fi
8039     \fi
8040 }%
8041 \fi
8042 }%
8043 \fi
8044 \Hy@DisableOption{hyperindex}

```

```
8045 \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.

```
8046 \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.

```
8047 \def\hyperpage#1{%
8048   \HyInd@hyperpage#1\nohyperpage{}\@nil
8049 }
8050 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8051   \HyInd@@hyperpage{#1}%
8052   #2%
8053   \def\Hy@temp{#3}%
8054   \ifx\Hy@temp\@empty
8055     \else
8056       \Hy@ReturnAfterFi{%
8057         \HyInd@hyperpage#3\@nil
8058       }%
8059   \fi
8060 }
8061 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8062 \def\@hyperpage#1--#2--#3\{\%
8063   \ifx\#2\%
8064     \@commahyperpage{#1}%
8065   \else
8066     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8067   \fi
8068 }
8069 \def\@commahyperpage#1{\@commahyperpage#1, \}
8070 \def\@commahyperpage#1, #2,#3\{\%
8071   \ifx\#2\%
8072     \HyInd@pagelink{#1}%
8073   \else
8074     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8075   \fi
8076 }
```

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

```
8077 \def\HyInd@pagelink#1{%
8078   \begingroup
8079   \toks@={}%
8080   \HyInd@removespaces#1 \@nil
8081   \endgroup
8082 }
8083 \def\HyInd@removespaces#1 #2\@nil{%
8084   \toks@=\expandafter{\the\toks@#1}%
8085   \ifx\#2\%
8086     \edef\x{\the\toks@}%
8087     \ifx\x\@empty
8088       \else
8089         \hyperlink{page.\the\toks@}{\the\toks@}%
8090       \fi
8091     \else
8092       \Hy@ReturnAfterFi{%
```

```

8093 \HyInd@removespaces#2\@nil
8094 }%
8095 \fi
8096 }

```

44 Compatibility with foiltex

```

8097 \ifclassloaded{foils}{%
8098 \providecommand*\ext@table{lot}%
8099 \providecommand*\ext@figure{lof}%
8100 }{}

```

45 Compatibility with seminar slide package

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

```

8101 \ifclassloaded{seminar}{%
8102 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
8103 }{%
8104 \Hy@seminarslidesfalse
8105 }
8106 \ifpackageloaded{slidesec}{%
8107 \newcommand\theHslidesection {\arabic{slidesection}}}%
8108 \newcommand\theHslidesubsection{%
8109 \theHslidesection.\arabic{slidesubsection}}%
8110 }%
8111 \def\slide@heading[#1]#2{%
8112 \H@refstepcounter{slidesection}%
8113 \@addtoreset{slidesubsection}{slidesection}%
8114 \addtocontents{los}{%
8115 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}}%
8116 {\@SCTR}{slideheading.\theslidesection}}%
8117 }%
8118 \def\Hy@tempa{#2}%
8119 \ifx\Hy@tempa\@empty
8120 \else
8121 {%
8122 \edef\@currentlabel{%
8123 \csname p@slidesection\endcsname\theslidesection
8124 }%
8125 \makeslideheading{#2}%
8126 }%
8127 \fi
8128 \gdef\theslideheading{#1}%
8129 \gdef\theslidesubheading{}%
8130 \ifHy@bookmarksnumbered
8131 \def\Hy@slidetitle{\theslidesection\space #1}%
8132 \else
8133 \def\Hy@slidetitle{#1}%
8134 \fi
8135 \ifHy@hypertextnames
8136 \ifHy@naturalnames
8137 \hyper@anchor{slideheading.\theslidesection}{\relax}%
8138 \Hy@writebookmark
8139 {\theslidesection}%
8140 {\Hy@slidetitle}%

```



```

8141         {slideheading.\theslidesection}%
8142         {1}%
8143         {toc}%
8144     \else
8145         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8146         \Hy@writebookmark
8147         {\theslidesection}%
8148         {\Hy@slidetitle}%
8149         {slideheading.\theHslidesection}%
8150         {1}%
8151         {toc}%
8152     \fi
8153 \else
8154     \Hy@GlobalStepCount\Hy@linkcounter
8155     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8156     \Hy@writebookmark
8157     {\theslidesection}%
8158     {\Hy@slidetitle}%
8159     {slideheading.\the\Hy@linkcounter}%
8160     {1}%
8161     {toc}%
8162 \fi
8163 }%
8164 \def\slide@subheading[#1]#2{%
8165     \H@refstepcounter{slidesubsection}%
8166     \addtocontents{los}{%
8167         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8168         {\@SCTR}{slideheading.\theslidesubsection}%
8169     }%
8170 \def\Hy@tempa{#2}%
8171 \ifx\Hy@tempa\@empty
8172 \else
8173     {%
8174         \edef\@currentlabel{%
8175             \csname p@slidesubsection\endcsname\theslidesubsection
8176         }%
8177         \makeslidesubheading{#2}%
8178     }%
8179 \fi
8180 \gdef\theslidesubheading{#1}%
8181 \ifHy@bookmarksnumbered
8182     \def\Hy@slidetitle{\theslidesubsection\space #1}%
8183 \else
8184     \def\Hy@slidetitle{#1}%
8185 \fi
8186 \ifHy@hypertextnames
8187     \ifHy@naturalnames
8188         \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8189         \Hy@writebookmark
8190         {\theslidesubsection}%
8191         {\Hy@slidetitle}%
8192         {slideheading.\theslidesubsection}%
8193         {2}%
8194         {toc}%
8195     \else
8196         \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8197         \Hy@writebookmark

```

```

8198     {\theslidesubsection}%
8199     {\Hy@slidetitle}%
8200     {slideheading.\theHslidesubsection}%
8201     {2}%
8202     {toc}%
8203   \fi
8204   \else
8205     \Hy@GlobalStepCount\Hy@linkcounter
8206     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8207     \Hy@writebookmark
8208     {\theslidesubsection}%
8209     {\Hy@slidetitle}%
8210     {slideheading.\the\Hy@linkcounter}%
8211     {1}%
8212     {toc}%
8213   \fi
8214 }%
8215 \providecommand*{\listslidenam}{List of Slides}%
8216 \def\listofslides{%
8217   \section*{%
8218     \listslidenam
8219     \@mkboth{%
8220       \expandafter\MakeUppercase\listslidenam
8221     }{%
8222       \expandafter\MakeUppercase\listslidenam
8223     }%
8224   }%
8225   \def\l@slide##1##2##3##4{%
8226     \slide@undottedcline{%
8227       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8228     }{}%
8229   }%
8230   \let\l@subslide\l@slide
8231   \@startlos
8232 }%
8233 \def\slide@contents{%
8234   \def\l@slide##1##2##3##4{%
8235     \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8236   }%
8237   \let\l@subslide\@gobblefour
8238   \@startlos
8239 }%
8240 \def\Slide@contents{%
8241   \def\l@slide##1##2##3##4{%
8242     \ifcase\lslide@flag
8243       \message{##1 ** \the\c@slidesection}%
8244       \ifnum##1>\c@slidesection
8245         \def\lslide@flag{1}%
8246         {%
8247           \large
8248           \slide@ccline{%
8249             \slidenumberline{$\rightarrow\bullet$}%
8250             {\hyperlink{##4}{##2}}%
8251           }{##3}%
8252         }%
8253       \else
8254         {%

```

```

8255     \large
8256     \slide@cline{%
8257         \slidenumberline{$\surd\;\bullet$}%
8258         {\hyperlink{##4}{##2}}}%
8259     }{##3}%
8260 }%
8261 \fi
8262 \or
8263 \def\lslide@flag{2}%
8264 {%
8265     \large
8266     \slide@cline{%
8267         \slidenumberline{$\bullet$}%
8268         {\hyperlink{##4}{##2}}}%
8269     }{##3}%
8270 }%
8271 \or
8272 {%
8273     \large
8274     \slide@cline{%
8275         \slidenumberline{$\bullet$}%
8276         {\hyperlink{##4}{##2}}}%
8277     }{##3}%
8278 }%
8279 \fi
8280 }%
8281 \def\l@subslide##1##2##3##4{%
8282     \ifnum\lslide@flag=1 %
8283         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}}%
8284     \fi
8285 }%
8286 \def\lslide@flag{0}%
8287 \@startlos
8288 }%
8289 }{}

```

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.)

```

8290 \ifHy@texht
8291     \expandafter\endinput
8292 \fi
8293 \let\real@setref\@setref
8294 \def\@setref#1#2#3{% csname, extract group, refname
8295     \ifx#1\relax
8296         \protect\G@refundefinedtrue
8297         \nfss@text{\reset@font\bfseries ??}%
8298         \@latex@warning{%
8299             Reference ‘#3’ on page \thepage \space undefined%
8300         }%
8301     \else
8302         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8303     \fi
8304 }

```

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

```

8305 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%

```

```

8306 \begingroup
8307 \toks0={\hyper@@link{#5}{#4}}%
8308 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8309 \edef\x{\endgroup
8310 \the\toks0 \the\toks1 }%
8311 }%
8312 \x
8313 }
8314 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8315 \ifx#1\relax
8316 \protect\G@refundefinedtrue
8317 \nfss@text{\reset@font\bfseries ??}%
8318 \@latex@warning{%
8319 Reference '#3' on page \thepage \space undefined%
8320 }%
8321 \else
8322 \protect\hyper@@link
8323 {\expandafter\@fifthoffive#1}%
8324 {page.\expandafter\@secondoffive#1}%
8325 {\expandafter\@secondoffive#1}%
8326 \fi
8327 }

8328 </package>
8329 <*check>
8330 \checklatex
8331 \checkcommand\def\@setref#1#2#3{%
8332 \ifx#1\relax
8333 \protect\G@refundefinedtrue
8334 \nfss@text{\reset@font\bfseries ??}%
8335 \@latex@warning{%
8336 Reference '#3' on page \thepage\space undefined%
8337 }%
8338 \else
8339 \expandafter#2#1\null
8340 \fi
8341 }
8342 </check>
8343 <*package>

```

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

```

8344 \def\HyRef@StarSetRef#1{%
8345 \begingroup
8346 \Hy@safe@activetrue
8347 \edef\x{#1}%
8348 \@onelevel@sanitize\x
8349 \edef\x{\endgroup
8350 \noexpand\HyRef@@StarSetRef
8351 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8352 }%
8353 \x
8354 }
8355 \def\HyRef@@StarSetRef#1#2#3{%
8356 \ifx#1\@undefined
8357 \let#1\relax
8358 \fi
8359 \real@setref#1#3{#2}%

```

```

8360 }
8361 \def\@refstar#1{%
8362   \HyRef@StarSetRef{#1}\@firstoffive
8363 }
8364 \def\@pagerefstar#1{%
8365   \HyRef@StarSetRef{#1}\@secondoffive
8366 }
8367 \def\@namerefstar#1{%
8368   \HyRef@StarSetRef{#1}\@thirdoffive
8369 }
8370 \Hy@AtBeginDocument{%
8371   \ifpackageloaded{varioref}{%
8372     \def\@Refstar#1{%
8373       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8374     }%
8375     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8376       \MakeUppercase#1%
8377     }%
8378     \DeclareRobustCommand*\@Ref*{%
8379       \ifstar\@Refstar\HyRef@Ref
8380     }%
8381     \def\HyRef@Ref#1{%
8382       \hyperref[{#1}]{\Ref*{#1}}%
8383     }%
8384     \def\@Vr@f#1{%
8385       \leavevmode\unskip\vref@space
8386       \hyperref[{#1}]{%
8387         \Ref*{#1}%
8388         \let\vref@space\nobreakspace
8389         \@vpageref{\unskip}{#1}%
8390       }%
8391     }%
8392     \def\@vr@f#1{%
8393       \leavevmode\unskip\vref@space
8394       \begingroup
8395       \let\T@pageref\@pagerefstar
8396       \hyperref[{#1}]{%
8397         \ref*{#1}%
8398         \vpageref{\unskip}{#1}%
8399       }%
8400     }%
8401   }%
8402 }{}%
8403 }
8404 \DeclareRobustCommand*\@autopageref{%
8405   \ifstar{%
8406     \HyRef@autopagerefname\pageref*%
8407   }\HyRef@autopageref
8408 }
8409 \def\HyRef@autopageref#1{%
8410   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8411 }
8412 \def\HyRef@autopagerefname{%
8413   \ltx@ifundefined{pageautorefname}{%
8414     \ltx@ifundefined{pagename}{%
8415       \Hy@Warning{No autoref name for ‘page’}%
8416     }{%

```

```

8417 \pagename\nobreakspace
8418 }%
8419 }{%
8420 \pageautorefname\nobreakspace
8421 }%
8422 }
8423 \DeclareRobustCommand*{\autoref}{%
8424 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
8425 }
8426 \def\HyRef@autoref#1#2{%
8427 \begingroup
8428 \Hy@safe@activetrue
8429 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8430 \endgroup
8431 }
8432 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8433 \HyRef@ShowKeysRef{#2}%
8434 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8435 \edef\HyRef@thisref{%
8436 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8437 }%
8438 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8439 \Hy@safe@activesfalse
8440 #3{%
8441 \expandafter\@fifthoffive#1\@empty\@empty\@empty
8442 }{%
8443 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8444 }{%
8445 \HyRef@currentHtag
8446 \expandafter\@firstoffive#1\@empty\@empty\@empty
8447 \null
8448 }%
8449 \else
8450 \protect\G@refundefinedtrue
8451 \nfss@text{\reset@font\bfseries ??}%
8452 \@latex@warning{%
8453 Reference '#2' on page \thepage\space undefined%
8454 }%
8455 \fi
8456 }
8457 \def\HyRef@testreftype#1.#2\.{%
8458 \ltx@ifundefined{#1autorefname}{%
8459 \ltx@ifundefined{#1name}{%
8460 \HyRef@StripStar#1\*\@nil{#1}%
8461 \ltx@ifundefined{\HyRef@name autorefname}{%
8462 \ltx@ifundefined{\HyRef@name name}{%
8463 \def\HyRef@currentHtag{}%
8464 \Hy@Warning{No autoref name for '#1'}%
8465 }{%
8466 \edef\HyRef@currentHtag{%
8467 \expandafter\noexpand\csname\HyRef@name name\endcsname
8468 \noexpand~%
8469 }%
8470 }%
8471 }{%
8472 \edef\HyRef@currentHtag{%
8473 \expandafter\noexpand

```

```

8474     \csname\HyRef@name autorefname\endcsname
8475     \noexpand~%
8476   }%
8477 }%
8478 }{%
8479   \edef\HyRef@currentHtag{%
8480     \expandafter\noexpand\csname#1name\endcsname
8481     \noexpand~%
8482   }%
8483 }%
8484 }{%
8485   \edef\HyRef@currentHtag{%
8486     \expandafter\noexpand\csname#1autorefname\endcsname
8487     \noexpand~%
8488   }%
8489 }%
8490 }
8491 \def\HyRef@StripStar#1*\#2\@nil#3{%
8492   \def\HyRef@name{#2}%
8493   \ifx\HyRef@name\HyRef@CaseStar
8494     \def\HyRef@name{#1}%
8495   \else
8496     \def\HyRef@name{#3}%
8497   \fi
8498 }
8499 \def\HyRef@CaseStar{*\\}
8500 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8501 \let\HyRef@ShowKeysRef\@gobble
8502 \def\HyRef@ShowKeysInit{%
8503   \begingroup\expandafter\expandafter\expandafter\endgroup
8504   \expandafter\ifx\csname SK@@label\endcsname\relax
8505   \else
8506     \ifx\SK@ref\@empty
8507     \else
8508       \def\HyRef@ShowKeysRef{%
8509         \SK@\SK@@ref
8510       }%
8511     \fi
8512   \fi
8513 }
8514 \@ifpackageloaded{showkeys}{%
8515   \HyRef@ShowKeysInit
8516 }{%
8517   \Hy@AtBeginDocument{%
8518     \@ifpackageloaded{showkeys}{%
8519       \HyRef@ShowKeysInit
8520     }{}%
8521   }%
8522 }

```

Defaults for the names that \autoref uses.

```

8523 \providecommand*\AMSautorefname{\equationautorefname}
8524 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8525 \providecommand*\Itemautorefname{\itemautorefname}

```

```

8526 \providecommand*\itemautorefname{item}
8527 \providecommand*\equationautorefname{Equation}
8528 \providecommand*\footnoteautorefname{footnote}
8529 \providecommand*\itemautorefname{item}
8530 \providecommand*\figureautorefname{Figure}
8531 \providecommand*\tableautorefname{Table}
8532 \providecommand*\partautorefname{Part}
8533 \providecommand*\appendixautorefname{Appendix}
8534 \providecommand*\chapterautorefname{chapter}
8535 \providecommand*\sectionautorefname{section}
8536 \providecommand*\subsectionautorefname{subsection}
8537 \providecommand*\subsubsectionautorefname{subsubsection}
8538 \providecommand*\paragraphautorefname{paragraph}
8539 \providecommand*\subparagraphautorefname{subparagraph}
8540 \providecommand*\FancyVerbLineautorefname{line}
8541 \providecommand*\theoremautorefname{Theorem}
8542 \providecommand*\pageautorefname{page}
8543 \end{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 pdfTeX offers `\pdfescapestring`.

```

8544 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
8545 \begingroup\expandafter\expandafter\expandafter\endgroup
8546 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8547   \begingroup
8548     \catcode'\=0 %
8549     \@makeother\%
8550     |@firstofone{|endgroup
8551     |def|Hy@pstringdef#1#2{%
8552       |begingroup
8553       |edef~{|string~}%
8554       |xdef|Hy@gtemp{#2}%
8555       |endgroup
8556       |let#1|Hy@gtemp
8557       |@onelevel@sanitize#1%
8558       |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
8559       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8560       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8561     }%
8562     |def|Hy@ExchangeBackslash#1\#2|@nil{%
8563       #1%
8564       |ifx|\#2|\% %
8565       |else
8566         \ %
8567       |Hy@ReturnAfterFi{%
8568         |Hy@ExchangeBackslash#2|@nil
8569       }%

```



```

8570   |fi
8571  }%
8572 }%
8573 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8574   #1%
8575   \ifx\#2\%
8576   \else
8577     \@backslashchar(%
8578     \Hy@ReturnAfterFi{%
8579       \Hy@ExchangeLeftParenthesis#2\@nil
8580     }%
8581   \fi
8582 }%
8583 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8584   #1%
8585   \ifx\#2\%
8586   \else
8587     \@backslashchar)%
8588     \Hy@ReturnAfterFi{%
8589       \Hy@ExchangeRightParenthesis#2\@nil
8590     }%
8591   \fi
8592 }%
8593 \else
8594   \def\Hy@pstringdef#1#2{%
8595     \begingroup
8596       \edef~{\string~}%
8597       \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8598     \endgroup
8599     \let#1\Hy@gtemp
8600   }%
8601 \fi
8602 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

8603 <*pdfTeX>
8604 \providecommand*{\XR@ext}{pdf}
8605 \Hy@setbreaklinks{true}
8606 \def\HyPat@ObjRef{%
8607   [0-9]*[1-9][0-9]* 0 R%
8608 }

```

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

```

8609 \let\Hy@pdfminorversion\relax
8610 \begingroup\expandafter\expandafter\expandafter\endgroup
8611 \expandafter\ifx\cname pdfminorversion\endcname\relax
8612 \begingroup\expandafter\expandafter\expandafter\endgroup
8613 \expandafter\ifx\cname pdfoptionpdfminorversion\endcname\relax
8614 \else
8615   \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%

```

```

8616 \fi
8617 \else
8618 \def\Hy@pdfminorversion{\pdfminorversion}%
8619 \fi
8620 \@ifundefined{Hy@pdfminorversion}{%
8621 \PackageInfo{hyperref}{%
8622 PDF version is not set, because pdfTeX is too old (<1.10a)%
8623 }%
8624 }{%
8625 \ifHy@ocgcolorlinks
8626 \ifnum\Hy@pdfminorversion<5 %
8627 \kvsetkeys{Hyp}{pdfversion=1.5}%
8628 \fi
8629 \fi
8630 \ifHy@setpdfversion
8631 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
8632 \else
8633 \Hy@pdfminorversion=\Hy@pdfversion\relax
8634 \fi
8635 \PackageInfo{hyperref}{%
8636 \expandafter\string\Hy@pdfminorversion
8637 :=\number\Hy@pdfversion\space
8638 }%
8639 \fi
8640 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
8641 }
8642 \Hy@DisableOption{pdfversion}%

8643 \ifHy@ocgcolorlinks
8644 \pdf@ifdraftmode{}{%
8645 \immediate\pdfobj{%
8646 <<%
8647 /Type/OCG%
8648 /Name(View)%
8649 /Usage<<%
8650 /Print<<%
8651 /PrintState/OFF%
8652 >>%
8653 /View<<%
8654 /ViewState/ON%
8655 >>%
8656 >>%
8657 >>%
8658 }%
8659 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
8660 \immediate\pdfobj{%
8661 <<%
8662 /Type/OCG%
8663 /Name(Print)%
8664 /Usage<<%
8665 /Print<<%
8666 /PrintState/ON%
8667 >>%
8668 /View<<%
8669 /ViewState/OFF%
8670 >>%
8671 >>%
8672 >>%

```

```

8673 }%
8674 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
8675 \immediate\pdfobj{%
8676   [%
8677     \OBJ@OCG@view\space\OBJ@OCG@print
8678   ]%
8679 }%
8680 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
8681 \pdfcatalog{%
8682   /OCProperties<<%
8683     /OCGs \OBJ@OCGs
8684   /D<<%
8685     /OFF[\OBJ@OCG@print]%
8686     /AS[%
8687       <<%
8688         /Event/View%
8689         /OCGs \OBJ@OCGs
8690         /Category[/View]%
8691       >>%
8692       <<%
8693         /Event/Print%
8694         /OCGs \OBJ@OCGs
8695         /Category[/Print]%
8696       >>%
8697       <<%
8698         /Event/Export%
8699         /OCGs \OBJ@OCGs
8700         /Category[/Print]%
8701       >>%
8702     ]%
8703   >>%
8704 >>%
8705 }%
8706 \begingroup
8707 \edef\x{\endgroup
8708   \pdfpageresources{%
8709     /Properties<<%
8710       /OCView \OBJ@OCG@view
8711       /OCPrint \OBJ@OCG@print
8712     >>%
8713   }%
8714 }%
8715 \x
8716 }%
8717 \Hy@AtBeginDocument{%
8718   \def\Hy@colorlink#1{%
8719     \begingroup
8720       \ifHy@ocgcolorlinks
8721         \def\Hy@ocgcolor{#1}%
8722         \setbox0=\hbox\bgroup\color@begingroup
8723       \else
8724         \HyColor@UseColor#1%
8725       \fi
8726     }%
8727   \def\Hy@endcolorlink{%
8728     \ifHy@ocgcolorlinks
8729       \color@endgroup\egroup

```

```

8730 \mbox{%
8731 \pdfliteral page{/OC/OCPrint BDC}%
8732 \rlap{\copy0}%
8733 \pdfliteral page{EMC/OC/OCView BDC}%
8734 \begingroup
8735 \expandafter\HyColor@UseColor\Hy@ocgcolor
8736 \box0 %
8737 \endgroup
8738 \pdfliteral page{EMC}%
8739 }%
8740 \fi
8741 \endgroup
8742 }%
8743 }%
8744 \else
8745 \Hy@DisableOption{ocgcolorlinks}%
8746 \fi

```

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

```

8747 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8748 \ifx\pdfstartlink\undefined% less than version 14
8749 \let\pdfstartlink\pdfannotlink
8750 \let\pdfinkmargin\@tempdima
8751 \let\pdfxform\pdfform
8752 \let\pdfastxform\pdfastform
8753 \let\pdfrefxform\pdfrefform
8754 \else
8755 \pdfinkmargin1pt %
8756 \fi

```

First set up the default linking

```
8757 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

8758 \Hy@WrapperDef\new@pdfink#1{%
8759 \ifhmode
8760 \@savs\spacefactor
8761 \fi
8762 \Hy@SaveLastskip
8763 \Hy@VerboseAnchor{#1}%
8764 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8765 \Hy@DestName\Hy@pstringDest\@pdfview
8766 \Hy@RestoreLastskip
8767 \ifhmode
8768 \spacefactor\@savs
8769 \fi
8770 }
8771 \let\pdf@endanchor\@empty

```

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

```

8772 \def\Hy@DestName#1#2{%
8773 \pdfdest name{#1}#2\relax
8774 }

```

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.

```

8775 \providecommand*\@pdfborder{0 0 1}
8776 \providecommand*\@pdfborderstyle{}
8777 \def\Hy@undefinedname{UNDEFINED}
8778 \def\find@pdflink#1#2{%
8779   \leavevmode
8780   \protected@edef\Hy@testname{#2}%
8781   \ifx\Hy@testname\@empty
8782     \Hy@Warning{%
8783       Empty destination name,\MessageBreak
8784       using '\Hy@undefinedname'%
8785     }%
8786     \let\Hy@testname\Hy@undefinedname
8787   \else
8788     \Hy@pstringdef\Hy@testname{%
8789       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8790     }%
8791   \fi
8792   \Hy@StartlinkName{%
8793     \ifHy@pdfa /F 4\fi
8794     \Hy@setpdfborder
8795     \ifx\@pdfhighlight\@empty
8796       \else
8797         /H\@pdfhighlight
8798       \fi
8799       \ifx\CurrentBorderColor\relax
8800         \else
8801           /C[\CurrentBorderColor]%
8802         \fi
8803     }\Hy@testname
8804     \expandafter\Hy@colorlink\csname @#1color\endcsname
8805   }
8806 \def\Hy@StartlinkName#1#2{%
8807   \pdfstartlink attr{#1}goto name{#2}\relax
8808 }
8809 \def\close@pdflink{%
8810   \Hy@endcolorlink
8811   \Hy@VerboseLinkStop
8812   \pdfendlink
8813 }
8814 \def\hyper@anchor#1{%
8815   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8816 }
8817 \def\hyper@anchorstart#1{%
8818   \new@pdflink{#1}%
8819   \Hy@activeanchortrue
8820 }
8821 \def\hyper@anchorend{%
8822   \pdf@endanchor
8823   \Hy@activeanchorfalse
8824 }
8825 \def\hyper@linkstart#1#2{%
8826   \Hy@VerboseLinkStart{#1}{#2}%
8827   \ltx@ifundefined{@#1bordercolor}{%
8828     \let\CurrentBorderColor\relax
8829   }{%

```

```

8830 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8831 }%
8832 \find@pdfink{#1}{#2}%
8833 }
8834 \def\hyper@linkend{\close@pdfink}
8835 \def\hyper@link#1#2#3{%
8836 \Hy@VerboseLinkStart{#1}{#2}%
8837 \ltx@ifundefined{@#1bordercolor}{%
8838 \let\CurrentBorderColor\relax
8839 }{%
8840 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8841 }%
8842 \find@pdfink{#1}{#2}#3%
8843 \close@pdfink
8844 }
8845 \let\CurrentBorderColor\@linkbordercolor
8846 \def\hyper@linkurl#1#2{%
8847 \begingroup
8848 \Hy@pstringdef\Hy@pstringURI{#2}%
8849 \hyper@chars
8850 \leavevmode
8851 \pdfstartlink
8852 attr{%
8853 \Hy@setpdfborder
8854 \ifx\@pdfnhighlight\@empty
8855 \else
8856 /H\@pdfhighlight
8857 \fi
8858 \ifx\@urlbordercolor\relax
8859 \else
8860 /C[\@urlbordercolor]%
8861 \fi
8862 }%
8863 user{%
8864 /Subtype/Link%
8865 \ifHy@pdfa /F 4\fi
8866 /A<<%
8867 /Type/Action%
8868 /S/URI%
8869 /URI(\Hy@pstringURI)%
8870 \ifHy@href@ismap
8871 /IsMap true%
8872 \fi
8873 \Hy@href@nextactionraw
8874 >>%
8875 }%
8876 \relax
8877 \Hy@colorlink\@urlcolor#1%
8878 \close@pdfink
8879 \endgroup
8880 }
8881 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8882 \begingroup
8883 \def\Hy@pstringF{#2}%
8884 \Hy@CleanupFile\Hy@pstringF
8885 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
8886 \Hy@pstringdef\Hy@pstringD{#3}%

```

```

8887 \Hy@MakeRemoteAction
8888 \leavevmode
8889 \pdfstartlink
8890 attr{%
8891 \Hy@setpdfborder
8892 \ifx\@pdfhighlight\@empty
8893 \else
8894 /H\@pdfhighlight
8895 \fi
8896 \ifx\@filebordercolor\relax
8897 \else
8898 /C[\@filebordercolor]%
8899 \fi
8900 }%
8901 user {%
8902 /Subtype/Link%
8903 \ifHy@pdfa /F 4\fi
8904 /A<<%
8905 /F(\Hy@pstringF)%
8906 /S/GoToR%
8907 \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}

```

```

8908 \ifx\#3\%
8909 /D[\Hy@href@page\@pdfremotestartview]%
8910 \else
8911 /D(\Hy@pstringD)%
8912 \fi
8913 \Hy@href@nextactionraw
8914 >>%
8915 }%
8916 \relax
8917 \Hy@colorlink\@filecolor#1%
8918 \close@pdflink
8919 \endgroup
8920 }
8921 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8922 \begingroup
8923 \Hy@pstringdef\Hy@pstringF{#1}%
8924 \Hy@pstringdef\Hy@pstringP{#3}%
8925 \leavevmode
8926 \pdfstartlink
8927 attr{%
8928 \Hy@setpdfborder
8929 \ifx\@pdfhighlight\@empty
8930 \else
8931 /H\@pdfhighlight
8932 \fi

```

```

8933 \ifx\@runbordercolor\relax
8934 \else
8935 /C[\@runbordercolor]%
8936 \fi
8937 }%
8938 user {%
8939 /Subtype/Link%
8940 \ifHy@pdfa /F 4\fi
8941 /A<<%
8942 /F(\Hy@pstringF)%
8943 /S/Launch%
8944 \Hy@SetNewWindow
8945 \ifx\#3\%
8946 \else
8947 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8948 \fi
8949 \Hy@href@nextactionraw
8950 >>%
8951 }%
8952 \relax
8953 \Hy@colorlink\@runcolor#2%
8954 \close@pdflink
8955 \endgroup
8956 }

```

\@pdfproducer

```

8957 \ifx\@pdfproducer\relax
8958 \begingroup\expandafter\expandafter\endgroup
8959 \expandafter\ifx\csname luatexversion\endcsname\relax
8960 \def\@pdfproducer{pdfTeX}%
8961 \ifx\eTeXversion\@undefined
8962 \else
8963 \ifx\eTeXversion\relax
8964 \else
8965 \ifnum\eTeXversion>0 %
8966 \def\@pdfproducer{pdfTeX}%
8967 \fi
8968 \fi
8969 \fi
8970 \ifx\pdfTeXversion\@undefined
8971 \else
8972 \ifnum\pdfTeXversion<100 %
8973 \edef\@pdfproducer{%
8974 \@pdfproducer
8975 \the\pdfTeXversion.\pdfTeXrevision
8976 }%
8977 \else
8978 \ifnum\pdfTeXversion<130 %
8979 \edef\@pdfproducer{%
8980 \@pdfproducer-
8981 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8982 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8983 \pdfTeXrevision
8984 }%
8985 \else
8986 \ifnum\pdfTeXversion<140 %
8987 \else

```



```

8988     \def\@pdfproducer{pdfTeX}%
8989     \fi
8990     \edef\@pdfproducer{%
8991       \@pdfproducer-%
8992       \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8993       \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8994       \pdfTeXrevision
8995     }%
8996     \fi
8997     \fi
8998     \fi
8999     \else
9000     \begingroup
9001       \count@=\luatexversion
9002       \divide\count@ by 100 %
9003       \edef\x{\the\count@}%
9004       \count@=-\x\relax
9005       \multiply\count@ by 100 %
9006       \advance\count@ by \luatexversion
9007       \edef\x{\endgroup
9008         \def\noexpand\@pdfproducer{%
9009           LuaTeX-\x.\the\count@.\luatexrevision
9010         }%
9011       }%
9012       \x
9013     \fi
9014     \fi

```

\PDF@SetupDox

```

9015 \def\PDF@SetupDoc{%
9016   \ifx\@pdfpagescrop\@empty
9017   \else
9018     \edef\process@me{%
9019       \pdfpagesattr={%
9020         /CropBox[\@pdfpagescrop]%
9021         \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
9022         \else
9023           ^^J\the\pdfpagesattr
9024         \fi
9025       }%
9026     }%
9027     \process@me
9028   \fi
9029   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9030   \pdfcatalog{%
9031     /PageMode/\@pdfpagemode
9032     \ifx\@baseurl\@empty
9033     \else
9034       /URI<</Base(\Hy@pstringB)>>%
9035     \fi
9036   }%
9037   \ifx\@pdfstartpage\@empty
9038   \else
9039     \ifx\@pdfstartview\@empty
9040     \else
9041       openaction goto page\@pdfstartpage{\@pdfstartview}%
9042     \fi

```

```

9043 \fi
9044 \edef\Hy@temp{%
9045 \ifHy@toolbar\else /HideToolbar true\fi
9046 \ifHy@menubar\else /HideMenubar true\fi
9047 \ifHy>windowui\else /HideWindowUI true\fi
9048 \ifHy@fitwindow /FitWindow true\fi
9049 \ifHy@centerwindow /CenterWindow true\fi
9050 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9051 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9052 \Hy@UseNameKey{Direction}\@pdfdirection
9053 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9054 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9055 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9056 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9057 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9058 \Hy@UseNameKey{Duplex}\@pdfduplex
9059 \ifx\@pdfpicktraybypdfsize\@empty
9060 \else
9061 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9062 \fi
9063 \ifx\@pdfprintpagerange\@empty
9064 \else
9065 /PrintPageRange\@pdfprintpagerange\%
9066 \fi
9067 \ifx\@pdfnumcopies\@empty
9068 \else
9069 /NumCopies \@pdfnumcopies
9070 \fi
9071 }%
9072 \pdfcatalog{%
9073 \ifx\Hy@temp\@empty
9074 \else
9075 /ViewerPreferences<<\Hy@temp>>%
9076 \fi
9077 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9078 \ifx\@pdflang\@empty
9079 \else
9080 /Lang(\@pdflang)%
9081 \fi
9082 }%
9083 }

```

\PDF@FinishDoc

```

9084 \def\PDF@FinishDoc{%
9085 \pdf@ifdraftmode{}\{%
9086 \Hy@UseMaketitleInfos
9087 \HyInfo@GenerateAddons
9088 \pdfinfo{%
9089 /Author(\@pdfauthor)%
9090 /Title(\@pdftitle)%
9091 /Subject(\@pdfsubject)%
9092 /Creator(\@pdfcreator)%
9093 \ifx\@pdfcreationdate\@empty
9094 \else
9095 /CreationDate(\@pdfcreationdate)%
9096 \fi
9097 \ifx\@pdfmoddate\@empty

```

```

9098 \else
9099 /ModDate(\@pdfmoddate)%
9100 \fi
9101 \ifx\@pdfproducer\relax
9102 \else
9103 /Producer(\@pdfproducer)%
9104 \fi
9105 /Keywords(\@pdfkeywords)%
9106 \ifx\@pdftrapped\@empty
9107 \else
9108 /Trapped/\@pdftrapped
9109 \fi
9110 \HyInfo@Addons
9111 }%
9112 }%
9113 \Hy@DisableOption{pdfauthor}%
9114 \Hy@DisableOption{pdftitle}%
9115 \Hy@DisableOption{pdfsubject}%
9116 \Hy@DisableOption{pdfcreator}%
9117 \Hy@DisableOption{pdfcreationdate}%
9118 \Hy@DisableOption{pdfmoddate}%
9119 \Hy@DisableOption{pdfproducer}%
9120 \Hy@DisableOption{pdfkeywords}%
9121 \Hy@DisableOption{pdftrapped}%
9122 \Hy@DisableOption{pdfinfo}%
9123 }

```

`\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`.

```

9124 \def\hyper@pagetransition{%
9125 \ifx\@pdfpagetransition\relax
9126 \else
9127 \expandafter\Hy@RemoveTransPageAttr
9128 \the\pdfpageattr^^J/Trans{}}>>\END
9129 \ifx\@pdfpagetransition\@empty
9130 \else
9131 \edef\@processme{%
9132 \global\pdfpageattr{%
9133 \the\pdfpageattr
9134 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9135 }%
9136 }%
9137 \@processme
9138 \fi
9139 \fi
9140 }

```

`\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.

```

9141 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9142 \ifx\#2\%
9143 \global\pdfpageattr{#1}%
9144 \else
9145 \Hy@RemoveTransPageAttr#1#4\END

```

```

9146 \fi
9147 }

```

`\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`.

```

9148 \def\hyper@pageduration{%
9149 \ifx\@pdfpageduration\relax
9150 \else
9151 \expandafter
9152 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9153 \ifx\@pdfpageduration\@empty
9154 \else
9155 \edef\@processme{%
9156 \global\pdfpageattr{%
9157 \the\pdfpageattr
9158 ^^J/Dur \@pdfpageduration\space
9159 }%
9160 }%
9161 \@processme
9162 \fi
9163 \fi
9164 }

```

`\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.

```

9165 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9166 \ifx\#2\%
9167 \global\pdfpageattr{#1}%
9168 \else
9169 \Hy@RemoveDurPageAttr#1#4\END
9170 \fi
9171 }

```

`\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).

```

9172 \def\hyper@pagehidden{%
9173 \ifHy@useHidKey
9174 \expandafter
9175 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
9176 \ifHy@pdfpagehidden
9177 \edef\@processme{%
9178 \global\pdfpageattr{%
9179 \the\pdfpageattr
9180 ^^J/Hid true % SPACE
9181 }%
9182 }%
9183 \@processme
9184 \fi
9185 \fi
9186 }

```

`\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.

```

9187 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
9188   \ifx\#2\%
9189     \global\pdfpageattr{#1}%
9190   \else
9191     \Hy@RemoveHidPageAttr#1#4\END
9192   \fi
9193 }

9194 \pdf@ifdraftmode{}{%
9195   \g@addto@macro\Hy@EveryPageHook{%
9196     \hyper@pagetransition
9197     \hyper@pageduration
9198     \hyper@pagehidden
9199   }%
9200 }

```

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

```

9201 </pdfTeX>
9202 <*pdfTeX | xetex>
9203 \Hy@AtBeginDocument{%
9204   \ifHy@setpagesize
9205     \expandafter\@firstofone
9206   \else
9207     \expandafter\@gobble
9208   \fi
9209   {%
9210     \@ifclassloaded{seminar}{%
9211 <*pdfTeX>
9212   \setlength{\pdfhorigin}{1truein}%
9213   \setlength{\pdfvorigin}{1truein}%
9214 </pdfTeX>
9215   \ifportrait
9216     \ifdim\paperwidth=\z@
9217     \else
9218       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9219     \fi
9220     \ifdim\paperheight=\z@
9221     \else
9222       \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9223     \fi
9224   \else
9225     \ifdim\paperheight=\z@
9226     \else
9227       \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9228     \fi
9229     \ifdim\paperwidth=\z@
9230     \else
9231       \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9232     \fi
9233   \fi
9234 }{%
9235   \ltx@ifundefined{stockwidth}{%
9236     \ifdim\paperwidth>\z@
9237       \setlength{\pdfpagewidth}{\paperwidth}%
9238     \fi

```

```

9239     \ifdim\paperheight>\z@
9240         \setlength{\pdfpageheight}{\paperheight}%
9241     \fi
9242 }{%
9243     \ifdim\stockwidth>\z@
9244         \setlength{\pdfpagewidth}{\stockwidth}%
9245     \fi
9246     \ifdim\stockheight>\z@
9247         \setlength{\pdfpageheight}{\stockheight}%
9248     \fi
9249 }%
9250 }%
9251 }%
9252 \Hy@DisableOption{setpagesize}%
9253 }
9254 </pdfTeX | xetex>
9255 <*pdfTeX>
9256 \def\Acrobatmenu#1#2{%
9257     \Hy@Acrobatmenu{#1}{#2}{%
9258         \pdfstartlink
9259         attr{%
9260             \Hy@setpdfborder
9261             \ifx\@pdfhighlight\@empty
9262             \else
9263                 /H\@pdfhighlight
9264             \fi
9265             \ifx\@menubordercolor\relax
9266             \else
9267                 /C[\@menubordercolor]%
9268             \fi
9269         }%
9270         user{%
9271             /Subtype/Link%
9272             \ifHy@pdfa /F 4\fi
9273             /A<<%
9274             /S/Named%
9275             /N/#1%
9276             \Hy@href@nextactionraw
9277             >>%
9278         }%
9279         \relax
9280         \Hy@colorlink\@menucolor#2%
9281     \close@pdflink
9282 }%
9283 }

```

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.

```

9284 \def\Hy@FixNotFirstPage{%
9285     \gdef\Hy@FixNotFirstPage{%

```

```

9286 \setbox\AtBeginShipoutBox=\hbox{%
9287 \copy\AtBeginShipoutBox
9288 }%
9289 }%
9290 }
9291 \AtBeginShipout{\Hy@FixNotFirstPage}
9292 </pdfTeX>

```

46.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: `html:<base href = "href_string">`

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the TeX file — the TeX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form `href="#name_string"` with the *name_string* identical to the one in the name command) or as part of a URL (of the form `URL#name_string`). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

9293 <*hypertex>
9294 \providecommand*{\XR@ext}{dvi}
9295 \def\PDF@FinishDoc{}
9296 \def\PDF@SetupDoc{%
9297 \ifx\@baseurl\@empty
9298 \else
9299 \special{html:<base href="\@baseurl">}%
9300 \fi
9301 }
9302 \Hy@WrapperDef\hyper@anchor#1{%
9303 \Hy@SaveLastskip
9304 \Hy@VerboseAnchor{#1}%
9305 \begingroup
9306 \let\protect=\string
9307 \hyper@chars
9308 \special{html:<a name=%

```

```

9309     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9310 \endgroup
9311 \Hy@activeanchortrue
9312 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9313 \special{html:</a>}%
9314 \Hy@activeanchorfalse
9315 \Hy@RestoreLastskip
9316 }
9317 \Hy@WrapperDef\hyper@anchorstart#1{%
9318 \Hy@SaveLastskip
9319 \Hy@VerboseAnchor{#1}%
9320 \begingroup
9321 \hyper@chars
9322 \special{html:<a name=%
9323     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9324 \endgroup
9325 \Hy@activeanchortrue
9326 }
9327 \def\hyper@anchorend{%
9328 \special{html:</a>}%
9329 \Hy@activeanchorfalse
9330 \Hy@RestoreLastskip
9331 }
9332 \def\@urlltype{url}
9333 \def\hyper@linkstart#1#2{%
9334 \Hy@VerboseLinkStart{#1}{#2}%
9335 \expandafter\Hy@colorlink\csname @#1color\endcsname
9336 \def\Hy@tempa{#1}%
9337 \ifx\Hy@tempa\@urlltype
9338 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9339 \else
9340 \begingroup
9341 \hyper@chars
9342 \special{html:<a href=%
9343     \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
9344 \endgroup
9345 \fi
9346 }
9347 \def\hyper@linkend{%
9348 \special{html:</a>}%
9349 \Hy@endcolorlink
9350 }
9351 \def\hyper@linkfile#1#2#3{%
9352 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9353 }
9354 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link \special, we need to get its height; ask me why L^AT_EX constructs make this totally foul up, and make us revert to basic T_EX. I do not know.

```

9355 \leavevmode
9356 \ifHy@raiselinks
9357 \Hy@SaveSpaceFactor
9358 \Hy@SaveSavedSpaceFactor
9359 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9360 \Hy@RestoreSavedSpaceFactor
9361 \@linkdim\dp\@tempboxa
9362 \lower\@linkdim\hbox{%
9363 \hyper@chars

```



```

9364 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9365 }%
9366 \Hy@colorlink\@urlcolor
9367 \Hy@RestoreSpaceFactor
9368 #1%
9369 \Hy@SaveSpaceFactor
9370 \@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).

```

9371 \advance\@linkdim by -6.5\p@
9372 \raise\@linkdim\hbox{\special{html:</a>}}%
9373 \Hy@endcolorlink
9374 \Hy@RestoreSpaceFactor
9375 \else
9376 \begingroup
9377 \hyper@chars
9378 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9379 \Hy@colorlink\@urlcolor#1%
9380 \special{html:</a>}%
9381 \Hy@endcolorlink
9382 \endgroup
9383 \fi
9384 }

```

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

```

9385 \def\hyper@link#1#2#3{%
9386 \Hy@VerboseLinkStart{#1}{#2}%
9387 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9388 }
9389 \def\hyper@image#1#2{%
9390 \begingroup
9391 \hyper@chars
9392 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9393 \endgroup
9394 }
9395 \</hypertex>
9396 \<*dviwindo>

```

46.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default c:/netscape/netscape is not suitable) Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertex cfg. For dviwindo, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

9397 \providecommand*\XR@ext{\dvi}
9398 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9399 \Hy@WrapperDef\hyper@anchor#1{%
9400 \Hy@SaveLastskip

```

```

9401 \Hy@VerboseAnchor{#1}%
9402 \begingroup
9403 \let\protect=\string
9404 \special{mark: #1}%
9405 \endgroup
9406 \Hy@activeanchortrue
9407 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9408 \Hy@activeanchorfalse
9409 \Hy@RestoreLastskip
9410 }
9411 \Hy@WrapperDef\hyper@anchorstart#1{%
9412 \Hy@SaveLastskip
9413 \Hy@VerboseAnchor{#1}%
9414 \special{mark: #1}%
9415 \Hy@activeanchortrue
9416 }
9417 \def\hyper@anchorend{%
9418 \Hy@activeanchorfalse
9419 \Hy@RestoreLastskip
9420 }
9421 \def\hyper@linkstart#1#2{%
9422 \Hy@VerboseLinkStart{#1}{#2}%
9423 \expandafter\Hy@colorlink\csname @#1color\endcsname
9424 \special{button: %
9425 10000000 %
9426 \number\baselineskip\space
9427 #2%
9428 }%
9429 }
9430 \def\hyper@linkend{%
9431 \Hy@endcolorlink
9432 }
9433 \def\hyper@link#1#2#3{%
9434 \Hy@VerboseLinkStart{#1}{#2}%
9435 \leavevmode
9436 \ifHy@raiselinks
9437 \Hy@SaveSpaceFactor
9438 \Hy@SaveSavedSpaceFactor
9439 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9440 \Hy@RestoreSavedSpaceFactor
9441 \@linkdim\dp\@tempboxa
9442 \lower\@linkdim\hbox{%
9443 \special{button: %
9444 \number\wd\@tempboxa\space
9445 \number\ht\@tempboxa\space
9446 #2%
9447 }%
9448 \expandafter\Hy@colorlink\csname @#1color\endcsname
9449 \Hy@RestoreSpaceFactor
9450 #3%
9451 \Hy@SaveSpaceFactor
9452 \Hy@endcolorlink
9453 }%
9454 \@linkdim\ht\@tempboxa
9455 \advance\@linkdim by -6.5\p@
9456 \raise\@linkdim\hbox{}%
9457 \Hy@RestoreSpaceFactor

```

```

9458 \else
9459 \special{button: %
9460 \number\wd\@tempboxa\space
9461 \number\ht\@tempboxa\space
9462 #2%
9463 }%
9464 \expandafter\Hy@colorlink\csname @#1color\endcsname
9465 #3%
9466 \Hy@endcolorlink
9467 \fi
9468 }
9469 \def\hyper@linkurl#1#2{%
9470 \begingroup
9471 \hyper@chars
9472 \leavevmode
9473 \ifHy@raiselinks
9474 \Hy@SaveSpaceFactor
9475 \Hy@SaveSavedSpaceFactor
9476 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9477 \Hy@RestoreSavedSpaceFactor
9478 \@linkdim\dp\@tempboxa
9479 \lower\@linkdim\hbox{%
9480 \special{button: %
9481 \number\wd\@tempboxa\space
9482 \number\ht\@tempboxa\space
9483 launch: \wwwbrowser\space
9484 #2%
9485 }%
9486 \Hy@colorlink\@urlcolor
9487 \Hy@RestoreSpaceFactor
9488 #1%
9489 \Hy@SaveSpaceFactor
9490 \Hy@endcolorlink
9491 }%
9492 \@linkdim\ht\@tempboxa
9493 \advance\@linkdim by -6.5\p@
9494 \raise\@linkdim\hbox{%
9495 \Hy@RestoreSpaceFactor
9496 \else
9497 \special{button: %
9498 \number\wd\@tempboxa\space
9499 \number\ht\@tempboxa\space
9500 launch: \wwwbrowser\space
9501 #2%
9502 }%
9503 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9504 \fi
9505 \endgroup
9506 }
9507 \def\hyper@linkfile#1#2#3{%
9508 \begingroup
9509 \hyper@chars
9510 \leavevmode
9511 \ifHy@raiselinks
9512 \Hy@SaveSpaceFactor
9513 \Hy@SaveSavedSpaceFactor
9514 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%

```

```

9515 \Hy@RestoreSavedSpaceFactor
9516 \@linkdim\dp\@tempboxa
9517 \lower\@linkdim\hbox{%
9518 \special{button: %
9519 \number\wd\@tempboxa\space
9520 \number\ht\@tempboxa\space
9521 #3,%
9522 file: #2%
9523 }%
9524 \Hy@colorlink\@filecolor
9525 \Hy@RestoreSpaceFactor
9526 #1%
9527 \Hy@SaveSpaceFactor
9528 \Hy@endcolorlink
9529 }%
9530 \@linkdim\ht\@tempboxa
9531 \advance\@linkdim by -6.5\p@
9532 \raise\@linkdim\hbox{}%
9533 \Hy@RestoreSpaceFactor
9534 \else
9535 \special{button: %
9536 \number\wd\@tempboxa\space
9537 \number\ht\@tempboxa\space
9538 #3,%
9539 file: #2%
9540 }%
9541 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9542 \fi
9543 \endgroup
9544 }
9545 \ifx\@pdfproducer\relax
9546 \def\@pdfproducer{dviwindo + Distiller}%
9547 \fi
9548 \HyInfo@AddonUnsupportedtrue
9549 \def\PDF@FinishDoc{%
9550 \Hy@UseMaketitleInfos
9551 \HyInfo@TrappedUnsupported
9552 \special{PDF: Keywords \@pdfkeywords}%
9553 \special{PDF: Title \@pdftitle}%
9554 \special{PDF: Creator \@pdfcreator}%
9555 \ifx\@pdfcreationdate\@empty
9556 \else
9557 \special{PDF: CreationDate \@pdfcreationdate}%
9558 \fi
9559 \ifx\@pdfmoddate\@empty
9560 \else
9561 \special{PDF: ModDate \@pdfmoddate}%
9562 \fi
9563 \special{PDF: Author \@pdfauthor}%
9564 \ifx\@pdfproducer\relax
9565 \else
9566 \special{PDF: Producer \@pdfproducer}%
9567 \fi
9568 \special{PDF: Subject \@pdfsubject}%
9569 \Hy@DisableOption{pdfauthor}%
9570 \Hy@DisableOption{pdftitle}%
9571 \Hy@DisableOption{pdfsubject}%

```

```

9572 \Hy@DisableOption{pdfcreator}%
9573 \Hy@DisableOption{pdfcreationdate}%
9574 \Hy@DisableOption{pdfmoddate}%
9575 \Hy@DisableOption{pdfproducer}%
9576 \Hy@DisableOption{pdfkeywords}%
9577 \Hy@DisableOption{pdftrapped}%
9578 \Hy@DisableOption{pdfinfo}%
9579 }
9580 \def\PDF@SetupDoc{%
9581 \ifx\@baseurl\@empty
9582 \else
9583 \special{PDF: Base \@baseurl}%
9584 \fi
9585 \ifx\@pdfpagescrop\@empty\else
9586 \special{PDF: BBox \@pdfpagescrop}%
9587 \fi
9588 \def\Hy@temp{%
9589 \ifx\@pdfstartpage\@empty
9590 \else
9591 \ifx\@pdfstartview\@empty
9592 \else
9593 \edef\Hy@temp{%
9594 ,Page=\@pdfstartpage
9595 ,View=\@pdfstartview
9596 }%
9597 \fi
9598 \fi
9599 \edef\Hy@temp{%
9600 \noexpand\pdfmark{%
9601 pdfmark=/DOCVIEW,%
9602 PageMode=/\@pdfpagemode
9603 \Hy@temp
9604 }%
9605 }%
9606 \Hy@temp
9607 \ifx\@pdfpagescrop\@empty
9608 \else
9609 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9610 \fi
9611 \edef\Hy@temp{%
9612 \ifHy@toolbar\else /HideToolbar true\fi
9613 \ifHy@menubar\else /HideMenubar true\fi
9614 \ifHy>windowui\else /HideWindowUI true\fi
9615 \ifHy@fitwindow /FitWindow true\fi
9616 \ifHy@centerwindow /CenterWindow true\fi
9617 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9618 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9619 \Hy@UseNameKey{Direction}\@pdfdirection
9620 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9621 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9622 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9623 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9624 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9625 \Hy@UseNameKey{Duplex}\@pdfduplex
9626 \ifx\@pdfpicktraybypdfsize\@empty
9627 \else
9628 /PickTrayByPDFSize \@pdfpicktraybypdfsize

```

```

9629 \fi
9630 \ifx\@pdfprintpagerange\@empty
9631 \else
9632 /PrintPageRange[\@pdfprintpagerange]%
9633 \fi
9634 \ifx\@pdfnumcopies\@empty
9635 \else
9636 /NumCopies \@pdfnumcopies
9637 \fi
9638 }%
9639 \pdfmark{pdfmark=/PUT,%
9640 Raw={%
9641 \string{Catalog\string}<<%
9642 \ifx\Hy@temp\@empty
9643 \else
9644 /ViewerPreferences<<\Hy@temp>>%
9645 \fi
9646 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9647 \ifx\@pdflang\@empty
9648 \else
9649 /Lang(\@pdflang)%
9650 \fi
9651 >>%
9652 }%
9653 }%
9654 }
9655 </dviwindo>
9656 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

9657 \providecommand*{\XR@ext}{pdf}
9658 \Hy@setbreaklinks{true}
9659 \def\HyPat@ObjRef{%
9660 @[\^ ]+}%
9661 }
9662 \newsavebox{\pdfm@box}
9663 \def\@pdfm@mark#1{\special{pdf:#1}}
9664 \Hy@WrapperDef\@pdfm@dest#1{%
9665 \Hy@SaveLastskip
9666 \Hy@VerboseAnchor{#1}%
9667 \begingroup
9668 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9669 \def\x{XYZ}%
9670 \ifx\x\@pdfview
9671 \def\x{XYZ @xpos @ypos null}%
9672 \else
9673 \def\x{FitH}%
9674 \ifx\x\@pdfview
9675 \def\x{FitH @ypos}%
9676 \else
9677 \def\x{FitBH}%
9678 \ifx\x\@pdfview
9679 \def\x{FitBH @ypos}%
9680 \else
9681 \def\x{FitV}%

```

```

9682 \ifx\x\@pdfview
9683 \def\x{FitV @xpos}%
9684 \else
9685 \def\x{FitBV}%
9686 \ifx\x\@pdfview
9687 \def\x{FitBV @xpos}%
9688 \else
9689 \def\x{Fit}%
9690 \ifx\x\@pdfview
9691 \let\x\@pdfview
9692 \else
9693 \def\x{FitB}%
9694 \ifx\x\@pdfview
9695 \let\x\@pdfview
9696 \else
9697 \def\x{FitR}%
9698 \ifx\x\@pdfview
9699 \Hy@Warning{'pdfview=FitR' is not supported}%
9700 \def\x{XYZ @xpos @ypos null}%
9701 \else
9702 \@onelevel@sanitize\@pdfview
9703 \Hy@Warning{%
9704 Unknown value '\@pdfview' for pdfview%
9705 }%
9706 \def\x{XYZ @xpos @ypos null}%
9707 \fi
9708 \fi
9709 \fi
9710 \fi
9711 \fi
9712 \fi
9713 \fi
9714 \fi
9715 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9716 \endgroup
9717 \Hy@RestoreLastskip
9718 }
9719 \providecommand*\@pdfview{XYZ}
9720 \providecommand*\@pdfborder{0 0 1}
9721 \providecommand*\@pdfborderstyle{}
9722 \def\hyper@anchor#1{%
9723 \@pdfm@dest{#1}%
9724 }
9725 \def\hyper@anchorstart#1{%
9726 \Hy@activeanchortrue
9727 \@pdfm@dest{#1}%
9728 }
9729 \def\hyper@anchorend{%
9730 \Hy@activeanchorfalse
9731 }
9732 \newcounter{Hy@AnnotLevel}
9733 \ifHy@ocgcolorlinks
9734 \def\OBJ@OCG@view{@OCG@view}%
9735 \@pdfm@mark{%
9736 obj \OBJ@OCG@view <<%
9737 /Type/OCG%
9738 /Name(View)%

```

```

9739      /Usage<<%
9740      /Print<<%
9741      /PrintState/OFF%
9742      >>%
9743      /View<<%
9744      /ViewState/ON%
9745      >>%
9746      >>%
9747      >>%
9748      }%
9749      \@pdfm@mark{close \OBJ@OCG@view}%
9750      \def\OBJ@OCG@print{\@OCG@print}%
9751      \@pdfm@mark{%
9752      obj \OBJ@OCG@print <<%
9753      /Type/OCG%
9754      /Name(Print)%
9755      /Usage<<%
9756      /Print<<%
9757      /PrintState/ON%
9758      >>%
9759      /View<<%
9760      /ViewState/OFF%
9761      >>%
9762      >>%
9763      >>%
9764      }%
9765      \@pdfm@mark{close \OBJ@OCG@print}%
9766      \def\OBJ@OCGs{\@OCGs}%
9767      \@pdfm@mark{%
9768      obj \OBJ@OCGs [%
9769      \OBJ@OCG@view\space\OBJ@OCG@print
9770      ]%
9771      }%
9772      \@pdfm@mark{close \OBJ@OCGs}%
9773      \@pdfm@mark{%
9774      put @catalog <<%
9775      /OCProperties<<%
9776      /OCGs \OBJ@OCGs
9777      /D<<%
9778      /OFF[\OBJ@OCG@print]%
9779      /AS[%
9780      <<%
9781      /Event/View%
9782      /OCGs \OBJ@OCGs
9783      /Category[/View]%
9784      >>%
9785      <<%
9786      /Event/Print%
9787      /OCGs \OBJ@OCGs
9788      /Category[/Print]%
9789      >>%
9790      <<%
9791      /Event/Export%
9792      /OCGs \OBJ@OCGs
9793      /Category[/Print]%
9794      >>%
9795      ]%

```



```

9796     >>%
9797     >>%
9798     >>%
9799 }%
9800 \AtBeginShipout{%
9801   \setbox\AtBeginShipoutBox=\hbox{%
9802     \copy\AtBeginShipoutBox
9803     \@pdfm@mark{%
9804       put @resources <<%
9805         /Properties<<%
9806         /OCView \OBJ@OCG@view
9807         /OCPrint \OBJ@OCG@print
9808       >>%
9809     >>%
9810   }%
9811 }%
9812 }%
9813 \Hy@AtBeginDocument{%
9814   \def\Hy@colorlink#1{%
9815     \begingroup
9816     \ifHy@ocgcolorlinks
9817       \def\Hy@ocgcolor{#1}%
9818       \setbox0=\hbox\bgroup\color@begingroup
9819     \else
9820       \HyColor@UseColor#1%
9821     \fi
9822   }%
9823   \def\Hy@endcolorlink{%
9824     \ifHy@ocgcolorlinks
9825       \color@endgroup\egroup
9826     \mbox{%
9827       \@pdfm@mark{content /OC/OCPrint BDC}%
9828       \rlap{\copy0}%
9829       \@pdfm@mark{content EMC/OC/OCView BDC}%
9830     \begingroup
9831     \expandafter\HyColor@UseColor\Hy@ocgcolor
9832     \box0 %
9833   \endgroup
9834   \@pdfm@mark{content EMC}%
9835 }%
9836 \fi
9837 \endgroup
9838 }%
9839 }%
9840 \else
9841   \Hy@DisableOption{ocgcolorlinks}%
9842 \fi

9843 \def\Hy@BeginAnnot#1{%
9844   \stepcounter{Hy@AnnotLevel}%
9845   \ifnum\value{Hy@AnnotLevel}=\@ne
9846     #1%
9847   \fi
9848 }
9849 \def\Hy@endAnnot{%
9850   \ifnum\value{Hy@AnnotLevel}=\@ne
9851     \Hy@endcolorlink
9852     \@pdfm@mark{eann}%

```

```

9853 \fi
9854 \addtocounter{Hy@AnnotLevel}\m@ne
9855 }

9856 \def\Hy@undefinedname{UNDEFINED}
9857 \def\hyper@linkstart#1#2{%
9858   \Hy@VerboseLinkStart{#1}{#2}%
9859   \Hy@BeginAnnot{%
9860     \protected@edef\Hy@testname{#2}%
9861     \ifx\Hy@testname\@empty
9862       \Hy@Warning{%
9863         Empty destination name,\MessageBreak
9864         using '\Hy@undefinedname'%
9865       }%
9866       \let\Hy@testname\Hy@undefinedname
9867     \else
9868       \Hy@pstringdef\Hy@testname{%
9869         \expandafter\HyperDestNameFilter\expandafter{%
9870           \Hy@testname
9871         }%
9872       }%
9873     \fi
9874     \@pdfm@mark{%
9875       bann<<%
9876       /Type/Annot%
9877       /Subtype/Link%
9878       \ifHy@pdfa /F 4\fi
9879       \Hy@setpdfborder
9880       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9881       \else
9882         /C[\csname @#1bordercolor\endcsname]%
9883       \fi
9884       /A<<%
9885       /S/GoTo%
9886       /D(\Hy@testname)%
9887       \Hy@href@nextactionraw
9888       >>%
9889       >>%
9890     }%
9891     \expandafter\Hy@colorlink\csname @#1color\endcsname
9892   }%
9893 }

9894 \def\hyper@linkend{\Hy@endAnnot}%
9895 \def\hyper@link#1#2#3{%
9896   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9897 }

9898 \def\hyper@linkfile#1#2#3{%
9899   \leavevmode
9900   \Hy@BeginAnnot{%
9901     \def\Hy@pstringF{#2}%
9902     \Hy@CleanupFile\Hy@pstringF
9903     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9904     \Hy@pstringdef\Hy@pstringD{#3}%
9905     \Hy@MakeRemoteAction
9906     \@pdfm@mark{%
9907       bann<<%
9908       /Type/Annot%
9909       /Subtype/Link%

```

```

9910     \ifHy@pdfa /F 4\fi
9911     \Hy@setpdfborder
9912     \ifx\@filebordercolor\relax
9913     \else
9914         /C[\@filebordercolor]%
9915     \fi
9916     /A<<%
9917     /S/GoToR%
9918     /F(\Hy@pstringF)%
9919     /D%
9920     \ifx\#\#3\%
9921         [\Hy@href@page\@pdfremotestartview]%
9922     \else
9923         (\Hy@pstringD)%
9924     \fi
9925     \Hy@SetNewWindow
9926     \Hy@href@nextactionraw
9927     >>%
9928     >>%
9929     }%
9930     \Hy@colorlink\@filecolor
9931     }%
9932     #1%
9933     \Hy@EndAnnot
9934 }
9935 \def\hyper@linkurl#1#2{%
9936     \leavevmode
9937     \Hy@BeginAnnot{%
9938         \Hy@pstringdef\Hy@pstringURI{#2}%
9939         \@pdfm@mark{%
9940             bann<<%
9941             /Type/Annot%
9942             /Subtype/Link%
9943             \ifHy@pdfa /F 4\fi
9944             \Hy@setpdfborder
9945             \ifx\@urlbordercolor\relax
9946             \else
9947                 /C[\@urlbordercolor]%
9948             \fi
9949             /A<<%
9950             /S/URI%
9951             /URI(\Hy@pstringURI)%
9952             \ifHy@href@ismap
9953                 /IsMap true%
9954             \fi
9955             \Hy@href@nextactionraw
9956             >>%
9957             >>%
9958             }%
9959             \Hy@colorlink\@urlcolor
9960             }%
9961             #1%
9962             \Hy@EndAnnot
9963         }
9964     \def\Acrobatmenu#1#2{%
9965         \Hy@Acrobatmenu{#1}{#2}{%
9966             \Hy@BeginAnnot{%

```

```

9967 \pdfmark{
9968   bann<<%
9969   /Type/Annot%
9970   /Subtype/Link%
9971   \ifHy@pdfa /F 4\fi
9972   /A<<%
9973   /S/Named%
9974   /N/#1%
9975   \Hy@href@nextactionraw
9976   >>%
9977   \Hy@setpdfborder
9978   \ifx\@menubordercolor\relax
9979   \relax
9980   /C[\@menubordercolor]%
9981   \fi
9982   >>%
9983   }%
9984   \Hy@colorlink\@menucolor
9985   }%
9986   #2%
9987   \Hy@endAnnot
9988   }%
9989 }
9990 \ifx\@pdfproducer\relax
9991 \def\@pdfproducer{dvipdfm}%

```

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

```

9992 \begingroup\expandafter\expandafter\expandafter\endgroup
9993 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9994 \else
9995 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9996 \fi
9997 \fi
9998 \def\PDF@FinishDoc{%
9999 \Hy@UseMaketitleInfos
10000 \HyInfo@GenerateAddons
10001 \pdfmark{
10002   docinfo<<%
10003   /Title(\pdftitle)%
10004   /Subject(\pdfsubject)%
10005   /Creator(\pdfcreator)%
10006   \ifx\pdfcreationdate\empty
10007   \else
10008   /CreationDate(\pdfcreationdate)%
10009   \fi
10010   \ifx\pdfmoddate\empty
10011   \else
10012   /ModDate(\pdfmoddate)%
10013   \fi
10014   /Author(\pdfauthor)%
10015   \ifx\pdfproducer\relax
10016   \else
10017   /Producer(\pdfproducer)%
10018   \fi
10019   /Keywords(\pdfkeywords)%
10020   \ifx\pdftrapped\empty
10021   \else
10022   /Trapped/\pdftrapped

```

```

10023     \fi
10024     \HyInfo@Addons
10025     >>%
10026 }%
10027 \Hy@DisableOption{pdfauthor}%
10028 \Hy@DisableOption{pdftitle}%
10029 \Hy@DisableOption{pdfsubject}%
10030 \Hy@DisableOption{pdfcreator}%
10031 \Hy@DisableOption{pdfcreationdate}%
10032 \Hy@DisableOption{pdfmoddate}%
10033 \Hy@DisableOption{pdfproducer}%
10034 \Hy@DisableOption{pdfkeywords}%
10035 \Hy@DisableOption{pdftrapped}%
10036 \Hy@DisableOption{pdfinfo}%
10037 }

10038 \def\PDF@SetupDoc{%
10039 \edef\Hy@temp{%
10040   \ifHy@toolbar\else /HideToolbar true\fi
10041   \ifHy@menubar\else /HideMenubar true\fi
10042   \ifHy>windowui\else /HideWindowUI true\fi
10043   \ifHy@fitwindow /FitWindow true\fi
10044   \ifHy@centerwindow /CenterWindow true\fi
10045   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10046   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10047   \Hy@UseNameKey{Direction}\@pdfdirection
10048   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10049   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10050   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10051   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10052   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10053   \Hy@UseNameKey{Duplex}\@pdfduplex
10054   \ifx\@pdfpicktraybypdfsize\@empty
10055   \else
10056     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10057   \fi
10058   \ifx\@pdfprintpagerange\@empty
10059   \else
10060     /PrintPageRange[\@pdfprintpagerange]%
10061   \fi
10062   \ifx\@pdfnumcopies\@empty
10063   \else
10064     /NumCopies \@pdfnumcopies
10065   \fi
10066 }%
10067 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10068 \@pdfm@mark{%
10069   docview<<%
10070     \ifx\@pdfstartpage\@empty
10071     \else
10072       \ifx\@pdfstartview\@empty
10073       \else
10074         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
10075       \fi
10076     \fi
10077     \ifx\@baseurl\@empty
10078     \else
10079       /URI<</Base(\Hy@pstringB)>>%

```

```

10080 \fi
10081 /PageMode/\@pdfpagemode
10082 \ifx\Hy@temp\@empty
10083 \else
10084 /ViewerPreferences<<\Hy@temp>>%
10085 \fi
10086 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10087 \ifx\@pdflang\@empty
10088 \else
10089 /Lang(\@pdflang)%
10090 \fi
10091 >>%
10092 }%
10093 \ifx\@pdfpagescrop\@empty
10094 \else
10095 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10096 \fi
10097 }
10098 </dvipdfm | xetex>

```

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

```

10099 <*dvipdfm>
10100 \AtBeginShipoutFirst{%
10101 \ifHy@setpagesize
10102 \begingroup
10103 \@ifundefined{stockwidth}{%
10104 \ifdim\paperwidth>\z@
10105 \ifdim\paperheight>\z@
10106 \special{papersize=\the\paperwidth,\the\paperheight}%
10107 \fi
10108 \fi
10109 }{%
10110 \ifdim\stockwidth>\z@
10111 \ifdim\stockheight>\z@
10112 \special{papersize=\the\stockwidth,\the\stockheight}%
10113 \fi
10114 \fi
10115 }%
10116 \endgroup
10117 \fi
10118 \Hy@DisableOption{setpagesize}%
10119 }
10120 </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.

```

10121 <*vtexhtml>
10122 \providecommand*\XR@ext\{htm}
10123 \RequirePackage{vtexhtml}
10124 \newif\if@Localurl
10125 \def\PDF@FinishDoc{}
10126 \def\PDF@SetupDoc{%
10127 \ifx\@baseurl\@empty
10128 \else

```

```

10129 \special{!direct <base href="\@baseurl">}%
10130 \fi
10131 }
10132 \def\@urlltype{url}
10133 \def\hyper@link#1#2#3{%
10134 \Hy@VerboseLinkStart{#1}{#2}%
10135 \leavevmode
10136 \special{!direct <a href=%
10137 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10138 #3%
10139 \special{!direct </a>}%
10140 }
10141 \def\hyper@linkurl#1#2{%
10142 \begingroup
10143 \hyper@chars
10144 \leavevmode
10145 \MathBSuppress=1\relax
10146 \special{!direct <a href=%
10147 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10148 #1%
10149 \MathBSuppress=0\relax
10150 \special{!direct </a>}%
10151 \endgroup
10152 }
10153 \def\hyper@linkfile#1#2#3{%
10154 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\#3\fi}%
10155 }
10156 \def\hyper@linkstart#1#2{%
10157 \Hy@VerboseLinkStart{#1}{#2}%
10158 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
10159 \@Localurlltrue
10160 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10161 \else
10162 \@Localurllfalse
10163 \begingroup
10164 \hyper@chars
10165 \special{!aref \HyperDestNameFilter{#2}}%
10166 \endgroup
10167 \fi
10168 }
10169 \def\hyper@linkend{%
10170 \if@Localurl
10171 \special{!endaref}%
10172 \else
10173 \special{!direct </a>}%
10174 \fi
10175 }
10176 \Hy@WrapperDef\hyper@anchorstart#1{%
10177 \Hy@SaveLastskip
10178 \Hy@VerboseAnchor{#1}%
10179 \begingroup
10180 \hyper@chars
10181 \special{!aname #1}%
10182 \special{!direct <a name=%
10183 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10184 \endgroup
10185 \Hy@activeanchortrue

```

```

10186 }
10187 \def\hyper@anchorend{%
10188   \special{!direct </a>}%
10189   \Hy@activeanchorfalse
10190   \Hy@RestoreLastskip
10191 }
10192 \Hy@WrapperDef\hyper@anchor#1{%
10193   \Hy@SaveLastskip
10194   \Hy@VerboseAnchor{#1}%
10195   \begingroup
10196     \let\protect=\string
10197     \hyper@chars
10198     \leavevmode
10199     \special{!aname #1}%
10200     \special{!direct <a name=%
10201       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10202   \endgroup
10203   \Hy@activeanchortrue
10204   \bgroup\anchor@spot\egroup
10205   \special{!direct </a>}%
10206   \Hy@activeanchorfalse
10207   \Hy@RestoreLastskip
10208 }
10209 \def\@Form[#1]{%
10210   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10211 }
10212 \def\@endForm{}
10213 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10214   \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10215 }
10216 \def\@TextField[#1]#2{% parameters, label
10217   \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10218 }
10219 \def\@CheckBox[#1]#2{% parameters, label
10220   \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10221 }
10222 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10223   \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10224 }
10225 \def\@PushButton[#1]#2{% parameters, label
10226   \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10227 }
10228 \def\@Reset[#1]#2{%
10229   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10230 }
10231 \def\@Submit[#1]#2{%
10232   \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10233 }
10234 </vtexhtml>
10235 <*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.
10236 \ifx\mediaheight\@undefined
10237 \else
10238   \ifx\mediaheight\relax

```



```

10239 \else
10240   \ifHy@setpagesize
10241     \providecommand*\VTeXInitMediaSize{%
10242       \ltx@ifundefined{stockwidth}{%
10243         \ifdim\paperheight>0pt %
10244           \setlength\mediaheight\paperheight
10245         \fi
10246         \ifdim\paperheight>0pt %
10247           \setlength\mediawidth\paperwidth
10248         \fi
10249       }{%
10250         \ifdim\stockheight>0pt %
10251           \setlength\mediaheight\stockheight
10252         \fi
10253         \ifdim\stockwidth>0pt %
10254           \setlength\mediawidth\stockwidth
10255         \fi
10256       }%
10257     }%
10258   \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10259 \fi
10260 \Hy@DisableOption{setpagesize}%
10261 \fi
10262 \fi

```

Older versions of VTeX require xyz in lower case.

```

10263 \providecommand*\@pdfview{xyz}
10264 \providecommand*\@pdfborder{0 0 1}
10265 \providecommand*\@pdfborderstyle{}
10266 \let\CurrentBorderColor\@linkbordercolor
10267 \Hy@WrapperDef\hyper@anchor#1{%
10268   \Hy@SaveLastskip
10269   \Hy@VerboseAnchor{#1}%
10270   \begingroup
10271     \let\protect=\string
10272     \hyper@chars
10273     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10274   \endgroup
10275   \Hy@activeanchortrue
10276   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10277   \Hy@activeanchorfalse
10278   \Hy@RestoreLastskip
10279 }
10280 \Hy@WrapperDef\hyper@anchorstart#1{%
10281   \Hy@SaveLastskip
10282   \Hy@VerboseAnchor{#1}%
10283   \begingroup
10284     \hyper@chars
10285     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10286   \endgroup
10287   \Hy@activeanchortrue
10288 }
10289 \def\hyper@anchorend{%
10290   \Hy@activeanchorfalse
10291   \Hy@RestoreLastskip
10292 }
10293 \def\@urltype{url}
10294 \def\Hy@undefinedname{UNDEFINED}

```

```

10295 \def\hyper@linkstart#1#2{%
10296   \Hy@VerboseLinkStart{#1}{#2}%
10297   \Hy@pstringdef\Hy@pstringURI{#2}%
10298   \expandafter\Hy@colorlink\csname @#1color\endcsname
10299   \ltx@ifundefined{@#1bordercolor}{%
10300     \let\CurrentBorderColor\relax
10301   }{%
10302     \edef\CurrentBorderColor{%
10303       \csname @#1bordercolor\endcsname
10304     }%
10305   }%
10306   \def\Hy@tempa{#1}%
10307   \ifx\Hy@tempa\@uratype
10308     \special{!%
10309       aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10310         \ifHy@href@ismap
10311           /IsMap true%
10312         \fi
10313         \Hy@href@nextactionraw
10314       >;%
10315       a=<%
10316         \ifHy@pdfa /F 4\fi
10317         \Hy@setpdfborder
10318         \ifx\CurrentBorderColor\relax
10319           \else
10320             /C [\CurrentBorderColor]%
10321           \fi
10322         >%
10323       }%
10324     \else
10325       \protected@edef\Hy@testname{#2}%
10326       \ifx\Hy@testname\@empty
10327         \Hy@Warning{%
10328           Empty destination name,\MessageBreak
10329           using '\Hy@undefinedname'%
10330         }%
10331         \let\Hy@testname\Hy@undefinedname
10332       \fi
10333       \special{!%
10334         aref \expandafter\HyperDestNameFilter
10335           \expandafter{\Hy@testname};%
10336         a=<%
10337           \ifHy@pdfa /F 4\fi
10338           \Hy@setpdfborder
10339           \ifx\CurrentBorderColor\relax
10340             \else
10341               /C [\CurrentBorderColor]%
10342             \fi
10343           >%
10344         }%
10345       \fi
10346     }
10347   \def\hyper@linkend{%
10348     \special{!endaref}%
10349     \Hy@endcolorlink
10350   }
10351   \def\hyper@linkfile#1#2#3{%

```

```

10352 \leavevmode
10353 \def\Hy@pstringF{#2}%
10354 \Hy@CleanupFile\Hy@pstringF
10355 \special{!%
10356   aref <%
10357   \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
10358   f=\Hy@pstringF>#3;%
10359   a=<%
10360     \ifHy@pdfa /F 4\fi
10361     \Hy@setpdfborder
10362     \ifx\@filebordercolor\relax
10363     \else
10364       /C [\@filebordercolor]%
10365     \fi
10366   >%
10367 }%
10368 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
10369 \special{!endaref}%
10370 }
10371 \def\hyper@linkurl#1#2{%
10372 \begingroup
10373 \Hy@pstringdef\Hy@pstringURI{#2}%
10374 \hyper@chars
10375 \leavevmode
10376 \special{!%
10377   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10378   \ifHy@href@ismap
10379     /IsMap true%
10380   \fi
10381   \Hy@href@nextactionraw
10382   >;%
10383   a=<%
10384     \ifHy@pdfa /F 4\fi
10385     \Hy@setpdfborder
10386     \ifx\@urlbordercolor\relax
10387     \else
10388       /C [\@urlbordercolor]%
10389     \fi
10390   >%
10391 }%
10392 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10393 \special{!endaref}%
10394 \endgroup
10395 }
10396 \def\hyper@link#1#2#3{%
10397 \Hy@VerboseLinkStart{#1}{#2}%
10398 \ltx@ifundefined{@#1bordercolor}{%
10399 \let\CurrentBorderColor\relax
10400 }{%
10401 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10402 }%
10403 \leavevmode
10404 \protected@edef\Hy@testname{#2}%
10405 \ifx\Hy@testname\@empty
10406 \Hy@Warning{%
10407   Empty destination name,\MessageBreak
10408   using '\Hy@undefinedname'%

```

```

10409 }%
10410 \let\Hy@testname\Hy@undefinedname
10411 \fi
10412 \special{!%
10413   aref \expandafter\HyperDestNameFilter
10414     \expandafter{\Hy@testname};%
10415   a=<%
10416     \ifHy@pdfa /F 4\fi
10417     \Hy@setpdfborder
10418     \ifx\CurrentBorderColor\relax
10419     \else
10420       /C [\CurrentBorderColor]%
10421     \fi
10422   >%
10423 }%
10424 \expandafter
10425 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
10426 \special{!endaref}%
10427 }
10428 \def\hyper@image#1#2{%
10429 \hyper@linkurl{#2}{#1}%
10430 }
10431 \def\@hyper@launch run:#1\#2#3{%
10432 \Hy@pstringdef\Hy@pstringF{#1}%
10433 \Hy@pstringdef\Hy@pstringP{#3}%
10434 \leavevmode
10435 \special{!aref %
10436   <u=%
10437     /Type/Action%
10438     /S/Launch%
10439     /F(\Hy@pstringF)%
10440     \Hy@SetNewWindow
10441     \ifx\#3\%
10442     \else
10443       /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10444     \fi
10445     \Hy@href@nextactionraw
10446   >,%
10447   a=<%
10448     \ifHy@pdfa /F 4\fi
10449     \Hy@setpdfborder
10450     \ifx\@runbordercolor\relax
10451     \else
10452       /C[\@runbordercolor]%
10453     \fi
10454   >%
10455 }%
10456 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
10457 \special{!endaref}%
10458 }
10459 \def\Acrobatmenu#1#2{%
10460 \Hy@Acrobatmenu{#1}{#2}{%
10461 \special{!%
10462   aref <u=/S /Named /N /#1>,%
10463   a=<%
10464     \ifHy@pdfa /F 4\fi
10465     \Hy@setpdfborder

```

```

10466 \ifx\@menubordercolor\relax
10467 \else
10468 /C[\@menubordercolor]%
10469 \fi
10470 >%
10471 }%
10472 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
10473 \special{!endaref}%
10474 }%
10475 }

```

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

The code below makes sense for V_TE_X 7.02 or later.

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

```

10476 \ifnum\Hy@VTeXversion<702 %
10477 \else
10478 \def\hyper@pagetransition{%
10479 \ifx\@pdfpagetransition\relax
10480 \else
10481 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

10482 \else
10483 \hvtex@parse@trans\@pdfpagetransition
10484 \fi
10485 \fi
10486 }%

```

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:

```

10487 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10488 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10489 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10490 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10491 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10492 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10493 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10494 \def\hvtex@par@dimension{/Dm}%
10495 \def\hvtex@par@direction{/Di}%
10496 \def\hvtex@par@duration{/D}%
10497 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

10498 \def\hvtex@gettoken{%
10499   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10500 }%

```

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

```

10501 \def\hvtex@gettoken@#1 #2\@nil{%
10502   \edef\hvtex@token{#1}%
10503   \edef\hvtex@buffer{#2}%
10504 }%
10505 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

10506 \let\hvtex@trans@code\@empty
10507 \let\hvtex@param@dimension\@empty
10508 \let\hvtex@param@direction\@empty
10509 \let\hvtex@param@duration\@empty
10510 \let\hvtex@param@motion\@empty
10511 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

10512 \hvtex@gettoken
10513 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

10514   \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

10515   \else
10516     \hvtex@gettoken
10517   \fi
10518 \fi
10519 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

10520 \hvtex@trans@params
10521 }%

```

Reentrant macro to parse optional parameters.

```

10522 \def\hvtex@trans@params{%
10523   \ifx\hvtex@buffer\@empty
10524   \else
10525     \hvtex@gettoken
10526     \let\hvtex@trans@par\hvtex@token
10527     \ifx\hvtex@buffer\@empty
10528     \else
10529       \hvtex@gettoken
10530       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

10531       \let\hvtex@param@duration\hvtex@token
10532     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

10533       \expandafter\edef\expandafter\hvtex@param@motion
10534       \expandafter{\expandafter\@gobble\hvtex@token}%
10535     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```
10536      \expandafter\edef\expandafter\hvtex@param@dimension
10537      \expandafter{\expandafter\@gobble\hvtex@token}%
10538      \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).

```
10539      \let\hvtex@param@direction\hvtex@token
10540      \fi\fi\fi
10541      \fi
10542      \fi
10543      \ifx\hvtex@buffer\@empty
10544      \let\next\hvtex@produce@trans
10545      \else
10546      \let\next\hvtex@trans@params
10547      \fi
10548      \next
10549  }%
```

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

```
10550  \def\hvtex@produce@trans{%
10551  \let\vtex@trans@special\@empty
10552  \if S\hvtex@trans@code
10553  \edef\vtex@trans@special{\hvtex@trans@code
10554  \hvtex@param@dimension\hvtex@param@motion}%
10555  \else\if B\hvtex@trans@code
10556  \edef\vtex@trans@special{%
10557  \hvtex@trans@code\hvtex@param@dimension
10558  }%
10559  \else\if X\hvtex@trans@code
10560  \edef\vtex@trans@special{%
10561  \hvtex@trans@code\hvtex@param@motion
10562  }%
10563  \else\if W\hvtex@trans@code
10564  \edef\vtex@trans@special{%
10565  \hvtex@trans@code\hvtex@param@direction
10566  }%
10567  \else\if D\hvtex@trans@code
10568  \let\vtex@trans@special\hvtex@trans@code
10569  \else\if R\hvtex@trans@code
10570  \let\vtex@trans@special\hvtex@trans@code
10571  \else\if G\hvtex@trans@code
10572  \edef\vtex@trans@special{%
10573  \hvtex@trans@code\hvtex@param@direction
10574  }%
10575  \fi\fi\fi\fi\fi\fi
10576  \ifx\vtex@trans@special\@empty
10577  \else
10578  \ifx\hvtex@param@duration\@empty
10579  \else
10580  \setlength{\dimen@}{\hvtex@param@duration\p}%
```

I'm not guilty of possible overflow.

```
10581      \multiply\dimen@\@m
10582      \edef\vtex@trans@special{%
10583      \vtex@trans@special,\strip@pt\dimen@
10584      }%
```

```

10585     \fi
        And all the mess is just for this.
10586     \special{!trans \vtex@trans@special}%
10587     \fi
10588 }%

10589 \def\hyper@pageduration{%
10590 \ifx\@pdfpageduration\relax
10591 \else
10592 \ifx\@pdfpageduration\@empty
10593 \special{!duration-}%
10594 \else
10595 \special{!duration \@pdfpageduration}%
10596 \fi
10597 \fi
10598 }%

10599 \def\hyper@pagehidden{%
10600 \ifHy@useHidKey
10601 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
10602 \fi
10603 }%

10604 \g@addto@macro\Hy@EveryPageBoxHook{%
10605 \hyper@pagetransition
10606 \hyper@pageduration
10607 \hyper@pagehidden
10608 }%
10609 \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

```

10610 \ifx\@pdfproducer\relax
10611 \def\@pdfproducer{VTeX}%
10612 \ifnum\Hy@VTeXversion>\z@
10613 \count@\VTeXversion
10614 \divide\count@ 100 %
10615 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10616 \multiply\count@ -100 %
10617 \advance\count@\VTeXversion
10618 \edef\@pdfproducer{%
10619 \@pdfproducer
10620 .\ifnum\count@<10 0\fi\the\count@
10621 \ifx\VTeXOS\@undefined\else
10622 \ifnum\VTeXOS>0 %
10623 \ifnum\VTeXOS<6 %
10624 \space(
10625 \ifcase\VTeXOS
10626 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10627 \fi
10628 )%
10629 \fi

```



```

10630     \fi
10631     \fi
10632     ,\space
10633     \ifnum\OpMode=\@ne PDF\else PS\fi
10634     \space backend%
10635     \ifx\gexmode\@undefined\else
10636         \ifnum\gexmode>z@\space with GeX\fi
10637     \fi
10638 }%
10639 \fi
10640 \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).

```

10641 \def\PDF@SetupDoc{%
10642     \ifx\@pdfpagescrop\@empty
10643     \else
10644         \special{!pdfinfo b=<\@pdfpagescrop>}%
10645     \fi
10646     \ifx\@pdfstartpage\@empty
10647     \else
10648         \ifx\@pdfstartview\@empty
10649         \else
10650             \special{!onopen Page\@pdfstartpage}%
10651         \fi
10652     \fi
10653     \special{!pdfinfo p=</\@pdfpagemode>}%
10654     \ifx\@baseurl\@empty
10655     \else
10656         \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10657     \fi
10658     \special{!pdfinfo v=<<<%
10659         \ifHy@toolbar\else /HideToolbar true\fi
10660         \ifHy@menubar\else /HideMenubar true\fi
10661         \ifHy>windowui\else /HideWindowUI true\fi
10662         \ifHy@fitwindow /FitWindow true\fi
10663         \ifHy@centerwindow /CenterWindow true\fi
10664         \ifHy@displaydoctitle /DisplayDocTitle true\fi
10665         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10666         \Hy@UseNameKey{Direction}\@pdfdirection
10667         \Hy@UseNameKey{ViewArea}\@pdfviewarea
10668         \Hy@UseNameKey{ViewClip}\@pdfviewclip
10669         \Hy@UseNameKey{PrintArea}\@pdfprintarea
10670         \Hy@UseNameKey{PrintClip}\@pdfprintclip
10671         \Hy@UseNameKey{PrintScaling}\@pdfprintscaling

```

```

10672 \Hy@UseNameKey{Duplex}\@pdfduplex
10673 \ifx\@pdfpicktraybypdfsize\@empty
10674 \else
10675 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10676 \fi
10677 \ifx\@pdfprintpagerange\@empty
10678 \else
10679 /PrintPageRange[\@pdfprintpagerange]%
10680 \fi
10681 \ifx\@pdfnumcopies\@empty
10682 \else
10683 /NumCopies \@pdfnumcopies
10684 \fi
10685 >>>}%
10686 \ifx\@pdfpagelayout\@empty
10687 \else
10688 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10689 \fi
10690 }%
10691 \HyInfo@AddonUnsupportedtrue
10692 \def\PDF@FinishDoc{%
10693 \Hy@UseMaketitleInfos
10694 \HyInfo@TrappedUnsupported
10695 \special{!pdfinfo a=<\@pdfauthor>}%
10696 \special{!pdfinfo t=<\@pdftitle>}%
10697 \special{!pdfinfo s=<\@pdfsubject>}%
10698 \special{!pdfinfo c=<\@pdfcreator>}%
10699 \ifx\@pdfproducer\relax
10700 \else
10701 \special{!pdfinfo r=<\@pdfproducer>}%
10702 \fi
10703 \special{!pdfinfo k=<\@pdfkeywords>}%
10704 \Hy@DisableOption{pdfauthor}%
10705 \Hy@DisableOption{pdftitle}%
10706 \Hy@DisableOption{pdfsubject}%
10707 \Hy@DisableOption{pdfcreator}%
10708 \Hy@DisableOption{pdfcreationdate}%
10709 \Hy@DisableOption{pdfmoddate}%
10710 \Hy@DisableOption{pdfproducer}%
10711 \Hy@DisableOption{pdfkeywords}%
10712 \Hy@DisableOption{pdftrapped}%
10713 \Hy@DisableOption{pdfinfo}%
10714 }
10715 </vtex>

```

46.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

10716 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10717 <package>\providecommand*{\Hy@DistillerDestFix}{%
10718 <*pdfmark | dviwindo>
10719 \def\Hy@DistillerDestFix{%
10720 \begingroup
10721 \let\x\literalps@out

```

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

```

10722 \ifnum \@ifundefined{OpMode}{0}{%
10723 \@ifundefined{gexmode}{0}{%
10724 \ifnum\gexmode>0 \OpMode\else 0\fi
10725 }>1 %
10726 \def\x##1{%
10727 \immediate\special{!=##1}%
10728 }%
10729 \fi
10730 \x{%
10731 /product where{%
10732 pop %
10733 product(Distiller)search{%
10734 pop pop pop %
10735 version(.)search{%
10736 exch pop exch pop%
10737 (3011)eq{%
10738 gsave %
10739 newpath 0 0 moveto closepath clip%
10740 /Courier findfont 10 scalefont setfont %
10741 72 72 moveto(.)show %
10742 grestore%
10743 }if%
10744 }{pop}ifelse%
10745 }{pop}ifelse%
10746 }if%
10747 }%
10748 \endgroup
10749 }
10750 </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

```

10751 <*pdfmark>
10752 \Hy@breaklinks@unsupported
10753 \def\HyPat@ObjRef{%

```

```

10754 \[~{]}+~}%
10755 }
10756 \Hy@WrapperDef\hyper@anchor#1{%
10757 \Hy@SaveLastskip
10758 \Hy@VerboseAnchor{#1}%
10759 \begingroup
10760 \pdfmark[\anchor@spot]{%
10761 pdfmark=/DEST,%
10762 linktype=anchor,%
10763 View=/\@pdfview \@pdfviewparams,%
10764 DestAnchor={#1}%
10765 }%
10766 \endgroup
10767 \Hy@RestoreLastskip
10768 }
10769 \ltx@ifundefined{hyper@anchorstart}{~}{\endinput}
10770 \Hy@WrapperDef\hyper@anchorstart#1{%
10771 \Hy@SaveLastskip
10772 \Hy@VerboseAnchor{#1}%
10773 \literalps@out{H.S}%
10774 \Hy@AllowHyphens
10775 \xdef\hyper@currentanchor{#1}%
10776 \Hy@activeanchortrue
10777 }
10778 \def\hyper@anchorend{%
10779 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10780 \pdfmark{%
10781 pdfmark=/DEST,%
10782 linktype=anchor,%
10783 View=/\@pdfview \@pdfviewparams,%
10784 DestAnchor=\hyper@currentanchor,%
10785 }%
10786 \Hy@activeanchorfalse
10787 \Hy@RestoreLastskip
10788 }
10789 \def\hyper@linkstart#1#2{%
10790 \Hy@VerboseLinkStart{#1}{#2}%
10791 \ifHy@breaklinks
10792 \else
10793 \leavevmode
10794 \ifmmode
10795 \def\Hy@LinkMath{$}%
10796 \else
10797 \def\Hy@LinkMath{}%
10798 \fi
10799 \Hy@SaveSpaceFactor
10800 \hbox\bgroup
10801 \Hy@RestoreSpaceFactor
10802 \Hy@LinkMath
10803 \fi
10804 \expandafter\Hy@colorlink\csname @#1color\endcsname
10805 \literalps@out{H.S}%
10806 \Hy@AllowHyphens
10807 \xdef\hyper@currentanchor{#2}%
10808 \gdef\hyper@currentlinktype{#1}%
10809 }
10810 \def\hyper@linkend{%

```

```

10811 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10812 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10813   \let\Hy@tempcolor\relax
10814 }{%
10815   \edef\Hy@tempcolor{%
10816     \csname @\hyper@currentlinktype bordercolor\endcsname
10817   }%
10818 }%
10819 \pdfmark{%
10820   pdfmark=/ANN,%
10821   linktype=link,%
10822   Subtype=/Link,%
10823   PDFAFlags=4,%
10824   Dest=\hyper@currentanchor,%
10825   AcroHighlight=\@pdfhighlight,%
10826   Border=\@pdfborder,%
10827   BorderStyle=\@pdfborderstyle,%
10828   Color=\Hy@tempcolor,%
10829   Raw=H.B%
10830 }%
10831 \Hy@endcolorlink
10832 \ifHy@breaklinks
10833 \else
10834   \Hy@LinkMath
10835   \Hy@SaveSpaceFactor
10836   \egroup
10837   \Hy@RestoreSpaceFactor
10838 \fi
10839 }

```

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.

```

10840 \begingroup
10841   \catcode'P=12 %
10842   \catcode'T=12 %
10843   \lowercase{\endgroup
10844   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10845 }
10846 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

10847 \def\hyper@pagetransition{%
10848   \ifx\@pdfpagetransition\relax
10849   \else
10850     \ifx\@pdfpagetransition\@empty
10851       % 1. Does an old entry have to be deleted?
10852       % 2. If 1=yes, how to delete?
10853     \else
10854       \pdfmark{%
10855         pdfmark=/PUT,%
10856         Raw={%
10857           \string{ThisPage\string}%
10858           <</Trans << /S /\@pdfpagetransition\space >> >>%
10859         }%
10860       }%
10861     \fi

```

```

10862 \fi
10863 }

```

\hyper@pageduration

```

10864 \def\hyper@pageduration{%
10865   \ifx\@pdfpageduration\relax
10866   \else
10867     \ifx\@pdfpageduration\@empty
10868       % 1. Does an old entry have to be deleted?
10869       % 2. If 1=yes, how to delete?
10870     \else
10871       \pdfmark{%
10872         pdfmark=/PUT,%
10873         Raw={%
10874           \string{ThisPage\string}%
10875           <</Dur \@pdfpageduration>>%
10876         }%
10877       }%
10878     \fi
10879   \fi
10880 }

```

\hyper@pagehidden

```

10881 \def\hyper@pagehidden{%
10882   \ifHy@useHidKey
10883   \pdfmark{%
10884     pdfmark=/PUT,%
10885     Raw={%
10886       \string{ThisPage\string}%
10887       <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10888     }%
10889   }%
10890 \fi
10891 }

```

```

10892 \g@addto@macro\Hy@EveryPageBoxHook{%
10893   \hyper@pagetransition
10894   \hyper@pageduration
10895   \hyper@pagehidden
10896 }

```

```

10897 \def\hyper@image#1#2{%
10898   \hyper@linkurl{#2}{#1}%
10899 }
10900 \def\Hy@undefinedname{UNDEFINED}
10901 \def\hyper@link#1#2#3{%
10902   \Hy@VerboseLinkStart{#1}{#2}%
10903   \ltx@ifundefined{@#1bordercolor}{%
10904     \let\Hy@tempcolor\relax
10905   }{%
10906     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10907   }%
10908   \begin{group}
10909     \protected@edef\Hy@testname{#2}%
10910     \ifx\Hy@testname\@empty
10911       \Hy@Warning{%
10912         Empty destination name,\MessageBreak
10913         using '\Hy@undefinedname'%

```

```

10914     }%
10915     \let\Hy@testname\Hy@undefinedname
10916 \fi
10917 \pdfmark[{#3}]{%
10918     Color=\Hy@tempcolor,%
10919     linktype={#1},%
10920     AcroHighlight=\@pdfhighlight,%
10921     Border=\@pdfborder,%
10922     BorderStyle=\@pdfborderstyle,%
10923     pdfmark=/ANN,%
10924     Subtype=/Link,%
10925     PDFAFlags=4,%
10926     Dest=\Hy@testname
10927 }%
10928 \endgroup
10929 }
10930 \newtoks\pdf@docset
10931 \def\PDF@FinishDoc{%
10932     \Hy@UseMaketitleInfos
10933     \HyInfo@GenerateAddons
10934     \let\Hy@temp\@empty
10935     \ifx\@pdfcreationdate\@empty
10936     \else
10937         \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10938     \fi
10939     \ifx\@pdfmoddate\@empty
10940     \else
10941         \expandafter\def\expandafter\Hy@temp\expandafter{%
10942             \Hy@temp
10943             ModDate=\@pdfmoddate,%
10944         }%
10945     \fi
10946     \ifx\@pdfproducer\relax
10947     \else
10948         \expandafter\def\expandafter\Hy@temp\expandafter{%
10949             \Hy@temp
10950             Producer=\@pdfproducer,%
10951         }%
10952     \fi
10953     \expandafter
10954     \pdfmark\expandafter{%
10955         \Hy@temp
10956         pdfmark=/DOCINFO,%
10957         Title=\@pdftitle,%
10958         Subject=\@pdfsubject,%
10959         Creator=\@pdfcreator,%
10960         Author=\@pdfauthor,%
10961         Keywords=\@pdfkeywords,%
10962         Trapped=\@pdftrapped
10963     }%
10964     \ifx\HyInfo@Addons\@empty
10965     \else
10966         \pdfmark{%
10967             pdfmark=/DOCINFO,%
10968             Raw={\HyInfo@Addons}%
10969         }%
10970     \fi

```

```

10971 \Hy@DisableOption{pdfauthor}%
10972 \Hy@DisableOption{pdftitle}%
10973 \Hy@DisableOption{pdfsubject}%
10974 \Hy@DisableOption{pdfcreator}%
10975 \Hy@DisableOption{pdfcreationdate}%
10976 \Hy@DisableOption{pdfmoddate}%
10977 \Hy@DisableOption{pdfproducer}%
10978 \Hy@DisableOption{pdfkeywords}%
10979 \Hy@DisableOption{pdftrapped}%
10980 \Hy@DisableOption{pdfinfo}%
10981 }
10982 \def\PDF@SetupDoc{%
10983 \def\Hy@temp{%
10984 \ifx\@pdfstartpage\@empty
10985 \else
10986 \ifx\@pdfstartview\@empty
10987 \else
10988 \edef\Hy@temp{%
10989 ,Page=\@pdfstartpage
10990 ,View=\@pdfstartview
10991 }%
10992 \fi
10993 \fi
10994 \edef\Hy@temp{%
10995 \noexpand\pdfmark{%
10996 pdfmark=/DOCVIEW,%
10997 PageMode=/\@pdfpagemode
10998 \Hy@temp
10999 }%
11000 }%
11001 \Hy@temp
11002 \ifx\@pdfpagescrop\@empty
11003 \else
11004 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11005 \fi
11006 \edef\Hy@temp{%
11007 \ifHy@toolbar\else /HideToolbar true\fi
11008 \ifHy@menubar\else /HideMenubar true\fi
11009 \ifHy>windowui\else /HideWindowUI true\fi
11010 \ifHy@fitwindow /FitWindow true\fi
11011 \ifHy@centerwindow /CenterWindow true\fi
11012 \ifHy@displaydoctitle /DisplayDocTitle true\fi
11013 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11014 \Hy@UseNameKey{Direction}\@pdfdirection
11015 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11016 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11017 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11018 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11019 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11020 \Hy@UseNameKey{Duplex}\@pdfduplex
11021 \ifx\@pdfpicktraybypdfsize\@empty
11022 \else
11023 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11024 \fi
11025 \ifx\@pdfprintpagerange\@empty
11026 \else
11027 /PrintPageRange\@pdfprintpagerange}%

```



```

11028 \fi
11029 \ifx\@pdfnumcopies\@empty
11030 \else
11031 /NumCopies \@pdfnumcopies
11032 \fi
11033 }%
11034 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11035 \pdfmark{%
11036 pdfmark=/PUT,%
11037 Raw={%
11038 \string{Catalog\string}<<%
11039 \ifx\Hy@temp\@empty
11040 \else
11041 /ViewerPreferences<<\Hy@temp>>%
11042 \fi
11043 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11044 \ifx\@pdflang\@empty
11045 \else
11046 /Lang(\@pdflang)%
11047 \fi
11048 \ifx\@baseurl\@empty
11049 \else
11050 /URI<</Base(\Hy@pstringB)>>%
11051 \fi
11052 >>%
11053 }%
11054 }%
11055 }
11056 </pdfmark>
11057 <*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.

```

11058 \newif\ifHy@pdfmarkerror
11059 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11060 \def\pdfmark@[#1]#2{%
11061 \Hy@pdfmarkerrorfalse
11062 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11063 \@processme
11064 \let\pdf@type\relax
11065 \kvsetkeys{PDF}{#2}%
11066 \ifHy@pdfmarkerror
11067 \else
11068 \ifx\pdf@type\relax
11069 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11070 \ifx\#1\%
11071 \else
11072 \pdf@rect{#1}%
11073 \fi
11074 \else
11075 \ifx\#1\%
11076 \literalps@out{%
11077 [\the\pdf@toks\space\pdf@type\space pdfmark%
11078 }%

```

```

11079 \else
11080 \ltx@ifundefined{@pdf@linktype color}{%
11081 \Hy@colorlink\@linkcolor
11082 }{%
11083 \expandafter\Hy@colorlink
11084 \csname @pdf@linktype color\endcsname
11085 }%
11086 \pdf@rect{#1}%
11087 \literalps@out{%
11088 [\the\pdf@toks\space\pdf@type\space pdfmark%
11089 }%
11090 \Hy@endcolorlink
11091 \fi
11092 \fi
11093 \fi
11094 }

```

The complicated bit is working out the right enclosing rectangle of some piece of \TeX text, needed by the `/Rect` key. This solution originates with Toby Thain (tobyth@netspace.net.au).

For the case `breaklinks` is enabled, I have added two hooks, the first one for package `setouterhbox`, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

11095 \newsavebox{\pdf@box}
11096 \providecommand*{\Hy@setouterhbox}{\sbox}
11097 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11098 \def\Hy@DEST{/DEST}
11099 \def\pdf@rect#1{%
11100 \begingroup
11101 \chardef\x=1 %
11102 \def\Hy@temp{#1}%
11103 \ifx\Hy@temp\ltx@empty
11104 \chardef\x=0 %
11105 \else
11106 \def\y{\anchor@spot}%
11107 \ifx\Hy@temp\y
11108 \def\y{\relax}%
11109 \ifx\anchor@spot\y
11110 \chardef\x=0 %
11111 \fi
11112 \fi
11113 \fi
11114 \expandafter\endgroup
11115 \ifcase\x
11116 \literalps@out{H.S}%
11117 \literalps@out{H.R}%
11118 \else
11119 \leavevmode
11120 \Hy@SaveSpaceFactor
11121 \ifmmode
11122 \def\Hy@LinkMath{$}%
11123 \else
11124 \def\Hy@LinkMath{}%

```

```

11125 \fi
11126 \ifHy@breaklinks
11127 \Hy@setouterhbox\pdf@box{%
11128 \Hy@RestoreSpaceFactor
11129 \Hy@LinkMath
11130 \Hy@AllowHyphens#1%
11131 \Hy@LinkMath
11132 \Hy@SaveSpaceFactor
11133 }%
11134 \else
11135 \sbox\pdf@box{%
11136 \Hy@RestoreSpaceFactor
11137 \Hy@LinkMath
11138 #1%
11139 \Hy@LinkMath
11140 \Hy@SaveSpaceFactor
11141 }%
11142 \fi
11143 \dimen@\ht\pdf@box
11144 \ifdim\dp\pdf@box=\z@
11145 \literalps@out{H.S}%
11146 \else
11147 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11148 \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...).

```

11149 \ifHy@breaklinks
11150 \ifhmode
11151 \Hy@breaklinksunhbox\pdf@box
11152 \else
11153 \box\pdf@box
11154 \fi
11155 \else
11156 \expandafter\box\pdf@box
11157 \fi

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

\ifHy@breaklinks#1\else\box\pdf@box\fi
\ifHy@breaklinks{#1}\else\box\pdf@box\fi

11158 \ifdim\dimen@=\z@
11159 \literalps@out{H.R}%
11160 \else
11161 \raise\dimen@\hbox{\literalps@out{H.R}}%
11162 \fi
11163 \Hy@RestoreSpaceFactor
11164 \fi
11165 \ifx\pdf@type\Hy@DEST
11166 \else
11167 \pdf@addtoksx{H.B}%
11168 \fi
11169 }

```

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.

```

11170 \newtoks\pdf@toks

```

```

11171 \newtoks\pdf@defaulttoks
11172 \pdf@defaulttoks={} %
11173 \def\pdf@addtoks#1#2{%
11174   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}} %
11175   \@processme
11176 }
11177 \def\pdf@addtoksx#1{%
11178   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}} %
11179   \@processme
11180 }
11181 \def\PDFdefaults#1{%
11182   \pdf@defaulttoks={#1} %
11183 }

```

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

```

11184 % what is the type of pdfmark?
11185 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11186 % what is the link type?
11187 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11188 \def\pdf@linktype{link}
11189 % parameter is a stream of PDF
11190 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11191 % parameter is a name
11192 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11193 % parameter is a array
11194 \define@key{PDF}{Border}{%
11195   \edef\Hy@temp{#1}%
11196   \ifx\Hy@temp\@empty
11197     \else
11198       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11199   \fi
11200 }
11201 \let\Hy@BorderArrayPatch\@empty
11202 % parameter is a dictionary
11203 \define@key{PDF}{BorderStyle}{%
11204   \edef\Hy@temp{#1}%
11205   \ifx\Hy@temp\@empty
11206     \else
11207       \pdf@addtoks{<<#1>>}{BS}%
11208   \fi
11209 }
11210 % parameter is a array
11211 \define@key{PDF}{Color}{%
11212   \ifx\relax#1\relax
11213     \else
11214       \pdf@addtoks{[#1]}{Color}% hash-ok
11215   \fi
11216 }
11217 % parameter is a string
11218 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11219 % parameter is a integer
11220 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11221 % parameter is a array
11222 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}} % hash-ok
11223 % parameter is a string
11224 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11225 % parameter is a string or file
11226 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}

```

```

11227 % parameter is a destination
11228 \define@key{PDF}{Dest}{%
11229   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11230   \ifx\Hy@pstringDest\@empty
11231     \Hy@pdfmarkerrortrue
11232     \Hy@Warning{Destination with empty name ignored}%
11233   \else
11234     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11235   \fi
11236 }
11237 \define@key{PDF}{DestAnchor}{%
11238   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11239   \ifx\Hy@pstringDest\@empty
11240     \Hy@pdfmarkerrortrue
11241     \Hy@Warning{Destination with empty name ignored}%
11242   \else
11243     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11244   \fi
11245 }
11246 % parameter is a string
11247 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11248 % parameter is a string
11249 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11250 % parameter is a int
11251 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11252 \define@key{PDF}{PDFAFlags}{%
11253   \ifHy@pdfa
11254     \pdf@addtoks{#1}{F}%
11255   \fi
11256 }
11257 % parameter is a name
11258 \define@key{PDF}{AcroHighlight}{%
11259   \begingroup
11260     \edef\x{#1}%
11261     \expandafter\endgroup\ifx\x\@empty
11262     \else
11263       \pdf@addtoks{#1}{H}%
11264     \fi
11265 }
11266 % parameter is a string
11267 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11268 % parameter is a string
11269 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11270 % parameter is a string
11271 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11272 % parameter is a string
11273 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11274 % parameter is a Boolean
11275 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11276 % parameter is a integer or name
11277 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11278 % parameter is a name
11279 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11280 % parameter is a string
11281 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11282 % parameter is a array
11283 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok

```

```

11284 % parameter is a integer
11285 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11286 % parameter is a name
11287 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11288 % parameter is a string
11289 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
11290 % parameter is a string
11291 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
11292 % parameter is a string
11293 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
11294 % parameter is an array
11295 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
11296 % parameter is a string
11297 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11298 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
11299 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
11300 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
11301 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11302 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
11303 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
11304 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
11305 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11306 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}
11307 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11308 \define@key{PDF}{Trapped}{%
11309   \edef\Hy@temp{#1}%
11310   \ifx\Hy@temp\empty
11311     \else
11312       \pdf@addtoks{/#1}{Trapped}%
11313     \fi
11314 }
11315
11316 </pdfmarkbase>
11317 <*pdfmark>
11318 \def\Acrobatmenu#1#2{%
11319   \Hy@Acrobatmenu{#1}{#2}%
11320   \pdfmark[{#2}]{%
11321     linktype=menu,%
11322     pdfmark=/ANN,%
11323     AcroHighlight=\pdfhighlight,%
11324     Border=\pdfborder,%
11325     BorderStyle=\pdfborderstyle,%
11326     Action={<< /Subtype /Named /N /#1 >>},%
11327     Subtype=/Link,%
11328     PDFAFlags=4%
11329   }%
11330 }%
11331 }

```

And now for some useful examples:

```

11332 \def\PDFNextPage{\ifnextchar[\PDFNextPage@{\PDFNextPage@[]}}
11333 \def\PDFNextPage@#1#2{%
11334   \pdfmark[{#2}]{%
11335     #1,%
11336     Border=\pdfborder,%
11337     BorderStyle=\pdfborderstyle,%

```

```

11338   Color=.2 .1 .5,%
11339   pdfmark=/ANN,%
11340   Subtype=/Link,%
11341   PDFAFlags=4,%
11342   Page=/Next%
11343 }%
11344 }
11345 \def\PDFPreviousPage{%
11346   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11347 }
11348 \def\PDFPreviousPage@[#1]#2{%
11349   \pdfmark[{#2}]{%
11350     #1,%
11351     Border=\@pdfborder,%
11352     BorderStyle=\@pdfborderstyle,%
11353     Color=.4 .4 .1,%
11354     pdfmark=/ANN,%
11355     Subtype=/Link,%
11356     PDFAFlags=4,%
11357     Page=/Prev%
11358   }%
11359 }
11360 \def\PDFOpen#1{%
11361   \pdfmark{#1,pdfmark=/DOCVIEW}%
11362 }

```

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

```

11363 \def\hyper@linkurl#1#2{%
11364   \begingroup
11365   \Hy@pstringdef\Hy@pstringURI{#2}%
11366   \hyper@chars
11367   \leavevmode
11368   \pdfmark[{#1}]{%
11369     pdfmark=/ANN,%
11370     linktype=url,%
11371     AcroHighlight=\@pdfhighlight,%
11372     Border=\@pdfborder,%
11373     BorderStyle=\@pdfborderstyle,%
11374     Color=\@urlbordercolor,%
11375     Action={<<%
11376       /Subtype/URI%
11377       /URI(\Hy@pstringURI)%
11378       \ifHy@href@ismap
11379         /IsMap true%
11380       \fi
11381     >>},%
11382     Subtype=/Link,%
11383     PDFAFlags=4%
11384   }%
11385   \endgroup
11386 }
11387 \def\hyper@linkfile#1#2#3{%
11388   \begingroup
11389   \def\Hy@pstringF{#2}%
11390   \Hy@CleanupFile\Hy@pstringF
11391   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11392   \Hy@pstringdef\Hy@pstringD{#3}%
11393   \Hy@MakeRemoteAction

```

```

11394 \leavevmode
11395 \pdfmark[{#1}]{%
11396 pdfmark=/ANN,%
11397 Subtype=/Link,%
11398 PDFAFlags=4,%
11399 AcroHighlight=\@pdfhighlight,%
11400 Border=\@pdfborder,%
11401 BorderStyle=\@pdfborderstyle,%
11402 linktype=file,%
11403 Color=\@filebordercolor,%
11404 Action={%
11405 <<%
11406 /S/GoToR%
11407 \Hy@SetNewWindow
11408 /F(\Hy@pstringF)%
11409 /D%
11410 \ifx\#3\%
11411 [\Hy@href@page\@pdfremotestartview]%
11412 \else
11413 (\Hy@pstringD)cvn%
11414 \fi
11415 \Hy@href@nextactionraw
11416 >>%
11417 }%
11418 }%
11419 \endgroup
11420 }
11421 \def\@hyper@launch run:#1\#2#3{%
11422 \begingroup
11423 \Hy@pstringdef\Hy@pstringF{#1}%
11424 \Hy@pstringdef\Hy@pstringP{#3}%
11425 \leavevmode
11426 \pdfmark[{#2}]{%
11427 pdfmark=/ANN,%
11428 Subtype=/Link,%
11429 PDFAFlags=4,%
11430 AcroHighlight=\@pdfhighlight,%
11431 Border=\@pdfborder,%
11432 BorderStyle=\@pdfborderstyle,%
11433 linktype=run,%
11434 Color=\@runbordercolor,%
11435 Action={%
11436 <<%
11437 /S/Launch%
11438 \Hy@SetNewWindow
11439 /F(\Hy@pstringF)%
11440 \ifx\#3\%
11441 \else
11442 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11443 \fi
11444 \Hy@href@nextactionraw
11445 >>%
11446 }%
11447 }%
11448 \endgroup
11449 }
11450 \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.

```

11451 <*dvips>
11452 \providecommand*\XR@ext}{pdf}
11453 \def\Hy@raisedlink{}
11454 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11455 \def\headerps@out#1{\special{! #1}}%
11456 \input{pdfmark.def}%
11457 \ifx\@pdfproducer\relax
11458   \def\@pdfproducer{dvips + Distiller}%
11459 \fi
11460 \providecommand*\@pdfborder{0 0 1}
11461 \providecommand*\@pdfborderstyle{}
11462 \providecommand*\@pdfview{XYZ}
11463 \providecommand*\@pdfviewparams{ H.V}
11464 \def\Hy@BorderArrayPatch{BorderArrayPatch}
11465 \g@addto@macro\Hy@FirstPageHook{%
11466   \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.

```

11467   /DvipsToPDF{72.27 mul Resolution div} def%
11468   /PDFToDvips{72.27 div Resolution mul} def%
11469   /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.

```

11470   /BorderArrayPatch{%
11471     [exch{%
11472       dup dup type/integertype eq exch type/realtype eq or%
11473       {BPToDvips}if%
11474     }forall]%
11475   }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.

```

11476   /HyperBorder {1 PDFToDvips} def%
11477   /H.V {pdf@hoff pdf@voff null} def%
11478   /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

```

11479 /H.S {%
11480   currentpoint %
11481   HyperBorder add /pdf@lly exch def %
11482   dup DvipsToPDF 72 add /pdf@hoff exch def %
11483   HyperBorder sub /pdf@llx exch def%
11484 } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current \backslash 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

```

11485 /H.L {%
11486   2 sub dup%
11487   /HyperBasePt exch def %
11488   PDFToDvips /HyperBaseDvips exch def %
11489   currentpoint %
11490   HyperBaseDvips sub /pdf@ury exch def%
11491   /pdf@urx exch def%
11492 } def%
11493 /H.A {%
11494   H.L %
11495 % | /pdf@voff| = the distance from the top of the page to a point
11496 % | \baselineskip| above the current point in PDF coordinates
11497   currentpoint exch pop %
11498   vsize 72 sub exch DvipsToPDF %
11499   HyperBasePt sub % baseline skip
11500   sub /pdf@voff exch def%
11501 } def%
11502 /H.R {%
11503   currentpoint %
11504   HyperBorder sub /pdf@ury exch def %
11505   HyperBorder add /pdf@urx exch def %
11506 % | /pdf@voff| = the distance from the top of the page to the current point, in
11507 % PDF coordinates
11508   currentpoint exch pop vsize 72 sub %
11509   exch DvipsToPDF sub /pdf@voff exch def%
11510 } def%
11511 }%
11512 }
11513 \AtBeginShipoutFirst{%
11514   \ifHy@setpagesize
11515     \begingroup
11516     \@ifundefined{stockwidth}{%
11517       \ifdim\paperwidth>\z@
11518         \ifdim\paperheight>\z@
11519           \special{papersize=\the\paperwidth,\the\paperheight}%
11520         \fi
11521       \fi
11522     }{%
11523       \ifdim\stockwidth>\z@
11524         \ifdim\stockheight>\z@
11525           \special{papersize=\the\stockwidth,\the\stockheight}%

```

```

11526     \fi
11527     \fi
11528   }%
11529 \endgroup
11530 \fi
11531 \Hy@DisableOption{setpagesize}%
11532 }
11533 </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.

```

11534 <*vtexpdfmark>
11535 \providecommand*{\XR@ext}{pdf}
11536 \def\Hy@raisedlink{}
11537 \def\literalps@out#1{\special{pS:#1}}%
11538 \def\headerps@out#1{\immediate\special{pS:#1}}%
11539 \input{pdfmark.def}%
11540 \ifx\@pdfproducer\relax
11541   \ifnum\OpMode=\@ne
11542     \def\@pdfproducer{VTeX}%
11543   \else
11544     \def\@pdfproducer{VTeX + Distiller}%
11545   \fi
11546 \fi
11547 \providecommand*\@pdfborder{0 0 1}
11548 \providecommand*\@pdfborderstyle{}
11549 \providecommand*\@pdfview{XYZ}
11550 \providecommand*\@pdfviewparams{ H.V}
11551 \g@addto@macro\Hy@FirstPageHook{%
11552   \headerps@out{%
11553     /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.

```

11554   /HyperBorder {1} def%
11555   /H.V {pdf@hoff pdf@voff null} def%
11556   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

11557   /H.S {%
11558     currentpoint %
11559     HyperBorder sub%
11560     /pdf@lly exch def %
11561     dup 72 add /pdf@hoff exch def %
11562     HyperBorder sub%
11563     /pdf@llx exch def%
11564   } def%

```

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

```

11565   /H.L {%

```

```

11566      2 sub%
11567      /HyperBasePt exch def %
11568      currentpoint %
11569      HyperBasePt add HyperBorder add%
11570      /pdf@ury exch def %
11571      HyperBorder add%
11572      /pdf@urx exch def%
11573      } def%
11574      /H.A {%
11575      H.L %
11576      currentpoint exch pop %
11577      vsize 72 sub exch %
11578      HyperBasePt add add%
11579      /pdf@voff exch def%
11580      } def%
pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder
11581      /H.R {%
11582      currentpoint %
11583      HyperBorder add%
11584      /pdf@ury exch def %
11585      HyperBorder add%
11586      /pdf@urx exch def %
11587      currentpoint exch pop vsize 72 sub add%
11588      /pdf@voff exch def%
11589      } def%
11590      }%
11591      }
11592      </vtxpdfmark>

```

46.11 Textures

```

11593 <*textures>
11594 \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.

```

11595 \begingroup
11596 \obeylines %
11597 \gdef\Hy@ps@CR{\noexpand
11598 }%
11599 \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.

```
11600 \def\literalps@out#1{%
11601   \special{postscript 0 0 transform}%
11602   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11603 }%
11604 %
```

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.

```
11605 \def\headerps@out#1{%
11606   \special{%
11607     prepostscript TeXdict begin\Hy@ps@CR
11608       #1\Hy@ps@CR
11609     end%
11610   }%
11611 }%
11612 %
```

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.

```
11613 \g@addto@macro\Hy@FirstPageHook{%
11614   \headerps@out{%
11615     /betterpdfmark {%
11616       systemdict begin %
11617         dup /BP eq%
11618         {cleartomark gsave nulldevice []}%
11619         {dup /EP eq%
11620           {cleartomark cleartomark grestore}%
11621           {cleartomark}%
11622         }ifelse%
11623       }ifelse %
11624     end%
11625   }def\Hy@ps@CR
11626   ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
11627 }% end of \headerps@out
11628 }% end of \AtBeginShipoutFirst
11629 %
11630 \input{pdfmark.def}%
11631 %
11632 \ifx\@pdfproducer\relax
11633   \def\@pdfproducer{Textures + Distiller}%
11634 \fi
11635 \providecommand*\@pdfborder{0 0 1}
11636 \providecommand*\@pdfborderstyle{}
11637 \providecommand*\@pdfview{XYZ}
11638 \providecommand*\@pdfviewparams{ H.V}
11639 %
```

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

```
11640 \Hy@AtBeginDocument{%
11641   \headerps@out{%
```

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

```

11642 /vsize {\Hy@pageheight} def%
11643 /DvipsToPDF {} def%
11644 /PDFToDvips {} def%
11645 /BPToDvips {} def%
11646 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11647 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11648 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11649 /H.S {%
11650   currentpoint %
11651   HyperBorder add /pdf@lly exch def %
11652   dup DvipsToPDF 72 add /pdf@hoff exch def %
11653   HyperBorder sub /pdf@llx exch def%
11654 } def\Hy@ps@CR
11655 /H.L {%
11656   2 sub %
11657   PDFToDvips /HyperBase exch def %
11658   currentpoint %
11659   HyperBase sub /pdf@ury exch def%
11660   /pdf@urx exch def%
11661 } def\Hy@ps@CR
11662 /H.A {%
11663   H.L %
11664   currentpoint exch pop %
11665   vsize 72 sub exch DvipsToPDF %
11666   HyperBase sub % baseline skip
11667   sub /pdf@voff exch def%
11668 } def\Hy@ps@CR
11669 /H.R {%
11670   currentpoint %
11671   HyperBorder sub /pdf@ury exch def %
11672   HyperBorder add /pdf@urx exch def %
11673   currentpoint exch pop vsize 72 sub %
11674   exch DvipsToPDF sub /pdf@voff exch def%
11675 } def\Hy@ps@CR
11676 }%
11677 }

11678 \Hy@AtBeginDocument{%
11679   \ifHy@colorlinks
11680     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11681   \fi
11682 }

```

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.

```

11683 \expandafter\let\expandafter\keepPDF@SetupDoc
11684   \csname PDF@SetupDoc\endcsname
11685 \def\PDF@SetupDoc{%
11686   \ifx\@baseurl\@empty
11687     \else
11688       \special{html:<base href="\@baseurl">}%
11689     \fi
11690   \keepPDF@SetupDoc
11691 }
11692 \Hy@WrapperDef\hyper@anchor#1{%
11693   \Hy@SaveLastskip

```

```

11694 \Hy@VerboseAnchor{#1}%
11695 \begingroup
11696 \let\protect=\string
11697 \special{html:<a name=%
11698     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11699 \endgroup
11700 \Hy@activeanchortrue
11701 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11702 \special{html:</a>}%
11703 \Hy@activeanchorfalse
11704 \Hy@RestoreLastskip
11705 }
11706 \Hy@WrapperDef\hyper@anchorstart#1{%
11707 \Hy@SaveLastskip
11708 \Hy@VerboseAnchor{#1}%
11709 \begingroup
11710 \hyper@chars
11711 \special{html:<a name=%
11712     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11713 \endgroup
11714 \Hy@activeanchortrue
11715 }
11716 \def\hyper@anchorend{%
11717 \special{html:</a>}%
11718 \Hy@activeanchorfalse
11719 \Hy@RestoreLastskip
11720 }
11721 \def\@urltype{url}
11722 \def\hyper@linkstart#1#2{%
11723 \Hy@VerboseLinkStart{#1}{#2}%
11724 \expandafter\Hy@colorlink\csname @#1color\endcsname
11725 \def\Hy@tempa{#1}%
11726 \ifx\Hy@tempa\@urltype
11727 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11728 \else
11729 \begingroup
11730 \hyper@chars
11731 \special{%
11732     html:<a href=%
11733     \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
11734     }%
11735 \endgroup
11736 \fi
11737 }
11738 \def\hyper@linkend{%
11739 \special{html:</a>}%
11740 \Hy@endcolorlink
11741 }
11742 \def\hyper@linkfile#1#2#3{%
11743 \hyper@linkurl{#1}{%
11744     \Hy@linkfileprefix#2\ifx\\#3\\\else\###3\fi
11745     }%
11746 }
11747 \def\hyper@linkurl#1#2{%
11748 \leavevmode
11749 \ifHy@raiselinks
11750 \Hy@SaveSpaceFactor

```

```

11751 \Hy@SaveSavedSpaceFactor
11752 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11753 \Hy@RestoreSavedSpaceFactor
11754 \@linkdim\dp\@tempboxa
11755 \lower\@linkdim\hbox{%
11756   \hyper@chars
11757   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11758 }%
11759 \Hy@colorlink\@urlcolor
11760 \Hy@RestoreSpaceFactor
11761 #1%
11762 \Hy@SaveSpaceFactor
11763 \@linkdim\ht\@tempboxa
11764 \advance\@linkdim by -6.5\p@
11765 \raise\@linkdim\hbox{\special{html:</a>}}%
11766 \Hy@endcolorlink
11767 \Hy@RestoreSpaceFactor
11768 \else
11769 \begingroup
11770   \hyper@chars
11771   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11772   \Hy@colorlink\@urlcolor#1%
11773   \special{html:</a>}%
11774   \Hy@endcolorlink
11775 \endgroup
11776 \fi
11777 }

```

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

```

11778 \def\hyper@link#1#2#3{%
11779   \Hy@VerboseLinkStart{#1}{#2}%
11780   \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
11781 }
11782 \def\hyper@image#1#2{%
11783   \begingroup
11784     \hyper@chars
11785     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11786   \endgroup
11787 }
11788 </textures>

```

46.12 dvipsone

```

11789 % \subsection{dvipsone driver}
11790 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11791 % |\special| commands.
11792 (*dvipsone)
11793 \providecommand*\XR@ext{-pdf}
11794 \def\Hy@raisedlink{}
11795 \providecommand*\@pdfborder{0 0 1}
11796 \providecommand*\@pdfborderstyle{}
11797 \def\literalps@out#1{\special{ps:#1}}%
11798 \def\headerps@out#1{\special{headertext=#1}}%
11799 \input{pdfmark.def}%
11800 \ifx\@pdfproducer\relax
11801   \def\@pdfproducer{dvipsone + Distiller}%
11802 \fi
11803 \HyInfo@AddonUnsupportedtrue

```



```

11804 \def\PDF@FinishDoc{%
11805   \Hy@UseMaketitleInfos
11806   \HyInfo@TrappedUnsupported
11807   \special{PDF: Keywords \@pdfkeywords}%
11808   \special{PDF: Title \@pdftitle}%
11809   \special{PDF: Creator \@pdfcreator}%
11810   \ifx\@pdfcreationdate\@empty
11811   \else
11812     \special{PDF: CreationDate \@pdfcreationdate}%
11813   \fi
11814   \ifx\@pdfmoddate\@empty
11815   \else
11816     \special{PDF: ModDate \@pdfmoddate}%
11817   \fi
11818   \special{PDF: Author \@pdfauthor}%
11819   \ifx\@pdfproducer\relax
11820   \else
11821     \special{PDF: Producer \@pdfproducer}%
11822   \fi
11823   \special{PDF: Subject \@pdfsubject}%
11824   \Hy@DisableOption{pdfauthor}%
11825   \Hy@DisableOption{pdftitle}%
11826   \Hy@DisableOption{pdfsubject}%
11827   \Hy@DisableOption{pdfcreator}%
11828   \Hy@DisableOption{pdfcreationdate}%
11829   \Hy@DisableOption{pdfmoddate}%
11830   \Hy@DisableOption{pdfproducer}%
11831   \Hy@DisableOption{pdfkeywords}%
11832   \Hy@DisableOption{pdftrapped}%
11833   \Hy@DisableOption{pdfinfo}%
11834 }
11835 \def\PDF@SetupDoc{%
11836   \def\Hy@temp{}%
11837   \ifx\@pdfstartpage\@empty
11838   \else
11839     \ifx\@pdfstartview\@empty
11840     \else
11841       \edef\Hy@temp{%
11842         ,Page=\@pdfstartpage
11843         ,View=\@pdfstartview
11844       }%
11845     \fi
11846   \fi
11847   \edef\Hy@temp{%
11848     \noexpand\pdfmark{%
11849       pdfmark=/DOCVIEW,%
11850       PageMode=/\@pdfpagemode
11851     }\Hy@temp
11852   }%
11853 }%
11854 \Hy@temp
11855 \ifx\@pdfpagescrop\@empty
11856 \else
11857   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11858 \fi
11859 \edef\Hy@temp{%
11860   \ifHy@toolbar\else /HideToolbar true\fi

```

```

11861 \ifHy@menubar\else /HideMenubar true\fi
11862 \ifHy@windowui\else /HideWindowUI true\fi
11863 \ifHy@fitwindow /FitWindow true\fi
11864 \ifHy@centerwindow /CenterWindow true\fi
11865 \ifHy@displaydoctitle /DisplayDocTitle true\fi
11866 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11867 \Hy@UseNameKey{Direction}\@pdfdirection
11868 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11869 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11870 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11871 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11872 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11873 \Hy@UseNameKey{Duplex}\@pdfduplex
11874 \ifx\@pdfpicktraybypdfsize\@empty
11875 \else
11876 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11877 \fi
11878 \ifx\@pdfprintpagerange\@empty
11879 \else
11880 /PrintPageRange[\@pdfprintpagerange]%
11881 \fi
11882 \ifx\@pdfnumcopies\@empty
11883 \else
11884 /NumCopies \@pdfnumcopies
11885 \fi
11886 }%
11887 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11888 \pdfmark{%
11889 pdfmark=/PUT,%
11890 Raw={%
11891 \string{Catalog\string}<<%
11892 \ifx\Hy@temp\@empty
11893 \else
11894 /ViewerPreferences<<\Hy@temp>>%
11895 \fi
11896 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11897 \ifx\@pdflang\@empty
11898 \else
11899 /Lang(\@pdflang)%
11900 \fi
11901 \ifx\@baseurl\@empty
11902 \else
11903 /URI<</Base(\Hy@pstringB)>>%
11904 \fi
11905 >>%
11906 }%
11907 }%
11908 }
11909 \providecommand*\@pdfview{XYZ}
11910 \providecommand*\@pdfviewparams{ %
11911 gsave revscl currentpoint grestore %
11912 72 add exch pop null exch null%
11913 }
11914 \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 .

```
11915 \g@addto@macro\Hy@FirstPageHook{%
11916   \headerps@out{%
```

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

```
11917   /DvipsToPDF { 65781 div } def%
11918   /PDFToDvips { 65781 mul } def%
11919   /BPToDvips{65781 mul}def%
11920   /HyperBorder { 1 PDFToDvips } def%
11921   /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.

```
11922   /BorderArrayPatch{%
11923     [exch{%
11924       dup dup type/integertype eq exch type/realtype eq or%
11925       {BPToDvips}if%
11926     }forall]%
11927   }def%

11928   /H.S {%
11929     currentpoint %
11930     HyperBorder add /pdf@lly exch def %
11931     dup DvipsToPDF 72 add /pdf@hoff exch def %
11932     HyperBorder sub /pdf@llx exch def%
11933   } def%

11934   /H.L {%
11935     2 sub %
11936     PDFToDvips /HyperBase exch def %
11937     currentpoint %
11938     HyperBase sub /pdf@ury exch def%
11939     /pdf@urx exch def%
11940   } def%

11941   /H.A {%
11942     H.L %
11943     currentpoint exch pop %
11944     HyperBase sub % baseline skip
11945     DvipsToPDF /pdf@voff exch def%
11946   } def%

11947   /H.R {%
11948     currentpoint %
11949     HyperBorder sub /pdf@ury exch def %
11950     HyperBorder add /pdf@urx exch def %
11951     currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11952   } def%
11953   }%
11954 }
11955 </dvipsone>
```

46.13 TeX4ht

```
11956 <*tex4ht>
11957 \providecommand*{\XR@ext}{html}
11958 \def\Hy@raisedlink{}
11959 \@ifpackageloaded{tex4ht}{%
11960   \Hy@InfoNoLine{tex4ht is already loaded}%
11961 }{%
11962   \RequirePackage[hx4ht]{tex4ht}%
```

```

11963 }
11964 \hyperlinkfileprefix{
11965 \def\PDF@FinishDoc{
11966 \def\PDF@SetupDoc{%
11967 \ifx\@baseurl\@empty
11968 \else
11969 \special{t4ht=<base href="\@baseurl">}%
11970 \fi
11971 }
11972 \Hy@WrapperDef\hyper@anchor#1{%
11973 \Hy@SaveLastskip
11974 \Hy@VerboseAnchor{#1}%
11975 \begingroup
11976 \let\protect=\string
11977 \special{t4ht=<a name=%
11978 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11979 \endgroup
11980 \Hy@activeanchortrue
11981 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11982 \special{t4ht=</a>}%
11983 \Hy@activeanchorfalse
11984 \Hy@RestoreLastskip
11985 }
11986 \Hy@WrapperDef\hyper@anchorstart#1{%
11987 \Hy@SaveLastskip
11988 \Hy@VerboseAnchor{#1}%
11989 \begingroup
11990 \hyper@chars\special{t4ht=<a name=%
11991 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11992 \endgroup
11993 \Hy@activeanchortrue
11994 }
11995 \def\hyper@anchorend{%
11996 \special{t4ht=</a>}%
11997 \Hy@activeanchorfalse
11998 \Hy@RestoreLastskip
11999 }
12000 \def\@urltype{url}
12001 \def\hyper@linkstart#1#2{%
12002 \Hy@VerboseLinkStart{#1}{#2}%
12003 \expandafter\Hy@colorlink\csname @#1color\endcsname
12004 \def\Hy@tempa{#1}%
12005 \ifx\Hy@tempa\@urltype
12006 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12007 \else
12008 \begingroup
12009 \hyper@chars
12010 \special{t4ht=<a href=%
12011 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
12012 \endgroup
12013 \fi
12014 }
12015 \def\hyper@linkend{%
12016 \special{t4ht=</a>}%
12017 \Hy@endcolorlink
12018 }
12019 \def\hyper@linkfile#1#2#3{%

```

```

12020 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
12021 }
12022 \def\hyper@linkurl#1#2{%
12023 \leavevmode
12024 \ifHy@raiselinks
12025 \Hy@SaveSpaceFactor
12026 \Hy@SaveSavedSpaceFactor
12027 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12028 \Hy@RestoreSavedSpaceFactor
12029 \@linkdim\dp\@tempboxa
12030 \lower\@linkdim\hbox{%
12031 \begingroup
12032 \hyper@chars
12033 \special{%
12034 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12035 }%
12036 \endgroup
12037 }%
12038 \Hy@colorlink\@urlcolor
12039 \Hy@RestoreSpaceFactor
12040 #1%
12041 \Hy@SaveSpaceFactor
12042 \Hy@endcolorlink
12043 \@linkdim\ht\@tempboxa
12044 \advance\@linkdim by -6.5\p@
12045 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12046 \Hy@RestoreSpaceFactor
12047 \else
12048 \begingroup
12049 \hyper@chars
12050 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12051 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
12052 \special{t4ht=</a>}%
12053 \endgroup
12054 \fi
12055 }

```

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

```

12056 \def\hyper@link#1#2#3{%
12057 \Hy@VerboseLinkStart{#1}{#2}%
12058 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
12059 }
12060 \def\hyper@image#1#2{%
12061 \begingroup
12062 \hyper@chars
12063 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12064 \endgroup
12065 }
12066 \let\autoref\ref
12067 \ifx \rEfLiNK \UnDef
12068 \def\rEfLiNK #1#2{#2}%
12069 \fi
12070 \def\backref#1{}

```

Fix for tex4ht.

```

12071 \AtBeginDocument{%
12072 \expandafter\let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12073 \expandafter\def\csname Make:Label\endcsname#1#2{%
12074 \ifhmode

```

```

12075 \Hy@SaveSpaceFactor
12076 \else
12077 \global\Hy@SavedSpaceFactor=1000 %
12078 \fi
12079 \Hy@OrgMakeLabel{#1}{%
12080 \Hy@RestoreSpaceFactor
12081 #2%
12082 \Hy@SaveSpaceFactor
12083 }%
12084 \Hy@RestoreSpaceFactor
12085 }%
12086 }
12087 </tex4ht>
12088 <*tex4htcfg>
12089 \IfFileExists{\jobname.cfg}{\endinput}{}
12090 \Preamble{html}
12091 \begin{document}%
12092 \EndPreamble
12093 \def\TeX{\TeX}
12094 \def\OMEGA{\Omega}
12095 \def\LaTeX{\LaTeX}
12096 \def\LaTeXe{\LaTeXe}
12097 \def\TeXe{\TeXe}
12098 \def\MF{Metafont}
12099 \def\MP{MetaPost}
12100 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

12101 <*pdfmark>
12102 \long\def\@Form[#1]{%
12103 \g@addto@macro\Hy@FirstPageHook{%
12104 \headerps@out{%
12105 [%
12106 /__objdef{pdfDocEncoding}%
12107 /type/dict%
12108 /OBJ pdfmark%
12109 [%
12110 {pdfDocEncoding}%
12111 <<%
12112 /Type/Encoding%
12113 /Differences[%
12114 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12115 /tilde %
12116 39/quotesingle %
12117 96/grave %
12118 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12119 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12120 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12121 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12122 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12123 164/currency %
12124 166/brokenbar %
12125 168/dieresis/copyright/ordfeminine %
12126 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12127 /twosuperior/threesuperior/acute/mu %

```

```

12128 183/periodcentered/cedilla/onesuperior/ordmasculine %
12129 188/onequarter/onehalf/threequarters %
12130 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12131 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12132 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12133 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12134 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12135 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12136 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12137 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12138 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
12139 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12140 ]%
12141 >>%
12142 /PUT pdfmark%
12143 [%
12144 /__objdef{ZaDb}%
12145 /type/dict%
12146 /OBJ pdfmark%
12147 [%
12148 {ZaDb}%
12149 <<%
12150 /Type/Font%
12151 /Subtype/Type1%
12152 /Name/ZaDb%
12153 /BaseFont/ZapfDingbats%
12154 >>%
12155 /PUT pdfmark%
12156 [%
12157 /__objdef{Helv}%
12158 /type/dict%
12159 /OBJ pdfmark%
12160 [%
12161 {Helv}%
12162 <<%
12163 /Type/Font%
12164 /Subtype/Type1%
12165 /Name/Helv%
12166 /BaseFont/Helvetica%
12167 /Encoding{pdfDocEncoding}%
12168 >>%
12169 /PUT pdfmark%
12170 [%
12171 /__objdef{aform}%
12172 /type/dict%
12173 /OBJ pdfmark%
12174 [%
12175 /__objdef{afields}%
12176 /type/array%
12177 /OBJ pdfmark%
12178 {%
12179 [%
12180 /BBox[0 0 100 100]%
12181 /__objdef{Check}%
12182 /BP pdfmark %
12183 1 0 0 setrgbcolor%
12184 /ZapfDingbats 80 selectfont %

```

```

12185 20 20 moveto%
12186 (4)show%
12187 [/EP pdfmark%
12188 [%
12189 /BBox[0 0 100 100]%
12190 /_objdef{Cross}%
12191 /BP pdfmark %
12192 1 0 0 setrgbcolor%
12193 /ZapfDingbats 80 selectfont %
12194 20 20 moveto%
12195 (8)show%
12196 [/EP pdfmark%
12197 [%
12198 /BBox[0 0 250 100]%
12199 /_objdef{Submit}%
12200 /BP pdfmark %
12201 0.6 setgray %
12202 0 0 250 100 rectfill %
12203 1 setgray %
12204 2 2 moveto %
12205 2 98 lineto %
12206 248 98 lineto %
12207 246 96 lineto %
12208 4 96 lineto %
12209 4 4 lineto %
12210 fill %
12211 0.34 setgray %
12212 248 98 moveto %
12213 248 2 lineto %
12214 2 2 lineto %
12215 4 4 lineto %
12216 246 4 lineto %
12217 246 96 lineto %
12218 fill%
12219 /Helvetica 76 selectfont %
12220 0 setgray %
12221 8 22.5 moveto%
12222 (Submit)show%
12223 [/EP pdfmark%
12224 [%
12225 /BBox[0 0 250 100]%
12226 /_objdef{SubmitP}%
12227 /BP pdfmark %
12228 0.6 setgray %
12229 0 0 250 100 rectfill %
12230 0.34 setgray %
12231 2 2 moveto %
12232 2 98 lineto %
12233 248 98 lineto %
12234 246 96 lineto %
12235 4 96 lineto %
12236 4 4 lineto %
12237 fill %
12238 1 setgray %
12239 248 98 moveto %
12240 248 2 lineto %
12241 2 2 lineto %

```



```

12242 4 4 lineto %
12243 246 4 lineto %
12244 246 96 lineto %
12245 fill%
12246 /Helvetica 76 selectfont %
12247 0 setgray %
12248 10 20.5 moveto%
12249 (Submit)show%
12250 [/EP pdfmark%
12251 } ?pdfmark%
12252 [%
12253 {aform}%
12254 <<%
12255 /Fields{afields}%
12256 /DR<<%
12257 /Font<<%
12258 /ZaDb{ZaDb}%
12259 /Helv{Helv}%
12260 >>%
12261 >>%
12262 /DA(/Helv 10 Tf 0 g)%
12263 /CO{corder}%
12264 \ifHy@pdfa
12265 \else
12266 \ifHyField@NeedAppearances
12267 /NeedAppearances true%
12268 \fi
12269 \fi
12270 >>%
12271 /PUT pdfmark%
12272 [%
12273 {Catalog}%
12274 <<%
12275 /AcroForm{aform}%
12276 >>%
12277 /PUT pdfmark%
12278 [%
12279 /__objdef{corder}%
12280 /type/array%
12281 /OBJ pdfmark% dps
12282 }}%
12283 \kvsetkeys{Form}{#1}%
12284 }
12285 \def\@endForm{}
12286 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12287 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12288 }
12289 \def\@TextField[#1]#2{% parameters, label
12290 \def\Fld@name{#2}%
12291 \def\Fld@default{}%
12292 \let\Fld@value\@empty
12293 \def\Fld@width{\DefaultWidthofText}%
12294 \def\Fld@height{%
12295 \ifFld@multiline
12296 \DefaultHeightofTextMultiline
12297 \else
12298 \DefaultHeightofText

```

```

12299 \fi
12300 }%
12301 \begingroup
12302 \expandafter\HyField@SetKeys\expandafter{%
12303 \DefaultOptionsofText,#1%
12304 }%
12305 \HyField@FlagsText
12306 \ifFld@hidden\def\Fld@width{1sp}\fi
12307 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12308 \LayoutTextField{#2}{%
12309 \Hy@escapeform\PDFForm@Text
12310 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12311 pdfmark=/ANN,Raw={\PDFForm@Text}%
12312 }%
12313 }%
12314 \endgroup
12315 }
12316 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12317 \def\Fld@name{#2}%
12318 \let\Fld@default\relax
12319 \let\Fld@value\relax
12320 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12321 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12322 \begingroup
12323 \Fld@menulength=0 %
12324 \@tempdima\z@
12325 \@for\@curropt:=#3\do{%
12326 \expandafter\Fld@checkequals\@curropt==\%
12327 \Hy@StepCount\Fld@menulength
12328 \settowidth{\@tempdimb}{\@currDisplay}%
12329 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12330 }%
12331 \advance\@tempdima by 15\p@
12332 \begingroup
12333 \HyField@SetKeys{#1}%
12334 \edef\x{\endgroup
12335 \noexpand\expandafter
12336 \noexpand\HyField@SetKeys
12337 \noexpand\expandafter{%
12338 \expandafter\noexpand\csname DefaultOptionsof%
12339 \ifFld@radio
12340 Radio%
12341 \else
12342 \ifFld@combo
12343 \ifFld@popdown
12344 PopdownBox%
12345 \else
12346 ComboBox%
12347 \fi
12348 \else
12349 ListBox%
12350 \fi
12351 \fi
12352 \endcsname
12353 }%
12354 }\x
12355 \HyField@SetKeys{#1}%

```

```

12356 \ifFld@hidden\def\Fld@width{1sp}\fi
12357 \ifx\Fld@value\relax
12358 \let\Fld@value\Fld@default
12359 \fi
12360 \LayoutChoiceField{#2}{%
12361 \ifFld@radio
12362 \HyField@FlagsRadioButton
12363 \@@Radio{#3}%
12364 \else
12365 \beginngroup
12366 \HyField@FlagsChoice
12367 \ifdim\Fld@width<\@tempdima
12368 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12369 \edef\Fld@width{\the\@tempdima}%
12370 \fi
12371 \ifFld@combo
12372 \else
12373 \@tempdima=\the\Fld@menulength\Fld@charsize
12374 \advance\@tempdima by \Fld@borderwidth bp %
12375 \advance\@tempdima by \Fld@borderwidth bp %
12376 \edef\Fld@height{\the\@tempdima}%
12377 \fi
12378 \@@ListBox{#3}%
12379 \endgroup
12380 \fi
12381 }%
12382 \endgroup
12383 }
12384 \def\@@Radio#1{%
12385 \Fld@listcount=0 %
12386 \EdefEscapeName\Fld@default{\Fld@default}%
12387 \@for\@curropt:=#1\do{%
12388 \expandafter\Fld@checkequals\@curropt==\%
12389 \EdefEscapeName\@currValue{\@currValue}%
12390 \Hy@StepCount\Fld@listcount
12391 \@currDisplay\space
12392 \Hy@escapeform\PDFForm@Radio
12393 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12394 pdfmark=/ANN,%
12395 Raw={%
12396 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12397 }%
12398 } % deliberate space between radio buttons
12399 }%
12400 }
12401 \newcount\Fld@listcount
12402 \def\@@ListBox#1{%
12403 \HyField@PDFChoices{#1}%
12404 \Hy@escapeform\PDFForm@List
12405 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12406 pdfmark=/ANN,Raw={\PDFForm@List}%
12407 }%
12408 }
12409 \def\@PushButton[#1]#2{% parameters, label
12410 \def\Fld@name{#2}%
12411 \beginngroup
12412 \expandafter\HyField@SetKeys\expandafter{%

```

```

12413     \DefaultOptionsofPushButton,#1%
12414 }%
12415 \ifHy@pdfa
12416     \Hy@Error{%
12417         PDF/A: Push button with JavaScript is prohibited%
12418     }\@ehc
12419     \LayoutPushButtonField{%
12420         \leavevmode
12421         \MakeButtonField{#2}%
12422     }%
12423 \else
12424     \HyField@FlagsPushButton
12425     \ifFld@hidden\def\Fld@width{1sp}\fi
12426     \LayoutPushButtonField{%
12427         \leavevmode
12428         \Hy@escapeform\PDFForm@Push
12429         \pdfmark[\MakeButtonField{#2}]{%
12430             pdfmark=/ANN,Raw={\PDFForm@Push}%
12431         }%
12432     }%
12433 \fi
12434 \endgroup
12435 }
12436 \def\@Submit[#1]#2{%
12437     \def\Fld@width{\DefaultWidthofSubmit}%
12438     \def\Fld@height{\DefaultHeightofSubmit}%
12439     \begingroup
12440     \expandafter\HyField@SetKeys\expandafter{%
12441         \DefaultOptionsofSubmit,#1%
12442     }%
12443     \HyField@FlagsPushButton
12444     \HyField@FlagsSubmit
12445     \ifFld@hidden\def\Fld@width{1sp}\fi
12446     \Hy@escapeform\PDFForm@Submit
12447     \pdfmark[\MakeButtonField{#2}]{%
12448         pdfmark=/ANN,%
12449         Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
12450     }%
12451 \endgroup
12452 }
12453 \def\@Reset[#1]#2{%
12454     \def\Fld@width{\DefaultWidthofReset}%
12455     \def\Fld@height{\DefaultHeightofReset}%
12456     \begingroup
12457     \expandafter\HyField@SetKeys\expandafter{%
12458         \DefaultOptionsofReset,#1%
12459     }%
12460     \leavevmode
12461     \ifHy@pdfa
12462         \Hy@Error{%
12463             PDF/A: Reset action is prohibited%
12464         }\@ehc
12465         \MakeButtonField{#2}%
12466     \else
12467         \HyField@FlagsPushButton
12468         \ifFld@hidden\def\Fld@width{1sp}\fi
12469         \Hy@escapeform\PDFForm@Reset

```

```

12470 \pdfmark[\MakeButtonField{#2}]{%
12471 pdfmark=/ANN,Raw={\PDFForm@Reset}%
12472 }%
12473 \fi
12474 \endgroup
12475 }%
12476 \def\@CheckBox[#1]#2{% parameters, label
12477 \def\Fld@name{#2}%
12478 \def\Fld@default{0}%
12479 \begingroup
12480 \def\Fld@width{\DefaultWidthofCheckBox}%
12481 \def\Fld@height{\DefaultHeightofCheckBox}%
12482 \expandafter\HyField@SetKeys\expandafter{%
12483 \DefaultOptionsofCheckBox,#1%
12484 }%
12485 \HyField@FlagsCheckBox
12486 \ifFld@hidden\def\Fld@width{1sp}\fi
12487 \LayoutCheckField{#2}{%
12488 \Hy@escapeform\PDFForm@Check
12489 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
12490 pdfmark=/ANN,Raw={\PDFForm@Check}%
12491 }%
12492 }%
12493 \endgroup
12494 }
12495 \pdfmark>

```

47.2 HyperTeX

```

12496 \hypertex>
12497 \def\@Form[#1]{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12498 \def\@endForm{}
12499 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12500 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12501 }
12502 \def\@TextField[#1]#2{% parameters, label
12503 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12504 }
12505 \def\@CheckBox[#1]#2{% parameters, label
12506 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12507 }
12508 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12509 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12510 }
12511 \def\@PushButton[#1]#2{% parameters, label
12512 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12513 }
12514 \def\@Reset[#1]#2{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12515 \def\@Submit[#1]#2{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12516 \hypertex>

```

47.3 TeX4ht

```

12517 \tex4ht>
12518 \def\@Form[#1]{%
12519 \kvsetkeys{Form}{#1}%
12520 \HCode{<form action="\Form@action" method="\Form@method">}%
12521 }
12522 \def\@endForm{\HCode{</form>}}

```

```

12523 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12524 \Hy\Message{Sorry, TeX4ht does not support gauges}%
12525 }
12526 \def\@TextField[#1]#2{% parameters, label
12527 \let\Hy@reserved@a\@empty
12528 \def\Fld@name{#2}%
12529 \def\Fld@default{}%
12530 \bgroup
12531 \Field@toks={ }%
12532 \kvsetkeys{Field}{#1}%
12533 \HCode{<label for="\Fld@name">#2</label>}%
12534 \ifFld@password
12535 \@@PasswordField
12536 \else
12537 \@@TextField
12538 \fi
12539 \egroup
12540 }
12541 \def\@@PasswordField{%
12542 \HCode{%
12543 <input type="password" %
12544 id="\Fld@name" %
12545 name="\Fld@name" %
12546 \ifFld@hidden type="hidden" \fi
12547 value="\Fld@default" %
12548 \the\Field@toks
12549 >%
12550 }%
12551 }
12552 \def\@@TextField{%
12553 \ifFld@multiline
12554 \HCode{<textarea %
12555 \ifFld@readonly readonly \fi
12556 id="\Fld@name" %
12557 name="\Fld@name" %
12558 \ifFld@hidden type="hidden" \fi
12559 \the\Field@toks>%
12560 }%
12561 \Fld@default
12562 \HCode{</textarea>}%
12563 \else
12564 \HCode{<input type="text" %
12565 \ifFld@readonly readonly \fi
12566 id="\Fld@name" %
12567 name="\Fld@name" %
12568 \ifFld@hidden type="hidden" \fi
12569 value="\Fld@default" %
12570 \the\Field@toks>%
12571 }%
12572 \fi
12573 }
12574 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12575 \def\Fld@name{#2}%
12576 \def\Fld@default{}%
12577 \let\Hy@reserved@a\relax
12578 \begingroup
12579 \expandafter\Fld@findlength#3\\%

```

```

12580 \Field@toks={ }%
12581 \kvsetkeys{Field}{#1}%
12582 #2%
12583 \ifFld@radio
12584 \expandafter\@@Radio#3\\%
12585 \else
12586 \expandafter\@@Menu#3\\%
12587 \fi
12588 \endgroup
12589 }
12590 \def\Fld@findlength#1\\{%
12591 \Fld@menulength=0 %
12592 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12593 }
12594 \def\@@Menu#1\\{%
12595 \HCode{<select size="\the\Fld@menulength" %
12596 name="\Fld@name" %
12597 \the\Field@toks>%
12598 }%
12599 \@for\@curropt:=#1\do{%
12600 \expandafter\Fld@checkequals\@curropt==\\%
12601 \HCode{<option %
12602 \ifx\@curropt\Fld@default selected \fi
12603 value="\@currValue">\@currDisplay</option>%
12604 }%
12605 }%
12606 \HCode{</select>}%
12607 }
12608 \def\@@Radio#1\\{%
12609 \@for\@curropt:=#1\do{%
12610 \expandafter\Fld@checkequals\@curropt==\\%
12611 \HCode{<input type="radio" %
12612 \ifx\@curropt\Fld@default checked \fi
12613 name="\Fld@name" %
12614 value="\@currValue" %
12615 \the\Field@toks>%
12616 }%
12617 \@currDisplay
12618 }%
12619 }
12620 \def\@PushButton[#1]#2{% parameters, label
12621 \def\Fld@name{#2}%
12622 \bgroup
12623 \Field@toks={ }%
12624 \kvsetkeys{Field}{#1}%
12625 \HCode{<input type="button" %
12626 name="\Fld@name" %
12627 value="#2" %
12628 \the\Field@toks>%
12629 }%
12630 \HCode{</button>}%
12631 \egroup
12632 }
12633 \def\@Submit[#1]#2{%
12634 \HCode{<button type="submit">#2</button>}%
12635 }
12636 \def\@Reset[#1]#2{%

```

```

12637 \HCode{<button type="reset">#2</button>}%
12638 }
12639 \def\@CheckBox[#1]#2{% parameters, label
12640 \let\Hy@reserved@a\@empty
12641 \def\Fld@name{#2}%
12642 \def\Fld@default{0}%
12643 \bgroup
12644 \Field@toks={ }%
12645 \kvsetkeys{Field}{#1}%
12646 \HCode{<input type="checkbox" %
12647 \ifFld@checked checked \fi
12648 \ifFld@disabled disabled \fi
12649 \ifFld@readonly readonly \fi
12650 name="\Fld@name" %
12651 \ifFld@hidden type="hidden" \fi
12652 value="\Fld@default" %
12653 \the\Field@toks>%
12654 #2%
12655 }%
12656 \egroup
12657 }
12658 </tex4ht>

```

47.4 pdfTeX

```

12659 <*pdfTeX>
12660 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12661 \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12662 }
12663 \def\MakeFieldObject#1#2{\sbox0{#1}%
12664 \immediate\pdfxform0 %
12665 \expandafter\edef\csname #2Object\endcsname{%
12666 \the\pdflastxform\space 0 R%
12667 }%
12668 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
12669 }%
12670 \def\HyField@afields{}
12671 \begingroup\expandafter\expandafter\expandafter\endgroup
12672 \expandafter\ifx\csname pdfastlink\endcsname\relax
12673 \let\HyField@AddToFields\relax
12674 \PackageInfo{hyperref}{%
12675 You need pdfTeX 1.40.0 for setting the /Fields entry.%
12676 \MessageBreak
12677 Adobe Reader/Acrobat accepts an empty /Field array,%
12678 \MessageBreak
12679 but other PDF viewers might complain%
12680 }%
12681 \else
12682 \def\HyField@AuxAddToFields#1{%
12683 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
12684 \Hy@AtBeginDocument{%
12685 \if@filesw
12686 \immediate\write\@mainaux{%
12687 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12688 }%
12689 \fi
12690 \let\HyField@AfterAuxOpen\@firstofone
12691 \def\HyField@AuxAddToFields#1{%

```



```

12692 \xdef\HyField@afields{%
12693 \ifx\HyField@afields\@empty
12694 \else
12695 \HyField@afields
12696 \space
12697 \fi
12698 #1 0 R%
12699 }%
12700 }%
12701 }%
12702 \def\HyField@AddToFields{%
12703 \expandafter\HyField@@AddToFields\expandafter{%
12704 \the\pdfastlink
12705 }%
12706 }%
12707 \def\HyField@@AddToFields#1{%
12708 \HyField@AfterAuxOpen{%
12709 \if@filesw
12710 \write\@mainaux{%
12711 \string\HyField@AuxAddToFields{#1}%
12712 }%
12713 \fi
12714 }%
12715 }%
12716 \fi
12717 \def\@Form[#1]{%
12718 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12719 \kvsetkeys{Form}{#1}%
12720 \pdf@ifdraftmode{}{%
12721 \Hy@FormObjects
12722 \ifnum\pdfTeXversion>13 %
12723 \pdfrefobj\OBJ@pdfdocencoding
12724 \pdfrefobj\OBJ@ZaDb
12725 \pdfrefobj\OBJ@Helv
12726 \fi
12727 \AtVeryEndDocument{%
12728 \immediate\pdfobj{%
12729 <<%
12730 /Fields[\HyField@afields]%
12731 /DR<<%
12732 /Font<<%
12733 /ZaDb \OBJ@ZaDb\space 0 R%
12734 /Helv \OBJ@Helv\space 0 R%
12735 >>%
12736 >>%
12737 /DA(/Helv 10 Tf 0 g)%
12738 \ifHy@pdfa
12739 \else
12740 \ifHyField@NeedAppearances
12741 /NeedAppearances true%
12742 \fi
12743 \fi
12744 >>%
12745 }%
12746 \edef\OBJ@acroform{\the\pdfastobj}%
12747 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
12748 }%

```

```

12749 }%
12750 \MakeFieldObject{%

Same as \ding{123} of package pifont.
12751 \begingroup
12752 \fontfamily{pzd}%
12753 \fontencoding{U}%
12754 \fontseries{m}%
12755 \fontshape{n}%
12756 \selectfont
12757 \char123 %
12758 \endgroup
12759 }{Ding}%
12760 \MakeFieldObject{%
12761 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
12762 }{Submit}%
12763 \MakeFieldObject{%
12764 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
12765 }{SubmitP}%
12766 }
12767 \def\@endForm{}
12768 \def\@TextField[#1]#2{% parameters, label
12769 \def\Fld@name{#2}%
12770 \def\Fld@default{}%
12771 \let\Fld@value\@empty
12772 \def\Fld@width{\DefaultWidthofText}%
12773 \def\Fld@height{%
12774 \ifFld@multiline
12775 \DefaultHeightofTextMultiline
12776 \else
12777 \DefaultHeightofText
12778 \fi
12779 }%
12780 \begingroup
12781 \expandafter\HyField@SetKeys\expandafter{%
12782 \DefaultOptionsofText,#1%
12783 }%
12784 \PDFForm@Name
12785 \HyField@FlagsText
12786 \ifFld@hidden\def\Fld@width{1sp}\fi
12787 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12788 \LayoutTextField{#2}{%
12789 \Hy@escapeform\PDFForm@Text
12790 \pdfstartlink user {\PDFForm@Text}\relax
12791 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
12792 \HyField@AddToFields
12793 }%
12794 \endgroup
12795 }
12796 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12797 \def\Fld@name{#2}%
12798 \let\Fld@default\relax
12799 \let\Fld@value\relax
12800 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12801 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12802 \begingroup
12803 \Fld@menulength=0 %
12804 \@tempdima\z@

```

```

12805 \@for\@curropt:=#3\do{%
12806   \expandafter\Fld@checkequals\@curropt==\%
12807   \Hy@StepCount\Fld@menulength
12808   \settowidth{\@tempdimb}{\@currDisplay}%
12809   \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12810 }%
12811 \advance\@tempdima by 15\p@
12812 \begingroup
12813   \HyField@SetKeys{#1}%
12814 \edef\x{\endgroup
12815   \noexpand\expandafter
12816   \noexpand\HyField@SetKeys
12817   \noexpand\expandafter{%
12818     \expandafter\noexpand\csname DefaultOptionsof%
12819       \ifFld@radio
12820         Radio%
12821       \else
12822         \ifFld@combo
12823         \ifFld@popdown
12824           PopdownBox%
12825         \else
12826           ComboBox%
12827         \fi
12828       \else
12829         ListBox%
12830       \fi
12831     \fi
12832   \endcsname
12833 }%
12834 }\x
12835 \HyField@SetKeys{#1}%
12836 \PDFForm@Name
12837 \ifFld@hidden\def\Fld@width{1sp}\fi
12838 \ifx\Fld@value\relax
12839   \let\Fld@value\Fld@default
12840 \fi
12841 \LayoutChoiceField{#2}{%
12842   \ifFld@radio
12843     \HyField@FlagsRadioButton
12844     \@@Radio{#3}%
12845   \else
12846     \begingroup
12847       \HyField@FlagsChoice
12848       \ifdim\Fld@width<\@tempdima
12849         \ifdim\@tempdima<1cm\@tempdima1cm\fi
12850       \edef\Fld@width{\the\@tempdima}%
12851       \fi
12852       \ifFld@combo
12853       \else
12854         \@tempdima=\the\Fld@menulength\Fld@charsize
12855         \advance\@tempdima by \Fld@borderwidth bp %
12856         \advance\@tempdima by \Fld@borderwidth bp %
12857       \edef\Fld@height{\the\@tempdima}%
12858       \fi
12859       \@@ListBox{#3}%
12860     \endgroup
12861   \fi

```

```

12862 }%
12863 \endgroup
12864 }
12865 \def\@@Radio#1{%
12866 \Fld@listcount=0 %
12867 \EdefEscapeName\Fld@default{\Fld@default}%
12868 \@for\@curropt:=#1\do{%
12869 \expandafter\Fld@checkequals\@curropt==\\%
12870 \EdefEscapeName\@currValue{\@currValue}%
12871 \Hy@StepCount\Fld@listcount
12872 \@currDisplay\space
12873 \leavevmode
12874 \Hy@escapeform\PDFForm@Radio
12875 \pdfstartlink user {%
12876 \PDFForm@Radio
12877 /AP<<%
12878 /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.

```

12879 /\@currValue\space \DingObject
12880 >>%
12881 >>%
12882 }%
12883 \relax
12884 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
12885 \ifnum\Fld@listcount=1 %
12886 \HyField@AddToFields
12887 \fi
12888 \space % deliberate space between radio buttons
12889 }%
12890 }
12891 \newcount\Fld@listcount
12892 \def\@@ListBox#1{%
12893 \HyField@PDFChoices{#1}%
12894 \leavevmode
12895 \Hy@escapeform\PDFForm@List
12896 \pdfstartlink user {\PDFForm@List}\relax
12897 \MakeChoiceField{\Fld@width}{\Fld@height}%
12898 \pdfendlink
12899 \HyField@AddToFields
12900 }
12901 \def\@PushButton[#1]#2{% parameters, label
12902 \def\Fld@name{#2}%
12903 \begingroup
12904 \expandafter\HyField@SetKeys\expandafter{%
12905 \DefaultOptionsofPushButton,#1%
12906 }%
12907 \PDFForm@Name
12908 \ifHy@pdfa
12909 \Hy@Error{%
12910 PDF/A: Push button with JavaScript is prohibited%
12911 }\@ehc
12912 \LayoutPushButtonField{%
12913 \leavevmode
12914 \MakeButtonField{#2}%
12915 }%

```

```

12916 \else
12917 \HyField@FlagsPushButton
12918 \ifFld@hidden\def\Fld@width{1sp}\fi
12919 \LayoutPushButtonField{%
12920 \leavevmode
12921 \Hy@escapeform\PDFForm@Push
12922 \pdfstartlink user {\PDFForm@Push}\relax
12923 \MakeButtonField{#2}%
12924 \pdfendlink
12925 \HyField@AddToFields
12926 }%
12927 \fi
12928 \endgroup
12929 }
12930 \def\@Submit[#1]#2{%
12931 \def\Fld@width{\DefaultWidthofSubmit}%
12932 \def\Fld@height{\DefaultHeightofSubmit}%
12933 \begingroup
12934 \expandafter\HyField@SetKeys\expandafter{%
12935 \DefaultOptionsofSubmit,#1%
12936 }%
12937 \HyField@FlagsPushButton
12938 \HyField@FlagsSubmit
12939 \ifFld@hidden\def\Fld@width{1sp}\fi
12940 \leavevmode
12941 \Hy@escapeform\PDFForm@Submit
12942 \pdfstartlink user {%
12943 \PDFForm@Submit
12944 /AP<</N \SubmitObject/D \SubmitPObject>>%
12945 }%
12946 \relax
12947 \MakeButtonField{#2}%
12948 \pdfendlink
12949 \HyField@AddToFields
12950 \endgroup
12951 }
12952 \def\@Reset[#1]#2{%
12953 \def\Fld@width{\DefaultWidthofReset}%
12954 \def\Fld@height{\DefaultHeightofReset}%
12955 \begingroup
12956 \expandafter\HyField@SetKeys\expandafter{%
12957 \DefaultOptionsofReset,#1%
12958 }%
12959 \leavevmode
12960 \ifHy@pdfa
12961 \Hy@Error{%
12962 PDF/A: Reset action is prohibited%
12963 }\@ehc
12964 \MakeButtonField{#2}%
12965 \else
12966 \HyField@FlagsPushButton
12967 \ifFld@hidden\def\Fld@width{1sp}\fi
12968 \Hy@escapeform\PDFForm@Reset
12969 \pdfstartlink user {\PDFForm@Reset}\relax
12970 \MakeButtonField{#2}%
12971 \pdfendlink
12972 \HyField@AddToFields

```

```

12973 \fi
12974 \endgroup
12975 }
12976 \def\@CheckBox[#1]#2{% parameters, label
12977 \def\Fld@name{#2}%
12978 \def\Fld@default{0}%
12979 \begingroup
12980 \def\Fld@width{\DefaultWidthofCheckBox}%
12981 \def\Fld@height{\DefaultHeightofCheckBox}%
12982 \expandafter\HyField@SetKeys\expandafter{%
12983 \DefaultOptionsofCheckBox,#1%
12984 }%
12985 \PDFForm@Name
12986 \HyField@FlagsCheckBox
12987 \ifFld@hidden\def\Fld@width{1sp}\fi
12988 \LayoutCheckField{#2}{%
12989 \Hy@escapeform\PDFForm@Check
12990 \pdfstartlink user {\PDFForm@Check}\relax
12991 \MakeCheckField{\Fld@width}{\Fld@height}%
12992 \pdfendlink
12993 \HyField@AddToFields
12994 }%
12995 \endgroup
12996 }
12997 \def\Hy@FormObjects{%
12998 \pdfobj {%
12999 <<%
13000 /Type/Encoding%
13001 /Differences[%
13002 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13003 /ring/tilde %
13004 39/quotesingle %
13005 96/grave %
13006 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13007 /fraction/guilsingleft/guilsingright/minus/perthousand%
13008 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13009 /quoteright/quotesingbase/trademark/fi/fl/Lslash/OE%
13010 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13011 164/currency %
13012 166/brokenbar %
13013 168/dieresis/copyright/ordfeminine %
13014 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13015 /twosuperior/threesuperior/acute/mu %
13016 183/periodcentered/cedilla/onesuperior/ordmasculine %
13017 188/onequarter/onehalf/threequarters %
13018 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13019 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13020 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13021 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13022 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13023 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13024 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13025 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13026 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave%
13027 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13028 ]%
13029 >>%

```

```

13030 }%
13031 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
13032 \pdfobj{%
13033 <<%
13034   /Type/Font%
13035   /Subtype/Type1%
13036   /Name/ZaDb%
13037   /BaseFont/ZapfDingbats%
13038 >>%
13039 }%
13040 \xdef\OBJ@ZaDb{\the\pdflastobj}%
13041 \pdfobj{%
13042 <<%
13043   /Type/Font%
13044   /Subtype/Type1%
13045   /Name/Helv%
13046   /BaseFont/Helvetica%
13047   /Encoding \OBJ@pdfdocencoding\space 0 R%
13048 >>%
13049 }%
13050 \xdef\OBJ@Helv{\the\pdflastobj}%
13051 \global\let\Hy@FormObjects\relax
13052 }
13053 </pdftex>

```

47.5 dvipdfm, xetex

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

```

13054 <*dvipdfm | xetex>

```

\@Gauge

```

13055 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13056 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13057 }

```

\@Form

```

13058 \def\@Form[#1]{%
13059 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13060 \kvsetkeys{Form}{#1}%
13061 \Hy@FormObjects
13062 \@pdfm@mark{obj @afields []}%
13063 \@pdfm@mark{obj @corder []}%
13064 \@pdfm@mark{%
13065   obj @aform <<%
13066     /Fields @afields%
13067     /DR<<%
13068     /Font<<%
13069     /ZaDb @OBJZaDb%
13070     /Helv @OBJHelv%
13071     >>%
13072   >>%
13073   /DA(/Helv 10 Tf 0 g)%
13074   /CO @corder%
13075   \ifHy@pdfa
13076   \else
13077     \ifHyField@NeedAppearances

```

```

13078         /NeedAppearances true%
13079         \fi
13080     \fi
13081     >>%
13082 }%
13083 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
13084 }

```

\@endForm

```

13085 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

13086 \def\dvipdfm@setdim{%
13087   height \the\ht\pdfm@box\space
13088   width \the\wd\pdfm@box\space
13089   depth \the\dp\pdfm@box\space
13090 }

```

\HyField@AnnotCount

```

13091 \newcount\HyField@AnnotCount
13092 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

13093 \def\HyField@AdvanceAnnotCount{%
13094   \global\advance\HyField@AnnotCount\@ne
13095 }

```

\HyField@TheAnnotCount

```

13096 \def\HyField@TheAnnotCount{%
13097   \the\HyField@AnnotCount
13098 }

```

\@TextField

```

13099 \def\@TextField[#1]#2{% parameters, label
13100   \def\Fld@name{#2}%
13101   \def\Fld@default{}%
13102   \let\Fld@value\@empty
13103   \def\Fld@width{\DefaultWidthofText}%
13104   \def\Fld@height{%
13105     \ifFld@multiline
13106       \DefaultHeightofTextMultiline
13107     \else
13108       \DefaultHeightofText
13109     \fi
13110   }%
13111   \begingroup
13112     \expandafter\HyField@SetKeys\expandafter{%
13113       \DefaultOptionsofText,#1%
13114     }%
13115     \PDFForm@Name
13116     \HyField@FlagsText
13117     \ifFld@hidden\def\Fld@width{1sp}\fi
13118     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13119     \setbox\pdfm@box=\hbox{%
13120       \MakeTextField{\Fld@width}{\Fld@height}%
13121     }%

```



```

13122 \HyField@AdvanceAnnotCount
13123 \LayoutTextField{#2}{%
13124 \Hy@escapeform\PDFForm@Text
13125 \@pdfm@mark{%
13126 ann @text\HyField@TheAnnotCount\space
13127 \dvipdfm@setdim << \PDFForm@Text >>%
13128 }%
13129 }%
13130 \unhbox\pdfm@box
13131 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
13132 % record in @afields array
13133 \endgroup
13134 }

```

\@ChoiceMenu

```

13135 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13136 \def\Fld@name{#2}%
13137 \let\Fld@default\relax
13138 \let\Fld@value\relax
13139 \def\Fld@width{\DefaultWidthofChoiceMenu}%
13140 \def\Fld@height{\DefaultHeightofChoiceMenu}%
13141 \begingroup
13142 \Fld@menulength=0 %
13143 \@tempdima\z@
13144 \@for\@curropt:=#3\do{%
13145 \expandafter\Fld@checkequals\@curropt==\%
13146 \Hy@StepCount\Fld@menulength
13147 \settowidth{\@tempdimb}{\@currDisplay}%
13148 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13149 }%
13150 \advance\@tempdima by 15\p@
13151 \begingroup
13152 \HyField@SetKeys{#1}%
13153 \edef\x{\endgroup
13154 \noexpand\expandafter
13155 \noexpand\HyField@SetKeys
13156 \noexpand\expandafter{%
13157 \expandafter\noexpand\csname DefaultOptionsof%
13158 \ifFld@radio
13159 Radio%
13160 \else
13161 \ifFld@combo
13162 \ifFld@popdown
13163 PopdownBox%
13164 \else
13165 ComboBox%
13166 \fi
13167 \else
13168 ListBox%
13169 \fi
13170 \fi
13171 \endcsname
13172 }%
13173 }\x
13174 \HyField@SetKeys{#1}%
13175 \PDFForm@Name
13176 \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

13177 \ifx\Fld@value\relax
13178 \let\Fld@value\Fld@default
13179 \fi
13180 \LayoutChoiceField{#2}{%
13181 \ifFld@radio
13182 \HyField@FlagsRadioButton
13183 \@@Radio{#3}%
13184 \else
13185 \beginngroup
13186 \HyField@FlagsChoice
13187 \ifdim\Fld@width<\@tempdima
13188 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13189 \edef\Fld@width{\the\@tempdima}%
13190 \fi
13191 \ifFld@combo
13192 \else
13193 \@tempdima=\the\Fld@menulength\Fld@charsize
13194 \advance\@tempdima by \Fld@borderwidth bp %
13195 \advance\@tempdima by \Fld@borderwidth bp %
13196 \edef\Fld@height{\the\@tempdima}%
13197 \fi
13198 \@@ListBox{#3}%
13199 \endgroup
13200 \fi
13201 }%
13202 \endgroup
13203 }

```

\@@Radio

```

13204 \def\@@Radio#1{%
13205 \Fld@listcount=0 %
13206 \EdefEscapeName\Fld@default{\Fld@default}%
13207 \setbox\pdfm@box=\hbox{%
13208 \MakeRadioField{\Fld@width}{\Fld@height}%
13209 }%
13210 \@for\@curropt:=#1\do{%
13211 \expandafter\Fld@checkequals\@curropt==\%
13212 \EdefEscapeName\@currValue{\@currValue}%
13213 \Hy@StepCount\Fld@listcount
13214 \@currDisplay\space
13215 \leavevmode
13216 \Hy@escapeform\PDFForm@Radio
13217 \ifnum\Fld@listcount=1 %
13218 \HyField@AdvanceAnnotCount
13219 \fi
13220 \@pdfm@mark{%
13221 ann %
13222 \ifnum\Fld@listcount=1 %
13223 @radio\HyField@TheAnnotCount%
13224 \space
13225 \fi
13226 \dvi pdfm@setdim
13227 <<%
13228 \PDFForm@Radio
13229 /AP<</N<</\@currValue /null>>>>%
13230 >>%
13231 }%

```

```

13232 \unhcopy\pdfm@box\space% deliberate space between radio buttons
13233 \ifnum\Fld@listcount=1 %
13234 \@pdfm@mark{%
13235     put @afields @radio\HyField@TheAnnotCount
13236 }%
13237 \fi
13238 }%
13239 }

```

\Fld@listcount

```

13240 \newcount\Fld@listcount

```

\@@ListBox

```

13241 \def\@@ListBox#1{%
13242 \HyField@PDFChoices{#1}%
13243 \setbox\pdfm@box=\hbox{%
13244 \MakeChoiceField{\Fld@width}{\Fld@height}%
13245 }%
13246 \leavevmode
13247 \Hy@escapeform\PDFForm@List
13248 \HyField@AdvanceAnnotCount
13249 \@pdfm@mark{%
13250 ann @list\HyField@TheAnnotCount\space
13251 \dvi pdfm@setdim
13252 <<\PDFForm@List>>%
13253 }%
13254 \unhbox\pdfm@box
13255 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
13256 }

```

\@PushButton

```

13257 \def\@PushButton[#1]#2{% parameters, label
13258 \def\Fld@name{#2}%
13259 \begingroup
13260 \expandafter\HyField@SetKeys\expandafter{%
13261 \DefaultOptionsofPushButton,#1%
13262 }%
13263 \PDFForm@Name
13264 \ifHy@pdfa
13265 \Hy@Error{%
13266 PDF/A: Push button with JavaScript is prohibited%
13267 }\@ehc
13268 \LayoutPushButtonField{%
13269 \leavevmode
13270 \MakeButtonField{#2}%
13271 }%
13272 \else
13273 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13274 \HyField@FlagsPushButton
13275 \ifFld@hidden\def\Fld@width{1sp}\fi
13276 \HyField@AdvanceAnnotCount
13277 \LayoutPushButtonField{%
13278 \leavevmode
13279 \Hy@escapeform\PDFForm@Push
13280 \@pdfm@mark{%
13281 ann @push\HyField@TheAnnotCount\space
13282 \dvi pdfm@setdim

```

```

13283         <<\PDFForm@Push>>%
13284     }%
13285 }%
13286 \unhbox\pdfm@box
13287 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
13288 \fi
13289 \endgroup
13290 }

\@Submit

13291 \def\@Submit[#1]#2{%
13292 \def\Fld@width{\DefaultWidthofSubmit}%
13293 \def\Fld@height{\DefaultHeightofSubmit}%
13294 \begingroup
13295 \expandafter\HyField@SetKeys\expandafter{%
13296 \DefaultOptionsofSubmit,#1%
13297 }%
13298 \HyField@FlagsPushButton
13299 \HyField@FlagsSubmit
13300 \ifFld@hidden\def\Fld@width{1sp}\fi
13301 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13302 \leavevmode
13303 \Hy@escapeform\PDFForm@Submit
13304 \HyField@AdvanceAnnotCount
13305 \@pdfm@mark{%
13306 ann @submit\HyField@TheAnnotCount\space
13307 \dvipdfm@setdim
13308 <<\PDFForm@Submit>>%
13309 }%
13310 \unhbox\pdfm@box%
13311 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
13312 \endgroup
13313 }

\@Reset

13314 \def\@Reset[#1]#2{%
13315 \def\Fld@width{\DefaultWidthofReset}%
13316 \def\Fld@height{\DefaultHeightofReset}%
13317 \begingroup
13318 \expandafter\HyField@SetKeys\expandafter{%
13319 \DefaultOptionsofReset,#1%
13320 }%
13321 \leavevmode
13322 \ifHy@pdfa
13323 \Hy@Error{%
13324 PDF/A: Reset action is prohibited%
13325 }\@ehc
13326 \MakeButtonField{#2}%
13327 \else
13328 \HyField@FlagsPushButton
13329 \ifFld@hidden\def\Fld@width{1sp}\fi
13330 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13331 \Hy@escapeform\PDFForm@Reset
13332 \HyField@AdvanceAnnotCount
13333 \@pdfm@mark{%
13334 ann @reset\HyField@TheAnnotCount\space
13335 \dvipdfm@setdim

```

```

13336      <<\PDFForm@Reset>>%
13337    }%
13338    \unhbox\pdfm@box
13339    \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
13340  \fi
13341 \endgroup
13342 }

```

\@CheckBox

```

13343 \def\@CheckBox[#1]#2{% parameters, label
13344   \def\Fld@name{#2}%
13345   \def\Fld@default{0}%
13346   \begingroup
13347     \def\Fld@width{\DefaultWidthofCheckBox}%
13348     \def\Fld@height{\DefaultHeightofCheckBox}%
13349     \expandafter\HyField@SetKeys\expandafter{%
13350       \DefaultOptionsofCheckBox,#1%
13351     }%
13352     \PDFForm@Name
13353     \HyField@FlagsCheckBox
13354     \ifFld@hidden\def\Fld@width{1sp}\fi
13355     \setbox\pdfm@box=\hbox{%
13356       \MakeCheckField{\Fld@width}{\Fld@height}%
13357     }%
13358     \HyField@AdvanceAnnotCount
13359     \LayoutCheckField{#2}{%
13360       \Hy@escapeform\PDFForm@Check
13361       \@pdfm@mark{%
13362         ann @check\HyField@TheAnnotCount\space
13363         \dvipdfm@setdim
13364         <<\PDFForm@Check>>%
13365       }%
13366       \unhbox\pdfm@box
13367       \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
13368     }%
13369   \endgroup
13370 }

13371 \def\Hy@FormObjects{%
13372   \@pdfm@mark{obj @OBJpdfdocencoding%
13373     <<%
13374       /Type/Encoding%
13375       /Differences[
13376         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13377         39/quotesingle %
13378         96/grave %
13379         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13380         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13381         /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13382         /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13383         /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13384         164/currency %
13385         166/brokenbar %
13386         168/dieresis/copyright/ordfeminine %
13387         172/logicalnot/.notdef/registered/macron/degree/plusminus%
13388         /twosuperior/threesuperior/acute/mu %
13389         183/periodcentered/cedilla/onesuperior/ordmasculine %
13390         188/onequarter/onehalf/threequarters %

```

```

13391 192/Agave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13392 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13393 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13394 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13395 /Udieresis/Yacute/Thorn/germandbls/agave/aacute/acircumflex%
13396 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13397 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
13398 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
13399 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13400 /thorn/ydieresis%
13401 }%
13402 >>%
13403 }%
13404 \@pdfm@mark{obj @OBJZaDb%
13405 <<%
13406 /Type/Font%
13407 /Subtype/Type1%
13408 /Name/ZaDb%
13409 /BaseFont/ZapfDingbats%
13410 >>%
13411 }%
13412 \@pdfm@mark{obj @OBJHelv%
13413 <<%
13414 /Type/Font%
13415 /Subtype/Type1%
13416 /Name/Helv%
13417 /BaseFont/Helvetica%
13418 /Encoding @OBJpdfdocencoding%
13419 >>%
13420 }%
13421 \global\let\Hy@FormObjects\relax
13422 }
13423 </dvipdfm | xetex>

```

47.6 Common forms part

```

13424 <*pdfmform>

```

\Hy@escapestring

```

13425 \begingroup\expandafter\expandafter\expandafter\endgroup
13426 \expandafter\ifx\csname pdfescapestring\endcsname\relax
13427 \let\Hy@escapestring\@firstofone
13428 \def\Hy@escapeform#1{%
13429 \ifHy@escapeform
13430 \def\Hy@escapestring##1{%
13431 \noexpand\Hy@escapestring{\noexpand##1}%
13432 }%
13433 \edef\Hy@temp{#1}%
13434 \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13435 \def\Hy@escapestring##1{%
13436 \@ifundefined{Hy@esc@\string##1}{%
13437 ##1%
13438 \ThisShouldNotHappen
13439 }{%
13440 \csname Hy@esc@\string##1\endcsname
13441 }%
13442 }%

```

```

13443 \else
13444 \let\Hy@escapestring\@firstofone
13445 \fi
13446 }%
13447 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
13448 \ifx\#3\%
13449 \else
13450 \expandafter
13451 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13452 \Hy@ReturnAfterFi{%
13453 \Hy@@escapeform#3\@nil
13454 }%
13455 \fi
13456 }%
13457 \else
13458 \def\Hy@escapeform#1{%
13459 \ifHy@escapeform
13460 \let\Hy@escapestring\pdfescapestring
13461 \else
13462 \let\Hy@escapestring\@firstofone
13463 \fi
13464 }%
13465 \Hy@escapeform{}}%
13466 \fi

```

\PDFForm@Name

```

13467 \def\PDFForm@Name{%
13468 \PDFForm@@Name\Fld@name
13469 \ifx\Fld@altname\relax
13470 \else
13471 \PDFForm@@Name\Fld@altname
13472 \fi
13473 \ifx\Fld@mappingname\relax
13474 \else
13475 \PDFForm@@Name\Fld@mappingname
13476 \fi
13477 }

```

\PDFForm@@Name

```

13478 \def\PDFForm@@Name#1{%
13479 \begingroup
13480 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
13481 \ifHy@unicode
13482 \Hy@unicodedefalse
13483 \fi
13484 \fi
13485 \HyPsd@XeTeXBigCharstrue
13486 \pdfstringdef\Hy@gtemp#1%
13487 \endgroup
13488 \let#1\Hy@gtemp
13489 }

```

\Fld@additionalactions

```

13490 \def\Fld@@additionalactions{%
K input (keystroke) format
13491 \ifx\Fld@keystroke@code\@empty

```

```

13492 \else
13493   /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13494 \fi

F display format
13495 \ifx\Fld@format@code\@empty
13496 \else
13497   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13498 \fi

V validation
13499 \ifx\Fld@validate@code\@empty
13500 \else
13501   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13502 \fi

C calculation
13503 \ifx\Fld@calculate@code\@empty
13504 \else
13505   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13506 \fi

Fo receiving the input focus
13507 \ifx\Fld@onfocus@code\@empty
13508 \else
13509   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13510 \fi

Bl loosing the input focus (blurred)
13511 \ifx\Fld@onblur@code\@empty
13512 \else
13513   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13514 \fi

D pressing the mouse button (down)
13515 \ifx\Fld@onmousedown@code\@empty
13516 \else
13517   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13518 \fi

U releasing the mouse button (up)
13519 \ifx\Fld@onmouseup@code\@empty
13520 \else
13521   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13522 \fi

E cursor enters the annotation's active area.
13523 \ifx\Fld@onenter@code\@empty
13524 \else
13525   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13526 \fi

X cursor exits the annotation's active area.
13527 \ifx\Fld@onexit@code\@empty
13528 \else
13529   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13530 \fi
13531 }
13532 \def\Fld@additionalactions{%
13533 \if-\Fld@additionalactions-
13534 \else

```



```

13535 \ifHy@pdfa
13536 \else
13537 /AA<<\Fld@@additionalactions>>%
13538 \fi
13539 \fi
13540 }

```

\Fld@annotnames

```

13541 \def\Fld@annotnames{%
13542 /T(\Fld@name)%
13543 \ifx\Fld@altname\relax
13544 \else
13545 /TU(\Fld@altname)%
13546 \fi
13547 \ifx\Fld@mappingname\relax
13548 \else
13549 /TM(\Fld@mappingname)%
13550 \fi
13551 }

```

\PDFForm@Check

```

13552 \def\PDFForm@Check{%
13553 /Subtype/Widget%
13554 \Fld@annotflags
13555 \Fld@annotnames
13556 /FT/Btn%
13557 \Fld@flags
13558 /Q \Fld@align
13559 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13560 /MK<<%
13561 \ifnum\Fld@rotation=\z@
13562 \else
13563 /R \Fld@rotation
13564 \fi
13565 \ifx\Fld@bordercolor\relax
13566 \else
13567 /BC[\Fld@bordercolor]%
13568 \fi
13569 \ifx\Fld@bcolor\relax
13570 \else
13571 /BG[\Fld@bcolor]%
13572 \fi
13573 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13574 >>%
13575 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13576 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13577 /H/P%
13578 \ifFld@checked /V/Yes\else /V/Off\fi
13579 \Fld@additionalactions
13580 }

```

\PDFForm@Push

```

13581 \ifHy@pdfa
13582 \else
13583 \def\PDFForm@Push{%
13584 /Subtype/Widget%
13585 \Fld@annotflags

```

```

13586 \Fld@annotnames
13587 /FT/Btn%
13588 \Fld@flags
13589 /H/P%
13590 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13591 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13592     \ifx\Fld@bordercolor\relax\else 1\fi
13593     \space
13594 \else
13595     /MK<<%
13596     \ifnum\Fld@rotation=\z@
13597     \else
13598         /R \Fld@rotation
13599     \fi
13600     \ifx\Fld@bordercolor\relax
13601     \else
13602         /BC[\Fld@bordercolor]%
13603     \fi
13604     >>%
13605 \fi
13606 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13607 \Fld@additionalactions
13608 }%
13609 \fi

```

\PDFForm@List

```

13610 \def\PDFForm@List{%
13611 /Subtype/Widget%
13612 \Fld@annotflags
13613 \Fld@annotnames
13614 /FT/Ch%
13615 \Fld@flags
13616 /Q \Fld@align
13617 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13618 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13619     \ifx\Fld@bordercolor\relax\else 1\fi
13620     \ifx\Fld@bcolor\relax \else 1\fi
13621     \space
13622 \else
13623     /MK<<%
13624     \ifnum\Fld@rotation=\z@
13625     \else
13626         /R \Fld@rotation
13627     \fi
13628     \ifx\Fld@bordercolor\relax
13629     \else
13630         /BC[\Fld@bordercolor]%
13631     \fi
13632     \ifx\Fld@bcolor\relax
13633     \else
13634         /BG[\Fld@bcolor]%
13635     \fi
13636     >>%
13637 \fi
13638 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13639     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13640 \Fld@choices

```

```

13641 \Fld@additionalactions
13642 }

```

\PDFForm@Radio

```

13643 \def\PDFForm@Radio{%
13644   /Subtype/Widget%
13645   \Fld@annotflags
13646   \Fld@annotnames
13647   /FT/Btn%
13648   \Fld@flags
13649   /H/P%
13650   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13651   /MK<<%
13652     \ifnum\Fld@rotation=\z@
13653     \else
13654       /R \Fld@rotation
13655     \fi
13656     \ifx\Fld@bordercolor\relax
13657     \else
13658       /BC[\Fld@bordercolor]%
13659     \fi
13660     \ifx\Fld@bcolor\relax
13661     \else
13662       /BG[\Fld@bcolor]%
13663     \fi
13664     /CA(\Fld@radiosymbol)%
13665   >>%
13666   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13667     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13668   \ifx\@currValue\Fld@default
13669     /V/\Fld@default
13670     /DV/\Fld@default
13671   \else
13672     /V/Off%
13673     /DV/Off%
13674   \fi
13675   \Fld@additionalactions
13676 }

```

\PDFForm@Text

```

13677 \def\PDFForm@Text{%
13678   /Subtype/Widget%
13679   \Fld@annotflags
13680   \Fld@annotnames
13681   /FT/Tx%
13682   \Fld@flags
13683   /Q \Fld@align
13684   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
13685   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13686     \ifx\Fld@bordercolor\relax\else 1\fi
13687     \ifx\Fld@bcolor\relax \else 1\fi
13688     \space
13689   \else
13690     /MK<<%
13691     \ifnum\Fld@rotation=\z@
13692     \else
13693       /R \Fld@rotation

```

```

13694 \fi
13695 \ifx\Fld@bordercolor\relax
13696 \else
13697 /BC[\Fld@bordercolor]%
13698 \fi
13699 \ifx\Fld@bcolor\relax
13700 \else
13701 /BG[\Fld@bcolor]%
13702 \fi
13703 >>%
13704 \fi
13705 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13706 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13707 /DV(\Hy@escapestring{\Fld@default})%
13708 /V(\Hy@escapestring{\Fld@value})%
13709 \Fld@additionalactions
13710 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
13711 }

```

\PDFForm@Submit

```

13712 \def\PDFForm@Submit{%
13713 /Subtype/Widget%
13714 \Fld@annotflags
13715 \Fld@annotnames
13716 /FT/Btn%
13717 \Fld@flags
13718 /H/P%
13719 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13720 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13721 \ifx\Fld@bordercolor\relax\else 1\fi
13722 \space
13723 \else
13724 /MK<<%
13725 \ifnum\Fld@rotation=\z@
13726 \else
13727 /R \Fld@rotation
13728 \fi
13729 \ifx\Fld@bordercolor\relax
13730 \else
13731 /BC[\Fld@bordercolor]%
13732 \fi
13733 >>%
13734 \fi
13735 /A<<%
13736 /S/SubmitForm%
13737 /F<<%
13738 /FS/URL%
13739 /F(\Hy@escapestring{\Form@action})%
13740 >>%
13741 \Fld@submitflags
13742 >>%
13743 \Fld@additionalactions
13744 }

```

\PDFForm@Reset

```

13745 \ifHy@pdfa
13746 \else

```

```

13747 \def\PDFForm@Reset{%
13748   /Subtype/Widget%
13749   \Fld@annotflags
13750   \Fld@annotnames
13751   /FT/Btn%
13752   \Fld@flags
13753   /H/P%
13754   /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
13755   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13756     \ifx\Fld@bordercolor\relax\else 1\fi
13757     \space
13758   \else
13759     /MK<<%
13760     \ifnum\Fld@rotation=\z@
13761     \else
13762       /R \Fld@rotation
13763     \fi
13764     \ifx\Fld@bordercolor\relax
13765     \else
13766       /BC[\Fld@bordercolor]%
13767     \fi
13768 %   /CA (Clear)
13769 %   /AC (Done)
13770   >>%
13771   \fi
13772   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13773   /A<</S/ResetForm>>%
13774   \Fld@additionalactions
13775 }%
13776 \fi

13777 </pdfform>
13778 <*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`

```

13779 \def\phantomsection{%
13780   \Hy@MakeCurrentHrefAuto{section*}%
13781   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
13782 }
13783 </package>

```

48.1 Bookmarks

```
13784 <*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.

```

13785 \def\Hy@writebookmark#1#2#3#4#5{%
13786   % section number, text, label, level, file
13787   \ifx\WriteBookmarks\relax%
13788   \else
13789     \ifnum#4>\Hy@bookmarksdepth\relax
13790     \else
13791       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
13792     \fi
13793   \fi
13794 }
13795 \def\Hy@currentbookmarklevel{0}
13796 \def\Hy@numberline#1{#1 }
13797 \def\@@writetorep#1#2#3#4#5{%
13798   \begingroup
13799   \edef\Hy@tempa{#5}%
13800   \ifx\Hy@tempa\Hy@bookmarkstype
13801     \edef\Hy@level{#4}%
13802     \ifx\Hy@levelcheck Y%
13803       \@tempcnta\Hy@level\relax
13804       \advance\@tempcnta by -1 %
13805       \ifnum\Hy@currentbookmarklevel<\@tempcnta
13806         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
13807         \advance\@tempcnta by 1 %
13808       \Hy@Warning{%
13809         Difference (\the\@tempcnta) between bookmark levels is %
13810         greater \MessageBreak than one, level fixed%
13811       }%
13812       \@tempcnta\Hy@currentbookmarklevel
13813       \advance\@tempcnta by 1 %
13814       \edef\Hy@level{\the\@tempcnta}%
13815     \fi
13816   \else
13817     \global\let\Hy@levelcheck Y%
13818   \fi
13819   \global\let\Hy@currentbookmarklevel\Hy@level
13820   \@tempcnta\Hy@level\relax
13821   \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
13822   \advance\@tempcnta by -1 %
13823   \edef\Hy@tempa{#3}%
13824   \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
13825   \ifx\Hy@tempa\Hy@tempb
13826     \Hy@Warning{%
13827       The anchor of a bookmark and its parent's must not%
13828       \MessageBreak be the same. Added a new anchor%

```

```

13829     }%
13830     \phantomsection
13831     \fi
13832     \ifHy@bookmarksnumbered
13833         \let\numberline\Hy@numberline
13834         \let\booknumberline\Hy@numberline
13835         \let\partnumberline\Hy@numberline
13836         \let\chapternumberline\Hy@numberline
13837     \else
13838         \let\numberline\@gobble
13839         \let\booknumberline\@gobble
13840         \let\partnumberline\@gobble
13841         \let\chapternumberline\@gobble
13842     \fi
13843     \HyPsd@XeTeXBigCharstrue
13844     \pdfstringdef\Hy@tempa{#2}%
13845     \HyPsd@SanitizeForOutFile\Hy@tempa
13846     \if@filesw
13847         \stepcounter{bookmark@seq@number}%
13848         \@ifundefined{@outlinefile}{%
13849             }{%
13850                 \protected@write{@outlinefile}{%
13851                     \protect\BOOKMARK
13852                     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
13853                     {\Hy@tempa}{\Hy@tempb}%
13854                     \@percentchar\space\thebookmark@seq@number
13855                 }%
13856             }%
13857         \fi
13858     \fi
13859     \endgroup
13860 }
13861 \newcounter{bookmark@seq@number}
13862 \begingroup
13863     \lccode'('= '{%
13864     \lccode')='}%
13865     \lccode'1=\z@
13866     \lccode'2=\z@
13867     \lccode'3=\z@
13868     \lccode'5=\z@
13869     \lccode'7=\z@
13870     \lccode'#= \z@
13871     \lccode'\='=\z@
13872     \lccode'\{=\z@
13873     \lccode'\}=\z@
13874     \lowercase{%
13875     \endgroup
13876     \def\HyPsd@SanitizeForOutFile#1{%
13877         \@onelevel@sanitize\Hy@tempa
13878         \escapechar'\%
13879         \edef\Hy@tempa{%
13880             \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
13881         }%
13882         \edef\Hy@tempa{%
13883             \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
13884         }%
13885     }%

```

```

13886 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
13887   #1%
13888   \ifx\#2\%
13889     \expandafter\ltx@gobble
13890   \else
13891     \expandafter\ltx@firstofone
13892   \fi
13893   {%
13894     \string\173%
13895     \HyPsd@SanitizeOut@BraceLeft#2\@nil
13896   }%
13897 }%
13898 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
13899   #1%
13900   \ifx\#2\%
13901     \expandafter\ltx@gobble
13902   \else
13903     \expandafter\ltx@firstofone
13904   \fi
13905   {%
13906     \string\175%
13907     \HyPsd@SanitizeOut@BraceRight#2\@nil
13908   }%
13909 }%
13910 }

```

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

```

13911 \newcommand{\currentpdfbookmark}{%
13912   \pdfbookmark[\Hy@currentbookmarklevel]%
13913 }
13914 \newcommand{\subpdfbookmark}{%
13915   \@tempcnta\Hy@currentbookmarklevel
13916   \Hy@StepCount\@tempcnta
13917   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
13918 }
13919 \newcommand{\belowpdfbookmark}[2]{%
13920   \@tempcnta\Hy@currentbookmarklevel
13921   \Hy@StepCount\@tempcnta
13922   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
13923   \advance\@tempcnta by -1 %
13924   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
13925 }

```

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.

```

13926 \renewcommand\pdfbookmark[3][0]{%
13927   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
13928   \hyper@anchorstart{#3.#1}\hyper@anchorend
13929 }
13930 \def\BOOKMARK{%
13931   \ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
13932 }
13933 \def\@BOOKMARK[#1]{%
13934   \ifnextchar[{\@@BOOKMARK[#1]}{\@@BOOKMARK[#1][-]}%
13935 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used

in the texinfo_{pdf} macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```
13936 \RequirePackage{rerunfilecheck}[2009/12/10]
13937 \def\Hy@OutlineRerunCheck{%
13938   \RerunFileCheck{\jobname.out}{}%
13939   \immediate\closeout\@outlinefile
13940 }{%
13941   Rerun to get outlines right\MessageBreak
13942   or use package 'bookmark'%
13943 }%
13944 }
```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```
13945 < *vtex >
13946 \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.

```
13947 \begingroup
13948   \catcode'\'=12 %
13949   \ifnum\Hy@VTeXversion<650 %
13950     \catcode'\ "=12 %
13951     \gdef\hv@pdf@char#1#2#3{%
13952       \char
13953       \ifcase'#1#2#3 %
13954         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13955         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
13956         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13957         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13958         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13959         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13960         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13961         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13962         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13963         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13964         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13965         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13966         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13967         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13968         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
13969         \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13970         \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13971         \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13972         \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13973         \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13974         \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13975         \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13976         \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
```

```

13977 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13978 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13979 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13980 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13981 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13982 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
13983 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13984 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13985 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13986 \fi
13987 }%
13988 \else
13989 \gdef\hv@pdf@char{\char'}%
13990 \fi
13991 \endgroup

```

\@@BOOKMARK

```

13992 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13993 \expandafter\edef\csname @count@#3\endcsname{%
13994 \the\@serial@counter
13995 }%
13996 \edef\@mycount{\the\@serial@counter}%
13997 \Hy@StepCount\@serial@counter
13998 \edef\@parcount{%
13999 \expandafter\ifx\csname @count@#5\endcsname\relax
14000 0%
14001 \else
14002 \csname @count@#5\endcsname
14003 \fi
14004 }%
14005 \immediate\special{%
14006 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14007 s=\ifx#2-c\else o\fi,t=#4%
14008 }%
14009 }%

```

\ReadBookmarks

```

14010 \def\ReadBookmarks{%
14011 \begingroup
14012 \def\0{\hv@pdf@char 0}%
14013 \def\1{\hv@pdf@char 1}%
14014 \def\2{\hv@pdf@char 2}%
14015 \def\3{\hv@pdf@char 3}%
14016 \def\({}%
14017 \def\)}%
14018 \def\do##1{%
14019 \ifnum\catcode'##1=\active
14020 \@makeother##1%
14021 \else
14022 \ifnum\catcode'##1=6 %
14023 \@makeother##1%
14024 \fi
14025 \fi
14026 }%
14027 \dospecials
14028 \Hy@safe@activetrue
14029 \InputIfFileExists{\jobname.out}{-}{-}%

```

```

14030 \endgroup
14031 \ifx\WriteBookmarks\relax
14032 \else
14033 \if@filesw
14034 \newwrite\@outlinefile
14035 \Hy@OutlineRerunCheck
14036 \immediate\openout\@outlinefile=\jobname.out\relax
14037 \ifHy@typexml
14038 \immediate\write\@outlinefile{<relaxxml>\relax}%
14039 \fi
14040 \fi
14041 \fi
14042 }

14043 </vtex>
14044 <*\vtex>
14045 \def\ReadBookmarks{%
14046 \pdf@ifdraftmode{ }{%
14047 \begingroup
14048 \def\do##1{%
14049 \ifnum\catcode'##1=\active
14050 \@makeother##1%
14051 \else
14052 \ifnum\catcode'##1=6 %
14053 \@makeother##1%
14054 \fi
14055 \fi
14056 }%
14057 \dospecials
14058 \Hy@safe@activestrue
14059 \escapechar='\%
14060 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14061 \calc@bm@number{##5}%
14062 }%
14063 \InputIfFileExists{\jobname.out}{ }{%
14064 \ifx\WriteBookmarks\relax
14065 \global\let\WriteBookmarks\relax
14066 \fi
14067 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14068 \def\Hy@temp{##4}%
14069 <*pdfetex>
14070 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14071 \Hy@OutlineName{ }\Hy@pstringName{%
14072 ##2\check@bm@number{##3}%
14073 }{%
14074 \expandafter\strip@prefix\meaning\Hy@temp
14075 }%
14076 </pdfetex>
14077 <*pdfmark>
14078 \pdfmark{%
14079 pdfmark=/OUT,%
14080 Count={##2\check@bm@number{##3}},%
14081 Dest={##3},%
14082 Title=\expandafter\strip@prefix\meaning\Hy@temp
14083 }%
14084 </pdfmark>
14085 <*dvipdfm|xetex>
14086 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%

```

```

14087 \pdfmark{@mark{%
14088   outline \ifHy@DvipdfmxOutlineOpen
14089     [%
14090       \ifnum##21>\z@
14091       \else
14092       -%
14093       \fi
14094     ] %
14095   \fi
14096   ##1<<%
14097   /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14098   /A<<%
14099   /S/GoTo%
14100   /D(\Hy@pstringName)%
14101   >>%
14102   >>%
14103   }%
14104 </dvipdfm | xetex>
14105 }%
14106 \begingroup
14107   \def\WriteBookmarks{0}%
14108   \InputIfFileExists{\jobname.out}{-}{-}%
14109 \endgroup
14110   %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
14111 \endgroup
14112 }%
14113 \ifx\WriteBookmarks\relax
14114 \else
14115   \if@filesw
14116     \newwrite\@outlinefile
14117     \Hy@OutlineRerunCheck
14118     \immediate\openout\@outlinefile=\jobname.out\relax
14119     \ifHy@typexml
14120       \immediate\write\@outlinefile{<relaxxml>\relax}%
14121     \fi
14122   \fi
14123 \fi
14124 }
14125 <*pdfTeX>
14126 \def\Hy@OutlineName#1#2#3#4{%
14127   \pdfoutline goto name{#2}count#3{#4}%
14128 }
14129 </pdfTeX>
14130 \def\check@bm@number#1{%
14131   \expandafter\ifx\csname B_#1\endcsname\relax
14132     0%
14133   \else
14134     \csname B_#1\endcsname
14135   \fi
14136 }
14137 \def\calc@bm@number#1{%
14138   \@tempcnta=\check@bm@number{#1}\relax
14139   \advance\@tempcnta by 1 %
14140   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14141 }
14142 </!vtex>
14143 \ifHy@implicit

```

```

14144 \else
14145   \expandafter\endinput
14146 \fi

14147 </outlines>
14148 <*outlines | hypertex>

14149 \newlength\Hy@SectionHShift
14150 \def\Hy@SectionAnchorHref#1{%
14151   \ifx\protect\@typeset@protect
14152     \Hy@@SectionAnchor{#1}%
14153   \fi
14154 }
14155 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
14156   \leavevmode
14157   \hbox to 0pt{%
14158     \kern-\Hy@SectionHShift
14159     \Hy@raisedlink{%
14160       \hyper@anchorstart{#1}\hyper@anchorend
14161     }%
14162     \hss
14163   }%
14164 }
14165 \let\H@old@ssect\@ssect
14166 \def\@ssect#1#2#3#4#5{%
14167   \Hy@MakeCurrentHrefAuto{section*}%
14168   \setlength\Hy@SectionHShift{#1}%
14169   \begingroup
14170     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14171     \toks\tw@\expandafter{%
14172       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14173       #5%
14174     }%
14175   \edef\x{\endgroup
14176     \the\toks@\the\toks\tw@}%
14177   }\x
14178 }
14179 \let\H@old@schapter\@schapter
14180 \def\@schapter#1{%
14181   \begingroup
14182     \let\@mkboth\@gobbletwo
14183     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14184     \Hy@raisedlink{%
14185       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14186     }%
14187   \endgroup
14188   \H@old@schapter{#1}%
14189 }

```

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:

```

14190 \ltx@ifundefined{@chapter}{-}{%
14191   \let\Hy@org@chapter\@chapter
14192   \def\@chapter{%
14193     \def\Hy@next{%
14194       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14195       \Hy@raisedlink{%
14196         \hyper@anchorstart{\@currentHref}\hyper@anchorend

```

```

14197 }%
14198 }%
14199 \ifnum\c@secnumdepth>\m@ne
14200 \ltx@ifundefined{if@mainmatter}%
14201 \iftrue{\csname if@mainmatter\endcsname}%
14202 \let\Hy@next\relax
14203 \fi
14204 \fi
14205 \Hy@next
14206 \Hy@org@chapter
14207 }%
14208 }

14209 \let\H@old@part\@part
14210 \begingroup\expandafter\expandafter\expandafter\endgroup
14211 \expandafter\ifx\csname chapter\endcsname\relax
14212 \let\Hy@secnum@part\z@
14213 \else
14214 \let\Hy@secnum@part\m@ne
14215 \fi
14216 \def\@part{%
14217 \ifnum\Hy@secnum@part>\c@secnumdepth
14218 \phantomsection
14219 \fi
14220 \H@old@part
14221 }

14222 \let\H@old@spart\@spart
14223 \def\@spart#1{%
14224 \Hy@MakeCurrentHrefAuto{part*}%
14225 \Hy@raisedlink{%
14226 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14227 }%
14228 \H@old@spart{#1}%
14229 }

14230 \let\H@old@sect\@sect
14231 \def\@sect#1#2#3#4#5#6[#7]#8{%
14232 \ifnum #2>\c@secnumdepth
14233 \expandafter\@firstoftwo
14234 \else
14235 \expandafter\@secondoftwo
14236 \fi
14237 {%
14238 \Hy@MakeCurrentHrefAuto{section*}%
14239 \setlength{\Hy@SectionHShift}{#3}%
14240 \begingroup
14241 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14242 \toks\tw@\expandafter{%
14243 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14244 #8%
14245 }%
14246 \edef\x{\endgroup
14247 \the\toks@\the\toks\tw@}%
14248 }\x
14249 }%
14250 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14251 }%
14252 }

```

```

14253 </outlines | hypertex>
14254 <*outlines>

14255 \expandafter\def\csname Parent-4\endcsname{}
14256 \expandafter\def\csname Parent-3\endcsname{}
14257 \expandafter\def\csname Parent-2\endcsname{}
14258 \expandafter\def\csname Parent-1\endcsname{}
14259 \expandafter\def\csname Parent0\endcsname{}
14260 \expandafter\def\csname Parent1\endcsname{}
14261 \expandafter\def\csname Parent2\endcsname{}
14262 \expandafter\def\csname Parent3\endcsname{}
14263 \expandafter\def\csname Parent4\endcsname{}

14264 </outlines>

```

49 Compatibility with koma-script classes

```

14265 <*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.

```

14266 \def\Hy@tempa{%
14267   \def\@addchap{##1}##2{%
14268     \typeout{##2}%
14269     \if@twoside
14270       \@mkboth{##1}{}%
14271     \else
14272       \@mkboth{}{##1}%
14273     \fi
14274     \addtocontents{lof}{\protect\addvspace{10\p@}}%
14275     \addtocontents{lot}{\protect\addvspace{10\p@}}%
14276     \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
14277     \Hy@raisedlink{%
14278       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14279     }%
14280     \if@twocolumn
14281       \@topnewpage[\@makeschapterhead{##2}]%
14282     \else
14283       \@makeschapterhead{##2}%
14284       \@afterheading
14285     \fi
14286     \addcontentsline{toc}{chapter}{##1}%
14287   }%
14288 }
14289 \ifclassloaded{scrbook}{%
14290   \ifclasslater{scrbook}{2001/01/01}{%
14291     \let\Hy@tempa\@empty
14292   }{}%
14293 }{%
14294   \ifclassloaded{scrreprt}{%
14295     \ifclasslater{scrreprt}{2001/01/01}{%
14296       \let\Hy@tempa\@empty
14297     }{}%
14298   }{%
14299     \let\Hy@tempa\@empty
14300   }%

```

```

14301 }%
14302 \Hy@tempa
14303 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

14304 <*pd1enc>
14305 \DeclareFontEncoding{PD1}{-}{-}

```

Accents

```

14306 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14307 \DeclareTextAccent{\'}{PD1}{\textacute}
14308 \DeclareTextAccent{\`}{PD1}{\textasciicircum}
14309 \DeclareTextAccent{\~}{PD1}{\texttilde}
14310 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14311 \DeclareTextAccent{\r}{PD1}{\textring}
14312 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14313 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14314 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14315 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14316 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14317 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14318 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14319 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14320 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciicircum}
14321 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14322 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14323 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14324 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14325 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14326 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14327 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
14328 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14329 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14330 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14331 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14332 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciicircum}
14333 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14334 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14335 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14336 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14337 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14338 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14339 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14340 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14341 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14342 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14343 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14344 \DeclareTextCommand{\newtie}{PD1}[1]{%
14345 \TextSymbolUnavailable{\newtie{#1}}#1%
14346 }

```

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

```

14347 % U+0009 (CHARACTER TABULATION)

```


14348 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
 14349 % U+000A (LINE FEED)
 14350 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
 14351 % U+000D (CARRIAGE RETURN)
 14352 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
 Accent glyph names
 14353 % U+02D8 BREVE; breve
 14354 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
 14355 % U+02C7 CARON; caron
 14356 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 14357 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 14358 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
 14359 % U+02D9 DOT ABOVE; dotaccent
 14360 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 14361 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14362 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 14363 % U+02DB OGONEK; ogonek
 14364 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 14365 % U+02DA RING ABOVE; ring
 14366 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 14367 % U+02DC SMALL TILDE; ilde, *tilde
 14368 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 14369 % U+0022 QUOTATION MARK; quotedbl
 14370 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 14371 % U+0023 NUMBER SIGN; numbersign
 14372 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 14373 % U+0024 DOLLAR SIGN; dollar
 14374 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 14375 % U+0025 PERCENT SIGN; percent
 14376 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 14377 % U+0026 AMPERSAND; ampersand
 14378 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle
 14379 % U+0028 LEFT PARENTHESIS; parenleft
 14380 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 14381 % U+0029 RIGHT PARENTHESIS; parenright
 14382 \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
 14383 % U+002E FULL STOP; period
 14384 \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
 14385 % U+003C LESS-THAN SIGN; less
 14386 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal
 14387 % U+003E GREATER-THAN SIGN; greater
 14388 \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
 14389 % U+005C REVERSE SOLIDUS; backslash
 14390 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 14391 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14392 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 14393 % U+005F LOW LINE; underscore
 14394 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 14395 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 14396 % U+0060 GRAVE ACCENT; grave
 14397 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 14398 % U+0069 LATIN SMALL LETTER I; i
 14399 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 14400 % U+007B LEFT CURLY BRACKET; braceleft
 14401 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 14402 % U+007C VERTICAL LINE; *bar, verticalbar
 14403 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 14404 % U+007D RIGHT CURLY BRACKET; braceright
 14405 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 14406 % U+007E TILDE; asciitilde
 14407 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 14408 % U+2022 BULLET; bullet
 14409 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 14410 % U+2020 DAGGER; dagger
 14411 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 14412 % U+2021 DOUBLE DAGGER; daggerdbl
 14413 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 14414 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14415 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 14416 % U+2014 EM DASH; emdash
 14417 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 14418 % U+2013 EN DASH; endash
 14419 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 14420 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14421 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 14422 % U+2044 FRACTION SLASH; fraction
 14423 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 14424 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 14425 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039

14426 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
14427 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
14428 % U+2212 MINUS SIGN; minus
14429 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
14430 % U+2030 PER MILLE SIGN; perthousand
14431 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
14432 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14433 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14434 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14435 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14436 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14437 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14438 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14439 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14440 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14441 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14442 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14443 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14444 % U+2122 TRADE MARK SIGN; trademark
14445 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14446 % U+FB01 LATIN SMALL LIGATURE FI; fi
14447 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14448 % U+FB02 LATIN SMALL LIGATURE FL; fl
14449 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14450 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14451 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
14452 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14453 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14454 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14455 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14456 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14457 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
14458 \DeclareTextCommand{\IJ}{PD1}{\230}
14459 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14460 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
14461 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14462 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
14463 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14464 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
14465 % U+0153 LATIN SMALL LIGATURE OE; oe
14466 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
14467 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14468 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
14469 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14470 \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.
14471 % U+20AC EURO SIGN; *Euro, euro
14472 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
14473 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
14474 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
14475 % U+00A2 CENT SIGN; cent
14476 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
14477 % U+00A3 POUND SIGN; sterling
14478 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14479 % U+00A4 CURRENCY SIGN; currency

14480 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14481 % U+00A5 YEN SIGN; yen
14482 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14483 % U+00A6 BROKEN BAR; brokenbar
14484 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
14485 % U+00A7 SECTION SIGN; section
14486 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
14487 % U+00A8 DIAERESIS; dieresis
14488 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
14489 % U+00A9 COPYRIGHT SIGN; copyright
14490 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
14491 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14492 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14493 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
14494 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14495 % U+00AC NOT SIGN; logicalnot
14496 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14497 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
14498 % U+00AE REGISTERED SIGN; registered
14499 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14500 % U+00AF MACRON; *macron, overscore
14501 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14502 % U+00B0 DEGREE SIGN; degree
14503 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14504 % U+00B1 PLUS-MINUS SIGN; plusminus
14505 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14506 % U+00B2 SUPERSCRIFT TWO; twosuperior
14507 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
14508 % U+00B3 SUPERSCRIFT THREE; threesuperior
14509 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
14510 % U+00B4 ACUTE ACCENT; acute
14511 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14512 % U+00B5 MICRO SIGN; mu, mul
14513 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14514 % U+00B6 PILCROW SIGN; paragraph
14515 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14516 % U+00B7 MIDDLE DOT; middot, *periodcentered
14517 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14518 % U+00B8 CEDILLA; cedilla
14519 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14520 % U+00B9 SUPERSCRIFT ONE; onesuperior
14521 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
14522 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14523 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14524 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
14525 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14526 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14527 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
14528 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14529 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14530 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14531 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14532 % U+00BF INVERTED QUESTION MARK; questiondown
14533 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF

14534 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14535 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14536 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14537 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14538 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14539 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14540 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14541 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14542 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14543 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
14544 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14545 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14546 % U+00C6 LATIN CAPITAL LETTER AE; AE
14547 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14548 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14549 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14550 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14551 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14552 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14553 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14554 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14555 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14556 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14557 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14558 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14559 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14560 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14561 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14562 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14563 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14564 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14565 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14566 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14567 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14568 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14569 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14570 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14571 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14572 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14573 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14574 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14575 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14576 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14577 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14578 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14579 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14580 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14581 % U+00D7 MULTIPLICATION SIGN; multiply
14582 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14583 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14584 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14585 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14586 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14587 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14588 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14589 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14590 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB

14591 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14592 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
14593 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14594 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
14595 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14596 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14597 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14598 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14599 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14600 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
14601 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; acute
14602 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
14603 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14604 \DeclareTextCompositeCommand{'}{PD1}{a}{\342}% U+00E2
14605 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14606 \DeclareTextCompositeCommand{'}{PD1}{a}{\343}% U+00E3
14607 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14608 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
14609 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14610 \DeclareTextCompositeCommand{r}{PD1}{a}{\345}% U+00E5
14611 % U+00E6 LATIN SMALL LETTER AE; ae
14612 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
14613 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14614 \DeclareTextCompositeCommand{c}{PD1}{c}{\347}% U+00E7
14615 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14616 \DeclareTextCompositeCommand{'}{PD1}{e}{\350}% U+00E8
14617 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14618 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
14619 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14620 \DeclareTextCompositeCommand{'}{PD1}{e}{\352}% U+00EA
14621 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14622 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
14623 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14624 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
14625 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
14626 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14627 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
14628 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
14629 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14630 \DeclareTextCompositeCommand{'}{PD1}{i}{\356}% U+00EE
14631 \DeclareTextCompositeCommand{'}{PD1}{i}{\356}% U+00EE
14632 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14633 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
14634 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
14635 % U+00F0 LATIN SMALL LETTER ETH; eth
14636 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
14637 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14638 \DeclareTextCompositeCommand{'}{PD1}{n}{\361}% U+00F1
14639 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14640 \DeclareTextCompositeCommand{'}{PD1}{o}{\362}% U+00F2
14641 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14642 \DeclareTextCompositeCommand{'}{PD1}{o}{\363}% U+00F3
14643 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14644 \DeclareTextCompositeCommand{'}{PD1}{o}{\364}% U+00F4
14645 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14646 \DeclareTextCompositeCommand{'}{PD1}{o}{\365}% U+00F5
14647 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis

```

14648 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
14649 % U+00F7 DIVISION SIGN; divide
14650 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
14651 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14652 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
14653 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14654 \DeclareTextCompositeCommand{'}{PD1}{u}{\371}% U+00F9
14655 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14656 \DeclareTextCompositeCommand{'}{PD1}{u}{\372}% U+00FA
14657 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14658 \DeclareTextCompositeCommand{\~}{PD1}{u}{\373}% U+00FB
14659 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14660 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
14661 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14662 \DeclareTextCompositeCommand{'}{PD1}{y}{\375}% U+00FD
14663 % U+00FE LATIN SMALL LETTER THORN; thorn
14664 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
14665 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14666 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
14667 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

14668 \DeclareTextCommand{\SS}{PD1}{SS}
14669 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

14670 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
14671 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
14672 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
14673 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
14674 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
14675 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
14676 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
14677 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

14678 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
14679 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
14680 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
14681 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
14682 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
14683 \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).

```

14684 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
14685 \DeclareTextCompositeCommand{'}{PD1}{c}{c}% cacute
14686 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
14687 \DeclareTextCompositeCommand{'}{PD1}{n}{n}% nacute
14688 \DeclareTextCompositeCommand{'}{PD1}{s}{s}% sacute
14689 \DeclareTextCompositeCommand{'}{PD1}{z}{z}% zacute
14690 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
14691 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
14692 \DeclareTextCompositeCommand{'}{PD1}{C}{C}% Cacute
14693 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
14694 \DeclareTextCompositeCommand{'}{PD1}{N}{N}% Nacute
14695 \DeclareTextCompositeCommand{'}{PD1}{S}{S}% Sacute
14696 \DeclareTextCompositeCommand{'}{PD1}{Z}{Z}% Zacute
14697 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

14698 \langle /pdlenc)

50.2 PU encoding

14699 \langle *puenc)

14700 \DeclareFontEncoding{PU}{-}{-}

50.2.1 NFSS2 accents

14701 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
14702 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
14703 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
14704 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
14705 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
14706 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
14707 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
14708 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
14709 % U+0304 COMBINING MACRON; macroncmb
14710 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
14711 % U+0306 COMBINING BREVE; brevecmb
14712 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
14713 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
14714 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
14715 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
14716 % U+0308 COMBINING DIAERESIS; dieresiscmb
14717 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
14718 % U+030A COMBINING RING ABOVE; ringcmb
14719 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
14720 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
14721 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
14722 % U+030C COMBINING CARON; caroncmb
14723 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
14724 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
14725 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
14726 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
14727 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
14728 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
14729 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
14730 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
14731 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
14732 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
14733 % U+0327 COMBINING CEDILLA; cedillacmb
14734 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
14735 % U+0328 COMBINING OGONEK; ogonekcmb
14736 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
14737 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
14738 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
14739 % U+20DD COMBINING ENCLOSING CIRCLE
14740 \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.

14741 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
14742 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
14743 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
14744 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
14745 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
14746 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
14747 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
14748 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}


```

14749 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
14750 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
14751 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
14752 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
14753 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
14754 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
14755 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
14756 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
14757 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
14758 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
14759 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

14760 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
14761 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
14762 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
14763 \DeclareTextCompositeCommand{\-}{PU}{\ }{\texttilde}
14764 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
14765 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
14766 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
14767 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
14768 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
14769 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
14770 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
14771 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
14772 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
14773 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
14774 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
14775 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
14776 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
14777 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
14778 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

14779 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
14780 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
14781 \DeclareTextCommand{\capitalgrave}{PU}[1]{\{'{#1}}
14782 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{#1}}
14783 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\~{#1}}
14784 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
14785 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\{"{#1}}
14786 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
14787 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
14788 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
14789 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
14790 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
14791 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
14792 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
14793 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

14794 % U+0009 (CHARACTER TABULATION)
14795 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
14796 % U+000A (LINE FEED)
14797 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
14798 % U+000D (CARRIAGE RETURN)
14799 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```

\80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 14800 % U+0022 QUOTATION MARK; quotedbl
 14801 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
 14802 % U+0023 NUMBER SIGN; numbersign
 14803 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 14804 % U+0024 DOLLAR SIGN; dollar
 14805 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 14806 % U+0025 PERCENT SIGN; percent
 14807 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 14808 % U+0026 AMPERSAND; ampersand
 14809 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 14810 % U+0027 APOSTROPHE; quotesingle
 14811 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 14812 % U+0028 LEFT PARENTHESIS; parenleft
 14813 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 14814 % U+0029 RIGHT PARENTHESIS; parenright
 14815 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 14816 % U+002A ASTERISK; asterisk
 14817 \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
 14818 % U+003C LESS-THAN SIGN; less
 14819 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 14820 % U+003E GREATER-THAN SIGN; greater
 14821 \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
 14822 % U+005C REVERSE SOLIDUS; backslash
 14823 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 14824 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14825 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 14826 % U+005F LOW LINE; underscore
 14827 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 14828 % U+0060 GRAVE ACCENT; grave
 14829 \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

14830 % U+0069 LATIN SMALL LETTER I; i
 14831 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 14832 \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
 14833 % U+007B LEFT CURLY BRACKET; braceleft
 14834 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 14835 % U+007C VERTICAL LINE; *bar, verticalbar
 14836 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 14837 % U+007D RIGHT CURLY BRACKET; braceright
 14838 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 14839 % U+007E TILDE; asciitilde
 14840 \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
 14841 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14842 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 14843 % U+00A2 CENT SIGN; cent
 14844 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 14845 % U+00A3 POUND SIGN; sterling
 14846 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 14847 % U+00A4 CURRENCY SIGN; currency
 14848 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 14849 % U+00A5 YEN SIGN; yen
 14850 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 14851 % U+00A6 BROKEN BAR; brokenbar
 14852 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 14853 % U+00A7 SECTION SIGN; section
 14854 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 14855 % U+00A8 DIAERESIS; diaeresis
 14856 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 14857 % U+00A9 COPYRIGHT SIGN; copyright
 14858 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 14859 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14860 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 14861 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 14862 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 14863 % U+00AC NOT SIGN; logicalnot
 14864 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 14865 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softhyphen
 14866 % U+00AE REGISTERED SIGN; registered
 14867 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 14868 % U+00AF MACRON; *macron, overscore
 14869 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 14870 % U+00B0 DEGREE SIGN; degree
 14871 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 14872 % U+00B1 PLUS-MINUS SIGN; plusminus
 14873 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 14874 % U+00B2 SUPERScript TWO; twosuperior
 14875 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 14876 % U+00B3 SUPERScript THREE; threesuperior

14877 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
14878 % U+00B4 ACUTE ACCENT; acute
14879 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
14880 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
14881 % U+00B5 MICRO SIGN; mu, mu1
14882 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
14883 % U+00B6 PILCROW SIGN; paragraph
14884 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
14885 % U+00B7 MIDDLE DOT; middot, *periodcentered
14886 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
14887 % U+00B8 CEDILLA; cedilla
14888 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
14889 % U+00B9 SUPERScript ONE; onesuperior
14890 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
14891 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14892 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
14893 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
14894 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
14895 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14896 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
14897 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14898 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
14899 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14900 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
14901 % U+00BF INVERTED QUESTION MARK; questiondown
14902 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
14903 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14904 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
14905 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14906 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
14907 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14908 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
14909 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14910 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
14911 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14912 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
14913 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14914 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
14915 % U+00C6 LATIN CAPITAL LETTER AE; AE
14916 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
14917 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14918 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
14919 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14920 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
14921 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14922 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
14923 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14924 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
14925 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14926 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
14927 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14928 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
14929 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14930 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
14931 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14932 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

14933 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14934 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
14935 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14936 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
14937 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14938 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
14939 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14940 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
14941 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14942 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
14943 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14944 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
14945 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14946 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
14947 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14948 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
14949 % U+00D7 MULTIPLICATION SIGN; multiply
14950 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14951 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14952 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14953 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14954 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
14955 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14956 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14957 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14958 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
14959 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14960 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
14961 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14962 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14963 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14964 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14965 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14966 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
14967 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14968 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
14969 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14970 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14971 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14972 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
14973 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14974 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
14975 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14976 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
14977 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14978 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14979 % U+00E6 LATIN SMALL LETTER AE; ae
14980 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
14981 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14982 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14983 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14984 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
14985 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14986 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14987 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14988 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14989 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis

14990 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
14991 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14992 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
14993 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
14994 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14995 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
14996 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
14997 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14998 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE
14999 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE
15000 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
15001 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
15002 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
15003 % U+00F0 LATIN SMALL LETTER ETH; eth
15004 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
15005 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
15006 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
15007 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
15008 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
15009 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
15010 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
15011 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
15012 \DeclareTextCompositeCommand{~}{PU}{o}{\80\364}% U+00F4
15013 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
15014 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
15015 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
15016 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
15017 % U+00F7 DIVISION SIGN; divide
15018 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
15019 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
15020 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
15021 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
15022 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
15023 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
15024 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
15025 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
15026 \DeclareTextCompositeCommand{~}{PU}{u}{\80\373}% U+00FB
15027 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
15028 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
15029 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
15030 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
15031 % U+00FE LATIN SMALL LETTER THORN; thorn
15032 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
15033 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
15034 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

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

15035 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
15036 \DeclareTextCompositeCommand{=}{PU}{A}{\81\000}% U+0100
15037 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
15038 \DeclareTextCompositeCommand{=}{PU}{a}{\81\001}% U+0101
15039 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
15040 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
15041 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
15042 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
15043 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek

15044 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15045 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15046 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15047 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15048 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15049 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15050 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15051 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15052 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15053 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15054 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15055 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
15056 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15057 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15058 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15059 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15060 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15061 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15062 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15063 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15064 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15065 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15066 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15067 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15068 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
15069 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
15070 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
15071 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15072 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15073 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15074 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15075 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15076 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15077 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15078 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15079 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15080 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15081 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15082 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15083 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15084 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15085 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15086 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15087 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15088 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15089 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15090 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15091 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15092 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15093 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15094 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15095 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15096 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15097 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15098 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15099 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
15100 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120

15101 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
 15102 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
 15103 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
 15104 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
 15105 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
 15106 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
 15107 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
 15108 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
 15109 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
 15110 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
 15111 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
 15112 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
 15113 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
 15114 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
 15115 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
 15116 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 15117 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
 15118 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 15119 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 15120 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
 15121 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
 15122 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
 15123 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 15124 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 15125 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 15126 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 15127 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 15128 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 15129 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 15130 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 15131 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 15132 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 15133 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 15134 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 15135 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 15136 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 15137 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 15138 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 15139 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 15140 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 15141 % U+0133 LATIN SMALL LIGATURE IJ; ij
 15142 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 15143 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 15144 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 15145 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 15146 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 15147 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 15148 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 15149 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 15150 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 15151 \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`.

15152 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic

15153 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15154 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15155 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15156 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15157 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15158 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
15159 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15160 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15161 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15162 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15163 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15164 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15165 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E
There seems to be no variants of letters 'L' and 'l' with a dot above (reasonable). There-
fore the \. accent is reused instead of making a separate accent macro \textmiddledot.
15166 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
15167 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15168 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15169 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15170 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15171 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15172 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15173 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15174 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15175 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
15176 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15177 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
15178 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
15179 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15180 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15181 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15182 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15183 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15184 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15185 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15186 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
trophe, quoterightn
15187 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15188 % U+014A LATIN CAPITAL LETTER ENG; Eng
15189 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15190 % U+014B LATIN SMALL LETTER ENG; eng
15191 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15192 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15193 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15194 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15195 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15196 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15197 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15198 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15199 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15200 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
cute, Ohungarumlaut
15201 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15202 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohun-
garumlaut

15203 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
15204 % U+0152 LATIN CAPITAL LIGATURE OE; OE
15205 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
15206 % U+0153 LATIN SMALL LIGATURE OE; oe
15207 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
15208 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
15209 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
15210 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
15211 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
15212 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
15213 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
15214 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
15215 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
15216 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
15217 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
15218 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
15219 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
15220 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
15221 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
15222 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
15223 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
15224 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
15225 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
15226 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
15227 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
15228 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
15229 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
15230 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
15231 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
15232 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
15233 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
15234 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
15235 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
15236 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
15237 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
15238 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
15239 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
15240 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
15241 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
15242 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
15243 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
15244 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
15245 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
15246 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
15247 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
15248 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
15249 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
15250 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
15251 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15252 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15253 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
15254 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15255 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
15256 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15257 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C

15258 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 15259 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 15260 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 15261 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 15262 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 15263 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 15264 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 15265 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 15266 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 15267 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 15268 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 15269 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 15270 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 15271 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 15272 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 15273 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 15274 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 15275 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 15276 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 15277 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 15278 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 15279 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 15280 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15281 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 15282 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 15283 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 15284 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 15285 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 15286 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 15287 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 15288 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 15289 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 15290 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15291 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15292 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15293 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15294 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15295 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

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

15296 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15297 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 15298 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 15299 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 15300 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 15301 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 15302 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 15303 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 15304 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 15305 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15306 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15307 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 15308 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 15309 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 15310 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2

15311 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 15312 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 15313 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 15314 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 15315 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 15316 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 15317 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 15318 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 15319 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 15320 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 15321 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 15322 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 15323 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 15324 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 15325 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 15326 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 15327 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 15328 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 15329 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 15330 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 15331 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 15332 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15333 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15334 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 15335 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 15336 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 15337 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 15338 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 15339 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
 15340 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 15341 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
 15342 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 15343 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 15344 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
 15345 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
 15346 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslasha-
 cute, Ostrokeacut
 15347 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
 15348 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
 cute, ostrokeacute
 15349 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 15350 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 15351 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 15352 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 15353 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 15354 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 15355 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 15356 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 15357 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 15358 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 15359 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 15360 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 15361 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 15362 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 15363 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 15364 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 15365 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave

15366 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 15367 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 15368 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 15369 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 15370 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 15371 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 15372 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 15373 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 15374 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 15375 % U+021E LATIN CAPITAL LETTER H WITH CARON
 15376 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 15377 % U+021F LATIN SMALL LETTER H WITH CARON
 15378 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 15379 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 15380 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 15381 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 15382 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 15383 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 15384 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 15385 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 15386 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 15387 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 15388 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 15389 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 15390 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 15391 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 15392 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 15393 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 15394 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 15395 % U+0237 LATIN SMALL LETTER DOTLESS J
 15396 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

15397 % U+02C7 CARON; caron
 15398 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 15399 % U+02D8 BREVE; breve
 15400 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 15401 % U+02D9 DOT ABOVE; dotaccent
 15402 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 15403 % U+02DA RING ABOVE; ring
 15404 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 15405 % U+02DB OGONEK; ogonek
 15406 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 15407 % U+02DC SMALL TILDE; ilde, *tilde
 15408 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 15409 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 15410 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 15411 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 15412 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 15413 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 15414 % U+02F7 MODIFIER LETTER LOW TILDE
 15415 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

15416 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15417 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 15418 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb

15419 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 15420 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 15421 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 15422 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 15423 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 15424 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 15425 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

15426 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 15427 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 15428 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 15429 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 15430 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 15431 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 15432 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 15433 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 15434 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 15435 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 15436 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 15437 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 15438 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 cronos
 15439 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 15440 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 15441 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 15442 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 15443 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 15444 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
 tadiesistonos
 15445 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 15446 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 15447 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 15448 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 15449 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 15450 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 15451 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 15452 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 15453 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 15454 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 15455 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 15456 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 15457 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 15458 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 15459 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 15460 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 15461 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 15462 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 15463 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 15464 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 15465 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 15466 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
 15467 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 15468 % U+039C GREEK CAPITAL LETTER MU; Mu
 15469 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 15470 % U+039D GREEK CAPITAL LETTER NU; Nu
 15471 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D

15472 % U+039E GREEK CAPITAL LETTER XI; Xi
 15473 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
 15474 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 15475 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 15476 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 15477 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
 15478 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 15479 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 15480 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 15481 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 15482 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 15483 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 15484 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 15485 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 15486 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 15487 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 15488 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 15489 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 15490 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 15491 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 15492 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
 15493 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
 15494 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
 15495 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
 15496 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
 15497 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
 silondieresis
 15498 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 15499 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos
 15500 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
 15501 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon
 15502 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 15503 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonon
 15504 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 15505 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonon
 15506 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 15507 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
 silondieresis
 15508 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
 15509 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 15510 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
 15511 % U+03B2 GREEK SMALL LETTER BETA; beta
 15512 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 15513 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 15514 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 15515 % U+03B4 GREEK SMALL LETTER DELTA; delta
 15516 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 15517 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 15518 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 15519 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 15520 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 15521 % U+03B7 GREEK SMALL LETTER ETA; eta
 15522 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 15523 % U+03B8 GREEK SMALL LETTER THETA; theta
 15524 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 15525 % U+03B9 GREEK SMALL LETTER IOTA; iota
 15526 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9

15527 % U+03BA GREEK SMALL LETTER KAPPA; kappa
15528 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
15529 % U+03BB GREEK SMALL LETTER LAMDA; lambda
15530 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
15531 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
15532 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
15533 % U+03BD GREEK SMALL LETTER NU; nu
15534 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
15535 % U+03BE GREEK SMALL LETTER XI; xi
15536 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
15537 % U+03BF GREEK SMALL LETTER OMICRON; omicron
15538 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
15539 % U+03C0 GREEK SMALL LETTER PI; pi
15540 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
15541 % U+03C1 GREEK SMALL LETTER RHO; rho
15542 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
15543 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
15544 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
15545 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
15546 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
15547 % U+03C4 GREEK SMALL LETTER TAU; tau
15548 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
15549 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
15550 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
15551 % U+03C6 GREEK SMALL LETTER PHI; phi
15552 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
15553 % U+03C7 GREEK SMALL LETTER CHI; chi
15554 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
15555 % U+03C8 GREEK SMALL LETTER PSI; psi
15556 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
15557 % U+03C9 GREEK SMALL LETTER OMEGA; omega
15558 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
15559 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
15560 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
15561 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silondieresis
15562 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
15563 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
15564 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
15565 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
15566 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
15567 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
15568 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
15569 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
15570 % U+03DA GREEK LETTER STIGMA; Stigmagreek
15571 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
15572 % U+03DB GREEK SMALL LETTER STIGMA
15573 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
15574 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
15575 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
15576 % U+03DD GREEK SMALL LETTER DIGAMMA
15577 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
15578 % U+03DE GREEK LETTER KOPPA; Koppagreek
15579 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
15580 % U+03DF GREEK SMALL LETTER KOPPA
15581 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
15582 % U+03E0 GREEK LETTER SAMPI; Sampigreek


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15583 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
15584 % U+03E1 GREEK SMALL LETTER SAMPI
15585 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

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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.

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15586 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
15587 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
15588 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
15589 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
15590 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
15591 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
15592 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
15593 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
15594 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
15595 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
15596 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
15597 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
15598 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
15599 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrril-
      lic, *afii10055
15600 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
15601 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
15602 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
15603 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
15604 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
15605 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
15606 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
15607 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
15608 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
15609 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
15610 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
15611 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
15612 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
15613 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
15614 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
15615 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
15616 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
15617 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
15618 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
15619 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
15620 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
15621 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
15622 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
15623 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
15624 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
15625 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
15626 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
15627 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
15628 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
15629 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
15630 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
15631 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
15632 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
15633 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
15634 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416

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15635 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
15636 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
15637 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
15638 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
15639 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
15640 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
15641 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
15642 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
15643 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
15644 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
15645 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
15646 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
15647 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
15648 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
15649 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
15650 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
15651 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
15652 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
15653 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
15654 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
15655 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
15656 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
15657 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
15658 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
15659 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
15660 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
15661 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
15662 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
15663 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
15664 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
15665 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
15666 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
15667 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
15668 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
15669 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
15670 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
15671 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
15672 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
15673 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
15674 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
15675 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
15676 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
15677 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
15678 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
15679 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
15680 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
15681 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
15682 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
15683 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
15684 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
15685 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
15686 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
15687 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
15688 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
15689 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
15690 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
15691 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432

15692 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
15693 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
15694 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
15695 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
15696 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
15697 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
15698 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
15699 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
15700 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
15701 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
15702 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
15703 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
15704 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
15705 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
15706 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
15707 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
15708 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
15709 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
15710 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
15711 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
15712 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
15713 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
15714 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
15715 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
15716 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
15717 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
15718 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
15719 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
15720 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
15721 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
15722 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
15723 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
15724 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
15725 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
15726 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
15727 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
15728 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
15729 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
15730 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
15731 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
15732 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
15733 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
15734 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
15735 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
15736 \DeclareTextCommand{\cyrrsh}{PU}{\84\110}% U+0448
15737 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
15738 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
15739 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
15740 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
15741 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
15742 \DeclareTextCommand{\cyrrery}{PU}{\84\113}% U+044B
15743 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
15744 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
15745 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
15746 \DeclareTextCommand{\cyrrerev}{PU}{\84\115}% U+044D
15747 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
15748 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E

15749 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 15750 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 15751 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 15752 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
 15753 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 15754 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 15755 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 15756 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 15757 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
 15758 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 15759 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
 15760 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 15761 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
 15762 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 15763 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 15764 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
 15765 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 15766 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 15767 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 15768 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
 15769 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 15770 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
 15771 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 15772 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
 15773 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 15774 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
 15775 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 15776 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
 15777 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 15778 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
 15779 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 15780 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
 15781 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 15782 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 15783 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
 15784 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 15785 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 15786 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 15787 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 15788 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 15789 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 15790 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 15791 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 15792 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 15793 \DeclareTextCommand{\cyr yat}{PU}{\84\143}% U+0463
 15794 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 15795 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 15796 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 15797 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 15798 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 15799 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 15800 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 15801 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 15802 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
 15803 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468

15804 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
 15805 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 15806 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 15807 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 15808 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 15809 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 15810 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
 15811 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 15812 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
 15813 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 15814 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 15815 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 15816 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 15817 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 15818 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 15819 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 15820 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 15821 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 15822 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 15823 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 15824 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 15825 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 15826 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 15827 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 15828 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 15829 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 15830 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 15831 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 15832 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 15833 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 15834 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 15835 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 15836 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 15837 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 15838 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 15839 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 15840 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 15841 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 15842 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 15843 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 15844 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 15845 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 15846 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 15847 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 15848 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 15849 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 15850 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 15851 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 15852 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic

15853 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 15854 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 15855 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 15856 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 15857 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 15858 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 15859 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 15860 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 15861 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 15862 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 15863 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 15864 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 15865 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 15866 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 15867 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 15868 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 15869 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 15870 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 15871 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 15872 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 15873 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 15874 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 15875 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 15876 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 15877 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 15878 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 15879 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 15880 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 15881 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 15882 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 15883 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 15884 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 15885 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 15886 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 15887 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 15888 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 15889 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

15890 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 15891 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 15892 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
 15893 \DeclareTextCommand{\cyrkdesc}{PU}{\84\233}% U+049B
 15894 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic
 15895 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 15896 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic
 15897 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 15898 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 15899 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 15900 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 15901 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 15902 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 15903 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 15904 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 15905 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 15906 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 15907 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 15908 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 15909 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 15910 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 15911 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 15912 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 15913 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 15914 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 15915 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 15916 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 15917 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 15918 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 15919 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 15920 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 15921 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 15922 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 15923 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 15924 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 15925 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 15926 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 15927 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 15928 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 15929 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 15930 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 15931 \DeclareTextCommand{\cyrtasc}{PU}{\84\255}% U+04AD
 15932 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 15933 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

15934 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
15935 \DeclareTextCommand{\cyrj}{PU}{\84\257}% U+04AF
15936 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraighstrokecyrillic
15937 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
15938 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraighstrokecyrillic
15939 \DeclareTextCommand{\cyrjhcrs}{PU}{\84\261}% U+04B1
15940 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
15941 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
15942 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
15943 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
15944 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
15945 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
15946 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
15947 \DeclareTextCommand{\cyrttetse}{PU}{\84\265}% U+04B5
15948 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
15949 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
15950 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
15951 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
15952 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
verticalstrokecyrillic
15953 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
15954 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
verticalstrokecyrillic
15955 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
15956 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
15957 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
15958 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
15959 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
15960 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
15961 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
15962 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
15963 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
15964 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
15965 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
15966 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
15967 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
15968 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
15969 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
15970 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
15971 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
15972 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
15973 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
15974 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
15975 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
15976 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
15977 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
15978 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic

15979 \DeclareTextCommand{\cyrrhk}{PU}{\84\304}% U+04C4
 15980 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15981 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15982 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15983 \DeclareTextCommand{\cyrljsc}{PU}{\84\306}% U+04C6
 15984 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15985 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15986 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 15987 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15988 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 15989 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15990 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 15991 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15992 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15993 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15994 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15995 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15996 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15997 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15998 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15999 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 16000 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 16001 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 16002 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 16003 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 16004 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 16005 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 16006 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 16007 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 16008 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 16009 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 16010 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 16011 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 16012 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 16013 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 16014 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 16015 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
 16016 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 16017 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 16018 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
 16019 \DeclareTextCompositeCommand{"}{PU}{\cyrswa}{\84\333}% U+04DB
 16020 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
 16021 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 16022 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
 16023 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 16024 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
 16025 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 16026 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

16027 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
16028 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
16029 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
16030 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
16031 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
16032 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
16033 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
16034 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
16035 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
16036 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
16037 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
16038 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
16039 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
16040 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
16041 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
16042 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
16043 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
16044 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
16045 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
16046 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
16047 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
16048 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
16049 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
16050 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
16051 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
16052 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
16053 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
16054 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
16055 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
16056 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
16057 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
16058 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
16059 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
16060 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
16061 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
16062 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
16063 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
16064 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
16065 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
16066 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
16067 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
16068 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
16069 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
16070 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
16071 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
16072 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
16073 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
16074 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
16075 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

16076 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
16077 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
16078 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
16079 \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
16080 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
16081 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
16082 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
16083 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

16084 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
16085 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

16086 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
16087 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
16088 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
16089 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
16090 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
16091 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
16092 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
16093 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
16094 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
16095 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
16096 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
16097 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
16098 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
16099 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
16100 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
16101 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
16102 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
16103 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
16104 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
16105 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
16106 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
16107 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
16108 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
16109 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
16110 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
16111 \DeclareTextCompositeCommand{=}{PU}{G}{\9036\040}% U+1E20
16112 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
16113 \DeclareTextCompositeCommand{=}{PU}{g}{\9036\041}% U+1E21
16114 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
16115 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
16116 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
16117 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
16118 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
16119 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
16120 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis

16121 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
16122 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
16123 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
16124 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
16125 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
16126 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
16127 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
16128 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
16129 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
16130 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
16131 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
16132 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
16133 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
16134 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
16135 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
16136 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
16137 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
16138 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
16139 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
16140 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
16141 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
16142 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
16143 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
16144 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
16145 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
16146 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
16147 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
16148 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
16149 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
16150 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
16151 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
16152 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
16153 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
16154 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
16155 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
16156 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
16157 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
16158 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
16159 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
16160 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
16161 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
16162 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
16163 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
16164 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
16165 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
16166 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
16167 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
16168 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
16169 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
16170 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
16171 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
16172 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
16173 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
16174 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
16175 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
16176 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
16177 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F

16178 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
16179 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
16180 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
16181 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
16182 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
16183 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
16184 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
16185 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
16186 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
16187 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82
16188 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
16189 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83
16190 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
16191 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
16192 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
16193 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
16194 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
16195 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
16196 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
16197 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
16198 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
16199 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
16200 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
16201 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
16202 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
16203 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
16204 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
16205 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
16206 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
16207 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
16208 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
16209 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
16210 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
16211 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
16212 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
16213 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
16214 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
16215 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
16216 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
16217 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
16218 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
16219 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
16220 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
16221 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
16222 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
16223 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
16224 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
16225 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
16226 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
cent
16227 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
16228 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
16229 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
16230 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
16231 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
16232 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
16233 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2

16234 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 16235 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 16236 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 16237 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 16238 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 16239 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

16240 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 16241 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 16242 % U+2013 EN DASH; endash
 16243 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 16244 % U+2014 EM DASH; emdash
 16245 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 16246 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 16247 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 16248 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 16249 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 16250 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 16251 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 16252 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 16253 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 16254 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 16255 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 16256 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 16257 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 16258 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 16259 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 16260 % U+2020 DAGGER; dagger
 16261 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 16262 % U+2021 DOUBLE DAGGER; daggerdbl
 16263 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 16264 % U+2022 BULLET; bullet
 16265 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 16266 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 16267 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 16268 % U+2030 PER MILLE SIGN; perthousand
 16269 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 16270 % U+2031 PER TEN THOUSAND SIGN
 16271 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 16272 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 inglleft
 16273 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 16274 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 inglright
 16275 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 16276 % U+203B REFERENCE MARK; referencemark
 16277 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 16278 % U+203D INTERROBANG
 16279 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 16280 % U+2044 FRACTION SLASH; fraction
 16281 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 16282 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 16283 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 16284 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 16285 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 16286 % U+2052 COMMERCIAL MINUS SIGN

16287 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

16288 % U+2070 SUPERSCRIPT ZERO; zerosuperior
16289 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
16290 % U+2074 SUPERSCRIPT FOUR; foursuperior
16291 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
16292 % U+2075 SUPERSCRIPT FIVE; fivesuperior
16293 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
16294 % U+2076 SUPERSCRIPT SIX; sixsuperior
16295 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
16296 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
16297 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
16298 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
16299 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
16300 % U+2079 SUPERSCRIPT NINE; ninesuperior
16301 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
16302 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
16303 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
16304 % U+207B SUPERSCRIPT MINUS
16305 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
16306 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
16307 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
16308 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
16309 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
16310 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
16311 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
16312 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
16313 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
16314 % U+2080 SUBSCRIPT ZERO; zeroinferior
16315 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
16316 % U+2081 SUBSCRIPT ONE; oneinferior
16317 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
16318 % U+2082 SUBSCRIPT TWO; twoinferior
16319 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
16320 % U+2083 SUBSCRIPT THREE; threeinferior
16321 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
16322 % U+2084 SUBSCRIPT FOUR; fourinferior
16323 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
16324 % U+2085 SUBSCRIPT FIVE; fiveinferior
16325 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
16326 % U+2086 SUBSCRIPT SIX; sixinferior
16327 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
16328 % U+2087 SUBSCRIPT SEVEN; seveninferior
16329 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
16330 % U+2088 SUBSCRIPT EIGHT; eightinferior
16331 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
16332 % U+2089 SUBSCRIPT NINE; nineinferior
16333 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
16334 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
16335 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
16336 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
16337 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

16338 % U+20A1 COLON SIGN; *colonmonetary, colonsign
16339 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1

16340 % U+20A4 LIRA SIGN; afii08941, *lira
 16341 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 16342 % U+20A6 NAIRA SIGN
 16343 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 16344 % U+20A7 PESETA SIGN; peseta
 16345 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 16346 % U+20A9 WON SIGN; won
 16347 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 16348 % U+20AB DONG SIGN; dong
 16349 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 16350 % U+20AC EURO SIGN; *Euro, euro
 16351 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 16352 % U+20B1 PESO SIGN
 16353 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 16354 % U+20B2 GUARANI SIGN
 16355 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

16356 % U+2103 DEGREE CELSIUS; centigrade
 16357 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 16358 % U+2116 NUMERO SIGN; *afii61352, numero
 16359 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 16360 % U+2117 SOUND RECORDING COPYRIGHT
 16361 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 16362 % U+211E PRESCRIPTION TAKE; prescription
 16363 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 16364 % U+2120 SERVICE MARK
 16365 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 16366 % U+2122 TRADE MARK SIGN; trademark
 16367 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 16368 % U+2126 OHM SIGN; Ohm, Omega
 16369 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 16370 % U+2127 INVERTED OHM SIGN
 16371 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 16372 % U+212B ANGSTROM SIGN; angstrom
 16373 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 16374 % U+212E ESTIMATED SYMBOL; estimated
 16375 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 16376 % U+2135 ALEF SYMBOL; aleph
 16377 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

16378 % U+2190 LEFTWARDS ARROW; arrowleft
 16379 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 16380 % U+2191 UPWARDS ARROW; arrowup
 16381 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 16382 % U+2192 RIGHTWARDS ARROW; arrowright
 16383 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 16384 % U+2193 DOWNWARDS ARROW; arrowdown
 16385 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

16386 % U+2212 MINUS SIGN; minus
 16387 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 16388 % U+221A SQUARE ROOT; radical
 16389 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

16390 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
16391 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
16392 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
16393 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

16394 % U+2422 BLANK SYMBOL
16395 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
16396 % U+2423 OPEN BOX; blank
16397 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

16398 % U+2460 CIRCLED DIGIT ONE; onecircle
16399 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
16400 % U+2461 CIRCLED DIGIT TWO; twocircle
16401 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
16402 % U+2462 CIRCLED DIGIT THREE; threecircle
16403 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
16404 % U+2463 CIRCLED DIGIT FOUR; fourcircle
16405 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
16406 % U+2464 CIRCLED DIGIT FIVE; fivecircle
16407 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
16408 % U+2465 CIRCLED DIGIT SIX; sixcircle
16409 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
16410 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
16411 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
16412 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
16413 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
16414 % U+2468 CIRCLED DIGIT NINE; ninecircle
16415 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
16416 % U+2469 CIRCLED NUMBER TEN; tencircle
16417 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
16418 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
16419 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
16420 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
16421 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
16422 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
16423 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
16424 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
16425 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
16426 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
16427 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
16428 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
16429 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
16430 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
16431 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
16432 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
16433 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
16434 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
16435 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
16436 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
16437 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
16438 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
16439 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
16440 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
16441 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7

16442 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 16443 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 16444 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 16445 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 16446 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 16447 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 16448 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 16449 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 16450 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 16451 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 16452 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 16453 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 16454 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 16455 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 16456 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 16457 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 16458 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 16459 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 16460 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 16461 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 16462 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 16463 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 16464 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 16465 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 16466 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 16467 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 16468 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 16469 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 16470 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 16471 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 16472 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 16473 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 16474 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 16475 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 16476 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 16477 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 16478 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 16479 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 16480 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 16481 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 16482 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 16483 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 16484 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 16485 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 16486 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 16487 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 16488 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 16489 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 16490 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 16491 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 16492 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 16493 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 16494 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 16495 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 16496 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 16497 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 16498 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle

16499 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 16500 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 16501 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 16502 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 16503 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 16504 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 16505 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 16506 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 16507 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 16508 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 16509 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 16510 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 16511 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 16512 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 16513 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 16514 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 16515 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 16516 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 16517 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 16518 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 16519 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 16520 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 16521 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 16522 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 16523 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 16524 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 16525 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 16526 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 16527 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 16528 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 16529 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 16530 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 16531 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 16532 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 16533 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 16534 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 16535 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 16536 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 16537 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 16538 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 16539 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 16540 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 16541 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 16542 % U+24EA CIRCLED DIGIT ZERO
 16543 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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

16544 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 16545 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 16546 % U+25EF LARGE CIRCLE; largecircle
 16547 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

16548 % U+266A EIGHTH NOTE; musicalnote
 16549 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 16550 % U+26AD MARRIAGE SYMBOL
 16551 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD

16552 % U+26AE DIVORCE SYMBOL
 16553 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

16554 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 16555 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 16556 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 16557 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

16558 % U+FB01 LATIN SMALL LIGATURE FI; fi
 16559 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 16560 % U+FB02 LATIN SMALL LIGATURE FL; fl
 16561 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

16562 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

16563 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 16564 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 16565 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 16566 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 16567 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 16568 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 16569 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 16570 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

16571 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 16572 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 16573 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 16574 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 16575 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 16576 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

16577 <*puvnenc>
 16578 \DeclareTextCommand{\abreve}{PU}{\81\003}
 16579 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
 16580 \DeclareTextCommand{\dj}{PU}{\81\021}
 16581 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
 16582 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
 16583 \DeclareTextCommand{\ohorn}{PU}{\81\241}
 16584 \DeclareTextCommand{\uhorn}{PU}{\81\260}
 16585 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
 16586 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
 16587 \DeclareTextCommand{\DJ}{PU}{\81\020}
 16588 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
 16589 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
 16590 \DeclareTextCommand{\OHORN}{PU}{\81\240}
 16591 \DeclareTextCommand{\UHORN}{PU}{\81\257}

16592 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
16593 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
16594 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
16595 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
16596 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
16597 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
16598 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
16599 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
16600 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
16601 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
16602 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
16603 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
16604 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
16605 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
16606 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
16607 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
16608 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
16609 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
16610 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
16611 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
16612 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
16613 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
16614 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
16615 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
16616 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
16617 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
16618 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
16619 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
16620 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
16621 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
16622 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
16623 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
16624 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
16625 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
16626 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
16627 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
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16629 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
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16632 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
16633 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
16634 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
16635 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
16636 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
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16654 \DeclareTextCompositeCommand{'}{PU}{A}{\80\300}
16655 \DeclareTextCompositeCommand{h}{PU}{A}{\9036\242}
16656 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}
16657 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\256}
16658 \DeclareTextCompositeCommand{d}{PU}{\ABREVE}{\9036\266}
16659 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\260}
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16663 \DeclareTextCompositeCommand{d}{PU}{\ACIRCUMFLEX}{\9036\254}
16664 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\246}
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16666 \DeclareTextCompositeCommand{~}{PU}{\ACIRCUMFLEX}{\9036\252}
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16674 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\300}
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16686 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}
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16706 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
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16710 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
16711 \DeclareTextCompositeCommand{\-}{PU}{Y}{\9036\370}
16712 </puvnc>

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50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

16713 <*puarenc>
16714 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
16715 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
16716 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
16717 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
16718 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
16719 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
16720 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
16721 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
16722 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
16723 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
16724 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
16725 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
16726 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
16727 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
16728 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
16729 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
16730 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
16731 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN
16732 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
16733 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
16734 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD
16735 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
16736 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
16737 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
16738 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
16739 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
16740 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
16741 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
16742 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
16743 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
16744 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
16745 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
TER MEEM
16746 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON

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16747 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
16748 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
16749 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
16750 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
16751 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
16752 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
16753 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
16754 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
16755 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
16756 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
16757 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
16758 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi
16759 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
16760 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
TER TCHEH
16761 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
16762 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
16763 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
16764 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

16765 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
16766 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
16767 </puarenc>

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51 End of file hyccheck.tex

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16768 <*check>
16769 \typeout{}
16770 \begin{document}
16771 \end{document}
16772 </check>

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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, 2076	15431, 15433, 15435, 15437, 15439, 15441, 15443, 15445, 15500, 15502, 15504, 15506, 15564, 15567, 15569, 15594, 15613, 15759, 15778, 16127, 16129, 16139, 16141, 16155, 16157, 16187, 16189, 16592, 16597, 16602, 16607, 16612, 16617, 16622, 16627, 16632, 16637, 16642, 16647, 16652, 16657, 16662, 16667, 16672, 16677, 16682, 16687, 16692, 16697, 16702, 16707	\@@ListBox . 12378, 12402, 12859, 12892, 13198, <u>13241</u>
\"	202, 227, 3174, 13950, 14310, 14322, 14334, 14457, 14543, 14557, 14565, 14580, 14592, 14608, 14622, 14633, 14634, 14648, 14660, 14666, 14717, 14745, 14764, 14785, 14912, 14926, 14934, 14948, 14960, 14976, 14990, 15001, 15002, 15016, 15028, 15034, 15281, 15496, 15498, 15508, 15560, 15562, 15590, 15603, 15755, 15768, 16001, 16003, 16017, 16019, 16021, 16023, 16025, 16027, 16037, 16039, 16041, 16043, 16049, 16051, 16053, 16055, 16061, 16063, 16069, 16071, 16077, 16079, 16119, 16121, 16191, 16193, 16203, 16205, 16221	\(190, 215, 336, 769, 772, 774, 2078, 14016, 14380 \) 191, 216, 337, 741, 747, 750, 2079, 14017, 14382	\@@Menu 12586, 12594 \@@PasswordField . 12535, 12541 \@@Radio . . 12363, 12384, 12584, 12608, 12844, 12865, 13183, <u>13204</u>
\#	560, 2161, 2162, 4581, 4592, 4594, 4610, 4642, 4702, 8562, 8564, 9343, 9352, 9387, 10154, 11733, 11744, 11780, 12011, 12020, 12058, 13870	* 339 \+ 200, 225, 340 \- 201, 226 \. 198, 223, 333, 1237, 3516, 3927, 14313, 14325, 14337, 14399, 14690, 14697, 14715, 14748, 14767, 14791, 14831, 14832, 15056, 15058, 15080, 15082, 15100, 15102, 15136, 15167, 15169, 15287, 15289, 15380, 15382, 15388, 15390, 16087, 16089, 16095, 16097, 16107, 16109, 16115, 16117, 16143, 16145, 16147, 16149, 16159, 16161, 16163, 16165, 16171, 16173, 16195, 16197, 16199, 16201, 16207, 16209, 16227	\@@TextField 12537, 12552 \@@commahyperpage . 8069, 8070 \@@hyper@creadexternallink 4891, 4893 \@@hyperref 4804, 4805 \@@latextohtmlX 2993, 5039 \@@windex 7997, 7998 \@@writetorep 13791, 13797 \@Alph 6632, 6634 \@BIBLABEL . . 7434, 7440, 7446 \@BOOKMARK . . 13931, 13933 \@CITE 7511, 7519 \@CITEX 7513 \@CheckBox . 5802, 10219, 12476, 12505, 12639, 12976, <u>13343</u>
\\$	184, 209, 335, 561, 4583, 4701	\ / 194, 219, 683, 684, 685, 752, 1861, 7962	\@ChoiceMenu 5799, 10222, 12316, 12508, 12574, 12796, <u>13135</u>
\%	562, 2076, 2136, 2137, 4580, 4589, 4591, 4643, 8564	\: 189, 214 \; 199, 224, 8257 \< 196, 221 \= 167, 173, 180, 183, 14315, 14327, 14339, 14710, 14752, 14771, 14790, 15036, 15038, 15072, 15074, 15121, 15123, 15124, 15193, 15195, 15253, 15255, 15392, 15394, 16033, 16035, 16057, 16059, 16111, 16113	\@Form 5497, 10209, 12102, 12497, 12518, 12717, <u>13058</u> \@Gauge 5808, 10213, 12286, 12499, 12523, 12660, <u>13055</u>
\&	185, 210, 563, 4584, 4595, 4597, 11790	\> 197, 222 \? 341 \@ 3165 \@@@ 2392 \@@@BOOKMARK . 13931, 13934, 13992, 14060, 14067	\@CITEX 7513 \@Form 5497, 10209, 12102, 12497, 12518, 12717, <u>13058</u> \@Gauge 5808, 10213, 12286, 12499, 12523, 12660, <u>13055</u> \@Localurifalse 10162 \@Localuritrue 10159 \@M 1143, 2449, 4688, 7072 \@MM 7197 \@PackageError 277 \@PackageInfo 280 \@PackageInfoNoLine 281 \@PackageWarning 278 \@PackageWarningNoLine . . 279 \@PushButton 5805, 10225, 12409, 12511, 12620, 12901, <u>13257</u>
\'	203, 228, 3114, 3128, 3169, 3171, 3172, 3173, 3174, 3179, 3180, 3182, 3187, 3193, 3197, 3198, 3201, 3244, 3245, 3250, 3251, 3252, 3253, 3254, 3255, 3256, 3257, 3259, 3263, 3276, 13948, 14307, 14319, 14331, 14537, 14553, 14561, 14574, 14588, 14594, 14602, 14618, 14627, 14628, 14642, 14656, 14662, 14685, 14687, 14688, 14689, 14692, 14694, 14695, 14696, 14704, 14742, 14761, 14782, 14906, 14922, 14930, 14942, 14956, 14962, 14970, 14986, 14995, 14996, 15010, 15024, 15030, 15048, 15050, 15155, 15157, 15175, 15177, 15209, 15211, 15221, 15223, 15283, 15285, 15335, 15337, 15343, 15345, 15347, 15349,		\@Refstar 8372, 8379 \@Reset 5814, 10228, 12453, 12514, 12636, 12952, <u>13314</u> \@Roman 645 \@SCTR 8116, 8168 \@SetMaxRnhefLabel 7508 \@Submit 5811, 10231, 12436, 12515, 12633, 12930, <u>13291</u> \@TextField . . 5796, 10216, 12289, 12502, 12526, 12768, <u>13099</u> \@addchap 14267 \@addtoreset . . 7891, 7892, 7906, 8113

<code>\@afterheading</code>	14284	<code>\@currDisplay</code> 5585, 12328, 12391,	<code>\@firstofone</code>	591, 592, 593,
<code>\@alph</code>	6628, 6630	12603, 12617, 12808, 12872,	594, 595, 596, 597, 598, 599,	
<code>\@anchorcolor</code>	3495, 9312, 9407,	13147, 13214	600, 601, 634, 825, 979, 990,	
	10276, 11701, 11981	<code>\@currValue</code>	1223, 1227, 1231, 1569, 3905,	
<code>\@arabic</code>	1113, 1118, 1122, 6627	12396, 12603, 12614, 12870,	4407, 5463, 5469, 5701, 6492,	
<code>\@auxout</code>	2386, 4849, 6024, 6026,	12879, 13212, 13229, 13668	6625, 6637, 6704, 7301, 7382,	
	6717, 6745, 7454, 7469, 7485,	<code>\@currentHlabel</code>	7523, 7546, 7728, 7952, 9205,	
	7495, 7525, 7548, 7574, 7580,	<code>\@currentHref</code>	12690, 13427, 13444, 13462	
	7604	2394,	<code>\@firstoftwo</code>	654, 935, 1105, 1777,
<code>\@backslashchar</code>	865, 868, 871,	5904, 6577, 6658, 6660, 6669,	5994, 14233	
	1367, 2038, 2042, 2045, 2183,	6671, 6678, 6759, 6761, 6771,	<code>\@fnsymbol</code>	6626
	2200, 2206, 2210, 2218, 4605,	6822, 6833, 6835, 6873, 6884,	<code>\@footnotemark</code> 7082, 7135, 7219,	
	8577, 8587	6888, 6895, 6919, 7009, 7040,	7231, 7233, 7245, 7246, 7276,	
<code>\@baseurl</code>	3502, 3504, 4949, 9029,	7065, 7129, 7139, 7141, 7142,	7278	
	9032, 9297, 9299, 9581, 9583,	7182, 7210, 7308, 7334, 7338,	<code>\@footnotetext</code>	7081, 7088, 7117,
	10067, 10077, 10127, 10129,	7353, 7355, 7583, 7767, 7790,	7232, 7234, 7248, 7249, 7269	
	10654, 10656, 11034, 11048,	7803, 7810, 7861, 7885, 7887,	<code>\@for</code> 3535, 5105, 7520, 7543, 12325,	
	11686, 11688, 11887, 11901,	13781, 14172, 14185, 14196,	12387, 12592, 12599, 12609,	
	11967, 11969	14226, 14243, 14278	12805, 12868, 13144, 13210	
<code>\@begintheorem</code> 6976, 6979, 7004,		<code>\@currentlabel</code>	<code>\@fourthoffive</code>	4519, 4837, 8436,
7011, 7035, 7042		6801, 7200, 7576,	8443	
<code>\@bibitem</code>	7461, 7492	7583, 7866, 7873, 8122, 8174	<code>\@gobble</code>	49, 56, 117,
<code>\@biblabel</code>	7434, 7481	<code>\@currentlabelname</code>	584, 585, 586, 587, 624, 625,	
<code>\@bookmarkopenstatus</code>	4405,	2384, 7130,	626, 627, 657, 658, 659, 668,	
4422, 13852		7183, 7211, 7313	670, 829, 942, 977, 988, 1129,	
<code>\@bookmarksopenlevel</code> 3456, 3458,		<code>\@currentlabstr</code>	1133, 1136, 1506, 1567, 1586,	
4408		2383, 2391	1599, 1603, 1666, 1729, 1730,	
<code>\@bsphack</code>	2379, 4842, 7578	<code>\@curropt</code>	1737, 1742, 1756, 1761, 2364,	
<code>\@capstartfalse</code>	7328	12325, 12326, 12387,	2421, 2680, 2692, 3893, 4078,	
<code>\@caption</code> 7293, 7305, 7348, 7384,		12388, 12592, 12599, 12600,	4080, 4132, 4571, 5448, 5691,	
7386		12602, 12609, 12610, 12612,	5958, 5962, 5980, 5982, 5998,	
<code>\@capytype</code> 2388, 7288, 7292, 7296,		12805, 12806, 12868, 12869,	5999, 6002, 6003, 6005, 6471,	
7303, 7310, 7352, 7377, 7381,		13144, 13145, 13210, 13211	6486, 6490, 6965, 6991, 7024,	
7384		<code>\@dblarg</code>	7290, 7379, 7766, 8501, 9207,	
<code>\@car</code> 1649, 1665, 1683, 1703, 3435,		2511, 7303, 7384	10534, 10537, 12718, 13059,	
5115, 8981, 8992		<code>\@definecounter</code>	13838, 13839, 13840, 13841	
<code>\@cdr</code>	8982, 8993	7846, 7847	<code>\@gobblefour</code> 590, 693, 1263, 1264,	
<code>\@chapter</code>	14191, 14192	<code>\@ehc</code>	1265, 3712, 8237	
<code>\@cite</code>	7511, 7542, 7639, 7645	2740, 2851,	<code>\@gobbleopt</code>	6005, 6007
<code>\@cite@opt</code>	7640, 7646, 7650, 7660	2876, 2909, 2947, 2954, 2965,	<code>\@gobbletwo</code>	588,
<code>\@citea</code>	7514, 7521, 7522, 7541,	2971, 4130, 4750, 4913, 5209,	661, 686, 694, 695, 842, 1262,	
7544, 7545		5333, 5529, 5562, 5738, 5787,	1684, 1761, 1765, 2565, 3710,	
<code>\@citeb</code>	7520, 7523, 7525, 7527,	12418, 12464, 12911, 12963,	3711, 4082, 5394, 5984, 5993,	
7531, 7534, 7543, 7546, 7548,		13267, 13325	6001, 6005, 8424, 14182	
7550, 7554, 7557		<code>\@ehd</code> 63, 296, 302, 317, 7289, 7378	<code>\@harvarditem</code>	7593, 7595
<code>\@citebordercolor</code>	3558, 4018	<code>\@endForm</code>	<code>\@hyper@C@anchor</code>	4999, 5000
<code>\@citecolor</code>	3496	5498, 10212, 12285,	<code>\@hyper@itemfalse</code>	6522, 6538,
<code>\@citedata@opt</code>	7641, 7647, 7649	12498, 12522, 12767, 13085	6552	
<code>\@citedatax</code>	7656, 7661	<code>\@endparyenv</code>	<code>\@hyper@itemtrue</code>	6523
<code>\@citedatax@opt</code>	7653, 7659	6974, 7000, 7031	<code>\@hyper@launch</code> 4919, 4928, 8921,	
<code>\@citeseppen</code>	7638, 7644	<code>\@eqnqr</code>	10431, 11421	
<code>\@citex</code>	7540	<code>\@eqnstarfalse</code>	<code>\@hyper@linkfile</code> 4900, 4903, 4907,	
<code>\@clubpenalty</code>	7074	<code>\@eqnstartrue</code>	4939	
<code>\@commahyperpage</code>	8064, 8069	<code>\@eqnswtrue</code>	<code>\@hyper@readexternallink</code>	4894,
<code>\@ctrerr</code>	6606, 6615	<code>\@esphack</code>	4898	
		2400, 4853, 7588, 8009	<code>\@hyperdef</code>	4812, 4813
		<code>\@extra@b@citeb</code> 7419, 7422, 7439,	<code>\@hyperpage</code>	8061, 8062
		7444, 7464, 7512, 7534, 7550,		
		7557		
		<code>\@extra@binfo</code>		
		7418, 7421, 7425		
		<code>\@fifthoffive</code> 4090, 4520, 4836, 8323,		
		8441		
		<code>\@filebordercolor</code>		
		3559,		
		4016, 8896, 8898, 9912, 9914,		
		10362, 10364, 11403		
		<code>\@filecolor</code> 3485, 3497, 8917, 9524,		
		9541, 9930, 10368		
		<code>\@firstoffive</code> 4516, 4525, 8362, 8446		

\@pdfkeywords	4033, 9063, 9065, 9630, 9632, 10058, 10060, 10677, 10679, 11025, 11027, 11878, 11880	\@protected@testopt 690
\@pdflang 4005, 4034, 9078, 9080, 9647, 9649, 10087, 10089, 11044, 11046, 11897, 11899	\@pdfprintscaling 9057, 9624, 10052, 10671, 11019, 11872	\@protected@testopt@xargs . 691
\@pdfm@dest . . . 9664, 9723, 9727	\@pdfproducer 3734, 4022, 8957, 9101, 9103, 9545, 9546, 9564, 9566, 9990, 9991, 9995, 10015, 10017, 10610, 10611, 10615, 10618, 10619, 10699, 10701, 10946, 10950, 11457, 11458, 11540, 11542, 11544, 11632, 11633, 11800, 11801, 11819, 11821	\@refstar 4542, 8361
\@pdfm@mark 6442, 9663, 9715, 9735, 9749, 9751, 9765, 9767, 9772, 9773, 9803, 9827, 9829, 9834, 9852, 9874, 9906, 9939, 9967, 10001, 10068, 10095, 13062, 13063, 13064, 13083, 13125, 13131, 13220, 13234, 13249, 13255, 13280, 13287, 13305, 13311, 13333, 13339, 13361, 13367, 13372, 13404, 13412, 14087	\@pdfremotestartview 3931, 3933, 3934, 3935, 3946, 3950, 3952, 3953, 3955, 4031, 8909, 9921, 11411	\@runbordercolor 3562, 4017, 8933, 8935, 10450, 10452, 11434
\@pdfmoddate 3751, 4025, 9097, 9099, 9559, 9561, 10010, 10012, 10939, 10943, 11814, 11816	\@pdfstartpage 3914, 3916, 4032, 9037, 9041, 9589, 9594, 10070, 10074, 10646, 10650, 10984, 10989, 11837, 11842	\@runcolor 3500, 8953, 10456
\@pdfnonfullscreenpagemode 9051, 9618, 10046, 10665, 11013, 11866	\@pdfstartview 3921, 3923, 4030, 9039, 9041, 9591, 9595, 10072, 10074, 10648, 10986, 10990, 11839, 11843	\@safe@activesfalse 643, 4522
\@pdfnumcopies 9067, 9069, 9634, 9636, 10062, 10064, 10681, 10683, 11029, 11031, 11882, 11884	\@pdfsubject 3758, 4026, 9091, 9568, 10004, 10697, 10958, 11823	\@safe@activestrue 642, 4521
\@pdfpageduration 3512, 9149, 9153, 9158, 10590, 10592, 10595, 10865, 10867, 10875	\@pdftempa 4905, 4906, 4909	\@savsf 8760, 8768
\@pdfpagelayout 9077, 9646, 10086, 10686, 10688, 11043, 11896	\@pdftempwordfile . . . 4896, 4906	\@schapter 14179, 14180
\@pdfpagemode 4223, 4224, 4418, 4419, 4428, 4429, 9031, 9602, 10081, 10653, 10997, 11850	\@pdftempwordrun . . . 4897, 4909	\@secondoffive . . 4091, 4517, 4530, 8324, 8325, 8365
\@pdfpagescrop 3959, 4029, 9016, 9020, 9585, 9586, 9607, 9609, 10093, 10095, 10642, 10644, 11002, 11004, 11855, 11857	\@pdftitle 3722, 4020, 9090, 9553, 10003, 10696, 10957, 11808	\@secondoftwo 630, 633, 933, 1108, 1635, 1775, 4090, 4091, 14235
\@pdfpagetransition 3508, 9125, 9129, 9134, 10479, 10481, 10483, 10848, 10850, 10858	\@pdftrapped . . 3769, 3772, 3775, 3784, 3793, 4028, 9106, 9108, 10020, 10022, 10962	\@sect 14230, 14231
\@pdfpicktraybypdfsize 9059, 9061, 9626, 9628, 10054, 10056, 10673, 10675, 11021, 11023, 11874, 11876	\@pdfview 3895, 8757, 8765, 9670, 9674, 9678, 9682, 9686, 9690, 9691, 9694, 9695, 9698, 9702, 9704, 9719, 10263, 10273, 10285, 10763, 10783, 11462, 11549, 11637, 11909	\@seqncr 6903
\@pdfprintarea . 9055, 9622, 10050, 10669, 11017, 11870	\@pdfviewarea . 9053, 9620, 10048, 10667, 11015, 11868	\@serial@counter . . 13946, 13994, 13996, 13997
\@pdfprintclip . 9056, 9623, 10051, 10670, 11018, 11871	\@pdfviewclip . 9054, 9621, 10049, 10668, 11016, 11869	\@seteqlabel 7882, 7883
\@pdfprintpagerange 3680,	\@pdfviewparams 3897, 3899, 10763, 10783, 11463, 11550, 11638, 11910	\@setminipage 7323, 7394
	\@percentchar . 4590, 4591, 4643, 13854	\@setref . . 4525, 4530, 8293, 8294, 8331
	\@processme . . 5573, 5574, 9131, 9137, 9155, 9161, 9177, 9183, 11062, 11063, 11174, 11175, 11178, 11179	\@sharp 6817, 6823
		\@skiphyperrfalse . . 6539, 7450, 7462
		\@skiphyperrtrue . . . 7436, 7462
		\@spaces 284
		\@spart 14222, 14223
		\@ssect 14165, 14166
		\@startlos 8231, 8238, 8287
		\@starttoc 6056
		\@tempa . 6975, 6976, 6979, 6981, 7003, 7010, 7014, 7034, 7041, 7045, 7151, 7155, 7158, 7170
		\@tempb 6931, 6935
		\@tempboxa 9359, 9361, 9370, 9439, 9441, 9444, 9445, 9454, 9460, 9461, 9476, 9478, 9481, 9482, 9492, 9498, 9499, 9514, 9516, 9519, 9520, 9530, 9536, 9537, 11752, 11754, 11763, 12027, 12029, 12043
		\@tempcnta . 13803, 13804, 13805, 13806, 13807, 13809, 13812, 13813, 13814, 13820, 13822, 13824, 13915, 13916, 13917, 13920, 13921, 13922, 13923, 13924, 14138, 14139, 14140
		\@tempdima 2452, 5836, 5837, 5838, 5839, 5840, 5841, 5842, 5843, 8750, 12324, 12329, 12331, 12367, 12368, 12369, 12373, 12374, 12375, 12376, 12804, 12809, 12811, 12848, 12849, 12850, 12854, 12855, 12856, 12857, 13143, 13148, 13150, 13187,

13188, 13189, 13193, 13194,
 13195, 13196
 \@tempdimb 12328, 12329, 12808,
 12809, 13147, 13148
 \@tempswafalse 7655
 \@tempswatruet 7625, 7628, 7631,
 7652
 \@temptokena . 3281, 3286, 3289,
 3291
 \@tfor 6932
 \@the@H@page . 7695, 7731, 7733,
 7734
 \@thefnmark . . 7086, 7097, 7162,
 7200, 7217, 7224, 7255, 7267,
 7274
 \@thirdoffive 4518, 8368
 \@thm 6983, 6984, 7017
 \@topnewpage 14281
 \@topsep 6973, 6999, 7030
 \@topsepadd . . . 6974, 7000, 7031
 \@typeset@protect 14151
 \@undefined . . 388, 391, 696, 3285,
 5995, 6030, 6043, 6055, 6277,
 6295, 6340, 7288, 7351, 7363,
 7368, 7377, 8356, 8748, 8961,
 8970, 10236, 10621, 10635
 \@undottedtocline 8283
 \@unprocessedoptions 4368
 \@urlbordercolor 3563,
 4014, 8858, 8860, 9945, 9947,
 10386, 10388, 11374
 \@urlcolor 3498, 8877,
 9366, 9379, 9486, 9503, 9959,
 10392, 11759, 11772, 12038,
 12051
 \@urltype 9332, 9337, 10132, 10158,
 10293, 10307, 11721, 11726,
 12000, 12005
 \@vpageref 8389
 \@whilenum 1279
 \@wrintex 7965, 7966, 7997
 \@writefile 7581
 \@x@sf 7137, 7146, 7280, 7282
 \@xfootnote 7253
 \@xfootnotemark 7094, 7271
 \@xfootnotenext 7083, 7264
 \@xp 7872, 7907, 7908, 7921, 7922,
 7924, 7925
 \[. . 192, 217, 334, 3579, 3597, 4762
 \{ 342, 364, 557, 2078, 10754, 13872
 \} 343, 369, 558, 2079, 10754, 13873
 \] 193, 218
 \^ 186, 211, 332, 2176,
 2177, 3192, 4578, 4579, 4587,
 14308, 14320, 14332, 14539,
 14555, 14563, 14576, 14590,
 14604, 14620, 14630, 14631,

14644, 14658, 14706, 14743,
 14762, 14783, 14908, 14924,
 14932, 14944, 14958, 14972,
 14988, 14998, 14999, 15012,
 15026, 15052, 15054, 15092,
 15094, 15108, 15110, 15144,
 15146, 15147, 15225, 15227,
 15273, 15275, 15277, 15279,
 16211, 16213
 _ . 187, 212, 565, 4582, 4599, 4600
 \' 166, 172, 179, 182,
 3128, 3262, 3265, 3267, 3275,
 13871, 14306, 14318, 14330,
 14535, 14551, 14559, 14572,
 14586, 14600, 14616, 14624,
 14625, 14640, 14654, 14702,
 14741, 14760, 14781, 14904,
 14920, 14928, 14940, 14954,
 14968, 14984, 14992, 14993,
 15008, 15022, 15339, 15341,
 15587, 15615, 15752, 15780,
 16183, 16185, 16233, 16235,
 16594, 16599, 16604, 16609,
 16614, 16619, 16624, 16629,
 16634, 16639, 16644, 16649,
 16654, 16659, 16664, 16669,
 16674, 16679, 16684, 16689,
 16694, 16699, 16704, 16709
 \l 188, 213, 338, 1984, 2077, 2118,
 3074, 4057, 7961, 8548, 8558
 \~ 564, 1281, 2226, 3186,
 3194, 3195, 3196, 4151, 4603,
 14309, 14321, 14333, 14541,
 14570, 14578, 14606, 14638,
 14646, 14708, 14744, 14763,
 14784, 14910, 14938, 14946,
 14974, 15006, 15014, 15116,
 15118, 15119, 15249, 15251,
 16179, 16181, 16229, 16231,
 16237, 16239, 16596, 16601,
 16606, 16611, 16616, 16621,
 16626, 16631, 16636, 16641,
 16646, 16651, 16656, 16661,
 16666, 16671, 16676, 16681,
 16686, 16691, 16696, 16701,
 16706, 16711

Numbers

\3 541, 1325, 1326,
 1327, 1328, 1329, 1330, 1331,
 1332, 1441, 1442, 1443, 1444,
 1445, 1446, 1447, 1448, 2340,
 14015, 14535, 14537, 14539,
 14541, 14543, 14545, 14547,
 14549, 14551, 14553, 14555,
 14557, 14559, 14561, 14563,
 14565, 14567, 14568, 14570,
 14572, 14574, 14576, 14578,

14580, 14582, 14584, 14586,
 14588, 14590, 14592, 14594,
 14596, 14598, 14600, 14602,
 14604, 14606, 14608, 14610,
 14612, 14614, 14616, 14618,
 14620, 14622, 14624, 14625,
 14627, 14628, 14630, 14631,
 14633, 14634, 14636, 14638,
 14640, 14642, 14644, 14646,
 14648, 14650, 14652, 14654,
 14656, 14658, 14660, 14662,
 14664, 14666, 14667, 14740,
 14904, 14906, 14908, 14910,
 14912, 14914, 14916, 14918,
 14920, 14922, 14924, 14926,
 14928, 14930, 14932, 14934,
 14936, 14938, 14940, 14942,
 14944, 14946, 14948, 14950,
 14952, 14954, 14956, 14958,
 14960, 14962, 14964, 14966,
 14968, 14970, 14972, 14974,
 14976, 14978, 14980, 14982,
 14984, 14986, 14988, 14990,
 14992, 14993, 14995, 14996,
 14998, 14999, 15001, 15002,
 15004, 15006, 15008, 15010,
 15012, 15014, 15016, 15018,
 15020, 15022, 15024, 15026,
 15028, 15030, 15032, 15034,
 15299, 15301, 15303, 15305,
 15306, 15308, 15310, 15312,
 15314, 15316, 15318, 15320,
 15322, 15324, 15326, 15328,
 15330, 15332, 15333, 15335,
 15337, 15339, 15341, 15343,
 15345, 15347, 15349, 15398,
 15400, 15402, 15404, 15406,
 15408, 15410, 15413, 15415,
 15540, 15542, 15544, 15546,
 15548, 15550, 15552, 15554,
 15556, 15558, 15560, 15562,
 15564, 15566, 15567, 15569,
 15571, 15573, 15575, 15577,
 15579, 15581, 15583, 15585,
 15971, 15973, 15975, 15977,
 15979, 15981, 15983, 15985,
 15987, 15989, 15991, 15993,
 15995, 15997, 15999, 16001,
 16003, 16005, 16007, 16009,
 16011, 16013, 16015, 16017,
 16019, 16021, 16023, 16025,
 16027, 16029, 16031, 16033,
 16035, 16037, 16039, 16041,
 16043, 16045, 16047, 16049,
 16051, 16053, 16055, 16057,
 16059, 16061, 16063, 16065,
 16067, 16069, 16071, 16073,

16075, 16077, 16079, 16081,
16083, 16233, 16235, 16237,
16239, 16459, 16461, 16463,
16465, 16467, 16469, 16471,
16473, 16475, 16477, 16479,
16481, 16483, 16485, 16487,
16489, 16491, 16493, 16495,
16497, 16499, 16501, 16503,
16505, 16507, 16509, 16511,
16513, 16515, 16517, 16519,
16521, 16523, 16525, 16527,
16529, 16531, 16533, 16535,
16537, 16539, 16541, 16543,
16545, 16547, 16555, 16557,
16579, 16581, 16582, 16586,
16588, 16589, 16592, 16594,
16596, 16607, 16609, 16613,
16614, 16615, 16616, 16617,
16618, 16619, 16620, 16622,
16623, 16624, 16625, 16626,
16627, 16628, 16629, 16630,
16631, 16632, 16633, 16634,
16635, 16636, 16637, 16638,
16639, 16640, 16642, 16643,
16644, 16645, 16646, 16647,
16648, 16649, 16650, 16651,
16652, 16654, 16656, 16667,
16669, 16673, 16674, 16675,
16676, 16677, 16678, 16679,
16680, 16682, 16683, 16684,
16685, 16686, 16687, 16688,
16689, 16690, 16691, 16692,
16693, 16694, 16695, 16696,
16697, 16698, 16699, 16700,
16702, 16703, 16704, 16705,
16706, 16707, 16708, 16709,
16710, 16711, 16764, 16766

\9 544, 1345, 1348, 1379,
2268, 2283, 2292, 2320, 2340,
14740, 16085, 16087, 16089,
16091, 16093, 16095, 16097,
16099, 16101, 16103, 16105,
16107, 16109, 16111, 16113,
16115, 16117, 16119, 16121,
16123, 16125, 16127, 16129,
16131, 16133, 16135, 16137,
16139, 16141, 16143, 16145,
16147, 16149, 16151, 16153,
16155, 16157, 16159, 16161,
16163, 16165, 16167, 16169,
16171, 16173, 16175, 16177,
16179, 16181, 16183, 16185,
16187, 16189, 16191, 16193,
16195, 16197, 16199, 16201,
16203, 16205, 16207, 16209,
16211, 16213, 16215, 16217,
16219, 16221, 16223, 16225,

16227, 16229, 16231, 16233,
16235, 16237, 16239, 16241,
16243, 16245, 16247, 16249,
16251, 16253, 16255, 16257,
16259, 16261, 16263, 16265,
16267, 16269, 16271, 16273,
16275, 16277, 16279, 16281,
16283, 16285, 16287, 16289,
16291, 16293, 16295, 16297,
16299, 16301, 16303, 16305,
16307, 16309, 16311, 16313,
16315, 16317, 16319, 16321,
16323, 16325, 16327, 16329,
16331, 16333, 16335, 16337,
16339, 16341, 16343, 16345,
16347, 16349, 16351, 16353,
16355, 16357, 16359, 16361,
16363, 16365, 16367, 16369,
16371, 16373, 16375, 16377,
16379, 16381, 16383, 16385,
16387, 16389, 16391, 16393,
16395, 16397, 16399, 16401,
16403, 16405, 16407, 16409,
16411, 16413, 16415, 16417,
16419, 16421, 16423, 16425,
16427, 16429, 16431, 16433,
16435, 16437, 16439, 16441,
16443, 16445, 16447, 16449,
16451, 16453, 16455, 16457,
16459, 16461, 16463, 16465,
16467, 16469, 16471, 16473,
16475, 16477, 16479, 16481,
16483, 16485, 16487, 16489,
16491, 16493, 16495, 16497,
16499, 16501, 16503, 16505,
16507, 16509, 16511, 16513,
16515, 16517, 16519, 16521,
16523, 16525, 16527, 16529,
16531, 16533, 16535, 16537,
16539, 16541, 16543, 16545,
16547, 16549, 16551, 16553,
16555, 16557, 16559, 16561,
16593, 16595, 16597, 16598,
16599, 16600, 16601, 16602,
16603, 16604, 16605, 16606,
16608, 16610, 16611, 16612,
16613, 16614, 16615, 16616,
16618, 16620, 16623, 16625,
16627, 16628, 16629, 16630,
16631, 16632, 16633, 16634,
16635, 16636, 16638, 16640,
16642, 16643, 16644, 16645,
16646, 16648, 16649, 16650,
16651, 16653, 16655, 16657,
16658, 16659, 16660, 16661,
16662, 16663, 16664, 16665,
16666, 16668, 16670, 16671,

16672, 16673, 16674, 16675,
16676, 16678, 16680, 16683,
16685, 16687, 16688, 16689,
16690, 16691, 16692, 16693,
16694, 16695, 16696, 16698,
16700, 16702, 16703, 16704,
16705, 16706, 16708, 16709,
16710, 16711, 16765

_ 345, 675,
3209, 3212, 3927, 7522, 7545,
14330, 14331, 14332, 14333,
14334, 14335, 14336, 14337,
14338, 14339, 14340, 14341,
14760, 14761, 14762, 14763,
14764, 14765, 14766, 14767,
14768, 14769, 14770, 14771,
14772, 14773, 14774, 14775,
14776, 14777, 14778

A

\ABREVE . . 16585, 16657, 16658,
16659, 16660, 16661
\abreve 16578, 16597, 16598, 16599,
16600, 16601
\AccFancyVerbLineautorefname .
. 3236
\Accfootnoteautorefname . . 3216
\Acctheoremautorefname . . 3240
\ACIRCUMFLEX . 16586, 16662,
16663, 16664, 16665, 16666
\acircumflex . . 3267, 16579, 16602,
16603, 16604, 16605, 16606
\Acrobatmenu . 2423, 4087, 5992,
9256, 9964, 10459, 11318
\active 1259, 1266,
4579, 4580, 4581, 4582, 4583,
4584, 4587, 4589, 4592, 4600,
14019, 14049
\add@accent 556
\addcontentsline 7317, 7388, 7764,
7769, 7840, 14286
\addtocontents 7809, 7841, 8114,
8166, 14274, 14275
\addtocounter . 6701, 6724, 6733,
6744, 6748, 6953, 9854
\addvspace 14274, 14275
\adl@LT@array 6815
\advance 478, 479, 1280,
4728, 5065, 5393, 5439, 5837,
5838, 5841, 5842, 6187, 6195,
6232, 7667, 7677, 7680, 7694,
9006, 9371, 9455, 9493, 9531,
10617, 11764, 12044, 12331,
12374, 12375, 12811, 12855,
12856, 13094, 13150, 13194,

13195, 13804, 13806, 13807,
13813, 13822, 13923, 14139
\AE 14547, 14916, 15343
\ae 14612, 14980, 15345
\afterassignment 1873, 1879, 1885
\AfterBeginDocument . . 375, 389
\aftergroup 7204
\alef 16720
\alefhamza 16716
\aleflowerhamza 16718
\alefmadda 16715
\alefmaqsura 16749
\Alph 6281, 6594, 6595
\alph 6282, 6924, 6955
\AMSautorefname 8523
\anchor@spot . . 5004, 5017, 5024,
5030, 5032, 8815, 9312, 9407,
10204, 10276, 10760, 11106,
11109, 11701, 11981
\appendix 6591, 6592
\appendixautorefname 3084, 3102,
3120, 3138, 3156, 3174, 3192,
3224, 3225, 3250, 3268, 8533
\arabic . . . 6278, 6497, 6500, 6503,
6504, 6505, 6507, 6508, 6509,
6510, 6512, 6513, 6514, 6515,
6516, 6517, 6520, 6530, 6531,
6571, 6708, 7849, 7855, 7903,
7917, 8102, 8107, 8109
\AtBeginDocument . . 376, 6028,
6805, 12071
\AtBeginShipout 6140, 9291, 9800
\AtBeginShipoutBox . 6144, 6147,
9286, 9287, 9801, 9802
\AtBeginShipoutFirst 6151, 10100,
11513, 11628
\AtEndDocument 6042
\AtEndOfPackage 386
\AtVeryEndDocument 6380, 12727
\author 6076, 6086
\autopageref 4222, 8404
\autoref . . . 665, 4221, 8423, 12066
\ayn 16738

B

\b . . . 896, 900, 906, 14316, 14328,
14340, 14732, 14755, 14774,
16091, 16093, 16099, 16101,
16131, 16133, 16135, 16137,
16151, 16153, 16167, 16169,
16175, 16177, 16215, 16217,
16219
\baa 16721
\back@none . . . 3019, 3029, 3042
\back@page 3021, 3034
\back@section . . 3020, 3026, 3032,
3038

\back@slide 3022, 3031
\backcite 7582
\backref 7613, 12070
\baselineskip . . 2426, 5850, 5851,
5852, 5853, 5854, 5855, 9426,
10779, 10811, 11496
\bbl@cite@choice 7429
\BeforeTeXIVht 2858
\begin 628, 12091, 16770
\belowpdfbookmark 13919
\bfseries . . . 606, 7528, 7551, 8297,
8317, 8334, 8451
\bgroup 684,
4695, 7191, 7203, 8722, 9818,
10204, 10800, 12530, 12622,
12643
\bibcite . . 7420, 7426, 7430, 7455,
7470, 7486, 7496
\bitsetGetDec . . 5117, 5250, 5268,
5282, 5295, 5311, 5343, 5368
\bitsetGetHex 5118
\bitsetGetSetBitList 5106
\bitsetIsEmpty 5247, 5265, 5279,
5292, 5308, 5340, 5365
\bitsetReset . . . 5220, 5254, 5273,
5287, 5300, 5316, 5348
\bitsetSetValue 5086, 5096
\BOOKMARK 13851, 13930
\booknumberline . . 13834, 13839
\box 5844, 6147, 8736, 9832, 11153,
11156
\bullet 8249, 8257, 8267, 8275

C

\C 14726, 15831, 15833
\c 897, 901, 907, 3186,
3194, 3195, 3196, 6099, 6106,
14314, 14326, 14338, 14549,
14614, 14734, 14749, 14768,
14779, 14918, 14982, 15104,
15106, 15149, 15151, 15159,
15161, 15179, 15181, 15213,
15215, 15229, 15231, 15237,
15239, 15384, 15386, 15886,
15889, 16103, 16105, 16123,
16125
\c@footnote 7096, 7153, 7161, 7273
\c@Hy@tempcnt 4713, 4714, 4720,
4728
\c@note 7670
\c@overlay 7670
\c@page . . 6187, 6195, 6212, 6232,
6233, 6237, 6249, 6251, 6256,
6263, 6265, 6267, 6296, 7667,
7671, 7673, 7677, 7680, 7681,
7694, 7724
\c@secnumdepth . . 14199, 14217,
14232

\c@slide 7670
\c@slidesection . . 8115, 8243, 8244
\c@slidesubsection 8167
\c@tocdepth 3426, 3431
\calc@bm@number . . 14061, 14137
\calculate@pdfview . . 3891, 3894
\capitalacute 14782
\capitalbreve 14789
\capitalcaron 14788
\capitalcedilla 14779
\capitalcircumflex 14783
\capitaldieresis 14785
\capitaldotaccent 14791
\capitalgrave 14781
\capitalhungarumlaut . . . 14786
\capitalmacron 14790
\capitalnewtie 14793
\capitalogonek 14780
\capitalring 14787
\capitaltie 14792
\capitaltilde 14784
\caption . . . 7287, 7289, 7376, 7378
\catcode . . 172, 173, 184, 185, 186,
187, 206, 822, 823, 959, 1259,
1266, 1984, 1985, 2118, 2119,
2175, 2176, 2177, 4438, 4440,
4578, 4579, 4580, 4581, 4582,
4583, 4584, 4587, 4589, 4592,
4600, 4610, 4701, 4702, 8548,
10841, 10842, 13948, 13950,
14019, 14022, 14049, 14052
\cf@encoding 1584
\chapterautorefname . 3085, 3103,
3121, 3139, 3157, 3175, 3193,
3222, 3251, 3269, 8534
\chapternumberline 13836, 13841
\char 12757, 13952, 13989
\chardef 289, 322, 2644, 2645, 2646,
2647, 2897, 2899, 4363, 4393,
11101, 11104, 11110
\check@bm@number 14072, 14080,
14130, 14138
\CheckBox 5801
\CheckCommand 7150
\checkcommand . . 42, 6743, 7264,
7271, 7278, 7376, 7386, 7480,
7492, 7840, 7843, 7903, 8331
\checklatex . . 4, 7263, 7375, 7479,
7839, 8330
\checkpackage 9, 6742, 7902
\ChoiceBox 5443
\ChoiceMenu 5798
\citation 7525, 7548, 7574
\citeauthoryear 7640, 7646
\citeN 7637
\CJK@char 1262
\CJK@charx 1263

\cyrksi	15817	\cyrz	3209, 3212, 3215, 3216, 3219, 3234, 3235, 3236, 3237, 3241, 15722, 15927	\cyrzdsc	15888
\CYRKVCRS	15895	\CYRSCHWA	16013, 16017	\CYRZH	15634, 15973, 16021
\cyrkvcrs	15897	\cyrschwa	16015, 16019	\cyrzh	3206, 3226, 15699, 15975, 16023
\CYRL	15645	\CYRSDSC	15923, 15924	\CYRZHDSC	15881
\cyr1	3220, 3222, 3224, 3226, 15710	\cyrsdsc	15926	\cyrzhdsc	15883
\CYRLDSC	15981	\CYRSEMISFTSN	15861		
\cyrldsc	15983	\cyrsemisftsn	15863		
\CYRLJE	15607	\CYRSFTSN	15679		
\cyrlje	15772	\cyrstfn	15744		
\CYRLYUS	15799	\CYRSH	15671		
\cyrlyus	15801	\cyrsh	15736		
\CYRM	15647	\CYRSHCH	15673		
\cym	3209, 3213, 3239, 3240, 15712	\cyrshch	15738		
\CYRMDSC	15993	\CYRSHHA	15957		
\cymdsc	15995	\cyrshha	15959		
\CYRN	15649	\CYRT	15659		
\cym	3206, 3212, 3213, 3215, 3216, 3218, 3226, 3232, 3233, 15714	\cyrt	3209, 3212, 3218, 3220, 3232, 3233, 3234, 3235, 3236, 3237, 3238, 3239, 3240, 15724		
\CYRNDSC	15907	\CYRTDSC	15929		
\cyrndsc	15909	\cyrtldsc	15931		
\CYRNG	15911	\CYRTETSE	15945		
\cyrng	15913	\cyrtetse	15947		
\CYRNHK	15985	\cyrthousands	15855		
\cyrnhk	15987	\CYRTSHE	15611		
\CYRNJE	15609	\cyrtshe	15776		
\cyrnje	15774	\CYRU	15618, 15661, 16057, 16061, 16065		
\CYRO	15651, 16041	\cyru	3216, 3218, 3232, 3233, 3236, 3240, 15726, 16059, 16063, 16067		
\cyro	3209, 3212, 3215, 3216, 3226, 3235, 3236, 3238, 3239, 3240, 15716, 16043	\CYRUK	15835		
\CYROMEGA	15787	\cyruk	15837		
\cyromega	15789	\CYRUSHRT	15617		
\CYROMEGARND	15839	\cyrushrt	15782		
\cyromegarnd	15841	\CYRV	15626		
\CYROMEGATITLO	15843	\cyrv	3204, 3206, 15691		
\cyromegatitlo	15845	\CYRY	15933		
\CYROT	15847	\cyry	15935		
\cyrot	15849	\CYRYA	15685		
\CYROTLD	16045, 16049	\cyrya	15750		
\cyrotld	16047, 16051	\CYRYAT	15791		
\CYRP	15653	\cyryat	15793		
\cyrp	3209, 3212, 3213, 3217, 3218, 3224, 3226, 3230, 3231, 3232, 3233, 15718	\CYRYHCRS	15937		
\CYRpalochka	15971	\cyrphcrs	15939		
\CYRPHK	15915	\CYRYI	15602		
\cyrphk	15917	\cyryi	15767		
\CYRPSI	15819	\CYRYO	15589		
\cyrpsi	15821	\cyryo	15754		
\CYRR	15655	\CYRYU	15683		
\cyr	3204, 3206, 3209, 3212, 3213, 3219, 3223, 3224, 3226, 3228, 3229, 3234, 3235, 3236, 3237, 3238, 3239, 3240, 15720	\cyryu	15748		
\CYRRTICK	15865	\CYRZ	15636, 15886, 16025		
\cyrrtick	15867	\cyrz	3223, 3228, 3229, 15701, 15889, 16027		
\CYRS	15657, 15924	\CYRZDSC	15885		

D

\d	898, 902, 908, 3264, 3268, 3270, 3271, 3272, 3273, 3274, 3276, 14317, 14329, 14341, 14730, 14756, 14775, 16593, 16598, 16603, 16608, 16613, 16618, 16623, 16628, 16633, 16638, 16643, 16648, 16653, 16658, 16663, 16668, 16673, 16678, 16683, 16688, 16693, 16698, 16703, 16708
\dad	16735
\dal	16728
\damma	16755
\declare@shorthand	1013, 1014, 1019, 1020, 1025, 1035, 1036, 1037, 1042, 1043, 1048, 1049, 1054, 1059, 1060, 1065, 1070, 1071, 1072, 1073, 1074, 1075, 1080, 1081, 1086, 1087, 1092, 1093
\DeclareFontEncoding	14305, 14700
\DeclareFontFamily	918, 926, 2726
\DeclareFontShape	919, 927, 2727
\DeclareFontSubstitution	920, 928, 2728
\DeclareLocalOptions	4066
\DeclareRobustCommand	4541, 4544, 4553, 4557, 4692, 4779, 4781, 4783, 4792, 5795, 5798, 5801, 5804, 5807, 5810, 5813, 5938, 5942, 6010, 6014, 8378, 8404, 8423, 14155
\DeclareTextAccent	14306, 14307, 14308, 14309, 14310, 14311, 14312, 14313, 14314, 14315, 14316, 14317
\DeclareVoidOption	2855, 2869, 2879, 2884, 2889, 2902, 2912, 2917, 2922, 2928, 2957, 2974, 2981, 2986, 2991, 2996, 3345, 3353, 3361, 3371
\DefaultHeightofCheckBox	5850, 12481, 12981, 13348
\DefaultHeightofChoiceMenu	5852, 12321, 12801, 13140
\DefaultHeightofReset	5848, 12455, 12954, 13316
\DefaultHeightofSubmit	5846, 12438, 12932, 13293

<code>\DefaultHeightofText</code>	5854, 12298, 12777, 13108	<code>\dth@counter</code>	7001, 7002, 7032, 7033, 7060
<code>\DefaultHeightofTextMultiline</code>	5855, 12296, 12775, 13106	<code>\dth@everypar</code>	7048
<code>\DefaultOptionsofCheckBox</code>	5860, 12483, 12983, 13350	<code>\dvipdfm@setdim</code>	13086, 13127, 13226, 13251, 13282, 13307, 13335, 13363
<code>\DefaultOptionsofComboBox</code>	5863	E	
<code>\DefaultOptionsofListBox</code>	5862	<code>\ECIRCUMFLEX</code>	16588, 16672, 16673, 16674, 16675, 16676
<code>\DefaultOptionsofPopdownBox</code>	5864	<code>\ecircumflex</code>	16581, 16612, 16613, 16614, 16615, 16616
<code>\DefaultOptionsofPushButton</code>	5859, 12413, 12905, 13261	<code>\EdefEscapeHex</code>	841
<code>\DefaultOptionsofRadio</code>	5865	<code>\EdefEscapeName</code>	3830, 3874, 12386, 12389, 12867, 12870, 13206, 13212
<code>\DefaultOptionsofReset</code>	5858, 12458, 12957, 13319	<code>\EdefEscapeString</code>	795, 805
<code>\DefaultOptionsofSubmit</code>	5857, 12441, 12935, 13296	<code>\EdefUnescapeName</code>	3831
<code>\DefaultOptionsofText</code>	5861, 12303, 12782, 13113	<code>\EdefUnescapeString</code>	790, 7733
<code>\DefaultWidthofCheckBox</code>	5851, 12480, 12980, 13347	<code>\egroup</code>	685, 8729, 9825, 10204, 10836, 12539, 12631, 12656
<code>\DefaultWidthofChoiceMenu</code>	5853, 12320, 12800, 13139	<code>\em</code>	612
<code>\DefaultWidthofReset</code>	5849, 12454, 12953, 13315	<code>\emph</code>	591
<code>\DefaultWidthofSubmit</code>	5847, 12437, 12931, 13292	<code>\empty</code>	1261, 3430
<code>\DefaultWidthofText</code>	5856, 12293, 12772, 13103	<code>\enc@html</code>	5508, 5511
<code>\define@key</code>	2543, 2545, 2588, 2603, 2606, 2609, 2617, 2620, 2630, 2633, 2636, 2653, 2665, 2667, 2670, 2673, 2690, 2694, 2697, 2700, 2703, 2706, 2709, 2712, 2747, 2805, 2894, 3002, 3013, 3016, 3023, 3052, 3071, 3074, 3311, 3368, 3380, 3395, 3420, 3423, 3427, 3455, 3460, 3464, 3467, 3474, 3486, 3493, 3503, 3506, 3509, 3513, 3528, 3537, 3547, 3554, 3565, 3572, 3589, 3679, 3688, 3718, 3724, 3730, 3736, 3742, 3748, 3754, 3760, 3766, 3799, 3806, 3840, 3891, 3892, 3912, 3919, 3929, 3959, 3960, 3963, 3966, 3969, 3972, 3975, 3978, 3981, 4004, 4007, 4010, 4709, 4738, 4744, 4756, 5058, 5146, 5202, 5504, 5509, 5522, 5550, 5592, 5595, 5598, 5602, 5605, 5609, 5612, 5616, 5620, 5624, 5627, 5631, 5634, 5637, 5640, 5643, 5646, 5662, 5665, 5668, 5671, 5674, 5677, 5707, 5710, 5713, 5716, 5735, 5741, 5756, 5762, 5779, 5784, 5790, 6393, 6404, 11185, 11187, 11190, 11192, 11194, 11203, 11211, 11218, 11220, 11222, 11224, 11226, 11228, 11237, 11247, 11249, 11251, 11252, 11258, 11267, 11269, 11271, 11273, 11275, 11277, 11279, 11281, 11283, 11285, 11287, 11289, 11291, 11293, 11295, 11297, 11298, 11299, 11300, 11301, 11302, 11303, 11304, 11305, 11306, 11307, 11308	<code>\df@tag</code>	7864, 7870
<code>\ding</code>	5682, 5685	<code>\DH</code>	14567, 14936
<code>\DingObject</code>	12879	<code>\dh</code>	14636, 15004
<code>\discretionary</code>	686	<code>\dhal</code>	16729
<code>\divide</code>	9002, 10614	<code>\dimen@</code>	519, 520, 524, 1880, 1948, 1949, 1952, 1954, 4043, 4044, 4046, 4053, 4054, 10580, 10581, 10583, 11143, 11158, 11161
<code>\DJ</code>	3276, 14568, 15068, 16587	<code>\dimexpr</code>	531, 2244, 2246, 2254, 2259, 2262, 2264, 2278, 2280, 2283, 2284, 2291, 2294, 2297, 2298, 2299, 2300, 2310, 2315, 2323, 2327, 2332, 2342, 2345, 2350, 2353, 2358, 2359
<code>\dj</code>	3273, 3274, 15070, 16580	<code>\ding</code>	5682, 5685
<code>\do</code>	1279, 2560, 2565, 2570, 3535, 3567, 3568, 3569, 3570, 3619, 3620, 3621, 3622, 3623, 3624, 3627, 3628, 3629, 3630, 3631, 3632, 3635, 3636, 3639, 3640, 3641, 3642, 3643, 3646, 3647, 3648, 3649, 3650, 3653, 3654, 3655, 3656, 3657, 3660, 3661, 3662, 3663, 3664, 3667, 3668, 3671, 3672, 3673, 3676, 3677, 3683, 3684, 3685, 3686, 3997, 3998, 3999, 4000, 4001, 4002, 5106, 6935, 7520, 7543, 12325, 12387, 12592, 12599, 12609, 12805, 12868, 13144, 13210, 14018, 14048	<code>\DingObject</code>	12879
<code>\documentclass</code>	2	<code>\discretionary</code>	686
<code>\dospecials</code>	14027, 14057	<code>\divide</code>	9002, 10614
<code>\dots</code>	568	<code>\DJ</code>	3276, 14568, 15068, 16587
<code>\dp</code>	5840, 5843, 7196, 9361, 9441, 9478, 9516, 11144, 11147, 11754, 12029, 13089	<code>\dj</code>	3273, 3274, 15070, 16580
		<code>\do</code>	1279, 2560, 2565, 2570, 3535, 3567, 3568, 3569, 3570, 3619, 3620, 3621, 3622, 3623, 3624, 3627, 3628, 3629, 3630, 3631, 3632, 3635, 3636, 3639, 3640, 3641, 3642, 3643, 3646, 3647, 3648, 3649, 3650, 3653, 3654, 3655, 3656, 3657, 3660, 3661, 3662, 3663, 3664, 3667, 3668, 3671, 3672, 3673, 3676, 3677, 3683, 3684, 3685, 3686, 3997, 3998, 3999, 4000, 4001, 4002, 5106, 6935, 7520, 7543, 12325, 12387, 12592, 12599, 12609, 12805, 12868, 13144, 13210, 14018, 14048
		<code>\documentclass</code>	2
		<code>\dospecials</code>	14027, 14057
		<code>\dots</code>	568
		<code>\dp</code>	5840, 5843, 7196, 9361, 9441, 9478, 9516, 11144, 11147, 11754, 12029, 13089
		<code>\end</code>	629, 16771
		<code>\endeqnarray</code>	6881, 6899, 6906
		<code>\endequation</code>	6844, 6876
		<code>\endForm</code>	5498
		<code>\endinput</code>	64, 2866, 2941, 4218, 4323, 8291, 10769, 12089, 14145
		<code>\endlinechar</code>	4577
		<code>\endNoHyper</code>	5974
		<code>\EndPreamble</code>	12092
		<code>\endsubeqnarray</code>	6910, 6921
		<code>\eqnarray</code>	6880, 6882, 6903
		<code>\equal</code>	7601
		<code>\equation</code>	6843, 6852, 6856, 6865
		<code>\equationautorefname</code>	3078, 3096, 3114, 3132, 3150, 3168, 3186, 3204, 3205, 3244, 3262, 8523, 8527
		<code>\errmessage</code>	3308
		<code>\es@roman</code>	645
		<code>\es@save@dot</code>	1237
		<code>\escapechar</code>	537, 846, 4165, 6928, 13878, 14059, 14110
		<code>\eTeX</code>	577, 12097
		<code>\etex@unexpanded</code>	1812, 1819
		<code>\eTeXversion</code>	8961, 8963, 8965

\evensidemargin	7751	\Fld@bordercolor	5490, 5714, 13565, 13567, 13592, 13600, 13602, 13619, 13628, 13630, 13656, 13658, 13686, 13695, 13697, 13721, 13729, 13731, 13756, 13764, 13766	12438, 12455, 12481, 12489, 12773, 12791, 12801, 12857, 12884, 12897, 12932, 12954, 12981, 12991, 13104, 13120, 13140, 13196, 13208, 13244, 13293, 13316, 13348, 13356	
\everypar	7074	\Fld@bordersep	5491, 5663	\Fld@hiddenfalse	5169
\ExecuteOptions 4058, 4059, 4063		\Fld@borderstyle	5493, 5647, 5648, 5649, 5659, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@hiddentrue	5170
\ext@figure	8099	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@invisiblefalse	5165
\ext@table	8098	\Fld@calculate@code 5722, 13503, 13505		\Fld@invisibletrue	5166
\extra@b@citeb	7527	\Fld@cbsymbol 5494, 5675, 13573		\Fld@keystroke@code 5723, 13491, 13493	
\extrasvietnam	3354	\Fld@charsize	5484, 5485, 5641, 12373, 12854, 13193, 13575, 13638, 13666, 13705, 13754	\Fld@listcount	12385, 12390, 12401, 12866, 12871, 12885, 12891, 13205, 13213, 13217, 13222, 13233, 13240
\extrasvietnamese	3346	\Fld@checkedfalse	5480	\Fld@loc	5593
F		\Fld@chequequals	5584, 12326, 12388, 12600, 12610, 12806, 12869, 13145, 13211	\Fld@mappingname	5623, 5625, 13473, 13475, 13547, 13549
\fa	16741	\Fld@choices	5373, 5381, 5383, 5387, 5396, 5404, 5409, 5457, 5459, 5467, 5468, 13640	\Fld@maxlen	5486, 5632, 13710
\FancyVerbLineautorefname 3091, 3109, 3127, 3145, 3163, 3181, 3199, 3234, 3237, 3257, 3275, 8540		\Fld@color	5488, 5717, 13576, 13639, 13667, 13706	\Fld@menulength	5482, 5635, 12323, 12327, 12373, 12591, 12592, 12595, 12803, 12807, 12854, 13142, 13146, 13193
\farsikaf	16762	\Fld@default	5398, 5401, 5403, 5666, 12291, 12307, 12318, 12358, 12386, 12478, 12529, 12547, 12561, 12569, 12576, 12602, 12612, 12642, 12652, 12770, 12787, 12798, 12839, 12867, 12978, 13101, 13118, 13137, 13178, 13206, 13345, 13668, 13669, 13670, 13707	\Fld@name	5617, 12290, 12317, 12410, 12477, 12528, 12533, 12544, 12545, 12556, 12557, 12566, 12567, 12575, 12596, 12613, 12621, 12626, 12641, 12650, 12769, 12797, 12902, 12977, 13100, 13136, 13258, 13344, 13468, 13542
\farsiya	16764	\Fld@DingDef	5675, 5678, 5680	\Fld@norotatefalse	5182
\fatha	16754	\Fld@disabledfalse	5481	\Fld@norotatetrue	5181
\fbox	12761, 12764	\Fld@export 5211, 5214, 5221, 5513		\Fld@noviewfalse	5185
\Field@addtoks 5572, 5603, 5606, 5757, 5780		\Fld@findlength	12579, 12590	\Fld@noviewtrue	5186
\Field@boolkey 5059, 5147, 5566, 5596, 5599		\Fld@flags	5280, 5282, 5293, 5295, 5309, 5311, 5341, 5343, 5366, 5368, 13557, 13588, 13615, 13648, 13682, 13717, 13752	\Fld@nozoomfalse	5178
\Field@toks	5570, 5571, 5573, 12531, 12548, 12559, 12570, 12580, 12597, 12615, 12623, 12628, 12644, 12653	\Fld@format@code	5720, 13495, 13497	\Fld@nozoomtrue	5177
\Field@Width	5483, 5629	\Fld@getmethodfalse	5533	\Fld@onblur@code	5725, 13511, 13513
\figureautorefname	3081, 3099, 3117, 3135, 3153, 3171, 3189, 3219, 3247, 3265, 8530	\Fld@getmethodtrue	5535	\Fld@onclick@code	5719, 5791, 13606
\filename@area	4945	\Fld@height	5638, 12294, 12310, 12321, 12376, 12393, 12405, 12438, 12455, 12481, 12489, 12773, 12791, 12801, 12857, 12884, 12897, 12932, 12954, 12981, 12991, 13104, 13120, 13140, 13196, 13208, 13244, 13293, 13316, 13348, 13356	\Fld@onenter@code	5728, 13523, 13525
\filename@base	4945	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@onexit@code	5729, 13527, 13529
\filename@ext	4942, 4943, 4945, 4946	\Fld@bordersep	5491, 5663	\Fld@onfocus@code	5724, 13507, 13509
\filename@parse	4941	\Fld@borderstyle	5493, 5647, 5648, 5649, 5659, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@onmousedown@code	5726, 13515, 13517
\find@pdfink	8778, 8832, 8842	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@onmouseup@code	5727, 13519, 13521
\Fld@@@additionalactions	13490, 13533, 13537	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@printfalse	5174
\Fld@@@DingDef	5682, 5685, 5704	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@printtrue	5173
\Fld@additionalactions	13490, 13579, 13607, 13641, 13675, 13709, 13743, 13774	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772	\Fld@radiosymbol	5495, 5678, 13664
\Fld@align	5487, 5669, 13558, 13616, 13683	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772		
\Fld@altname	5619, 5621, 13469, 13471, 13543, 13545	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772		
\Fld@annotflags 5266, 5268, 13554, 13585, 13612, 13645, 13679, 13714, 13749		\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772		
\Fld@annotnames	13541, 13555, 13586, 13613, 13646, 13680, 13715, 13750	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772		
\Fld@bcolor	5489, 5711, 13569, 13571, 13632, 13634, 13660, 13662, 13687, 13699, 13701	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772		
\fld@bcolor	13620	\Fld@borderwidth	5492, 5644, 5834, 5837, 5838, 5841, 5842, 12374, 12375, 12855, 12856, 13194, 13195, 13559, 13590, 13617, 13650, 13684, 13719, 13772		

\Fld@rotation	5496, 5708, 13561, 13563, 13591, 13596, 13598, 13618, 13624, 13626, 13652, 13654, 13685, 13691, 13693, 13720, 13725, 13727, 13755, 13760, 13762
\Fld@submitflags	5248, 5250, 13741
\Fld@temp	5681, 5683, 5686, 5687, 5696, 5697
\Fld@validate@code	5721, 13499, 13501
\Fld@value	5399, 5406, 5408, 5672, 12292, 12307, 12319, 12357, 12358, 12771, 12787, 12799, 12838, 12839, 13102, 13118, 13138, 13177, 13178, 13708
\Fld@width	5628, 12293, 12306, 12310, 12320, 12356, 12367, 12369, 12393, 12405, 12425, 12437, 12445, 12454, 12468, 12480, 12486, 12489, 12772, 12786, 12791, 12800, 12837, 12848, 12850, 12884, 12897, 12918, 12931, 12939, 12953, 12967, 12980, 12987, 12991, 13103, 13117, 13120, 13139, 13176, 13187, 13189, 13208, 13244, 13275, 13292, 13300, 13315, 13329, 13347, 13354, 13356
\float@caption	7297, 7357
\float@makebox	7359, 7360
\floatingpenalty	7197
\flq	652
\flqq	650
\fmtname	7
\fmtversion	7
\fontencoding	545, 549, 584, 12753
\fontfamily	585, 12752
\fontseries	586, 6968, 6994, 7025, 12754
\fontshape	587, 4504, 12755
\fontsize	588
\footins	7191
\footnote	5035
\footnoteautorefname	3079, 3097, 3115, 3133, 3151, 3169, 3187, 3208, 3211, 3245, 3263, 8524, 8528
\footnotesep	7195, 7202
\footnotesize	617, 7193
\footnotetext	7153
\footref	7221, 7222
\foreignlanguage	633
\Form	5497
\Form@action	5507, 12520, 13739
\Form@boolkey	5501
\Form@htmlfalse	5500, 5519
\Form@htmltrue	5512
\Form@method	5531, 5539, 12520
\frq	653
\frqq	651
\futurelet	705, 1603
\FV@SetLineNo	6682
\FV@StepLineNo	6681, 6683, 6684
G	
\G	14725, 14751, 14770, 15351, 15353, 15355, 15357, 15359, 15361, 15362, 15364, 15366, 15368, 15370, 15372, 15374
\g@addto@macro	6154, 6326, 7429, 7706, 7709, 7712, 7761, 9195, 10604, 10892, 11465, 11551, 11613, 11915, 12103
\G@refundefinedtrue	4830, 7529, 7552, 8296, 8316, 8333, 8450
\gaf	16763
\Gauge	5807
\GenericError	693, 3712
\GenericInfo	695, 3710
\GenericWarning	283, 694, 3711
\getpagerefnumber	6796
\getrefbykeydefault	6752, 6753
\gexmode	10635, 10636, 10724
\ghayn	16739
\Gin@setfile	7941, 7942
\glossary	659
\glq	648
\glqq	646
\Greeksnumeral	1101
\greeknumeral	1100
\grq	649
\grqq	647
\guill@spacing	1030
\guillemotleft	1070, 14494, 14674, 14862, 16567
\guillemotright	1071, 14525, 14675, 14894, 16568
\guilsinglleft	14425, 14676, 16273, 16569
\guilsinglright	14427, 14677, 16275, 16570
H	
\H	14721, 14753, 14772, 14786, 15201, 15203, 15265, 15267, 16065, 16067
\h	3266, 16595, 16600, 16605, 16610, 16615, 16620, 16625, 16630, 16635, 16640, 16645, 16650, 16655, 16660, 16665, 16670, 16675, 16680, 16685, 16690, 16695, 16700, 16705, 16710
\H@@footnotemark	7082, 7099, 7226, 7233, 7245, 7256
\H@@footnotetext	7081, 7091, 7118, 7175, 7234, 7248, 7256
\H@cmpfootnotetext	7089, 7101, 7103
\H@definecounter	7846, 7848
\H@endeqnarray	6881, 6900
\H@endequation	6844, 6876
\H@endsubeqnarray	6910, 6922
\H@eqnarray	6880, 6885
\H@equation	6843, 6867
\H@item	6518, 6524, 7437, 7462
\H@newctr	7851, 7853
\H@old@part	14209, 14220
\H@old@schapter	14179, 14188
\H@old@sect	14230, 14241, 14250
\H@old@spart	14222, 14228
\H@old@ssect	14165, 14170
\H@refstepcounter	6533, 6543, 6683, 6807, 6820, 6866, 7007, 7038, 7292, 8112, 8165
\H@seteqlabel	7882, 7884
\H@subeqnarray	6909, 6913
\ha	16747
\Haa	16726
\halign	668
\hamza	16714
\HAR@checkcitations	7617
\HAR@citetoaux	7573
\HAR@tempa	7618, 7619, 7620, 7621, 7622, 7623
\harvardcite	7567, 7604
\harvarditem	7592
\hbox	1872, 1878, 1884, 2456, 3441, 3447, 4980, 4982, 5629, 5828, 5829, 5830, 5831, 7557, 7746, 8722, 9286, 9362, 9372, 9442, 9456, 9479, 9494, 9517, 9532, 9801, 9818, 10800, 11147, 11161, 11755, 11765, 12030, 12045, 12668, 13119, 13207, 13243, 13273, 13301, 13330, 13355, 14157
\hc@currentHref	7308
\HCode	12520, 12522, 12533, 12542, 12554, 12562, 12564, 12595, 12601, 12606, 12611, 12625, 12630, 12634, 12637, 12646
\headerps@out	6427, 11455, 11466, 11538, 11552, 11605, 11614, 11627, 11641, 11680, 11798, 11916, 12104
\hfill	5828, 5829, 5830, 5831, 7448, 7481
\Hfootnoteautorefname	8524
\hhyperref	5040

<code>\hoffset</code>	7747	<code>\hvtex@trans@effect@Dissolve</code>	10489	<code>\Hy@babelnormalise</code> .	4793, 4795
<code>\hphantom</code>	627	<code>\hvtex@trans@effect@Glitter</code>	10490	<code>\Hy@backout</code> . .	4571, 5958, 5962, 7403
<code>\href</code> .	660, 4692, 5034, 5035, 6000	<code>\hvtex@trans@effect@R</code> . .	10493	<code>\Hy@backreffalse</code>	441, 3043, 3065, 4226
<code>\href@</code>	4695, 4698, 4703	<code>\hvtex@trans@effect@Split</code>	10491	<code>\Hy@backreftrue</code>	3036, 3040, 3062
<code>\href@split</code>	4703, 4704	<code>\hvtex@trans@effect@Wipe</code>	10492	<code>\Hy@BeginAnnot</code>	9843, 9859, 9900, 9937, 9966
<code>\hsize</code>	7198	<code>\hvtex@trans@par</code> .	10526, 10530, 10532, 10535, 10538	<code>\Hy@bibcite</code>	7426, 7430
<code>\hskip</code> 1883, 1961, 2497, 2498, 4689, 5834, 12668		<code>\hvtex@trans@params</code> . . .	10520, 10522, 10546	<code>\Hy@bookmarksdepth</code>	3426, 3431, 3443, 3449, 13789
<code>\hspace</code>	656, 7607, 7608	<code>\Hy@@boolkey</code>	2511, 2512	<code>\Hy@bookmarksnumberedfalse</code>	442
<code>\hss</code>	7755, 14162	<code>\Hy@@CleanupFile</code> . . .	4980, 4982	<code>\Hy@bookmarksopenfalse</code> . . .	443
<code>\ht</code>	5836, 5839, 9370, 9445, 9454, 9461, 9482, 9492, 9499, 9520, 9530, 9537, 11143, 11763, 12043, 13087	<code>\Hy@@DefNameKey</code> . .	2585, 2587	<code>\Hy@bookmarkstrue</code>	444
<code>\htmladdimg</code>	5033	<code>\Hy@@escapeform</code> .	13434, 13447, 13453	<code>\Hy@bookmarkstype</code> .	3461, 3463, 7777, 13800
<code>\htmladdnormallink</code>	5034	<code>\Hy@@SectionAnchor</code>	14152, 14155	<code>\Hy@boolkey</code> . .	2511, 2604, 2607, 2610, 2631, 2634, 2637, 2668, 2671, 2674, 2691, 2695, 2698, 2701, 2704, 2707, 2710, 2713, 3014, 3017, 3072, 3369, 3381, 3396, 3421, 3424, 3465, 3468, 3529, 3689, 3961, 3964, 3967, 3970, 3973, 3976, 3979, 3987, 4008, 4011, 6394
<code>\htmladdnormallinkfoot</code> . . .	5035	<code>\Hy@Otemp</code>	3471, 3473, 5731, 5733	<code>\Hy@BorderArrayPatch</code> . .	11198, 11201, 11464, 11914
<code>\htmlref</code>	5036	<code>\Hy@OVersionCheck</code> . . .	305, 324	<code>\Hy@breaklinks@unsupported</code>	2679, 10752
<code>\Huge</code>	614	<code>\Hy@Oabspage</code> . .	6174, 6260, 6376, 6453	<code>\Hy@breaklinksfalse</code>	445
<code>\huge</code>	618	<code>\Hy@OAcrobatmenu</code> . . .	4103, 4144, 9257, 9965, 10460, 11319	<code>\Hy@breaklinksunhbox</code> . .	11097, 11151
<code>\Hurl</code>	4778, 4780, 4782	<code>\Hy@Oactiveanchorfalse</code>	4575, 8823, 9314, 9329, 9408, 9418, 9730, 10189, 10206, 10277, 10290, 10786, 11703, 11718, 11983, 11997	<code>\Hy@CatcodeWrapper</code>	4433, 4492, 4536, 4565
<code>\hv@pdf@char</code> 13947, 14012, 14013, 14014, 14015		<code>\Hy@Oactiveanchortrue</code>	8819, 9311, 9325, 9406, 9415, 9726, 10185, 10203, 10275, 10287, 10776, 11700, 11714, 11980, 11993	<code>\Hy@centerwindowfalse</code>	446
<code>\hvtex@buffer</code> 10499, 10503, 10511, 10514, 10523, 10527, 10543		<code>\Hy@OAllowHyphens</code> .	4685, 10774, 10806, 11130	<code>\Hy@chapapp</code> . .	6588, 6596, 6622, 14183, 14194, 14276
<code>\hvtex@gettoken</code> . .	10498, 10512, 10516, 10525, 10529	<code>\Hy@OAnchorName</code> . . .	4815, 4817, 4820, 4822, 4844, 4846, 4850, 4855, 4857	<code>\Hy@chapterstring</code> . . .	6583, 6585, 6588, 6621
<code>\hvtex@gettoken@</code> .	10499, 10501	<code>\Hy@Oappendixstring</code> .	6587, 6596	<code>\Hy@CheckOptionValue</code> . . .	2555, 2592
<code>\hvtex@par@dimension</code> . .	10494, 10535	<code>\Hy@OAtBeginDocument</code>	378, 1009, 2731, 2791, 2862, 2937, 2993, 3383, 4040, 4076, 4214, 4220, 4319, 4472, 4562, 5906, 6019, 6460, 6688, 7564, 8370, 8517, 8717, 9203, 9813, 10258, 11640, 11678, 12683, 12684	<code>\Hy@CJKbookmarksfalse</code> . . .	447
<code>\hvtex@par@direction</code> . . .	10495, 10538	<code>\Hy@OAtBeginDocumentHook</code>	379, 384, 390, 391	<code>\Hy@cjkpu</code>	1272, 1274, 1295
<code>\hvtex@par@duration</code> 10496, 10530		<code>\Hy@OAtEndOfPackage</code> .	381, 904, 2372, 3347, 3355, 3362, 4202, 4228, 4234, 4424	<code>\Hy@CleanupFile</code>	4978, 8884, 9902, 10354, 11390
<code>\hvtex@par@motion</code> 10497, 10532		<code>\Hy@OAtEndOfPackageHook</code> .	382, 385, 387, 388	<code>\Hy@colorlink</code>	3375, 4496, 4504, 4508, 8718, 8804, 8877, 8917, 8953, 9280, 9312, 9335, 9366, 9379, 9407, 9423, 9448, 9464, 9486, 9503, 9524, 9541, 9814, 9891, 9930, 9959, 9984, 10276, 10298, 10368, 10392, 10425, 10456, 10472, 10804, 11081, 11083, 11701, 11724, 11759, 11772, 11981, 12003, 12038, 12051
<code>\hvtex@param@dimension</code> 10507, 10536, 10554, 10557		<code>\Hy@Oauthor</code>	6088, 6092		
<code>\hvtex@param@direction</code> .	10508, 10539, 10565, 10573				
<code>\hvtex@param@duration</code> .	10509, 10531, 10578, 10580				
<code>\hvtex@param@motion</code> . .	10510, 10533, 10554, 10561				
<code>\hvtex@parse@trans</code> 10483, 10505					
<code>\hvtex@produce@trans</code> . . .	10544, 10550				
<code>\hvtex@token</code> 10502, 10513, 10519, 10526, 10531, 10534, 10537, 10539					
<code>\hvtex@trans@code</code> 10487, 10488, 10489, 10490, 10491, 10492, 10493, 10506, 10552, 10553, 10555, 10557, 10559, 10561, 10563, 10565, 10567, 10568, 10569, 10570, 10571, 10573					
<code>\hvtex@trans@effect@Blinds</code>	10487				
<code>\hvtex@trans@effect@Box</code> .	10488				

\Hy@colorlinksfalse	3372	4295, 4297, 4301, 4306, 4310,	\Hy@finalfalse	407
\Hy@ColorList	3534, 3535	4313, 4316, 4327, 4330, 4333,	\Hy@finaltrue	406
\Hy@CounterExists	6483, 6496, 6499	4342, 4343, 4354, 4356, 4362, 4364, 4366	\Hy@FirstPage	4114
\Hy@currentbookmarklevel	13795, 13805, 13806, 13812, 13819, 13912, 13915, 13920, 13924	\Hy@dth@currentHref	\Hy@FirstPageHook	6139, 6152, 6154, 6425, 6426, 11465, 11551, 11613, 11915, 12103
\Hy@defaultdriver	4308, 4333, 4343, 4354	7009, 7040, 7065	\Hy@fitwindowfalse	450
\Hy@DefFormAction	5505, 5507	\Hy@DviErrMsg	\Hy@FixNotFirstPage	9284, 9285, 9291
\Hy@DefNameKey	2584, 3566, 3618, 3626, 3634, 3638, 3645, 3652, 3659, 3666, 3670, 3675, 3682, 3996	2826, 2828, 2831, 2837, 2850	\Hy@float@caption	7298, 7348, 7350
\Hy@DEST	11098, 11165	\Hy@DviModetrue	\Hy@float@currentHref	7351, 7353, 7355, 7363, 7366, 7368
\Hy@DestName	8765, 8772	\Hy@DvipdfmxOutlineOpentru	\Hy@footnote@currentHref	5905, 7106, 7111, 7121, 7126, 7129, 7141, 7143, 7166, 7207, 7210
\Hy@DisableOption	2541, 4096, 4097, 4098, 4100, 4207, 4233, 4370, 4371, 4372, 4373, 4374, 4375, 4376, 4377, 4378, 4379, 4380, 4381, 4382, 4383, 4384, 4385, 4386, 4387, 4432, 4485, 4513, 4514, 4573, 4574, 5910, 5911, 5912, 5913, 5914, 5915, 5916, 5917, 5918, 5919, 5920, 5921, 5922, 5923, 5924, 5925, 5926, 5927, 5928, 5929, 5930, 5931, 5932, 5933, 6112, 6328, 7260, 7946, 8044, 8045, 8642, 8745, 9113, 9114, 9115, 9116, 9117, 9118, 9119, 9120, 9121, 9122, 9252, 9569, 9570, 9571, 9572, 9573, 9574, 9575, 9576, 9577, 9578, 9841, 10027, 10028, 10029, 10030, 10031, 10032, 10033, 10034, 10035, 10036, 10118, 10260, 10704, 10705, 10706, 10707, 10708, 10709, 10710, 10711, 10712, 10713, 10971, 10972, 10973, 10974, 10975, 10976, 10977, 10978, 10979, 10980, 11531, 11824, 11825, 11826, 11827, 11828, 11829, 11830, 11831, 11832, 11833	4394, 4401	\Hy@FormObjects	12721, 12997, 13051, 13061, 13371, 13421
\Hy@EndAnnot	9849, 9894, 9933, 9962, 9987	\Hy@EndWrap	\Hy@frenchlinksfalse	3374
\Hy@endcolorlink	3376, 4500, 4505, 4509, 8727, 8810, 9312, 9349, 9373, 9381, 9407, 9431, 9452, 9466, 9490, 9503, 9528, 9541, 9823, 9851, 10276, 10349, 10368, 10392, 10425, 10456, 10472, 10831, 11090, 11701, 11740, 11766, 11774, 11981, 12017, 12042, 12051	4434, 4436, 4437, 4470	\Hy@Gin@setfile	7941, 7943
\Hy@Error	277, 293, 299, 313, 2735, 2848, 2873, 2906, 2944, 2951, 2962, 2968, 4128, 4746, 4911, 5206, 5330, 5526, 5558, 5736, 5785, 12416, 12462, 12909, 12961, 13265, 13323	\Hy@Escapeform	\Hy@GlobalStepCount	479, 6260, 6652, 6675, 7737, 8154, 8205
\Hy@Escapeform	12309, 12392, 12404, 12428, 12446, 12469, 12488, 12789, 12874, 12895, 12921, 12941, 12968, 12989, 13124, 13216, 13247, 13279, 13303, 13331, 13360, 13428, 13458, 13465	\Hy@Escapeformfalse	\Hy@gtemp	819, 820, 4166, 4172, 4174, 5403, 5404, 5408, 5409, 5420, 5434, 8597, 8599, 13486, 13488
\Hy@Escapeformfalse	448	\Hy@Escapestring	\Hy@Chref	4695, 4697
\Hy@Escapestring	13425, 13493, 13497, 13501, 13505, 13509, 13513, 13517, 13521, 13525, 13529, 13573, 13606, 13707, 13708, 13739	\Hy@EveryPageAnchor	\Hy@Chref@nextactionraw	4732, 4755, 4757, 4758, 4760, 4765, 4769, 4771, 8873, 8913, 8949, 9276, 9887, 9926, 9955, 9975, 10313, 10381, 10445, 11415, 11444
\Hy@EveryPageAnchor	7719, 7762	\Hy@EveryPageBoxHook	\Hy@Chref@page	4710, 4712, 4716, 4717, 4719, 4726, 4729, 8909, 9921, 11411
\Hy@EveryPageBoxHook	6138, 6142, 6146, 7761, 10604, 10892	\Hy@ExchangeLeftParenthesis	\Hy@hyperfootnotesfalse	7078
\Hy@EveryPageHook	6137, 6141, 6326, 9195	\Hy@ExchangeRightParenthesis	\Hy@hyperfootnotestrue	451
\Hy@ExchangeLeftParenthesis	8573, 8579	\Hy@ExchangeRightParenthesis	\Hy@hyperindextrue	452
\Hy@ExchangeRightParenthesis	8583, 8589	\Hy@false	\Hy@hypertexnamesfalse	2376
\Hy@false	2420, 2522, 3028, 3064, 5555	\Hy@figuresfalse	\Hy@hypertexnamestrue	453
\Hy@figuresfalse	449		\Hy@ifStringEndsWith	4946, 4958
			\Hy@implicittrue	454
			\Hy@Info	280, 2530, 4177, 4179, 4182, 4184, 4187, 4189, 4192, 4194, 4197, 4199, 4417, 4423, 4501, 4506, 4510, 4654, 4681, 5113, 5867, 5869, 5872, 5874, 5877, 5879, 5882, 5884, 5887, 5889, 5892, 5894, 5897, 5899, 7504, 7565, 7782, 7799
			\Hy@InfoNoLine	281, 4209, 4211, 11960
			\Hy@LastPage	4117
			\Hy@level	13801, 13803, 13814, 13819, 13820, 13821, 13852

\Hy@levelcheck . . .	13802, 13817	\Hy@nextfalse	4146, 7956	8885, 8886, 8923, 8924, 9029,
\Hy@linkcounter .	483, 485, 6652,	\Hy@NextPage	4108	9668, 9868, 9903, 9904, 9938,
6653, 6675, 6676, 7885, 8154,		\Hy@nexttrue . .	4147, 4148, 4149,	10067, 10297, 10373, 10432,
8155, 8159, 8205, 8206, 8210		7957, 7958, 7959		10433, 11034, 11229, 11238,
\Hy@linkfileprefix . . .	3505, 4930,	\Hy@number . . .	3904, 3908, 3916	11365, 11391, 11392, 11423,
9352, 10154, 11744, 12020		\Hy@numberline . .	13796, 13833,	11424, 11887, 13451, 14070,
\Hy@LinkMath . . .	10795, 10797,	13834, 13835, 13836		14086
10802, 10834, 11122, 11124,		\Hy@ObsoletePaperOption	2613,	\Hy@pstringDest
11129, 11131, 11137, 11139		2621	 8764, 8765, 9668, 9715,
\Hy@linktoc . . .	2639, 2641, 2649,	\Hy@ocgcolor . .	8721, 8735, 9817,	11229, 11230, 11234, 11238,
2651, 2661, 7818		9831		11239, 11243
\Hy@linktoc@all	2647	\Hy@ocgcolorlinksfalse	3373, 4480	\Hy@pstringF
\Hy@linktoc@none	2644	\Hy@org@chapter . .	14191, 14206	8884, 8885, 8905, 8923, 8942,
\Hy@linktoc@page . . .	2639, 2646,	\Hy@OrgMakeLabel	12072, 12079	8947, 9901, 9902, 9903, 9918,
2649		\Hy@OutlineName .	14071, 14126	10353, 10354, 10358, 10432,
\Hy@linktoc@section .	2641, 2645,	\Hy@OutlineRerunCheck .	<u>13936</u> ,	10439, 10443, 11389, 11390,
2651		14035, 14117		11391, 11408, 11423, 11439,
\Hy@linktocpagefalse	455	\Hy@PageAnchorSlide	7679, 7717,	11442
\Hy@localanchornamfalse . .	456	7730		\Hy@pstringName .
\Hy@LT@currentHref .	6822, 6833	\Hy@PageAnchorSlidesPlain	7666,	14070, 14071,
\Hy@LT@footnotetext	7165, 7174	7716, 7725		14086, 14100
\Hy@make@anchor . . .	7859, 7865,	\Hy@pageanchortrue	462	\Hy@pstringP .
7871		\Hy@pagecounter .	484, 486, 6714,	8924, 8947, 10433,
\Hy@make@df@tag@@	7863, 7878	7737, 7739		10443, 11424, 11442
\Hy@make@df@tag@@@	7869, 7879	\Hy@pageheight	4054, 11553,	\Hy@pstringURI
\Hy@MakeCurrentHref	<u>6663</u> , 6676	11642	 8848, 8869, 9938, 9951,
\Hy@MakeCurrentHrefAuto		\Hy@pagelabelsfalse	6161	10297, 10309, 10373, 10377,
. . .	<u>6674</u> , 6756, 7860, 13780,	\Hy@pagelabelstrue	463	11365, 11377
14167, 14183, 14194, 14224,		\Hy@param	6620, 6621, 6622, 6649,	\Hy@PutCatalog
14238, 14276		6653		<u>6322</u> , <u>6330</u> , <u>6442</u>
\Hy@MakeRemoteAction . .	4715,	\Hy@pdfafalse	477	\Hy@raisedlink
8887, 9905, 11393		\Hy@pdfencoding@pdfdoc .	2786	2444, 6576,
\Hy@maketitle@end . .	<u>7237</u> , <u>7242</u> ,	\Hy@pdfmarkerrorfalse . .	11061	6758, 6779, 6780, 6781, 6784,
7244		\Hy@pdfmarkerrortrue . . .	11231,	6834, 6873, 6876, 7062, 7109,
\Hy@maketitle@optarg	<u>7235</u> , <u>7240</u>	11240		7124, 7179, 7205, 7336, 7414,
\Hy@Match .	328, 330, 3005, 3515,	\Hy@pdfminorversion	8609, 8615,	7438, 7443, 7463, 7861, 7886,
3575, 3592, 3935, 4760, 5649		8618, 8626, 8631, 8633, 8636,	8640	11453, 11536, 11794, 11958,
\Hy@MaybeStopNow .	2927, 4064	\Hy@pdfpagehiddenfalse . . .	464	13781, 14159, 14184, 14195,
\Hy@menubartrue	457	\Hy@pdfstringdef .	<u>818</u> , 5378, 5386	14225, 14277
\Hy@Message	282,	\Hy@pdfstringfalse	465, 5935	\Hy@raiselinksfalse . . .
2861, 2936, 4213, 4318, 4362,		\Hy@pdfstringtrue	672, 5907	467, 7566
10210, 10214, 10217, 10220,		\Hy@pdfversion	2813, 2824, 5380,	\Hy@RemoveDurPageAttr .
10223, 10226, 10229, 10232,		8631, 8633, 8637, 8640, 13480		9152,
12287, 12497, 12500, 12503,		\Hy@plainpagesfalse	466	<u>9165</u>
12506, 12509, 12512, 12514,		\Hy@PrevPage	4111	\Hy@RemoveHidPageAttr .
12515, 12524, 12661, 13056		11595, 11602, 11607,		9175,
\Hy@naturalnamesfalse	458	11608, 11625, 11646, 11647,		<u>9187</u>
\Hy@nestingfalse	459	11648, 11654, 11661, 11668,		\Hy@RemovePercentCr . . .
\Hy@newline@author	6131	11675		4627,
\Hy@newline@title	6130	\Hy@pstringB .	9029, 9034, 10067,	4631, 4636
\Hy@newwindowfalse	461	10079, 11034, 11050, 11887,		\Hy@RemoveTransPageAttr
\Hy@newwindowsetfalse	460, 3984	11903		<u>9127</u> ,
\Hy@newwindowsettrue . . .	3986,	\Hy@pstringD .	8886, 8911, 9904,	<u>9141</u>
4734		9923, 11392, 11413		\Hy@reserved@a
\Hy@newwindowtrue	4735	\Hy@pstringdef		4860, 6883, 6912,
\Hy@next	<u>6276</u> , <u>6286</u> , <u>6291</u> , <u>14193</u> , <u>8544</u> , 8764, 8788, 8848,		<u>12527</u> , <u>12577</u> , <u>12640</u>
14202, 14205				\Hy@RestoreCatcodes
				<u>205</u> , 4060,
				4369
				\Hy@RestoreLastskip .
				<u>2465</u> , 8766,
				9315, 9330, 9409, 9419, 9717,
				10190, 10207, 10278, 10291,
				10767, 10787, 11704, 11719,
				11984, 11998
				\Hy@RestoreSavedSpaceFactor . .
				2440, 9360, 9440, 9477, 9515,
				<u>11753</u> , <u>12028</u>
				\Hy@RestoreSpaceFactor

2431, 2457, 2462, 9359, 9367,
 9374, 9439, 9449, 9457, 9476,
 9487, 9495, 9514, 9525, 9533,
 10801, 10837, 11128, 11136,
 11163, 11752, 11760, 11767,
 12027, 12039, 12046, 12080,
 12084
 \Hy@ReturnAfterElseFi [487](#), [4615](#)
 \Hy@ReturnAfterElseFiFiEnd . .
 [491](#), [1846](#)
 \Hy@ReturnAfterFi [487](#), [507](#), [2024](#),
[4619](#), [4635](#), [8056](#), [8092](#), [8578](#),
[8588](#), [13452](#)
 \Hy@ReturnAfterFiFiEnd . . [490](#),
[1838](#), [1852](#), [1930](#), [1937](#)
 \Hy@ReturnEnd . . [489](#), [490](#), [491](#),
[1858](#), [1942](#)
 \Hy@safe@activestfalse [492](#), [4526](#),
[4531](#), [4874](#), [8439](#)
 \Hy@safe@activesttrue . [492](#), [4155](#),
[4524](#), [4529](#), [4607](#), [4644](#), [4652](#),
[4680](#), [4797](#), [4866](#), [8346](#), [8428](#),
[14028](#), [14058](#)
 \Hy@saved@currentHref . . . [7139](#),
[7142](#)
 \Hy@saved@footnotemark . [7231](#),
[7246](#)
 \Hy@saved@footnotetext . . [7232](#),
[7249](#)
 \Hy@saved@hook [6116](#), [6126](#)
 \Hy@saved@refstepcounter . [6560](#),
[6808](#)
 \Hy@SavedSpaceFactor . . . [2427](#),
[2429](#), [2434](#), [2435](#), [2441](#), [12077](#)
 \Hy@SaveLastskip . . . [2465](#), [8762](#),
[9303](#), [9318](#), [9400](#), [9412](#), [9665](#),
[10177](#), [10193](#), [10268](#), [10281](#),
[10757](#), [10771](#), [11693](#), [11707](#),
[11973](#), [11987](#)
 \Hy@SaveSavedSpaceFactor
[2439](#), [9358](#), [9438](#), [9475](#), [9513](#),
[11751](#), [12026](#)
 \Hy@SaveSpaceFactor [2428](#),
[2448](#), [2459](#), [9357](#), [9369](#), [9437](#),
[9451](#), [9474](#), [9489](#), [9512](#), [9527](#),
[10799](#), [10835](#), [11120](#), [11132](#),
[11140](#), [11750](#), [11762](#), [12025](#),
[12041](#), [12075](#), [12082](#)
 \Hy@scanauthor [6086](#), [6091](#)
 \Hy@scanoptauthor . . [6086](#), [6087](#)
 \Hy@scanopttitle [6077](#), [6078](#)
 \Hy@scantitle [6077](#), [6082](#)
 \Hy@secnum@part . [14212](#), [14214](#),
[14217](#)
 \Hy@SectionAnchorHref [670](#),
[14150](#), [14172](#), [14243](#)
 \Hy@SectionHShift [14149](#), [14158](#),
[14168](#), [14239](#)
 \Hy@seminarslidesfalse . . . [8104](#)
 \Hy@seminarssidetrue [8102](#)
 \Hy@setbreaklinks . . . [2676](#), [2680](#),
[2692](#), [8605](#), [9658](#)
 \Hy@SetCatcodes [181](#), [231](#), [4062](#)
 \Hy@SetNewWindow
 [3990](#), [8907](#), [8944](#), [9925](#),
[10440](#), [11407](#), [11438](#)
 \Hy@setouterhbox . [11096](#), [11127](#)
 \Hy@setpagesizetrue [468](#)
 \Hy@setpdfborder
[3608](#), [8794](#), [8853](#), [8891](#), [8928](#),
[9260](#), [9879](#), [9911](#), [9944](#), [9977](#),
[10317](#), [10338](#), [10361](#), [10385](#),
[10417](#), [10449](#), [10465](#)
 \Hy@setpdfversiontrue [2812](#)
 \Hy@setref@link [8302](#), [8305](#)
 \Hy@SlidesFormatOptionalPage .
 . . [6190](#), [7665](#), [7684](#), [7688](#)
 \Hy@SlidesPage [6197](#), [7698](#), [7699](#),
[7705](#), [7707](#), [7710](#), [7713](#)
 \Hy@slidetitle . [8131](#), [8133](#), [8140](#),
[8148](#), [8158](#), [8182](#), [8184](#), [8191](#),
[8199](#), [8209](#)
 \Hy@StartlinkName . . [8792](#), [8806](#)
 \Hy@StepCount [478](#), [6237](#), [12327](#),
[12390](#), [12592](#), [12807](#), [12871](#),
[13146](#), [13213](#), [13916](#), [13921](#),
[13997](#)
 \Hy@StringLocalhost . [4976](#), [4977](#),
[4992](#)
 \Hy@temp [700](#), [707](#), [822](#),
[894](#), [997](#), [1000](#), [1008](#), [1009](#),
[2619](#), [2624](#), [2625](#), [2626](#), [2627](#),
[2628](#), [2629](#), [3470](#), [3479](#), [3480](#),
[3481](#), [3482](#), [3483](#), [3484](#), [3485](#),
[3535](#), [3536](#), [3537](#), [3540](#), [3542](#),
[3545](#), [3555](#), [3558](#), [3559](#), [3560](#),
[3561](#), [3562](#), [3563](#), [3573](#), [3586](#),
[3590](#), [3605](#), [3767](#), [3768](#), [3771](#),
[3774](#), [3777](#), [3802](#), [3810](#), [3811](#),
[3812](#), [3813](#), [3814](#), [3815](#), [3816](#),
[3817](#), [3818](#), [3982](#), [3983](#), [4135](#),
[4139](#), [4140](#), [4141](#), [4142](#), [4241](#),
[4243](#), [4248](#), [4250](#), [4253](#), [4267](#),
[4269](#), [4274](#), [4276](#), [4283](#), [4285](#),
[4290](#), [4292](#), [4295](#), [4355](#), [4356](#),
[5103](#), [5107](#), [5108](#), [5119](#), [5203](#),
[5204](#), [5205](#), [5207](#), [5211](#), [5523](#),
[5524](#), [5525](#), [5527](#), [5531](#), [5532](#),
[5647](#), [5659](#), [5730](#), [5746](#), [5747](#),
[5748](#), [5749](#), [5750](#), [5751](#), [5752](#),
[5753](#), [5755](#), [5761](#), [5767](#), [5768](#),
[5769](#), [5770](#), [5771](#), [5772](#), [5773](#),
[5774](#), [5775](#), [5776](#), [5777](#), [6217](#),
[6220](#), [6229](#), [6231](#), [6235](#), [6239](#),
[6283](#), [6285](#), [6708](#), [6711](#), [6714](#),
[6720](#), [6846](#), [6852](#), [6960](#), [6983](#),
[7215](#), [7221](#), [8053](#), [8054](#), [9044](#),
[9073](#), [9075](#), [9588](#), [9593](#), [9599](#),
[9603](#), [9606](#), [9611](#), [9642](#), [9644](#),
[10039](#), [10082](#), [10084](#), [10934](#),
[10937](#), [10941](#), [10942](#), [10948](#),
[10949](#), [10955](#), [10983](#), [10988](#),
[10994](#), [10998](#), [11001](#), [11006](#),
[11039](#), [11041](#), [11102](#), [11103](#),
[11107](#), [11195](#), [11196](#), [11204](#),
[11205](#), [11309](#), [11310](#), [11836](#),
[11841](#), [11847](#), [11851](#), [11854](#),
[11859](#), [11892](#), [11894](#), [13433](#),
[13434](#), [14068](#), [14074](#), [14082](#),
[14097](#)
 \Hy@temp@A [731](#), [732](#), [1830](#), [1832](#),
[1843](#), [1845](#), [1850](#), [1851](#), [1854](#),
[3803](#), [3805](#), [7975](#), [7976](#), [7977](#),
[7984](#), [8012](#), [8013](#), [8014](#), [8023](#)
 \Hy@temp@B [1831](#), [1832](#)
 \Hy@tempa [2513](#), [2515](#), [2517](#),
[2518](#), [2520](#), [2522](#), [2524](#), [2527](#),
[2530](#), [2531](#), [3024](#), [3025](#), [3026](#),
[3028](#), [3029](#), [3031](#), [3032](#), [3034](#),
[3038](#), [3042](#), [3053](#), [3055](#), [3057](#),
[3058](#), [3060](#), [3064](#), [4613](#), [4614](#),
[4625](#), [4629](#), [4798](#), [4802](#), [4865](#),
[4868](#), [4877](#), [4879](#), [5510](#), [5511](#),
[5551](#), [5552](#), [5555](#), [5559](#), [6266](#),
[6268](#), [6306](#), [6308](#), [6453](#), [6455](#),
[6930](#), [6932](#), [6933](#), [6936](#), [6937](#),
[6938](#), [7293](#), [7298](#), [7303](#), [7776](#),
[7777](#), [7795](#), [7796](#), [7802](#), [8118](#),
[8119](#), [8170](#), [8171](#), [9336](#), [9337](#),
[10158](#), [10306](#), [10307](#), [11725](#),
[11726](#), [12004](#), [12005](#), [13799](#),
[13800](#), [13823](#), [13825](#), [13844](#),
[13845](#), [13853](#), [13877](#), [13879](#),
[13880](#), [13882](#), [13883](#), [14266](#),
[14291](#), [14296](#), [14299](#), [14302](#)
 \Hy@tempb [6267](#), [6268](#), [6307](#), [6308](#),
[13824](#), [13825](#), [13853](#)
 \Hy@tempcolor . . . [10813](#), [10815](#),
[10828](#), [10904](#), [10906](#), [10918](#)
 \Hy@TempPageAnchor . . . [7668](#),
[7724](#), [7734](#), [7738](#), [7754](#)
 \Hy@Test@Alph [6609](#), [6632](#)
 \Hy@Test@alph [6600](#), [6628](#)
 \Hy@Testname [8780](#), [8781](#),
[8786](#), [8788](#), [8789](#), [8803](#), [9860](#),
[9861](#), [9866](#), [9868](#), [9870](#), [9886](#),
[10325](#), [10326](#), [10331](#), [10335](#),
[10404](#), [10405](#), [10410](#), [10414](#),
[10909](#), [10910](#), [10915](#), [10926](#)
 \Hy@texhtfalse [469](#)

`\Hy@texhttrue` 2856, 4237
`\Hy@TheSlideOptionalPage` 7683, 7687, 7692, 7701
`\Hy@title` 6079, 6083
`\Hy@toclevel` 7787, 7791, 7804
`\Hy@toolbartrue` 470
`\Hy@true` . 2419, 2518, 2520, 3058, 3060, 5552
`\Hy@typexmlfalse` 471
`\Hy@undefinedname` 8777, 8784, 8786, 9856, 9864, 9866, 10294, 10329, 10331, 10408, 10410, 10900, 10913, 10915
`\Hy@unicodefalse` . . 472, 798, 808, 2742, 2743, 2751, 3744, 3750, 6710, 7729, 13482
`\Hy@unicodetrue` 2743, 6387, 6401
`\Hy@useHidKeyfalse` 3527
`\Hy@useHidKeytrue` 3531
`\Hy@UseMaketitleInfos` 6132, 9086, 9550, 9999, 10693, 10932, 11805
`\Hy@UseMaketitleString` . . 6113, 6133, 6134
`\Hy@UseNameKey` 2597, 9051, 9052, 9053, 9054, 9055, 9056, 9057, 9058, 9077, 9618, 9619, 9620, 9621, 9622, 9623, 9624, 9625, 9646, 10046, 10047, 10048, 10049, 10050, 10051, 10052, 10053, 10086, 10665, 10666, 10667, 10668, 10669, 10670, 10671, 10672, 11013, 11014, 11015, 11016, 11017, 11018, 11019, 11020, 11043, 11866, 11867, 11868, 11869, 11870, 11871, 11872, 11873, 11896
`\Hy@usetitlefalse` 473
`\Hy@varioref@refstepcounter` 6799, 6806
`\Hy@varioref@undefined` . . 6790, 6794, 8434
`\Hy@VerboseAnchor` . 4677, 8763, 9304, 9319, 9401, 9413, 9666, 10178, 10194, 10269, 10282, 10758, 10772, 11694, 11708, 11974, 11988
`\Hy@verbosefalse` 474
`\Hy@VerboseGlobalTemp` . . 4653, 4654, 4655, 4656, 4660
`\Hy@VerboseLinkInfo` 4660, 4661, 4664, 4671
`\Hy@VerboseLinkStart` 4649, 8826, 8836, 9334, 9386, 9422, 9434, 9858, 10134, 10157, 10296, 10397, 10790, 10902, 11723, 11779, 12002, 12057
`\Hy@VerboseLinkStop` 4665, 8811
`\Hy@VersionCheck` 290, 4366
`\Hy@VersionChecked` . . 289, 322, 4363, 4365
`\Hy@vt@PutCatalog` . 6359, 6361
`\Hy@VTeXversion` . . . 6339, 6351, 10357, 10476, 10612, 13949
`\Hy@WarnHTMLFieldOption` . . 5577, 5610, 5613, 5763
`\Hy@Warning` 278, 353, 514, 1770, 2535, 2550, 2575, 2655, 2770, 2775, 3387, 3439, 3518, 3581, 3600, 3779, 3826, 3834, 3945, 4476, 4721, 4764, 4880, 5002, 5160, 5515, 5578, 5652, 6397, 6412, 7768, 8415, 8464, 8782, 9699, 9703, 9862, 10327, 10406, 10911, 11232, 11241, 13808, 13826
`\Hy@WarningNoLine` . 279, 2614, 2682, 2796, 3490, 3551, 3695, 3795, 4047, 4094, 4245, 4254, 4271, 4287, 4296, 6060, 6162, 6353, 6467, 6695, 7778, 7933, 11069
`\Hy@WarningPageBorderColor` 3548, 3550, 3552
`\Hy@WarningPageColor` . . 3487, 3489, 3491
`\Hy@WarnOptionDisabled` . 2547, 2549
`\Hy@WarnOptionValue` . . . 2528, 2534, 3045, 3067
`\Hy@windowuitrue` 475
`\Hy@wrapper@babel` . 4153, 4171
`\Hy@WrapperDef` 4163, 8758, 9302, 9317, 9399, 9411, 9664, 10176, 10192, 10267, 10280, 10756, 10770, 11692, 11706, 11972, 11986
`\Hy@writebookmark` . 2424, 7788, 8138, 8146, 8156, 8189, 8197, 8207, 13785, 13927
`\HyC@cmd` 87, 109, 122
`\HyC@check` 68, 71, 74
`\HyC@checkcommand` . 50, 57, 59
`\HyC@checkFailed` 146, 157
`\HyC@checkItem` . . 132, 133, 134, 135, 138
`\HyC@checklong` 45, 53
`\HyC@checkOk` 144, 154
`\HyC@checkPackage` . . 12, 16, 18
`\HyC@cmd` 62, 75, 87, 95, 118, 131
`\HyC@date` 11, 15, 23, 29, 31
`\HyC@DeclareRobustCommand` 114
`\HyC@def` 125
`\HyC@defcmd` 47, 54, 93
`\HyC@doCheck` 99, 130
`\HyC@edef` 125
`\HyC@getDate` 12, 14
`\HyC@meaning` 152, 160
`\HyC@nc@default` 103, 105
`\HyC@nc@noopt` 88, 91, 103, 112, 123, 127
`\HyC@nc@opt` 88, 101, 123
`\HyC@newcommand` 86
`\HyC@next` 48, 55, 60, 83
`\HyC@noValue` . 80, 81, 82, 85, 139
`\HyC@optcmd` 107, 111
`\HyC@org@cmd` 76
`\HyC@org@optcmd` 80, 111
`\HyC@org@robustcmd` . . 81, 120
`\HyC@org@robustoptcmd` . . 82
`\HyC@package` 10, 22, 28, 34, 37, 38
`\HyC@param` 78, 96, 102
`\HyC@robustcmd` . . 115, 120, 121, 122
`\HyC@star` 67, 70, 94
`\HyC@string` . . 131, 152, 155, 158
`\HyC@Toks` . . 79, 90, 96, 106, 126
`\HyCal@do` 508, 512
`\HyCal@scan` 499, 503, 527
`\HyColor@FieldBColor` 5711, 5714
`\HyColor@FieldColor` 5717
`\HyColor@HyperrefBorderColor` 3538, 3556
`\HyColor@HyperrefColor` . . 3475, 3494, 3495, 3496, 3497, 3498, 3499, 3500
`\HyColor@UseColor` . . 4498, 8724, 8735, 9820, 9831
`\HyField@@AddToFields` . 12703, 12707
`\HyField@@PDFChoices` . . 5398, 5399, 5414
`\HyField@@SetFlag` . . 5093, 5095
`\HyField@@UseFlag` . . 5083, 5085
`\HyField@AddToFields` . . 12673, 12702, 12792, 12886, 12899, 12925, 12949, 12972, 12993
`\HyField@AdvanceAnnotCount` . . 13093, 13122, 13218, 13248, 13276, 13304, 13332, 13358
`\HyField@afields` . . 12670, 12692, 12693, 12695, 12730
`\HyField@AfterAuxOpen` . 12683, 12690, 12708
`\HyField@AnnotCount` . . . 13091, 13094, 13097

\HyField@AuxAddToFields	12682, 12687, 12691, 12711	\HyField@UseFlag	5082, 5223, 5224, 5225, 5226, 5227, 5228, 5229, 5230, 5233, 5234, 5235, 5236, 5239, 5240, 5241, 5244, 5255, 5256, 5257, 5258, 5259, 5260, 5261, 5262, 5263, 5274, 5275, 5276, 5288, 5289, 5290, 5301, 5302, 5303, 5304, 5306, 5317, 5318, 5319, 5320, 5321, 5322, 5323, 5324, 5335, 5338, 5349, 5350, 5351, 5352, 5354, 5356, 5357, 5360, 5363	\HyLang@afrikaans	3077
\HyField@FlagsAnnot	5253, 5272, 5286, 5299, 5315, 5347	\HyInd@@@wrindex	7971, 7974, 8005, 8011	\HyLang@DeclareLang	3293, 3322, 3323, 3324, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3332, 3333, 3334, 3335, 3336, 3337, 3338, 3339, 3340, 3341, 3342, 3343, 3344
\HyField@FlagsCheckBox	5285, 12485, 12986, 13353	\HyInd@@hyperpage	8051, 8061	\HyLang@english	3095
\HyField@FlagsChoice	5346, 12366, 12847, 13186	\HyInd@@wrindex	7966, 7967	\HyLang@french	3113
\HyField@FlagsPushButton	5271, 12424, 12443, 12467, 12917, 12937, 12966, 13274, 13298, 13328	\HyInd@EncapChar	3075, 4057, 7961	\HyLang@german	3131
\HyField@FlagsRadioButton	5298, 12362, 12843, 13182	\HyInd@hyperpage	8048, 8050, 8057	\HyLang@italian	3149
\HyField@FlagsSubmit	5219, 12444, 12938, 13299	\HyInd@org@wrindex	7965, 7969, 7979, 7985, 7987, 7990	\HyLang@magyar	3167
\HyField@FlagsText	5314, 12305, 12785, 13116	\HyInd@pagelink	8066, 8072, 8074, 8077	\HyLang@portuges	3185
\HyField@NeedAppearancesfalse	5543, 5556	\HyInd@ParenLeft	7948, 7976, 8013	\HyLang@russian	3203
\HyField@NeedAppearancetrue	5546, 5549, 5553	\HyInd@ParenRight	7949, 7977, 7984, 8014, 8023	\HyLang@spanish	3243
\HyField@NewBitsetFlag	5051, 5054, 5062	\HyInd@removespaces	8080, 8083, 8093	\HyLang@vietnamese	3261, 3346, 3354
\HyField@NewFlag	5049, 5125, 5126, 5127, 5128, 5129, 5130, 5131, 5132, 5133, 5134, 5135, 5136, 5137, 5138, 5139, 5140, 5141, 5142, 5143, 5144, 5149, 5150, 5151, 5152, 5153, 5154, 5155, 5156, 5157, 5190, 5192, 5193, 5195, 5196, 5198, 5199, 5200, 5201	\HyInfo@AddonHandler	3821, 3824	\HyLinguex@OrgB	896, 900
\HyField@NewFlagOnly	5053, 5191, 5194, 5197	\HyInfo@AddonList	3848, 3849, 3883, 3890	\HyLinguex@OrgC	897, 901
\HyField@NewOption	5050, 5056	\HyInfo@Addons	3869, 3885, 9110, 10024, 10964, 10968	\HyLinguex@OrgD	898, 902
\HyField@PDFAFlagWarning	5159, 5167, 5171, 5175, 5179, 5183, 5187	\HyInfo@AddonUnsupportedtrue	9548, 10691, 11803	\HyLinguex@Restore	899, 912, 916, 924, 2724
\HyField@PDFChoices	5371, 12403, 12893, 13242	\HyInfo@do	3823, 3850, 3873	\HyOpt@CheckDvi	2844, 2880, 2885, 2890, 2913, 2918, 2923, 2975, 2982, 2987, 2992, 2997
\HyField@PrintFlags	5100, 5246, 5264, 5278, 5291, 5307, 5339, 5364	\HyInfo@GenerateAddons	3867, 9087, 10000, 10933	\HyOpt@DriverFallback	3001, 3004, 3005, 3009, 4332, 4337
\HyField@SetFlag	5092, 5232, 5238, 5243, 5277, 5305	\HyInfo@Key	3831, 3832, 3840, 3845, 3850, 3853, 3860, 3874, 3878	\HyOpt@DriverType	4305, 4307, 4334, 4344, 4346, 4362
\HyField@SetKeys	5475, 12302, 12333, 12336, 12355, 12412, 12440, 12457, 12482, 12781, 12813, 12816, 12835, 12904, 12934, 12956, 12982, 13112, 13152, 13155, 13174, 13260, 13295, 13318, 13349	\HyInfo@KeyEscaped	3830, 3831	\HyOrg@addtoreset	7891, 7893, 7920
\HyField@TheAnnotCount	13096, 13126, 13131, 13223, 13235, 13250, 13255, 13281, 13287, 13306, 13311, 13334, 13339, 13362, 13367	\HyInfo@trapped@false	3771, 3790	\HyOrg@appendix	6591, 6597
		\HyInfo@trapped@true	3768, 3789	\HyOrg@author	6076, 6089, 6093
		\HyInfo@trapped@unknown	3774, 3791	\HyOrg@float@makebox	7359, 7361
		\HyInfo@TrappedUnsupported	3792, 3796, 9551, 10694, 11806	\HyOrg@hyperpage	7951, 7953, 7954
		\HyInfo@Value	3844, 3846	\HyOrg@languageshorthands	968, 982, 993, 1003
		\HyLang@addto	3279, 3295, 3313, 3346, 3354	\HyOrg@make@df@tag@@	7876
				\HyOrg@make@df@tag@@@	7877
				\HyOrg@maketitle	7229, 7236, 7241
				\HyOrg@subequations	6947, 6954
				\HyOrg@title	6075, 6080, 6084
				\HyOrg@url	4777
				\HyPat@NonNegativeReal	3576, 3577, 3578, 3579, 3595, 3597, 3926, 3936, 3937, 3938, 3940, 3941, 3942
				\HyPat@ObjRef	4761, 4762, 4775, 8606, 9659, 10753
				\hyper@@@anchor	4078, 4787, 4789, 4820, 4822, 4855, 4857, 4999, 5947, 5963, 5980, 7105, 7110, 7120, 7125, 7177, 7180, 7206, 7334, 7337, 7365, 7669, 7724,

7734, 7739, 8137, 8145, 8155, 8188, 8196, 8206	5954, 5969, 5985, 7145, 7408, 7411, 7822, 7826, 7830, 7832, 8834, 9347, 9430, 9894, 9896, 10169, 10347, 10810, 11738, 12015	\hypercalcbpdef . . 496, 533, 3923, 3933
\hyper@@link . . 4647, 4705, 4810, 4834, 4836, 4860, 7422, 7568, 7569, 7570, 7618, 7620, 7622, 8307, 8322, 8424	\hyper@linkfile 4085, 4947, 5956, 5971, 5987, 8881, 9351, 9507, 9898, 10153, 10351, 11387, 11742, 12019	\hyperdef 4812, 6001
\hyper@@normalise . . 4616, 4620, 4624	\hyper@linkstart 4082, 5953, 5968, 5984, 7143, 7404, 7411, 7822, 7826, 7830, 7832, 8825, 9333, 9421, 9857, 9896, 10156, 10295, 10789, 11722, 12001	\HyperDestNameFilter 4039, 4681, 8764, 8789, 9309, 9323, 9343, 9387, 9668, 9869, 10137, 10147, 10165, 10183, 10201, 10273, 10285, 10334, 10413, 11229, 11238, 11698, 11712, 11733, 11780, 11978, 11991, 12011, 12058, 14006, 14070, 14086
\hyper@anchor 5026, 5950, 5965, 6030, 6043, 8814, 9302, 9399, 9722, 10192, 10267, 10756, 11692, 11972	\hyper@linkurl 4084, 4782, 4922, 4929, 4950, 4954, 5955, 5970, 5986, 8846, 9352, 9354, 9387, 9469, 9935, 10141, 10154, 10371, 10429, 10898, 11363, 11743, 11747, 11780, 12020, 12022, 12058	\HyperFirstAtBeginDocument 6027, 6029, 6051, 6054
\hyper@anchorend 4081, 5934, 5952, 5967, 5983, 6577, 6760, 6835, 6876, 6895, 6919, 7066, 7416, 7441, 7444, 7464, 7597, 7861, 7887, 8821, 9327, 9417, 9729, 10187, 10289, 10778, 11716, 11995, 13781, 13928, 14160, 14185, 14196, 14226, 14278	\hyper@livelink 5948, 5975	\hypergetpageref 6753
\hyper@anchorstart 4080, 5934, 5951, 5966, 5982, 6577, 6759, 6835, 6873, 6895, 6919, 7063, 7414, 7439, 7444, 7464, 7597, 7861, 7887, 8817, 9317, 9411, 9725, 10176, 10280, 10770, 11706, 11986, 13781, 13928, 14160, 14185, 14196, 14226, 14278	\hyper@makecurrent . 6573, 6618, 6821, 6872, 6894, 6918, 7008, 7039, 7140, 7310, 7352	\hypergetref 6752
\hyper@chars 4641, 8849, 9307, 9321, 9341, 9363, 9377, 9391, 9471, 9509, 10143, 10164, 10180, 10197, 10272, 10284, 10374, 11366, 11710, 11730, 11756, 11770, 11784, 11990, 12009, 12032, 12049, 12062	\hyper@n@normalise . . 4608, 4612	\HyperGlobalCurrentHref . 6638, 6640, 6648, 6649, 6653, 6656, 6660, 6666, 6667, 6671
\hyper@currentanchor . . . 10775, 10784, 10807, 10824	\hyper@nat@current 7405	\hyperimage . . . 4783, 5033, 7943
\hyper@currentlinktype . . 10808, 10812, 10816	\hyper@nat@chorend 7416	\hyperindexformat 7950
\hyper@hash . . 4593, 4594, 4642, 4922, 4934, 4951, 4954, 5901, 10137	\hyper@nat@anchorstart 7413	\hyperlink 4646, 6002, 8089, 8227, 8235, 8250, 8258, 8268, 8276, 8283
\hyper@image . 4783, 4784, 9389, 10428, 10897, 11782, 12060	\hyper@nat@linkbreak 7410	\hyperlinkfileprefix . . 3505, 3506, 3507, 11964
\hyper@last 6050, 6055	\hyper@nat@linkend 7407	\HyperLocalCurrentHref . . 6656, 6658, 6664, 6665, 6666, 6667, 6669
\hyper@link 4079, 4869, 5948, 5949, 5964, 5975, 5981, 8835, 9385, 9433, 9895, 10133, 10396, 10901, 11778, 12056	\hyper@nat@linkstart 7402	\hyperpage 6008, 7951, 7952, 7954, 8047
\hyper@link@ . . 4086, 4861, 4863, 5946, 5957, 5961, 5972, 5988	\hyper@normalise . . 4058, 4063, 4585, 4695, 4698, 4779, 4781, 4783, 4804, 5505	\HyperRaiseLinkDefault . . 2426, 2453
\hyper@linkend 4083,	\hyper@pageduration . 9148, 9197, 10589, 10606, 10864, 10894	\HyperRaiseLinkHook 2425, 2454
	\hyper@pagehidden . . 9172, 9198, 10599, 10607, 10881, 10895	\HyperRaiseLinkLength . . 2452, 2453, 2456
	\hyper@pagetransition 9124, 9196, 10478, 10605, 10847, 10893	\hyperref . 4792, 5040, 5041, 6004, 8382, 8386, 8396, 8410
	\hyper@quote . 5903, 9309, 9323, 9338, 9343, 9364, 9378, 9392, 10137, 10147, 10160, 10183, 10201, 11698, 11712, 11727, 11733, 11757, 11771, 11785, 11978, 11991, 12006, 12011, 12034, 12050, 12063	\hypersetup 2763, 2803, 3331, 3807, 4059, 5998
	\hyper@readexternallink . . 4871, 4887	\hypertarget 4785, 6003
	\hyper@refstepcounter 6551, 6554, 6562	\HyPL@@@CheckThePage . 6287, 6305
	\hyper@tilde 4602, 4603, 4604, 5902	\HyPL@@CheckThePage . . 6263, 6265
	\hyperbaseurl . . 3502, 3503, 5999	\HyPL@Alph 6182
	\hypercalcbp 494, 494	\HyPL@alph 6183
		\HyPL@arabic 6179
		\HyPL@CheckThePage 6214, 6262
		\HyPL@Entry . 6455, 6463, 6471, 6473
		\HyPL@EveryPage . . . 6202, 6326
		\HyPL@Format 6278, 6279, 6280, 6281, 6282, 6294
		\HyPL@found . 6277, 6284, 6288, 6295, 6305, 6307

\HyPL@Labels . [6173](#), [6317](#), [6318](#),
[6320](#), [6322](#), [6373](#), [6374](#), [6466](#),
[6474](#), [6475](#)
\HyPL@LastNumber . [6177](#), [6233](#),
[6256](#)
\HyPL@LastPrefix [6178](#), [6227](#),
[6258](#)
\HyPL@LastType [6176](#), [6218](#), [6257](#)
\HyPL@page [6196](#), [6205](#), [6208](#),
[6214](#), [6223](#)
\HyPL@Prefix [6223](#), [6225](#), [6227](#),
[6241](#), [6244](#), [6246](#), [6258](#), [6272](#),
[6310](#)
\HyPL@Roman [6180](#)
\HyPL@roman [6181](#)
\HyPL@SetPageLabels [6316](#), [6381](#),
[6469](#)
\HyPL@SlidesOptionalPage [6189](#),
[6193](#), [6198](#)
\HyPL@SlidesSetPage [6184](#), [6186](#),
[6206](#)
\HyPL@StorePageLabel [6241](#),
[6243](#), [6313](#), [6371](#), [6450](#)
\HyPL@thisLabel [6170](#), [6172](#), [6204](#),
[6208](#), [6209](#)
\HyPL@Type [6211](#), [6218](#), [6222](#),
[6240](#), [6248](#), [6257](#), [6271](#), [6309](#)
\HyPL@Useless [6314](#), [6320](#)
\HyPL@SlidesSetPage [6213](#)
\HyPsd@@@@autoref [1691](#), [1693](#),
[1696](#)
\HyPsd@@@@CJKdigits [1561](#), [1564](#),
[1572](#)
\HyPsd@@@@nameref [1673](#), [1675](#),
[1678](#)
\HyPsd@@@@pageref [1655](#), [1657](#),
[1660](#)
\HyPsd@@@@ref [1639](#), [1641](#), [1644](#)
\HyPsd@@@@UTFviii@four [2293](#),
[2296](#)
\HyPsd@@@AppendItalcorr [1860](#)
\HyPsd@@@autoref [1688](#), [1689](#)
\HyPsd@@@autorefname [1709](#), [1712](#)
\HyPsd@@@CJKdigits [1553](#), [1555](#),
[1558](#)
\HyPsd@@@CJKnumber [1454](#), [1456](#),
[1459](#), [1512](#), [1527](#), [1540](#), [1542](#),
[1546](#)
\HyPsd@@@ConvertToUnicode
. [2172](#)
\HyPsd@@@GetNextTwoTokens
. [2170](#)
\HyPsd@@@GlyphProcessWarning
. [2030](#), [2033](#)
\HyPsd@@@GreekNum [1116](#), [1125](#),
[1224](#), [1228](#), [1232](#)
\HyPsd@@@hspace [1609](#), [1610](#)
\HyPsd@@@LetCommand [1733](#),
[1754](#)
\HyPsd@@@nameref [1670](#), [1671](#)
\HyPsd@@@pageref [1652](#), [1653](#)
\HyPsd@@@ProtectSpacesFi [1782](#),
[1786](#), [1804](#), [1810](#), [1815](#)
\HyPsd@@@ref [1636](#), [1637](#)
\HyPsd@@@RemoveBraces [1828](#)
\HyPsd@@@RemoveBracesFi [1825](#),
[1828](#)
\HyPsd@@@RemoveCmdPrefix
. [1987](#), [1990](#)
\HyPsd@@@ReplaceFi [2057](#), [2063](#),
[2068](#)
\HyPsd@@@UTFviii@four [2277](#),
[2282](#)
\HyPsd@add@accent [556](#), [1598](#)
\HyPsd@AfterCountRemove [1873](#),
[1944](#)
\HyPsd@AfterDimenRemove
. [1879](#), [1947](#)
\HyPsd@AfterSkipRemove [1885](#),
[1959](#)
\HyPsd@AMSclassfix [655](#), [1619](#),
[1621](#)
\HyPsd@AppendItalcorr [1844](#),
[1851](#), [1860](#)
\HyPsd@autoref [665](#), [1688](#)
\HyPsd@autorefname [1700](#), [1706](#)
\HyPsd@babel@danish [1012](#)
\HyPsd@babel@dutch [1018](#)
\HyPsd@babel@finnish [1024](#)
\HyPsd@babel@frenchb [1029](#)
\HyPsd@babel@german [1034](#)
\HyPsd@babel@macedonian [1041](#)
\HyPsd@babel@ngerman [1047](#)
\HyPsd@babel@portuges [1053](#)
\HyPsd@babel@russian [1058](#)
\HyPsd@babel@slovene [1064](#)
\HyPsd@babel@spanish [1069](#)
\HyPsd@babel@swedish [1079](#)
\HyPsd@babel@ukrainian [1085](#)
\HyPsd@babel@usorbian [1091](#)
\HyPsd@BabelPatch [641](#), [967](#),
[1002](#)
\HyPsd@CatcodeWarning [1889](#),
[1906](#), [1909](#), [1912](#), [1915](#), [1971](#)
\HyPsd@Char [2174](#)
\HyPsd@CharOctByte [2194](#), [2196](#),
[2199](#), [2208](#), [2213](#)
\HyPsd@CharSurrogate [2188](#),
[2205](#)
\HyPsd@CharTwoByte [2186](#), [2193](#)
\HyPsd@CheckCatcodes [718](#), [1866](#)
\HyPsd@CJK@Unicode [1336](#), [1340](#)
\HyPsd@CJKActiveChars [1276](#),
[1291](#)
\HyPsd@CJKdigit [1565](#), [1575](#)
\HyPsd@CJKdigits [1338](#), [1551](#)
\HyPsd@CJKhook [671](#), [1247](#), [1258](#)
\HyPsd@CJKhook@bookmarks
. [1253](#), [1287](#)
\HyPsd@CJKhook@unicode [1255](#),
[1335](#)
\HyPsd@CJKnumber [1337](#), [1451](#)
\HyPsd@CJKnumberFour [1469](#),
[1473](#), [1477](#), [1490](#), [1494](#), [1498](#),
[1504](#)
\HyPsd@CJKnumberLarge [1482](#),
[1489](#)
\HyPsd@CJKnumberThree [1510](#),
[1514](#), [1520](#)
\HyPsd@CJKnumberTwo [1525](#),
[1529](#), [1535](#)
\HyPsd@ConvertToUnicode [786](#),
[2120](#)
\HyPsd@DecimalToOctal [1268](#),
[1299](#)
\HyPsd@DecimalToOctalFirst
. [1342](#), [1378](#)
\HyPsd@DecimalToOctalSecond
. [1343](#), [1352](#), [1415](#)
\HyPsd@DefCommand [701](#), [702](#),
[703](#), [704](#), [1722](#)
\HyPsd@DisableCommands [947](#),
[949](#)
\HyPsd@DoConvert [2122](#), [2132](#)
\HyPsd@DoEscape [2146](#)
\HyPsd@doxspace [758](#), [2093](#)
\HyPsd@empty [743](#), [745](#), [749](#), [750](#),
[752](#), [760](#), [767](#)
\HyPsd@End [718](#), [722](#), [1783](#), [1786](#),
[1789](#), [1792](#), [1795](#), [1808](#), [1818](#),
[1825](#), [1828](#), [1866](#), [1874](#), [1880](#),
[1886](#), [1931](#), [1938](#), [1944](#), [1947](#),
[1959](#)
\HyPsd@EndWithElse [1588](#), [1597](#)
\HyPsd@EscapeTeX [797](#), [807](#), [2075](#)
\HyPsd@fi [1800](#), [1806](#), [1810](#), [1816](#)
\HyPsd@GetNextTwoTokens [2170](#)
\HyPsd@GetOneBye [2165](#)
\HyPsd@GetTwoBytes [2161](#)
\HyPsd@GLYPHERR [723](#), [1585](#),
[1599](#), [1606](#)
\HyPsd@GlyphProcess [725](#), [2018](#),
[2031](#)
\HyPsd@GlyphProcessWarning
. [2025](#), [2029](#)
\HyPsd@GobbleFiFi [1590](#), [1596](#)
\HyPsd@GreekNum [1105](#), [1108](#),
[1110](#)
\HyPsd@Greeknumeral [1101](#), [1107](#)
\HyPsd@greeknumeral [1100](#), [1104](#)

\HyPsd@GreekNumI . 1128, 1154, 1197, 1223
\HyPsd@GreekNumII . 1132, 1176, 1220, 1227
\HyPsd@GreekNumIII 1135, 1199, 1231
\HyPsd@GreekNumIV 1144, 1222
\HyPsd@GreekNumV . 1147, 1226
\HyPsd@GreekNumVI 1149, 1230
\HyPsd@GreekPatch . 638, 1097, 1099
\HyPsd@HighA 1346, 1355
\HyPsd@HighB 1356, 1361
\HyPsd@HighC 1362, 1365
\HyPsd@HighD 1358, 1370
\HyPsd@href 660, 1635
\HyPsd@hspace 656, 1609
\HyPsd@hspacetest . . 1612, 1614, 1617
\HyPsd@ifnextchar 687, 688, 689, 1759
\HyPsd@ignorespaces . . 669, 958
\HyPsd@InitUnicode 921
\HyPsd@inmathwarn . . 555, 1582
\HyPsd@ITALCORR . . 679, 683, 1606
\HyPsd@langshort@system . . 973, 976
\HyPsd@LanguageShorthands 969, 974, 986
\HyPsd@LetCommand . 705, 706, 1722
\HyPsd@LetUnexpandableSpace . . . 674, 675, 676, 677, 1602, 1605
\HyPsd@LoadStringEnc . . . 2767, 2787, 2789, 2793, 2795, 6392
\HyPsd@LoadUnicode 2716, 2721, 2729, 2732, 2734, 2741, 6386
\HyPsd@nameref 664, 1670
\HyPsd@pageref 663, 1652
\HyPsd@pdfencoding . 787, 2715, 2718, 2750, 2762, 2765, 2766, 2771, 2786, 6388, 6390, 6407, 6410
\HyPsd@pdfencoding@auto . 787, 2756, 2766, 2783, 6390, 6409
\HyPsd@pdfencoding@pdfdoc 2749, 2771, 2784
\HyPsd@pdfencoding@unicode 2753, 2785, 6388, 6406
\HyPsd@PrerenderUnicode 3705, 3721, 3727, 3733, 3739, 3757, 3763, 3843
\HyPsd@protected@testopt . 690, 691, 1763
\HyPsd@ProtectSpaces 711, 1780, 1801, 1850
\HyPsd@ref 662, 1636
\HyPsd@RemoveBraces 713, 1822, 1839, 1847, 1853
\HyPsd@RemoveCmdPrefix 1980, 1986
\HyPsd@RemoveMask 721, 1789, 1795, 1808, 1818
\HyPsd@RemoveSpaceWarning 1954, 1966, 1992
\HyPsd@ReplaceSpaceWarning 1949, 1961, 2005
\HyPsd@Rest . . 1867, 1927, 1935, 1938, 1945, 1950, 1956, 1962, 1968
\HyPsd@RussianPatch . 640, 1240
\HyPsd@SanitizeForOutFile 13845, 13876
\HyPsd@SanitizeOut@BraceLeft . . . 13880, 13886, 13895
\HyPsd@SanitizeOut@BraceRight . . . 13883, 13898, 13907
\HyPsd@SPACEOPTI . 715, 730, 731, 733, 735, 737, 738, 777, 779, 1902, 2104
\HyPsd@spaceopti 779, 2049
\HyPsd@SpanishPatch . 639, 1234
\HyPsd@String 712, 714, 717, 719, 724, 726, 1833, 1834, 1844, 1896, 1897, 1901, 1902, 1917, 1918, 1948, 1960, 2019, 2020
\HyPsd@StringSubst . . 727, 729, 735, 741, 744, 747, 750, 769, 772, 774, 2072
\HyPsd@Subst . 723, 732, 736, 742, 748, 752, 756, 761, 762, 763, 764, 765, 766, 770, 773, 2056, 2073, 2088, 2089, 2090
\HyPsd@temp 790, 792, 793, 795, 796, 803, 805, 806, 2748, 2749, 2750, 2753, 2756, 2762, 2774, 2778, 6405, 6406, 6407, 6409, 6410, 6415
\HyPsd@ToBigChar 847, 848, 857
\HyPsd@ToBigChars . . . 800, 839
\HyPsd@tocsection . . 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1630
\HyPsd@UnescapedString . . 792, 841, 842, 848
\HyPsd@UnexpandableSpace 1605, 1791, 1815, 1950, 1962
\HyPsd@unichar 2235, 2302, 2308, 2313
\HyPsd@unichar@first@byte 2321, 2341
\HyPsd@unichar@octtwo . . 2343, 2351, 2357
\HyPsd@unichar@second@byte 2329, 2349
\HyPsd@UnicodeReplacementCharacter 2305, 2340
\HyPsd@utf@viii@undeferr . . 552, 2363
\HyPsd@UTFviii . 546, 2223, 2228
\HyPsd@UTFviii@@@three . . 2258, 2267
\HyPsd@UTFviii@@two 2243, 2249
\HyPsd@UTFviii@ccxliv@def 2233, 2239
\HyPsd@UTFviii@ccxliv@undef 2232, 2238
\HyPsd@UTFviii@four 2231, 2276
\HyPsd@UTFviii@three 2230, 2257
\HyPsd@UTFviii@two 2229, 2242
\HyPsd@Warning 1767, 1972, 1993, 2006, 2035, 2041
\HyPsd@XeTeXBigCharsfalse 814, 828, 833
\HyPsd@XeTeXBigCharstrue 827, 836, 3720, 3726, 3732, 3738, 3756, 3762, 3842, 13485, 13843
\HyPsd@XSPACE 681, 757, 1606
\HyPsd@xspace . . . 755, 757, 758
\HyRef@@@StarSetRef . 8350, 8355
\HyRef@autopageref . 8407, 8409
\HyRef@autopagerefname . 8406, 8410, 8412
\HyRef@autoref 8424, 8426
\HyRef@autosetref . . . 8429, 8432
\HyRef@CaseStar 8493, 8499
\HyRef@currentHtag . 8445, 8463, 8466, 8472, 8479, 8485, 8500
\HyRef@MakeUppercaseFirstOfFive 8373, 8375
\HyRef@name . 8461, 8462, 8467, 8474, 8492, 8493, 8494, 8496
\HyRef@Ref 8379, 8381
\HyRef@ShowKeysInit 8502, 8515, 8519
\HyRef@ShowKeysRef 8433, 8501
\HyRef@StarSetRef . . 8344, 8362, 8365, 8368, 8373
\HyRef@StripStar . . . 8460, 8491
\HyRef@testreftype . . 8438, 8457
\HyRef@thisref 8435, 8438
\HyTmp@found . 5425, 5435, 5438
\HyTmp@key 5419, 5420
\HyTmp@optitem . . . 5375, 5391, 5418, 5423, 5429, 5450, 5461

`\HyTmp@optlist` 5374, 5389, 5390, 5421, 5422, 5427, 5428, 5436, 5437, 5457, 5459, 5466, 5469
`\HyXeTeX@CheckUnicode` . 3691, 3702, 3719, 3725, 3731, 3737, 3755, 3761, 3841, 6420
I
`\i` 14462, 14625, 14628, 14631, 14634, 14831, 14993, 14996, 14999, 15002, 15119, 15124, 15129, 15134, 15138, 15305, 15361
`\if` 1631, 2413, 6231, 6239, 6936, 6937, 10552, 10555, 10559, 10563, 10567, 10569, 10571, 13533
`\if@eqnstar` 6878, 6886
`\if@filesw` 2381, 4848, 6020, 6064, 6451, 6461, 6702, 7451, 7466, 7482, 7494, 7524, 7547, 7574, 7579, 7598, 7999, 12685, 12709, 13846, 14033, 14115
`\if@hyper@item` 6536, 6549
`\if@inlabel` 7052
`\if@Localurl` 10124, 10170
`\if@mid@expandable` 654
`\if@minipage` 7322, 7393
`\if@nmbrlist` 6523
`\if@nobreak` 7071
`\if@skiphyperref` 6537, 6547
`\if@twocolumn` 14280
`\if@twoside` 14269
`\ifcase` 346, 1161, 1183, 1206, 1300, 1349, 1371, 1374, 1380, 1416, 1460, 1576, 2271, 2753, 3436, 4365, 5221, 5326, 5455, 5532, 6601, 6610, 7818, 7976, 8013, 8242, 8434, 10625, 11115, 13591, 13618, 13685, 13720, 13755, 13953
`\ifcat` 1868, 1895, 1900, 1905, 1908, 1911, 1914, 5010, 5012
`\ifdim` 1617, 1948, 1952, 1960, 1964, 2468, 2487, 4044, 4391, 9216, 9220, 9225, 9229, 9236, 9239, 9243, 9246, 10104, 10105, 10110, 10111, 10243, 10246, 10250, 10253, 11144, 11158, 11517, 11518, 11523, 11524, 12329, 12367, 12368, 12809, 12848, 12849, 13148, 13187, 13188
`\ifetex@unexpanded` 1774
`\iffalse` 834, 5544
`\ifFileExists` 6059, 12089
`\ifFld@checked` 5478, 12647, 13578
`\ifFld@comb` 5325
`\ifFld@combo` . 5353, 5358, 12342, 12371, 12822, 12852, 13161, 13191
`\ifFld@disabled` 5479, 12648
`\ifFld@edit` 5359
`\ifFld@fileselect` 5328
`\ifFld@hidden` 12306, 12356, 12425, 12445, 12468, 12486, 12546, 12558, 12568, 12651, 12786, 12837, 12918, 12939, 12967, 12987, 13117, 13176, 13275, 13300, 13329, 13354
`\ifFld@multiline` 5326, 12295, 12553, 12774, 13105
`\ifFld@multiselect` 5397
`\ifFld@password` ... 5327, 12534
`\ifFld@popdown` ... 5145, 12343, 12823, 13162
`\ifFld@radio` . 12339, 12361, 12583, 12819, 12842, 13158, 13181
`\ifFld@readonly` ... 12555, 12565, 12649
`\ifForm@html` 5499
`\ifhmode` . 2429, 2433, 2486, 2495, 4687, 6961, 6985, 7018, 7137, 7146, 7280, 7282, 8759, 8767, 11150, 12074
`\ifHy@activeanchor` ... 396, 5023
`\ifHy@backref` ... 397, 4196, 4568, 5881, 7575, 7611
`\ifHy@bookmarks` 398, 4416
`\ifHy@bookmarksnumbered` . 399, 8130, 8181, 13832
`\ifHy@bookmarksopen` . 400, 4406
`\ifHy@breaklinks` 401, 2681, 10791, 10832, 11126, 11149
`\ifHy@centerwindow` 402, 9049, 9616, 10044, 10663, 11011, 11864
`\ifHy@CJKbookmarks` . 403, 1252
`\ifHy@colorlinks` . 404, 4487, 5886, 11679
`\ifHy@displaydoctitle` 439, 9050, 9617, 10045, 10664, 11012, 11865
`\ifHy@draft` 405, 4077
`\ifHy@DviMode` . 2825, 2845, 3003
`\ifHy@DvipdfmxOutlineOpen` .. 4389, 14088
`\ifHy@escapeform` ... 408, 13429, 13459
`\ifHy@figures` 409, 4176, 5866, 7940
`\ifHy@fitwindow` 410, 9048, 9615, 10043, 10662, 11010, 11863
`\ifHy@frenchlinks` 411, 4503
`\ifHy@href@ismap` ... 4743, 8870, 9952, 10310, 10378, 11378
`\ifHy@hyperfootnotes` . 412, 7079
`\ifHy@hyperindex` 413, 4186, 5876, 7947
`\ifHy@hypertextnames` 414, 6624, 6706, 7722, 8135, 8186
`\ifHy@implicit` .. 415, 4208, 14143
`\ifHy@linktocpage` 416, 2638, 2648
`\ifHy@localanchorname` 417, 6657, 6668
`\ifHy@menubar` . 418, 9046, 9613, 10041, 10660, 11008, 11861
`\ifHy@naturalnames` .. 419, 6636, 8136, 8187
`\ifHy@nesting` .. 420, 4181, 4786, 4819, 4854, 5008, 5871, 7104, 7119, 7176, 7333
`\ifHy@newwindow` ... 422, 3993, 10357
`\ifHy@newwindowset` .. 421, 3991
`\ifHy@next` 1010, 4150, 7964
`\ifHy@ocgcolorlinks` .. 423, 3386, 4473, 4483, 5891, 8625, 8643, 8720, 8728, 9733, 9816, 9824
`\ifHy@pageanchor` 424, 6693, 6705, 6720, 7721
`\ifHy@pagelabels` 425, 6158, 6371, 6449
`\ifHy@pdfa` 440, 4101, 4475, 4910, 5158, 5734, 5783, 5896, 8793, 8865, 8903, 8940, 9272, 9878, 9910, 9943, 9971, 10316, 10337, 10360, 10384, 10416, 10448, 10464, 11253, 12264, 12415, 12461, 12738, 12908, 12960, 13075, 13264, 13322, 13535, 13581, 13745
`\ifHy@pdfmarkerror` 11058, 11066
`\ifHy@pdfpagehidden` . 426, 3530, 9176, 10601, 10887
`\ifHy@pdfstring` .. 427, 932, 6541
`\ifHy@plainpages` 428, 4191, 6707, 7723
`\ifHy@psize` 429
`\ifHy@raiselinks` . 430, 9356, 9436, 9473, 9511, 11749, 12024
`\ifHy@seminarslides` 431
`\ifHy@setpagesize` ... 432, 9204, 10101, 10240, 11514
`\ifHy@setpdfversion` .. 2804, 8630
`\ifHy@texht` 433, 4263, 4515, 4563, 5569, 5601, 5754, 5778, 5934, 8290
`\ifHy@toolbar` .. 434, 9045, 9612, 10040, 10659, 11007, 11860
`\ifHy@typexml` .. 395, 4201, 4490, 4534, 6021, 14037, 14119

<code>\ifHy@unicode</code> . 435, 542, 575, 578, 728, 740, 768, 776, 785, 1111, 1271, 1974, 1995, 2008, 2037, 2043, 2303, 2714, 2764, 3693, 6395, 13481	<code>\ifvtexpdf</code> 4326	<code>\jeh</code> 16761
<code>\ifHy@useHidKey</code> 3526, 9173, 10600, 10882	<code>\ifvtexps</code> 4329	<code>\jobname</code> 6023, 6059, 6066, 12089, 13938, 14029, 14036, 14063, 14108, 14110, 14118
<code>\ifHy@usetitle</code> 436, 6074	<code>\ifxetex</code> 791, 824, 2830, 2903, 3692, 4268, 4312, 4390	K
<code>\ifHy@verbose</code> . . 437, 4650, 4666, 4678, 5101, 7793	<code>\ignorespaces</code> . . . 669, 6788, 6956, 7212, 7318, 7329, 7332, 7389, 7397, 7459, 7474, 7490, 7499, 7609, 8115, 8167	<code>\k</code> . . . 14342, 14684, 14686, 14691, 14693, 14736, 14754, 14773, 14780, 15044, 15046, 15084, 15086, 15131, 15133, 15134, 15269, 15271, 15328, 15330, 15927, 15966, 15969
<code>\ifHy@windowui</code> . 438, 9047, 9614, 10042, 10661, 11009, 11862	<code>\IJ</code> 14458, 15140	<code>\kaf</code> 16743
<code>\ifHyField@NeedAppearances</code> 5542, 5544, 5547, 12266, 12740, 13077	<code>\ij</code> 14667, 15142	<code>\kasra</code> 16756
<code>\ifHyInfo@AddonUnsupported</code> 3819, 3833, 3868	<code>\immediate</code> 6022, 6023, 6024, 6026, 6066, 6364, 6454, 6462, 6717, 6745, 7454, 7469, 7485, 7495, 7525, 7548, 7574, 7604, 8645, 8660, 8675, 10727, 11538, 12664, 12686, 12728, 13939, 14005, 14036, 14038, 14118, 14120	<code>\keepPDF@SetupDoc</code> 11683, 11690
<code>\ifHyPsd@XeTeXBigChars</code> . . 832, 834, 837, 840	<code>\incr@eqnum</code> 6847, 6860	<code>\kern</code> 1877, 1949, 1954, 1966, 7057, 7743, 7744, 7745, 7747, 7748, 7753, 14158
<code>\ifmeasuring@</code> 6561, 6574	<code>\indent</code> 6966, 6992	<code>\kernel@ifnextchar</code> 688
<code>\ifnmode</code> 10794, 11121	<code>\index</code> 658	<code>\kha</code> 16727
<code>\ifnum</code> . . . 258, 864, 867, 870, 873, 876, 987, 1112, 1115, 1126, 1127, 1131, 1139, 1143, 1146, 1156, 1178, 1201, 1341, 1452, 1468, 1472, 1492, 1505, 1508, 1521, 1523, 1536, 1538, 1544, 2182, 2185, 2261, 2304, 2307, 2319, 2434, 2930, 2933, 2959, 3437, 3438, 4400, 4407, 4720, 5380, 5451, 5462, 6188, 6212, 6233, 6249, 6351, 7671, 7681, 8244, 8282, 8626, 8631, 8965, 8972, 8978, 8986, 9845, 9850, 10357, 10476, 10612, 10620, 10622, 10623, 10633, 10636, 10722, 10724, 10844, 11541, 12722, 12885, 13217, 13222, 13233, 13480, 13561, 13591, 13596, 13618, 13624, 13652, 13685, 13691, 13710, 13720, 13725, 13755, 13760, 13789, 13805, 13949, 14019, 14022, 14049, 14052, 14090, 14199, 14217, 14232	<code>\indexentry</code> 8002, 8017, 8025, 8029, 8034	<code>\KV@href@pdfnewwindow</code> . 4741
<code>\ifodd</code> 2285, 2290, 7748	<code>\input</code> 915, 923, 2723, 3349, 3357, 3364, 4364, 11456, 11539, 11630, 11799	<code>\KV@href@pdfnewwindow@default</code> 4742
<code>\ifpdf</code> . 256, 2827, 2870, 4242, 4309	<code>\InputIfFileExists</code> . . 4061, 14029, 14063, 14108, 14110	<code>\KV@Hyp@draft</code> 2612
<code>\ifpdfstringunicode</code> 547, 550	<code>\inputlineno</code> 4657, 5015	<code>\KV@Hyp@nolinks</code> 2612
<code>\ifportrait</code> 9215	<code>\insert</code> 7191	<code>\KV@Hyp@pdfnewwindow</code> . 4741
<code>\ifthenelse</code> 7601	<code>\IntCalcAdd</code> 2211	<code>\KV@Hyp@pdfnewwindow@default</code> 4742
<code>\iftrue</code> 837, 1781, 1803, 2067, 5547, 14201	<code>\IntCalcDec</code> 1363	<code>\kv@key</code> . . 3827, 3830, 3837, 5378, 5381, 5383, 5387, 5391
<code>\ifvmode</code> 2445, 2467, 2476	<code>\IntCalcDiv</code> 1357, 1366, 1371, 1474, 1483, 1495, 1512, 1527, 1542, 2195, 2201, 2207	<code>\kv@parse</code> 5377
<code>\ifvoid</code> 6828, 6832, 7056	<code>\intcalcDiv</code> . 1347, 2202, 2209, 2212	<code>\kv@parse@normalized</code> 3852, 3859
<code>\ifvtex</code> 2833, 2929, 2958	<code>\IntCalcMod</code> . . 1359, 1368, 1374, 1478, 1484, 1499, 1515, 1530, 1544, 1546, 2197, 2202, 2203, 2209, 2212, 2214	<code>\kv@processor@default</code> 3855, 3862
<code>\ifvtexdvi</code> 2834	<code>\intcalcMod</code> 1349	<code>\kv@set@family@handler</code> . . 3820
<code>\ifvtexhtml</code> 4284, 4315	<code>\intcalcSub</code> 2189	<code>\kv@value</code> . 3825, 5379, 5386, 5387
	<code>\interfootnotelinepenalty</code> . . 7194	<code>\kvsetkeys</code> 2803, 2857, 2977, 3699, 3800, 4102, 4339, 4357, 4474, 5476, 8627, 11065, 12283, 12519, 12532, 12581, 12624, 12645, 12719, 13060
	<code>\interlinepenalty</code> 7194	L
	<code>\item</code> 6518, 6521, 7481, 7493, 7596	<code>\L</code> 14451, 15171
	<code>\Itemautorefname</code> 8525	<code>\l</code> 14464, 15173
	<code>\itemautorefname</code> . . . 3080, 3098, 3116, 3134, 3152, 3170, 3188, 3217, 3218, 3246, 3264, 8525, 8526, 8529	<code>\l@slide</code> . . 8115, 8225, 8230, 8234, 8241
	<code>\itemindent</code> 7057	<code>\l@subslide</code> . 8167, 8230, 8237, 8281
	<code>\itshape</code> 608	<code>\label</code> 657, 7766
	J	<code>\label@C@hyperref</code> 4826, 4828
	<code>\j</code> 15147, 15332, 15396	<code>\label@hyperdef</code> 4812, 4840
	<code>\jarr</code> 16753	<code>\label@hyperref</code> . 4793, 4825, 5037
	<code>\jeem</code> 16725	<code>\labelsep</code> 7608
		<code>\labelwidth</code> 7607
		<code>\lam</code> 16744
		<code>\language@group</code> 636
		<code>\languageshorthands</code> . . 968, 969, 1003

<code>\LARGE</code>	615				
<code>\Large</code>	616				
<code>\large</code> .	619, 8247, 8255, 8265, 8273				
<code>\lastbox</code>	7055				
<code>\lastpage@putlabel</code>	6688				
<code>\lastskip</code> .	2468, 2472, 2479, 2487, 2491, 2498				
<code>\LaTeX</code> . . .	572, 574, 12095, 12096				
<code>\LaTeXe</code>	573, 12096				
<code>\LayoutCheckField</code> .	5822, 12487, 12988, 13359				
<code>\LayoutChoiceField</code> .	5819, 12360, 12841, 13180				
<code>\LayoutPushButtonField</code> . .	5825, 12419, 12426, 12912, 12919, 13268, 13277				
<code>\LayoutTextField</code> . . .	5816, 12308, 12788, 13123				
<code>\lccode</code>	364, 369, 863, 1281, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2226, 5694, 7961, 7962, 13863, 13864, 13865, 13866, 13867, 13868, 13869, 13870, 13871, 13872, 13873				
<code>\ldots</code>	567				
<code>\leavevmode</code>	666, 2423, 4087, 4104, 4144, 4915, 5992, 7136, 7279, 7515, 8385, 8393, 8779, 8850, 8888, 8925, 9355, 9435, 9472, 9510, 9899, 9936, 10135, 10144, 10198, 10352, 10375, 10403, 10434, 10793, 11119, 11367, 11394, 11425, 11748, 12023, 12420, 12427, 12460, 12873, 12894, 12913, 12920, 12940, 12959, 13215, 13246, 13269, 13278, 13302, 13321, 14156				
<code>\letLTxcmds@gtemp</code>	240				
<code>\LetLtxMacro</code> .	5937, 5941, 6009, 6013				
<code>\limits</code>	4633				
<code>\listofslides</code>	8216				
<code>\listslidenam</code> .	8215, 8218, 8220, 8222				
<code>\literalps@out</code> .	2421, 10716, 10721, 10773, 10779, 10805, 10811, 11076, 11087, 11116, 11117, 11145, 11147, 11159, 11161, 11454, 11537, 11600, 11797				
<code>\lower</code> . . .	9362, 9442, 9479, 9517, 11147, 11755, 12030				
<code>\lowercase</code> . . .	365, 370, 883, 1282, 2086, 2227, 2514, 3024, 3054, 3767, 3803, 5050, 5051, 5054, 5059, 5083, 5093, 5147, 5203, 5523, 5596, 5599, 5695, 7963, 10843, 13874				
<code>\lslide@flag</code> .	8242, 8245, 8263, 8282, 8286				
<code>\LT@array</code>	6813				
<code>\LT@foot</code>	6828, 6832				
<code>\LT@p@ftn</code> .	7152, 7155, 7159, 7169				
<code>\LT@p@ftntext</code>	7150, 7157				
<code>\LT@start</code>	6830, 6840				
<code>\ltx@backslashchar</code> .	332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 344				
<code>\ltx@empty</code> .	237, 240, 2826, 3001, 3009, 3378, 3523, 4332, 4342, 6213, 11103				
<code>\ltx@firstofone</code> .	2846, 13891, 13903				
<code>\ltx@firstoftwo</code> .	259, 351, 359, 4549, 4971				
<code>\ltx@gobble</code> .	286, 2852, 6332, 13889, 13901				
<code>\ltx@gobblethree</code>	7703				
<code>\ltx@ifclassloaded</code>	6185, 7664				
<code>\ltx@ifpackagelater</code>	362				
<code>\ltx@ifpackageloaded</code>	1248				
<code>\ltx@ifUndefined</code> .	253, 292, 298, 327, 635, 678, 753, 788, 906, 907, 908, 1011, 1017, 1023, 1028, 1033, 1040, 1046, 1052, 1057, 1063, 1068, 1078, 1084, 1090, 1096, 1235, 1241, 1618, 1713, 1714, 2375, 2408, 4147, 4148, 4149, 4548, 4549, 4745, 6114, 6502, 6589, 6593, 6908, 7417, 7682, 8413, 8414, 8458, 8459, 8461, 8462, 8827, 8837, 9235, 10242, 10299, 10398, 10769, 10812, 10903, 11080, 14190, 14200				
<code>\ltx@ifundefined</code>	7064, 7698				
<code>\ltx@leftbracechar</code>	342, 366				
<code>\ltx@LocalAppendToMacro</code> .	234, 379, 382				
<code>\ltx@one</code> . .	258, 6187, 6188, 6195, 7667, 7671, 7677, 7680, 7681, 7694				
<code>\ltx@rightbracechar</code>	343, 371				
<code>\ltx@secondoftwo</code> . .	254, 261, 265, 348, 4548, 4549, 4551, 4969				
<code>\ltx@space</code>	345				
<code>\ltx@undefined</code>	236				
<code>\ltx@zero</code> .	2080, 2081, 2082, 2083, 2084, 2085				
<code>\LTxcmds@gtemp</code> .	235, 236, 237, 239, 244, 245, 247				
<code>\luatexrevision</code>	9009				
<code>\luatexversion</code>	9001, 9006				
M					
<code>\m@ne</code>	4165, 4669, 4728, 5065, 6733, 6928, 9854, 14110, 14199, 14214				
<code>\make@df@tag@@</code>	7876, 7878				
<code>\make@df@tag@@@</code> . .	7877, 7879				
<code>\make@stripped@name</code> .	6566, 6869, 6891, 6915, 6926				
<code>\makeatletter</code>	3, 946, 6058				
<code>\MakeButtonField</code> . .	5832, 12421, 12429, 12447, 12465, 12470, 12914, 12923, 12947, 12964, 12970, 13270, 13273, 13301, 13326, 13330				
<code>\MakeCheckField</code> . . .	5829, 12489, 12991, 13356				
<code>\MakeChoiceField</code> . .	5831, 12405, 12897, 13244				
<code>\MakeFieldObject</code> .	12663, 12750, 12760, 12763				
<code>\MakeLowercase</code>	632				
<code>\MakeLowercaseUnsupportedInPdfStrings</code>	632				
<code>\MakeRadioField</code> . . .	5828, 12393, 12884, 13208				
<code>\makeslideheading</code>	8125				
<code>\makeslidesubheading</code>	8177				
<code>\maketag@@@</code>	7865				
<code>\MakeTextField</code>	5830, 12310, 12791, 13120				
<code>\maketitle</code>	7229, 7230				
<code>\MakeUppercase</code> .	631, 8220, 8222, 8376				
<code>\MakeUppercaseUnsupportedInPdfStrings</code>	631				
<code>\MathBSuppress</code> . .	10145, 10149				
<code>\mathdisplay</code>	6850, 6859				
<code>\mathdisplay@push</code> . .	6848, 6857				
<code>\mathversion</code>	624				
<code>\maxdimen</code>	3458, 12668				
<code>\MaybeStopEarly</code> .	482, 2860, 2935, 4212, 4317, 6482				
<code>\mbox</code> .	667, 7528, 7551, 8730, 9826				
<code>\mddefault</code>	6968, 6994, 7025				
<code>\mdseries</code>	607				
<code>\meaning</code>	62, 153, 159, 2384, 6098, 6649, 6933, 14074, 14082, 14097				
<code>\measuring@false</code>	6561				
<code>\mediaheight</code> .	10236, 10238, 10244, 10251				
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<code>\MessageBreak</code>	294, 300, 314, 315, 354, 355, 515, 1980, 2001, 2014, 2037, 2042, 2044,				

2536, 2537, 2551, 2573, 2576, 2578, 2656, 2657, 2683, 2684, 2736, 2737, 2738, 2776, 2777, 2797, 2808, 2849, 2874, 2907, 2945, 2952, 2963, 2969, 3046, 3388, 3519, 3520, 3582, 3583, 3601, 3602, 3696, 3780, 3835, 3836, 3946, 3947, 4049, 4246, 4247, 4255, 4256, 4272, 4273, 4288, 4289, 4297, 4298, 4477, 4722, 4723, 4747, 4748, 4764, 4765, 5104, 5109, 5118, 5161, 5207, 5331, 5444, 5516, 5527, 5559, 5560, 5579, 5653, 5654, 5655, 5656, 6163, 6398, 6413, 6414, 6696, 7770, 7800, 7801, 7802, 7803, 7804, 7935, 8783, 9863, 10328, 10407, 10912, 12676, 12678, 13810, 13828, 13941	2804, 2825, 3526, 3819, 4389, 4743, 5057, 5145, 5478, 5479, 5499, 5542, 6536, 6537, 6561, 6878, 10124, 11058	\nohyperpage . . . 5991, <u>8046</u> , 8048, 8050
\MF 582, 12098	\newlabel . 2387, 4850, 6036, 6037, 6045, 6071, 6718, 6746	\nolinkurl 4779
\MP 583, 12099	\newlabelxx 6038, 6039	\nolinkurl@ 4779, 4780
\multiply 9005, 10581, 10616	\newlength 14149	\NomFancyVerbLineautorefname 3235
N	\newline 570, 6119	\Nomfootnoteautorefname . 3215
\n 874	\newname 6567, 6870, 6892, 6916, 6929, 6938	\Nomtheoremautorefname . 3239
\name@of@eq 6534, 6564	\newsavebox 9662, 11095	\nonumber 6903, 6906
\name@of@slide 6535, 6545	\newtie 14344, 14345, 14728, 14758, 14777, 14793	\normalfont 602, 6962, 6988, 7021
\nameref 664, 4553, 4557	\newtoks . 90, 5570, 10930, 11170, 11171	\normalsize 620, 7325, 7396
\nasb 16751	\newwrite . . . 6065, 14034, 14116	\note 7712
\netscape 9398	\next . . . 7602, 7603, 7604, 10544, 10546, 10548	\NR@gettitle 7315
\new@ifnextchar 689	\nfss@text . 8297, 8317, 8334, 8451	\null 7593, 7601, 8339, 8447
\new@pdfink . . . 8758, 8815, 8818	\NG 15189	\number . 1129, 1133, 1136, 1144, 1147, 1149, 1454, 1456, 1483, 1484, 2186, 2244, 2245, 2246, 2247, 2251, 2252, 2253, 2254, 2255, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2269, 2270, 2271, 2272, 2273, 2274, 2277, 2279, 2283, 2284, 2286, 2288, 2290, 2293, 2297, 2298, 2299, 2300, 2309, 2310, 2314, 2315, 2322, 2323, 2327, 2330, 2331, 2332, 2342, 2344, 2345, 2350, 2352, 2353, 2358, 2359, 3905, 4391, 4408, 5071, 6626, 6627, 6630, 6634, 8637, 8640, 9426, 9444, 9445, 9460, 9461, 9481, 9482, 9498, 9499, 9519, 9520, 9536, 9537
\new@refstepcounter . 6842, 6874	\noboundary 16766	\numberline . . . 7318, 7389, 13833, 13838
\newblock 7612	\nobreak . 2469, 2477, 2488, 2496, 7137, 7280	\numberwithin <u>7900</u>
\newcommand 4, 9, 42, 2422, 5996, 6000, 6497, 6500, 6503, 6504, 6505, 6507, 6508, 6509, 6510, 6512, 6513, 6514, 6515, 6516, 6517, 6526, 6527, 6528, 6529, 6530, 6531, 6924, 7903, 8102, 8107, 8108, 13911, 13914, 13919	\nobreakspace . . 677, 8388, 8417, 8420	\numexpr . 2251, 2252, 2253, 2255, 2261, 2269, 2270, 2271, 2272, 2273, 2274, 2278, 2280, 2284, 2286, 2288, 2290, 2294, 2297, 2298, 2300, 2309, 2314, 2331, 2345, 2353, 2359, 3909
\newcount 483, 484, 2427, 4713, 5482, 6174, 12401, 12891, 13091, 13240, 13946	\noexpand 22, 93, 95, 108, 116, 169, 171, 172, 173, 176, 206, 852, 956, 1295, 1728, 1745, 1868, 2240, 2475, 2476, 2477, 2480, 2494, 2495, 2496, 2499, 3307, 3309, 3311, 3312, 3313, 3315, 3331, 3537, 3538, 3540, 3885, 4167, 4171, 4172, 4339, 4627, 4800, 4880, 5010, 5012, 5113, 6287, 6288, 6297, 6299, 6302, 6427, 6730, 6731, 6733, 6758, 6759, 6760, 6761, 6762, 6770, 6771, 6772, 6932, 7153, 7161, 7162, 7163, 7165, 7289, 7378, 7453, 7468, 7484, 7669, 7895, 7897, 8350, 8351, 8467, 8468, 8473, 8475, 8480, 8481, 8486, 8487, 9008, 9600, 10995, 11062, 11597, 11848, 12335, 12336, 12337, 12338, 12815, 12816, 12817, 12818, 13154, 13155, 13156, 13157, 13431	\nun 16746
\newcounter . . . 6519, 7080, 9732, 13861	\nofrenchguillemets 696, 698	O
\newdimen 480, 5483, 5484	\NoHy@OrgPageRef . . 5941, 5943, 6013, 6015	\O 14584, 14952, 15347
\newif 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 832, 1010,	\NoHy@OrgRef 5937, 5939, 6009, 6011	\o 14652, 15020, 15349
	\NoHyper 5945	\obeylines 11596

\OBJ@pdfdocencoding . . .	12723, 13031, 13047		
\OBJ@ZaDb	12724, 12733, 13040		
\OCIRCUMFLEX .	16589, 16687, 16688, 16689, 16690, 16691		
\ocircumflex	16582, 16627, 16628, 16629, 16630, 16631		
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\OE	14453, 15205		
\oe	14466, 15207		
\offinterlineskip	6145		
\OHORN . . .	16590, 16692, 16693, 16694, 16695, 16696		
\ohorn . .	3262, 3269, 16583, 16632, 16633, 16634, 16635, 16636		
\oldb	906		
\oldc	907		
\oldcontentsline .	6031, 6034, 6044		
\oldd	908		
\oldnewlabel . . .	6036, 6041, 6045		
\OMEGA	12094		
\online	7797, 7798		
\openout	6023, 6066, 14036, 14118		
\OpMode .	2930, 2933, 2946, 2959, 2964, 10633, 10724, 11541		
\or	349, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1171, 1185, 1186, 1187, 1188, 1189, 1190, 1191, 1192, 1193, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1350, 1372, 1375, 1381, 1382, 1383, 1384, 1385, 1386, 1387, 1388, 1389, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411, 1412, 1417, 1418, 1419, 1420, 1421, 1422, 1423, 1424, 1425, 1426, 1427, 1428, 1429, 1430, 1431, 1432, 1433, 1434, 1435, 1436, 1437, 1438, 1439, 1440, 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1461, 1462, 1463, 1464, 1465, 1577, 1578, 1579, 5231, 5237, 5242, 5456, 6601, 6602, 6603, 6604, 6610, 6611, 6612, 6613, 7820, 7824, 8262, 8271, 10626, 13954, 13955, 13956,		
	13957, 13958, 13959, 13960, 13961, 13962, 13963, 13964, 13965, 13966, 13967, 13968, 13969, 13970, 13971, 13972, 13973, 13974, 13975, 13976, 13977, 13978, 13979, 13980, 13981, 13982, 13983, 13984, 13985		
\overlay	7709		
P			
\P	566		
\p@	2310, 2315, 5485, 5491, 6970, 6996, 7027, 9371, 9455, 9493, 9531, 10580, 11764, 12044, 12331, 12811, 13150, 14274, 14275		
\p@equation	7872		
\PackageError	61		
\PackageInfo . .	8621, 8635, 12674		
\PackageWarning	2807, 5442		
\pageautorefname . . .	3093, 3111, 3129, 3147, 3165, 3183, 3201, 3241, 3259, 3277, 8420, 8542		
\pagename	8417		
\pageref . . .	663, 4222, 4544, 5941, 5942, 6013, 6014, 6696, 8406, 8410		
\paperheight	4042, 9220, 9222, 9225, 9227, 9239, 9240, 10105, 10106, 10243, 10244, 10246, 11518, 11519		
\paperwidth	9216, 9218, 9229, 9231, 9236, 9237, 10104, 10106, 10247, 11517, 11519		
\par .	6961, 6986, 7019, 7317, 7345, 7387, 7397, 7595, 7615		
\paragraphautorefname . . .	3089, 3107, 3125, 3143, 3161, 3179, 3197, 3230, 3232, 3255, 3273, 8538		
\partautorefname	3083, 3101, 3119, 3137, 3155, 3173, 3191, 3221, 3249, 3267, 8532		
\partnumberline . . .	13835, 13840		
\PassOptionsToPackage . . .	2978, 3035, 3039, 3061, 4071, 4358		
\pdf@addtoks	11173, 11192, 11198, 11207, 11214, 11218, 11220, 11222, 11224, 11226, 11234, 11243, 11247, 11249, 11251, 11254, 11263, 11267, 11269, 11271, 11273, 11275, 11277, 11279, 11281, 11283, 11285, 11287, 11289, 11291, 11293, 11295, 11297, 11298, 11299, 11300, 11301, 11302, 11303,		
	11304, 11305, 11306, 11307, 11312		
\pdf@addtoksx	11167, 11177, 11190		
\pdf@box . . .	11095, 11127, 11135, 11143, 11144, 11147, 11151, 11153, 11156		
\pdf@defaulttoks . .	11062, 11171, 11172, 11182		
\pdf@docset	10930		
\pdf@endanchor .	8771, 8815, 8822		
\pdf@escapestring	8597		

\PDFForm@Push . . .	12428, 12430, 12921, 12922, 13279, 13283, 13581	
\PDFForm@Radio . .	12392, 12396, 12874, 12876, 13216, 13228, 13643	
\PDFForm@Reset . .	12469, 12471, 12968, 12969, 13331, 13336, 13745	
\PDFForm@Submit . .	12446, 12449, 12941, 12943, 13303, 13308, 13712	
\PDFForm@Text . . .	12309, 12311, 12789, 12790, 13124, 13127, 13677	
\pdfhorigin	9212	
\pdfinfo	9088	
\pdflastform	8752	
\pdflastlink	12704	
\pdflastobj	8659, 8674, 8680, 12746, 13031, 13040, 13050	
\pdflastxform	8752, 12666, 12668	
\pdflinkmargin . . .	8747, 8750, 8755	
\pdfliteral	8731, 8733, 8738	
\pdfm@box	9662, 13087, 13088, 13089, 13119, 13130, 13207, 13232, 13243, 13254, 13273, 13286, 13301, 13310, 13330, 13338, 13355, 13366	
\pdfmark	6445, 9600, 9609, 9639, 10760, 10780, 10819, 10854, 10871, 10883, 10917, 10954, 10966, 10995, 11004, 11035, 11059, 11320, 11334, 11349, 11361, 11368, 11395, 11426, 11848, 11857, 11888, 12310, 12393, 12405, 12429, 12447, 12470, 12489, 14078	
\pdfmark@	11059, 11060	
\pdfmatch	346	
\pdfminorversion	8618	
\PDFNextPage	11332	
\PDFNextPage@ . . .	11332, 11333	
\pdfobj	8645, 8660, 8675, 12728, 12998, 13032, 13041	
\PDFOpen	11360	
\pdfoptionpdfminorversion	8615	
\pdfoutline	14127	
\pdfpageattr	9128, 9132, 9133, 9143, 9152, 9156, 9157, 9167, 9175, 9178, 9179, 9189	
\pdfpageheight . . .	9222, 9231, 9240, 9247	
\pdfpageresources	8708	
\pdfpagesattr	9019, 9021, 9023	
\pdfpagewidth	9218, 9227, 9237, 9244	
\PDFPreviousPage	11345	
\PDFPreviousPage@	11346, 11348	
\pdffreelform	8753	
\pdffrefobj	12723, 12724, 12725	
\pdffrefxform	8753, 12668	
\pdfstartlink	8748, 8749, 8807, 8851, 8889, 8926, 9258, 12790, 12875, 12896, 12922, 12942, 12969, 12990	
\pdfstringdef	535, 819, 3722, 3728, 3734, 3740, 3745, 3751, 3758, 3764, 3844, 5403, 5408, 5434, 6122, 6223, 6225, 6711, 7695, 7731, 13486, 13844	
\pdfstringdefDisableCommands	905, 944, 5993, 6117	
\pdfstringdefPostHook	815, 938	
\pdfstringdefPreHook	673, 938, 950, 952, 6116, 6126	
\pdfstringdefWarn	569, 570, 668, 955, 1736, 1741, 1760, 1764	
\pdfTeXrevision	8975, 8983, 8994	
\pdfTeXversion	8970, 8972, 8975, 8978, 8981, 8982, 8986, 8992, 8993, 12722	
\pdfvorigin	9213	
\pdfxform	8751, 12664	
\peh	16759	
\penalty	1871, 2449, 4688, 7522, 7545	
\phantom	625	
\phantomsection	4037, 5997, 7772, 13779, 13830, 14218	
\Preamble	12090	
\PrerenderUnicode	3713	
\process@me	6096, 6108, 6109, 9018, 9027	
\ProcessKeyvalOptions	4075	
\protect	1869, 4830, 7318, 7389, 7453, 7468, 7484, 7600, 7607, 7608, 7810, 7841, 8115, 8167, 8296, 8316, 8322, 8333, 8450, 9306, 9403, 10196, 10271, 11696, 11976, 13851, 14151, 14274, 14275	
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\protected@write	2386, 4849, 7580, 8001, 8016, 8024, 8028, 8033, 13850	
\protected@xdef	7162, 7255	
\providecommand	2403, 2404, 3413, 3414, 3417, 3418, 4308, 4521, 4522, 4641, 4784, 6027, 6313, 6338, 6463, 7418, 7419, 7434, 7512, 8098, 8099, 8215, 8523, 8524, 8525, 8526, 8527, 8528, 8529, 8530, 8531, 8532, 8533, 8534, 8535, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8604, 8757, 8775, 8776, 9294, 9397, 9398, 9657, 9719, 9720, 9721, 10122, 10241, 10263, 10264, 10265, 10717, 11096, 11097, 11452, 11460, 11461, 11462, 11463, 11535, 11547, 11548, 11549, 11550, 11594, 11635, 11636, 11637, 11638, 11793, 11795, 11796, 11909, 11910, 11957, 12687	
\PushButton	5804	
\put@me@back	5005, 5018, 5028	
Q		
\qaf	16742	
\quotedblbase	14433, 14670, 16259, 16563	
\quotesinglbase	14443, 14672, 16253, 16565	
R		
\r	877, 14311, 14323, 14335, 14545, 14610, 14719, 14746, 14765, 14787, 14914, 14978, 15261, 15263, 16223, 16225	
\ra	16730	
\raff	16752	
\raise	2456, 9372, 9456, 9494, 9532, 11161, 11765, 12045	
\ReadBookmarks	4074, 4092, 4229, 4425, 4565, 14010, 14045	
\real@setref	8293, 8359	
\realfootnote	7252	
\Ref	8378, 8382, 8387	
\ref	662, 4221, 4541, 5045, 5937, 5938, 6009, 6010, 7217, 7224, 8397, 12066	
\ref@one	4806, 4807	
\rEfLiNK	12067, 12068	
\refstepcounter	6533, 6540, 6560, 6783, 6806, 6807, 6808, 6817, 6842, 6866, 6874, 6978, 7381	
\rem@ptetc	10844, 10846	
\renewcommand	2378, 7360, 7917, 13926	
\RequirePackage	22, 232, 250, 251, 269, 270, 271, 272, 273, 274, 275, 276, 394, 1246, 1773, 2372, 2788, 2858, 4203, 4204, 4493, 4537, 4569, 4776, 5048, 5979, 6136, 6379, 10123, 11962, 13936	

<code>\RerunFileCheck</code>	13938	<code>\slide</code>	7706	<code>\subsection</code>	11789
<code>\Reset</code>	5813	<code>\slide@cline</code> 8235, 8248, 8256, 8266, 8274		<code>\subsectionautorefname</code>	3087, 3105, 3123, 3141, 3159, 3177, 3195, 3228, 3253, 3271, 8536
<code>\reset@font</code> 7528, 7551, 8297, 8317, 8334, 8451		<code>\Slide@contents</code>	8240	<code>\subsubsectionautorefname</code> 3088, 3106, 3124, 3142, 3160, 3178, 3196, 3229, 3254, 3272, 8537	
<code>\revtex@checking</code>	7505	<code>\slide@contents</code>	8233	<code>\sukun</code>	16758
<code>\Rightarrow</code>	8249	<code>\slide@heading</code>	8111	<code>\surd</code>	8257
<code>\rlap</code>	8732, 9828	<code>\slide@subheading</code>	8164		
<code>\rm</code>	613	<code>\slide@undottedcline</code>	8226		
<code>\rmfamily</code>	603	<code>\slidenumberline</code> 8227, 8235, 8249, 8257, 8267, 8275			
<code>\Roman</code>	6279	<code>\SliTeX</code>	581		
<code>\roman</code>	6280	<code>\slshape</code>	610		
<code>\romannumeral</code>	962, 963	<code>\small</code>	622		
<code>\rule</code>	7202	<code>\smash</code>	2450		
		<code>\spacefactor</code> 2429, 2435, 7137, 7146, 7280, 7282, 8760, 8768			
S		<code>\specialDvipdfmxOutlineOpen</code>	4038		
<code>\sad</code>	16734	<code>\splitmaxdepth</code>	7196		
<code>\sbox</code>	3709, 5833, 9359, 9439, 9476, 9514, 11096, 11135, 11752, 12027, 12663	<code>\splittopskip</code>	7195		
<code>\scr@LT@array</code>	6816	<code>\SS</code>	14668, 16562		
<code>\scriptsize</code>	621	<code>\ss</code>	3133, 14598, 14683, 14966		
<code>\scriptstyle</code>	7518	<code>\st@rredfalse</code>	6849, 6858		
<code>\scrollmode</code> 1788, 1813, 1823, 1836, 1928, 2060		<code>\stepcounter</code>	6550, 6731, 6800, 6949, 7138, 7254, 9844, 13847		
<code>\scshape</code>	609, 6967, 6993	<code>\stockheight</code>	4042, 9246, 9247, 10111, 10112, 10250, 10251, 11524, 11525		
<code>\section</code>	8217	<code>\stockwidth</code>	9243, 9244, 10110, 10112, 10253, 10254, 11523, 11525		
<code>\sectionautorefname</code>	3086, 3104, 3122, 3140, 3158, 3176, 3194, 3223, 3252, 3270, 8535	<code>\stop@hyper</code>	5960		
<code>\seen</code>	16732	<code>\StringEncodingConvertTest</code> 793, 803			
<code>\selectfont</code>	589, 4504, 12756	<code>\strip@period</code>	2391		
<code>\set@display@protect</code>	4156	<code>\strip@prefix</code> 62, 2384, 6098, 6649, 6933, 14074, 14082, 14097			
<code>\setbox</code>	1872, 1878, 1884, 3441, 3447, 5629, 6144, 7055, 8722, 9286, 9801, 9818, 13119, 13207, 13243, 13273, 13301, 13330, 13355	<code>\strip@pt</code>	524, 531, 4054, 9218, 9222, 9227, 9231, 10583, 13575, 13638, 13666, 13705, 13754		
<code>\setcounter</code>	4719	<code>\strip@pt@and@otherjunk</code> 10779, 10811, 10846			
<code>\setkeys</code>	4694, 4739	<code>\strutbox</code>	7196		
<code>\setlength</code>	519, 520, 2453, 9212, 9213, 9218, 9222, 9227, 9231, 9237, 9240, 9244, 9247, 10244, 10247, 10251, 10254, 10580, 14168, 14239	<code>\sub@label</code>	2378		
<code>\setpdfinkmargin</code> 3892, 3893, 8747		<code>\subeqnarray</code>	6909, 6911		
<code>\settowidth</code>	12328, 12808, 13147	<code>\subequations</code>	6947, 6948		
<code>\SetupKeyvalOptions</code>	2507, 4065	<code>\subfig@oldlabel</code>	2380		
<code>\sffamily</code>	604	<code>\Submit</code>	5810		
<code>\shadda</code>	16757	<code>\SubmitObject</code>	12944		
<code>\sheen</code>	16733	<code>\SubmitPObject</code>	12944		
<code>\shortciteN</code>	7643	<code>\subparagraphautorefname</code> 3090, 3108, 3126, 3144, 3162, 3180, 3198, 3231, 3233, 3256, 3274, 8539			
<code>\SK@</code>	8509	<code>\subpdfbookmark</code>	13914		
<code>\SK@@ref</code>	8509				
<code>\SK@ref</code>	8506				
<code>\skip@</code> 1886, 1960, 1961, 1964, 1966, 2472, 2478, 2491, 2497					
				T	
				<code>\T</code>	16722
				<code>\t</code>	14343, 14738, 14757, 14776, 14792
				<code>\T@nameref</code>	4558
				<code>\T@pageref</code>	4528, 4545, 8395
				<code>\T@ref</code>	4523, 4542
				<code>\T@temp</code>	7506, 7509
				<code>\Ta</code>	16736
				<code>\taa</code>	16723
				<code>\tableautorefname</code>	3082, 3100, 3118, 3136, 3154, 3172, 3190, 3220, 3248, 3266, 8531
				<code>\tagform@</code>	7871
				<code>\tatweel</code>	16740
				<code>\tch eh</code>	16760
				<code>\temp@online</code>	7797, 7800
				<code>\TeX</code>	571, 572, 579, 581, 12093, 12095, 12097
				<code>\texorpdfstring</code>	931, 5994
				<code>\textacute</code>	14307, 14319, 14331, 14511, 14742, 14761, 14879
				<code>\textacutedbl</code>	15411
				<code>\textaleph</code>	16377
				<code>\textAlpha</code>	1163, 15431, 15447
				<code>\textalpha</code>	1163, 15500, 15510
				<code>\textampersand</code> 563, 14378, 14809	
				<code>\textangstrom</code>	16373
				<code>\textasciicute</code>	14880
				<code>\textasciibreve</code>	14354, 14750, 14769, 15400
				<code>\textasciicaron</code>	14312, 14324, 14336, 14356, 14747, 14766, 15398
				<code>\textasciicircum</code>	14308, 14320, 14332, 14392, 14743, 14762, 14825
				<code>\textasciidieresis</code>	14310, 14322, 14334, 14488, 14745, 14764, 14856
				<code>\textasciigrave</code> 14306, 14318, 14330, 14397, 14741, 14760, 14829	
				<code>\textasciimacron</code>	14315, 14327, 14339, 14501, 14752, 14771, 14869
				<code>\textasciitilde</code>	564, 4604, 14407, 14840

<code>\textasteriskcentered</code>	14817	<code>\textdelta</code>	1166, 15516	<code>\texthslash</code>	15114
<code>\textbackslash</code>	559, 727, 2366, 14390, 14823	<code>\textDigammagreek</code>	15575	<code>\textHT</code>	14348, 14795
<code>\textbaht</code>	16085	<code>\textdigammagreek</code>	15577	<code>\texthungarumlaut</code>	14362, 14753, 14772, 15410, 15411
<code>\textbar</code>	14403, 14836	<code>\textdiscount</code>	16287	<code>\textinterrobang</code>	16279
<code>\textbardbl</code>	16247	<code>\textdiv</code>	14680, 16573	<code>\textIota</code>	1185, 15437, 15463, 15496
<code>\textBeta</code>	1164, 15449	<code>\textdivide</code>	14650, 14680, 15018, 16573	<code>\textiota</code>	1185, 15506, 15526, 15560
<code>\textbeta</code>	1164, 14683, 15512	<code>\textdivorced</code>	16553	<code>\textIotadieresis</code>	15445, 15495
<code>\textbf</code>	596	<code>\textdollar</code>	561, 14374, 14805	<code>\textit</code>	598
<code>\textbigcircle</code>	14759, 14778, 16547	<code>\textdong</code>	16349	<code>\textKappa</code>	1186, 15465
<code>\textblank</code>	16395	<code>\textdotaccent</code>	14313, 14325, 14337, 14360, 14748, 14767, 15402	<code>\textkappa</code>	1186, 15528
<code>\textbraceleft</code>	557, 2367, 14401, 14834	<code>\textdotbelow</code>	14317, 14329, 14341, 14384, 14756, 14775, 15421	<code>\textKoppagreek</code>	1193, 15579
<code>\textbraceright</code>	558, 2367, 14405, 14838	<code>\textdoublegrave</code>	14751, 14770, 15417	<code>\textkoppagreek</code>	1193, 15581
<code>\textbrokenbar</code>	14484, 14852	<code>\textdownarrow</code>	16385	<code>\textkra</code>	15153
<code>\textbullet</code>	14409, 16265	<code>\textdownarrow</code>	16385	<code>\textLambda</code>	1187, 15467
<code>\textcdot</code>	14682, 16575	<code>\texteightinferior</code>	16331	<code>\textlambda</code>	1187, 15530
<code>\textcedilla</code>	14314, 14326, 14338, 14519, 14749, 14768, 14888	<code>\teightsuperior</code>	16299	<code>\textlangl</code>	16391
<code>\textcelsius</code>	14669, 16357	<code>\textellipsis</code>	567, 568, 14415, 16267	<code>\textlatin</code>	634, 6637
<code>\textcent</code>	14476, 14844	<code>\textemdash</code>	761, 14417, 16245	<code>\textlbrackdbl</code>	16555
<code>\textChi</code>	1213, 15489	<code>\textendash</code>	762, 14419, 16243	<code>\textleftarrow</code>	16379
<code>\textchi</code>	1213, 15554	<code>\textEpsilon</code>	1167, 15433, 15455	<code>\textless</code>	14386, 14819
<code>\textcircled</code>	14740, 14759, 14778, 16399, 16401, 16403, 16405, 16407, 16409, 16411, 16413, 16415, 16417, 16419, 16421, 16423, 16425, 16427, 16429, 16431, 16433, 16435, 16437, 16439, 16441, 16443, 16445, 16447, 16449, 16451, 16453, 16455, 16457, 16459, 16461, 16463, 16465, 16467, 16469, 16471, 16473, 16475, 16477, 16479, 16481, 16483, 16485, 16487, 16489, 16491, 16493, 16495, 16497, 16499, 16501, 16503, 16505, 16507, 16509, 16511, 16513, 16515, 16517, 16519, 16521, 16523, 16525, 16527, 16529, 16531, 16533, 16535, 16537, 16539, 16541, 16543	<code>\textepsilon</code>	575, 578, 1167, 15502, 15518	<code>\textLF</code>	14350, 14797
<code>\textcircledP</code>	16361	<code>\textequalsuperior</code>	16307	<code>\textlira</code>	16341
<code>\textcircumflex</code>	14358	<code>\textestimated</code>	16375	<code>\textlnot</code>	14497, 14865
<code>\textcolonmonetary</code>	16339	<code>\textEta</code>	1170, 15435, 15459	<code>\textlogicalnot</code>	14496, 14678, 14864, 16571
<code>\textcolor</code>	630, 12718, 12761, 12764, 13059	<code>\texteta</code>	1170, 15504, 15522	<code>\textlongs</code>	15295, 16227
<code>\textcompwordmark</code>	16241	<code>\texteuro</code>	14472, 16351	<code>\textlquill</code>	16283
<code>\textcopyright</code>	14490, 14858	<code>\textexclamdown</code>	765, 1074, 14474, 14842	<code>\textmacronbelow</code>	14316, 14328, 14340, 14395, 14755, 14774, 15423
<code>\textCR</code>	14352, 14799	<code>\textfi</code>	763, 14447, 16559	<code>\textmarried</code>	16551
<code>\textcurrency</code>	14480, 14848	<code>\TextField</code>	5795	<code>\textmd</code>	597
<code>\textdagger</code>	14411, 16261	<code>\textfiveinferior</code>	16325	<code>\textmho</code>	16371
<code>\textdaggerdbl</code>	14413, 16263	<code>\textfivesuperior</code>	16293	<code>\textminus</code>	14429, 16387
<code>\textdegree</code>	14503, 14669, 14871	<code>\textfl</code>	764, 14449, 16561	<code>\textminussuperior</code>	16305
<code>\textDelta</code>	1166, 15453	<code>\textflorin</code>	14421, 15297	<code>\textMu</code>	1188, 15469
		<code>\textflq</code>	652, 14676, 16569	<code>\textmu</code>	1188, 14513, 14882
		<code>\textflqq</code>	650, 14674, 16567	<code>\textmugreek</code>	15532
		<code>\textfourinferior</code>	16323	<code>\textmultiply</code>	14582, 14679, 14950, 16572
		<code>\textfoursuperior</code>	16291	<code>\textmusicalnote</code>	16549
		<code>\textfractionsolidus</code>	14423, 16281	<code>\textnaira</code>	16343
		<code>\textfrq</code>	653, 14677, 16570	<code>\textnapostrophe</code>	15187
		<code>\textfrqq</code>	651, 14675, 16568	<code>\textneg</code>	14678, 16571
		<code>\textGamma</code>	1165, 15451	<code>\textnewtie</code>	14758, 14777, 15419
		<code>\textgamma</code>	1165, 15514	<code>\textnineinferior</code>	16333
		<code>\textglq</code>	648, 14672, 16565	<code>\textninesuperior</code>	16301
		<code>\textglqq</code>	646, 14670, 16563	<code>\textnormal</code>	592
		<code>\textgravedbl</code>	15413	<code>\textnsuperior</code>	16313
		<code>\textgreater</code>	14388, 14821	<code>\textNu</code>	1189, 15471
		<code>\textgrq</code>	649, 14673, 16566	<code>\textnu</code>	1189, 15534
		<code>\textgrqq</code>	647, 14671, 16564	<code>\textnumbersign</code>	560, 14372, 14803
		<code>\textGslash</code>	15316	<code>\textnumeralsigngreek</code>	1140, 15427
		<code>\textgslash</code>	15318	<code>\textnumeralsignlowergreek</code>	1157, 1179, 1202, 15429
		<code>\textguarani</code>	16355	<code>\textnumero</code>	16359
		<code>\textHslash</code>	15112		

<code>\textogonek</code> .	14364, 14754, 14773, 15406	<code>\textring</code> . . .	14311, 14323, 14335, 14366, 14746, 14765, 15404	<code>\textzeroinferior</code>	16315
<code>\textohm</code>	16369	<code>\textrm</code>	593	<code>\textzerosuperior</code>	16289
<code>\textOmega</code> . .	1215, 15443, 15493	<code>\textrquill</code>	16285	<code>\textZeta</code>	1169, 15457
<code>\textomega</code> . .	1215, 15558, 15569	<code>\textSampigreek</code> . . .	1216, 15583	<code>\textzeta</code>	1169, 15520
<code>\textOmicron</code> .	1191, 15439, 15475	<code>\textsampigreek</code> . . .	1216, 15585	<code>\TH</code>	14596, 14964
<code>\textomicron</code> .	1191, 15538, 15564	<code>\textsc</code>	599	<code>\th</code>	14664, 15032
<code>\textonehalf</code>	14529, 14898	<code>\textsection</code>	14486, 14854	<code>\thaa</code>	16724
<code>\textoneinferior</code>	16317	<code>\textservicemark</code>	16365	<code>\thebookmark@seq@number</code>	13854
<code>\textonequarter</code> . . .	14527, 14896	<code>\textseveninferior</code>	16329	<code>\theequation</code> . .	6566, 6869, 6891, 6915, 6951
<code>\textonesuperior</code> . .	14521, 14890	<code>\textsevensuperior</code>	16297	<code>\thefootnote</code>	7097, 7274
<code>\textopenbullet</code>	16545	<code>\textsf</code>	594, 12761, 12764	<code>\theHchapter</code> . .	6507, 6508, 6509, 6510, 6595
<code>\textordfeminine</code> . .	14492, 14860	<code>\textSigma</code>	1209, 15481	<code>\theHenumi</code>	6526
<code>\textordmasculine</code> .	14523, 14892	<code>\textsigma</code>	1209, 15546	<code>\theHenumii</code>	6527
<code>\textparagraph</code> .	566, 14515, 14884	<code>\textsixinferior</code>	16327	<code>\theHenumiii</code>	6528
<code>\textparenleft</code> . .	769, 770, 14380, 14813	<code>\textsixsuperior</code>	16295	<code>\theHenumiv</code>	6529
<code>\textparenleftinferior</code>	16335	<code>\textsl</code>	600	<code>\theHequation</code> .	6497, 6567, 6870, 6892, 6916, 6924, 6951, 6955
<code>\textparenleftsuperior</code> . . .	16309	<code>\textsterling</code>	14478, 14846	<code>\theHfigure</code>	6504, 6508
<code>\textparenright</code> . .	14382, 14815	<code>\textStigmagreek</code> . . .	1168, 15571	<code>\theHHfootnote</code>	6530, 6532
<code>\textparenrightinferior</code> . . .	16337	<code>\textstigmagreek</code> . . .	1168, 15573	<code>\theHHmpfootnote</code>	6532
<code>\textparenrightsuperior</code> . .	16311	<code>\textsurd</code>	16389	<code>\theHitem</code> .	6520, 6526, 6527, 6528, 6529
<code>\textpercent</code> . .	562, 14376, 14807	<code>\TextSymbolUnavailable</code> .	14342, 14343, 14345	<code>\theHlisting</code>	3417
<code>\textperiodcentered</code> .	14517, 14682, 14886, 16575	<code>\textTau</code>	1210, 15483	<code>\theHlstlisting</code>	3413
<code>\textpertenthousand</code>	16271	<code>\texttau</code>	1210, 15548	<code>\theHmpfootnote</code>	6531
<code>\textperthousand</code> . .	14431, 16269	<code>\textTheta</code>	1171, 15461	<code>\theHpage</code>	7688
<code>\textpeseta</code>	16345	<code>\texttheta</code>	1171, 15524	<code>\theHparagraph</code>	6514, 6515
<code>\textpeso</code>	16353	<code>\textthreeinferior</code>	16321	<code>\theHparentequation</code> .	6950, 6955
<code>\textPhi</code>	1212, 15487	<code>\textthreequarters</code> .	14531, 14900	<code>\theHpart</code>	6500
<code>\textphi</code>	1212, 15552	<code>\textthreesuperior</code> .	14509, 14877	<code>\theHsection</code> . .	6497, 6503, 6510, 6512, 6516, 6517, 6594
<code>\textPi</code>	1192, 15477	<code>\texttie</code>	14757, 14776, 15425	<code>\theHslide</code>	8102
<code>\textpi</code>	1192, 15540	<code>\texttilde</code>	4151, 14309, 14321, 14333, 14368, 14744, 14763, 15408	<code>\theHslidesection</code>	8107, 8109, 8145, 8149
<code>\textplusminus</code> . .	14505, 14681, 14873, 16574	<code>\texttildelow</code>	15415	<code>\theHslidesubsection</code> .	8108, 8196, 8200
<code>\textplussuperior</code>	16303	<code>\texttimes</code>	14679, 16572	<code>\theHsubequation</code>	6924
<code>\textpm</code>	14681, 16574	<code>\texttrademark</code> . . .	14445, 16367	<code>\theHsubparagraph</code>	6515
<code>\textPsi</code>	1214, 15491	<code>\textTslash</code>	15245	<code>\theHsubsection</code>	6512, 6513
<code>\textpsi</code>	1214, 15556	<code>\texttslash</code>	15247	<code>\theHsubsubsection</code> . .	6513, 6514
<code>\textquestiondown</code> . . .	766, 1075, 14533, 14902	<code>\texttt</code>	595	<code>\theHtable</code>	6505, 6509
<code>\textquotedbl</code>	14370, 14801	<code>\texttwoinferior</code>	16319	<code>\theHtheorem</code>	6516
<code>\textquotedblleft</code> . .	14435, 14671, 16255, 16564	<code>\texttwosuperior</code> . .	14507, 14875	<code>\theHthm</code>	6517
<code>\textquotedblright</code> .	14437, 16257	<code>\textunderscore</code> .	565, 4598, 4599, 4601, 14394, 14827	<code>\theHy@tempcnt</code>	4714, 4722, 4729
<code>\textquoteleft</code> .	14439, 14673, 16249, 16566	<code>\textup</code>	601	<code>\thelisting</code>	3417
<code>\textquoteright</code> . .	14441, 16251	<code>\textuparrow</code>	16381	<code>\thelstlisting</code>	3413
<code>\textquotesingle</code>	14811	<code>\textUpsilon</code> .	1211, 15441, 15485, 15498	<code>\thempfn</code> . .	7086, 7163, 7255, 7267
<code>\textrangle</code>	16393	<code>\textupsilon</code> . .	1211, 15550, 15562, 15567	<code>\theoremautorefname</code> .	3092, 3110, 3128, 3146, 3164, 3182, 3200, 3238, 3258, 3276, 8541
<code>\textrbrackdbl</code>	16557	<code>\textupsilonacute</code> . .	15508, 15566	<code>\thepage</code> .	2389, 4832, 6164, 6190, 6205, 6711, 6719, 6746, 7531, 7554, 7583, 7684, 7731, 7810, 7841, 8002, 8019, 8025, 8029, 8036, 8299, 8319, 8336, 8453
<code>\textrecipe</code>	16363	<code>\textvarsigma</code>	15544		
<code>\textreferencemark</code>	16277	<code>\textvisiblespace</code>	16397		
<code>\textregistered</code>	14499, 14867	<code>\textwon</code>	16347		
<code>\textRho</code>	1208, 15479	<code>\textXi</code>	1190, 15473		
<code>\textrho</code>	1208, 15542	<code>\textxi</code>	1190, 15536		
<code>\textrightarrow</code>	16383	<code>\textyen</code>	14482, 14850		

X		9683, 9685, 9686, 9687, 9689, 9690, 9691, 9693, 9694, 9695, 9697, 9698, 9700, 9706, 9715, 10721, 10726, 10730, 11101, 11104, 11110, 11115, 11260, 11261, 12334, 12354, 12814, 12834, 13153, 13173, 14175, 14177, 14246, 14248	\yahamza
\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, 304, 309, 310, 521, 526, 847, 850, 854, 859, 891, 960, 966, 1723, 1751, 2178, 2180, 2473, 2483, 2492, 2502, 2557, 2558, 2563, 2579, 3299, 3302, 3306, 3319, 3429, 3430, 3433, 3434, 3435, 3439, 3442, 3448, 3875, 3881, 3884, 3887, 4042, 4043, 4048, 4049, 4106, 4107, 4108, 4111, 4114, 4117, 4157, 4158, 4160, 4161, 4338, 4341, 4668, 4674, 4867, 4878, 4882, 4885, 4960, 4961, 4962, 4974, 4985, 4986, 4987, 4988, 4991, 4992, 5066, 5080, 5105, 5109, 5112, 5122, 6097, 6098, 6103, 6729, 6736, 6769, 6776, 6817, 6826, 6828, 6840, 8086, 8087, 8309, 8312, 8347, 8348, 8349, 8351, 8353, 8707, 8715, 9003, 9004, 9007, 9009, 9012, 9669, 9670, 9671, 9673, 9674, 9675, 9677, 9678, 9679, 9681, 9682,	\XeTeXrevision 4391, 9995 \XeTeXversion 4391, 9995 \XR@CdURL 2410, 2411 \XR@addURL 2410 \XR@ext . 2665, 2666, 4943, 4946, 6338, 8604, 9294, 9397, 9657, 10122, 11452, 11535, 11594, 11793, 11957 \XR@URL 2415 \xspace 679, 681	Z \z 310, 311, 316, 2561, 2562 4966, 4974 \z@ 823, 863, 987, 1139 1178, 1201, 1452, 1492 1521, 1536, 1544, 1617 1878, 1884, 1948, 1952 1964, 2429, 2434, 2468 2754, 2757, 2899, 3441 4044, 4400, 6341, 6344 7056, 7202, 9216, 9220 9229, 9236, 9239, 9243 10104, 10105, 10110, 10612, 10636, 10844, 11158, 11517, 11518, 11524, 12324, 12804, 13143, 13561, 13591, 13618, 13624, 13652, 13691, 13710, 13720, 13755, 13760, 13865, 13867, 13868, 13869, 13871, 13872, 13873, 14212 \z@skip \za \zay \ZWNJ
Y			
\y	309, 311, 315, 862, 865, 868, 871, 874, 877, 886, 2559, 2564, 2569, 3435, 3436, 3437, 3438, 4109, 4112, 4115, 4118, 4120, 4126, 4963, 4964, 4965, 4966, 4974, 6098, 6106, 6813, 6815, 6816, 6819, 6826, 11106, 11107, 11108, 11109		
\ya	16750		