

Hypertext marks in L^AT_EX

Sebastian Rahtz

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

Heiko Oberdiek

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

2011/04/09 v6.82f

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	17
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	Package <code>xspace</code> support	100
15.2	Option <code>draft</code>	101
15.3	PDF/A	101
15.4	Patch for babel's <code>\texttilde</code>	102
15.4.1	Driver loading	104
15.4.2	Bookmarks	107
16	User hypertext macros	110
17	Underlying basic hypertext macros	115
18	Compatibility with the <i>l^AT_EX</i>2html 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	125
19.1.4	Pushbutton field	125
19.1.5	Check box field	125
19.1.6	Radio button field	126
19.1.7	Text fields	126
19.1.8	Choice fields	127
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	143
27.1.1 pdfTeX and VTeX	147
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	177
40 New counters	178
41 AMSL^AT_EX compatibility	179
41.1 \@addtoreset and \numberwithin patches	180
42 Included figures	181
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	VT _E X typesetting system	223
46.7	Fix for Adobe bug number 466320	235
46.8	Direct pdfmark support	236
46.9	Rokicki's dvips	250
46.10	VT _E X's vtexpdfmark driver	252
46.11	Textures	253
46.12	dvipsone	257
46.13	TeX4ht	260
47	Driver-specific form support	263
47.1	pdfmarks	263
47.2	HyperTeX	270
47.3	TeX4ht	270
47.4	pdfTeX	273
47.5	dvipdfm, xetex	280
47.6	Common forms part	287
48	Bookmarks in the PDF file	294
48.1	Bookmarks	294
48.1.1	Rerun warning	298
48.1.2	Driver stuff	298
49	Compatibility with koma-script classes	304
50	Encoding definition files for encodings of PDF strings	305
50.1	PD1 encoding	305
50.2	PU encoding	313
50.2.1	NFSS2 accents	313
50.2.2	Basic Latin: U+0000 to U+007F	314
50.2.3	Latin-1 Supplement: U+0080 to U+00FF	316
50.2.4	Latin Extended-A: U+0080 to U+017F	319
50.2.5	Latin Extended-B: U+0180 to U+024F	324
50.2.6	Spacing Modifier Letters: U+02B0 to U+02FF	326
50.2.7	Combining Diacritical Marks: U+0300 to U+036F	326
50.2.8	Greek and Coptic: U+0370 to U+03FF	327
50.2.9	Cyrillic: U+0400 to U+04FF	330
50.2.10	Thai: U+0E00 to U+0E7F	340
50.2.11	Latin Extended Additional: U+1E00 to U+1EFF	340
50.2.12	General Punctuation: U+2000 to U+206F	343
50.2.13	Superscripts and Subscripts: U+2070 to U+209F	344
50.2.14	Currency Symbols: U+20A0 to U+20CF	344
50.2.15	Letterlike Symbols: U+2100 to U+214F	345
50.2.16	Arrows: U+2190 to U+21FF	345
50.2.17	Mathematical Operators: U+2200 to U+22FF	345
50.2.18	Miscellaneous Technical: U+2300 to U+23FF	346
50.2.19	Control Pictures: U+2400 to U+243F	346

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF	346
50.2.21 Box Drawing: U+2500 to U+257F	348
50.2.22 Miscellaneous Symbols: U+2600 to U+26FF	348
50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF	349
50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F	349
50.2.25 Miscellaneous	349
50.2.26 Aliases	349
50.3 PU encoding, additions for VnT _E X	349
50.4 PU encoding, additions for Arabi	352
51 End of file hycheck.tex	353
52 Index	354

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 `\cmd_` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```

231 \Hy@SetCatcodes

```

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

```

232 \RequirePackage{ltxcmds}[2010/04/26]
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 \let\Hy@Match\ltx@gobblefour
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 \let\Hy@AtBeginDocumentHook\ltx@empty

```

`\Hy@AtEndOfPackageHook`

```

385 \let\Hy@AtEndOfPackageHook\ltx@empty

```

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\ltx@empty
482 \let\MaybeStopEarly\relax
483 \newcount\Hy@linkcounter
484 \newcount\Hy@pagecounter
485 \Hy@linkcounter0
486 \Hy@pagecounter0

```

5.1 Macros for recursions

```

487 \let\Hy@ReturnEnd\@empty
488 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
489 \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.

```

490 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
491 \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).

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

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

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

Example (TeX):

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

`\hypercalsbp`

```
492 \begingroup\expandafter\expandafter\expandafter\endgroup
493 \expandafter\ifx\csname dimexpr\endcsname\relax
494   \def\hypercalsbpdef#1#2{%
495     \begingroup
496       \toks@{}%
497       \HyCal@scan#2\hypercalsbp\@nil
498     \expandafter\endgroup
499     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
500   }%
501   \def\HyCal@scan#1\hypercalsbp#2\@nil{%
502     \toks@\expandafter{\the\toks@ #1}%
503     \ifx\#2\%
504       \else
505         \ltx@ReturnAfterFi{%
506           \HyCal@do#2\@nil
507         }%
508       \fi
509     }%
510   \def\HyCal@do#1#2\@nil{%
511     \ifpackageloaded{calc}{}%
512     \Hy@Warning{%
513       For calculations \string\hypercalsbp\space needs\MessageBreak
514       package calc or e-TeX%
515     }%
516   }%
517   \setlength{\dimen@}{#1}%
518   \setlength{\dimen@}{0.99626401\dimen@}%
519   \edef\x{%
520     \toks@{}
521     \the\toks@
522     \strip@pt\dimen@
```

```

523   }%
524   }\x
525   \HyCal@scan#2\@nil
526 }%
527 \else
528 \def\hypercalcbp#1{%
529   \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
530 }%
531 \def\hypercalcbpdef{\def}%
532 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

- The result should obey the rules of the PDF specification for strings.

- The string can safely be processed by T_EX, because the tokens have only catcodes 10 until 12.

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

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

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

```
534 \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 T_EX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard L^AT_EX behaviour.

```
535 \escapechar'\%
```

From the view of T_EX 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.

```
536 \edef\0{\string\0}%
537 \edef\1{\string\1}%
538 \edef\2{\string\2}%
539 \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.

```
540 \ifHy@unicode
541 \edef\8{\string\8}%
542 \edef\9{\string\9}%
543 \fontencoding{PU}%
544 \HyPsd@UTFviii
545 \def\ifpdfstringunicode###1##2{##1}%
546 \else
547 \fontencoding{PD1}%
548 \def\ifpdfstringunicode###1##2{##2}%
549 \fi
550 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
551 \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).

```
552 \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).

```
553 \let\@inmathwarn\HyPsd\@inmathwarn
```

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

```
554 \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.

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

```
567 \def\\\{\pdfstringdefWarn\\}%
568 \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.

```
569 \def\TeX{\TeX}%
570 \def\LaTeX{\LaTeX}%
571 \def\LaTeXe{%
```

```

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

```

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

```

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

```

Environments.

```
626 \def\begin#1{\csname#1\endcsname}%
627 \def\end#1{\csname end#1\endcsname}%
```

Package color.

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

Upper- and lowercase.

```
629 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
630 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%
```

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

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

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

```
642 \let\cyr\relax
```

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

```
643 \let\es@roman\@Roman
```

Package german.

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

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

AMS classes.

```
653 \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.

```
654 \let\hspace\HyPsd@hspace
```

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

```
655 \let\label\@gobble
656 \let\index\@gobble
657 \let\glossary\@gobble
658 \let\href\HyPsd@href
659 \let\@mkboth\@gobbletwo
```

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

```
660 \let\ref\HyPsd@ref
661 \let\pageref\HyPsd@pageref
662 \let\nameref\HyPsd@nameref
663 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
664 \let\leavevmode\@empty
665 \let\mbox\@empty
```

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

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

Patch for `cjk` bookmarks.

```
669 \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`).

```
670 \Hy@pdfstringtrue
671 \pdfstringdefPreHook
```

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

```
672 \HyPsd@LetUnexpandableSpace\space
673 \HyPsd@LetUnexpandableSpace\%
674 \HyPsd@LetUnexpandableSpace~%
675 \HyPsd@LetUnexpandableSpace\nobreakspace
```


Package xspace.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

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

Support for package 'args':

```
689 \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).

```
690 \begingroup
691 \let\GenericError\@gobblefour
692 \let\GenericWarning\@gobbletwo
693 \let\GenericInfo\@gobbletwo
```

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

```
694 \ifx\nofrenchguillemets\@undefined
695 \else
696 \nofrenchguillemets
697 \fi
```

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

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

6.2.3 Postprocessing

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

```
707 \ifx#1\@empty
708 \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.

```

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

```

713 \let\HyPsd@SPACEOPTI\relax
714 {%
715 \let\HyPsd@String\@empty
716 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
717 \global\let#1\HyPsd@String
718 }%
719 \expandafter\HyPsd@RemoveMask\expandafter
720 |\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.

```

721 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
722 \let\HyPsd@String\@empty
723 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
724 \global\let#1\HyPsd@String

```

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

```
725 \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.

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

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

```

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

```

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

```

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

```

765 \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.

```

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

```

774 \ifHy@unicode
775 \edef\HyPsd@SPACEOPTI{\80\040}%
776 \else

```

```

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

```

781 \endgroup
782 \begingroup
783 \ifHy@unicode
784 \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

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

```

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

```

813 \pdfstringdefPostHook#1%
814 \endgroup
815 }

```

\Hy@pdfstringdef

```

816 \def\Hy@pdfstringdef#1#2{%
817 \pdfstringdef\Hy@gtemp{#2}%
818 \let#1\Hy@gtemp
819 }

```

6.3 Encodings

6.3.1 XeTeX

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

```

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

```

6.3.2 Workaround for package linguex

```

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

```

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.

```

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

```

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

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.

```

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

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`.

```

936 \@ifundefined{pdfstringdefPreHook}{%
937   \let\pdfstringdefPreHook\@empty
938 }{}
939 \@ifundefined{pdfstringdefPostHook}{%
940   \let\pdfstringdefPostHook\@gobble
941 }{}

```

`\pdfstringdefDisableCommands` In `\pdfstringdefPreHook` the user can add code that is executed before the string, that have to be converted by `\pdfstringdef`, is expanded. So replacements for problematic macros can be given. The code in `\pdfstringdefPreHook` should not be replaced perhaps by an `\renewcommand`, because a previous meaning gets lost.

Macro `\pdfstringdefDisableCommands` avoids this, because it reuses the old meaning of the hook and appends the new code to `\pdfstringdefPreHook`, e.g.:

```

\pdfstringdefDisableCommands{%
  \let~\textasciitilde
  \def\url{\pdfstringdefWarn\url}%
  \let\textcolor\@gobble
}
```

```
}%
```

In the argument of `\pdfstringdefDisableCommands` the character `@` can be used in command names. So it is easy to use useful \LaTeX commands like `@gobble` or `@firstofone`.

```
942 \def\pdfstringdefDisableCommands{%
943   \begingroup
944   \makeatletter
945   \HyPsd@DisableCommands
946 }
```

`\HyPsd@DisableCommands`

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

`\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`.

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

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.

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

```

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

```

Nothing to do for english.

```

1009 \ltx@ifundefined{danish@sh@"@sel}{-}{%
1010   \def\HyPsd@babel@danish{%
1011     \declare@shorthand{danish}{-}{-}%
1012     \declare@shorthand{danish}{-}{-}%
1013   }%
1014 }
1015 \ltx@ifundefined{dutch@sh@"@sel}{-}{%

```

```

1016 \def\HyPsd@babel@dutch{%
1017   \declare@shorthand{dutch}{"}{|}%
1018   \declare@shorthand{dutch}{"}~{|}%
1019 }%
1020 }
1021 \ltx@ifundefined{finnish@sh@}{}{}%
1022 \def\HyPsd@babel@finnish{%
1023   \declare@shorthand{finnish}{"}{|}%
1024 }%
1025 }
1026 \ltx@ifundefined{french@sh@}{}{}%
1027 \def\HyPsd@babel@frenchb{%
1028   \def\guill@spacing{ }%
1029 }%
1030 }
1031 \ltx@ifundefined{german@sh@}{}{}%
1032 \def\HyPsd@babel@german{%
1033   \declare@shorthand{german}{"}{|}%
1034   \declare@shorthand{german}{"}{|}%
1035   \declare@shorthand{german}{"}~{|}%
1036 }%
1037 }
1038 \ltx@ifundefined{macedonian@sh@}{}{}%
1039 \def\HyPsd@babel@macedonian{%
1040   \declare@shorthand{macedonian}{"}{|}%
1041   \declare@shorthand{macedonian}{"}~{|}%
1042 }%
1043 }{}
1044 \ltx@ifundefined{ngerman@sh@}{}{}%
1045 \def\HyPsd@babel@ngerman{%
1046   \declare@shorthand{ngerman}{"}{|}%
1047   \declare@shorthand{ngerman}{"}~{|}%
1048 }%
1049 }
1050 \ltx@ifundefined{portuges@sh@}{}{}%
1051 \def\HyPsd@babel@portuges{%
1052   \declare@shorthand{portuges}{"}{|}%
1053 }%
1054 }
1055 \ltx@ifundefined{russian@sh@}{}{}%
1056 \def\HyPsd@babel@russian{%
1057   \declare@shorthand{russian}{"}{|}%
1058   \declare@shorthand{russian}{"}~{|}%
1059 }%
1060 }
1061 \ltx@ifundefined{slovene@sh@}{}{}%
1062 \def\HyPsd@babel@slovene{%
1063   \declare@shorthand{slovene}{"}{|}%
1064 }%
1065 }

```

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

```

1066 \ltx@ifundefined{spanish@sh@}{}{}%
1067 \def\HyPsd@babel@spanish{%
1068   \declare@shorthand{spanish}{<<}{\guillemotleft}%
1069   \declare@shorthand{spanish}{>>}{\guillemotright}%
1070   \declare@shorthand{spanish}{"}{|}%
1071   \declare@shorthand{spanish}{"}~{|}%

```

```

1072 \declare@shorthand{spanish}{!}{\textexclamdown}%
1073 \declare@shorthand{spanish}{?}{\textquestiondown}%
1074 }%
1075 }
1076 \ltx@ifundefined{swedish@sh@"@sel}{-}{%
1077 \def\HyPsd@babel@swedish{%
1078 \declare@shorthand{swedish}{"}{|}{}%
1079 \declare@shorthand{swedish}{~}{-}%
1080 }%
1081 }
1082 \ltx@ifundefined{ukrainian@sh@"@sel}{-}{%
1083 \def\HyPsd@babel@ukrainian{%
1084 \declare@shorthand{ukrainian}{"}{|}{}%
1085 \declare@shorthand{ukrainian}{~}{-}%
1086 }%
1087 }
1088 \ltx@ifundefined{usorbian@sh@"@sel}{-}{%
1089 \def\HyPsd@babel@usorbian{%
1090 \declare@shorthand{usorbian}{f}{f}%
1091 \declare@shorthand{usorbian}{"}{|}{}%
1092 }%
1093 }
1094 \ltx@ifundefined{greek@sh@\string~@sel}{-}{%
1095 \let\HyPsd@GreekPatch\@empty
1096 }{%
1097 \def\HyPsd@GreekPatch{%
1098 \let\greeknumeral\HyPsd@greeknumeral
1099 \let\Greeknnumeral\HyPsd@Greeknnumeral
1100 }%
1101 }
1102 \def\HyPsd@greeknumeral#1{%
1103 \HyPsd@GreekNum\@firstoftwo{#1}%
1104 }
1105 \def\HyPsd@Greeknnumeral#1{%
1106 \HyPsd@GreekNum\@secondoftwo{#1}%
1107 }
1108 \def\HyPsd@GreekNum#1#2{%
1109 \ifHy@unicode
1110 \ifnum#2<\@ne
1111 \@arabic{#2}%
1112 \else
1113 \ifnum#2<1000000 %
1114 \HyPsd@@GreekNum#1{#2}%
1115 \else
1116 \@arabic{#2}%
1117 \fi
1118 \fi
1119 \else
1120 \@arabic{#2}%
1121 \fi
1122 }
1123 \def\HyPsd@@GreekNum#1#2{%
1124 \ifnum#2<\@m
1125 \ifnum#2<10 %
1126 \expandafter\HyPsd@GreekNumI
1127 \expandafter\@gobble\expandafter#1\number#2%
1128 \else

```

```

1129 \ifnum#2<100 %
1130 \expandafter\HyPsd@GreekNumII
1131 \expandafter\@gobble\expandafter#1\number#2%
1132 \else
1133 \expandafter\HyPsd@GreekNumIII
1134 \expandafter\@gobble\expandafter#1\number#2%
1135 \fi
1136 \fi
1137 \ifnum#2>\z@
1138 \textnumeralsigngreek
1139 \fi
1140 \else
1141 \ifnum#2<\@M
1142 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1143 \else
1144 \ifnum#2<100000 %
1145 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1146 \else
1147 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1148 \fi
1149 \fi
1150 \fi
1151 }
1152 \def\HyPsd@GreekNumI#1#2#3{%
1153 #1{%
1154 \ifnum#3>\z@
1155 \textnumeralsignlowergreek
1156 \fi
1157 }%
1158 \expandafter#2%
1159 \ifcase#3 %
1160 {}{}%
1161 \or\textalpha\textAlpha
1162 \or\textbeta\textBeta
1163 \or\textgamma\textGamma
1164 \or\textdelta\textDelta
1165 \or\textepsilon\textEpsilon
1166 \or\textstigmagreek\textStigmagreek
1167 \or\textzeta\textZeta
1168 \or\texteta\textEta
1169 \or\texttheta\textTheta
1170 \else
1171 {}{}%
1172 \fi
1173 }
1174 \def\HyPsd@GreekNumII#1#2#3#4{%
1175 #1{%
1176 \ifnum#3>\z@
1177 \textnumeralsignlowergreek
1178 \fi
1179 }%
1180 \expandafter#2%
1181 \ifcase#3 %
1182 {}{}%
1183 \or\textiota\textIota
1184 \or\textkappa\textKappa
1185 \or\textlambda\textLambda

```

```

1186 \or\textmu\textMu
1187 \or\textnu\textNu
1188 \or\textxi\textXi
1189 \or\textomicron\textOmicron
1190 \or\textpi\textPi
1191 \or\textkoppagreek\textKoppagreek
1192 \else
1193   {}{}%
1194 \fi
1195 \HyPsd@GreekNumI#1#2#4%
1196 }
1197 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1198   #1{%
1199     \ifnum#3>\z@
1200       \textnumeralsignlowergreek
1201       \fi
1202     }%
1203     \expandafter#2%
1204     \ifcase#3 %
1205       {}{}%
1206     \or\extrho\textRho
1207     \or\textsigma\textSigma
1208     \or\texttau\textTau
1209     \or\textupsilon\textUpsilon
1210     \or\textphi\textPhi
1211     \or\textchi\textChi
1212     \or\textpsi\textPsi
1213     \or\textomega\textOmega
1214     \or\textsampigreek\textSampigreek
1215     \else
1216       {}{}%
1217     \fi
1218     \HyPsd@GreekNumII#1#2#4#5%
1219   }
1220 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1221   \HyPsd@GreekNumI\@firstofone#1#2%
1222   \HyPsd@@GreekNum#1{#3#4#5}%
1223 }
1224 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1225   \HyPsd@GreekNumII\@firstofone#1#2#3%
1226   \HyPsd@@GreekNum#1{#4#5#6}%
1227 }
1228 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1229   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1230   \HyPsd@@GreekNum#1{#5#6#7}%
1231 }

1232 \def\HyPsd@SpanishPatch{%
1233   \ltx@ifundefined{es@save@dot}{%
1234     }{%
1235       \let.\es@save@dot
1236     }%
1237 }

```

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

```

1238 \def\HyPsd@RussianPatch{%
1239   \ltx@ifundefined{russian@sh@"@-@}{%

```

```

1240 }{%
1241   \@namedef{russian@sh@"@-@}{-}%
1242 }%
1243 }

```

6.5.3 CJK patch

```
1244 \RequirePackage{intcalc}[2007/09/27]
```

\HyPsd@CJKhook

```

1245 \def\HyPsd@CJKhook{%
1246   \ltx@ifpackageloaded{CJK}{%
1247     \let\CJK@kern\relax
1248     \let\CJKkern\relax
1249     \let\CJK@CJK\relax
1250     \ifHy@CJKbookmarks
1251       \HyPsd@CJKhook@bookmarks
1252     \fi
1253     \HyPsd@CJKhook@unicode
1254   }{}%
1255 }

```

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 ($\geq 0x40$).

```

1256 \begingroup
1257   \catcode"7F=\active
1258   \toks@{%
1259     \let\CJK@ignorespaces\empty
1260     \def\CJK@char#1{\@gobbletwo}%
1261     \let\CJK@charx\@gobblefour
1262     \let\CJK@punctchar\@gobblefour
1263     \def\CJK@punctcharx#1{\@gobblefour}%
1264     \catcode"7F=\active
1265     \def^^7f#1^^7f#2^^7f{%
1266       \string #1\HyPsd@DecimalToOctal{#2}%
1267     }%
1268     % ... ?
1269     \ifHy@unicode
1270       \def\Hy@cjkpu{\80}%
1271     \else
1272       \let\Hy@cjkpu\@empty
1273     \fi
1274     \HyPsd@CJKActiveChars
1275   }%
1276   \count@=127 %
1277   \@whilenum\count@<255 \do{%
1278     \advance\count@ by 1 %

```



```

1279 \lccode'\~=\count@
1280 \lowercase{%
1281 \toks@\expandafter{\the\toks@ ~}%
1282 }%
1283 }%
1284 \toks@\expandafter{\the\toks@ !}%
1285 \xdef\HyPsd@CJKhook@bookmarks{%
1286 \the\toks@
1287 }%
1288 \endgroup

```

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

```

1289 \def\HyPsd@CJKActiveChars#1{%
1290 \ifx#1!%
1291 \let\HyPsd@CJKActiveChars\relax
1292 \else
1293 \edef#1{\noexpand\Hy@cjku\string#1}%
1294 \fi
1295 \HyPsd@CJKActiveChars
1296 }

```

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

```

1297 \def\HyPsd@DecimalToOctal#1{%
1298 \ifcase #1 %
1299 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1300 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1301 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1302 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1303 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1304 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1305 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1306 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1307 \or @\or A\or B\or C\or D\or E\or F\or G%
1308 \or H\or I\or J\or K\or L\or M\or N\or O%
1309 \or P\or Q\or R\or S\or T\or U\or V\or W%
1310 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1311 \or \140\or a\or b\or c\or d\or e\or f\or g%
1312 \or h\or i\or j\or k\or l\or m\or n\or o%
1313 \or p\or q\or r\or s\or t\or u\or v\or w%
1314 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1315 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1316 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1317 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1318 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1319 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1320 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1321 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1322 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1323 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1324 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1325 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1326 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1327 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1328 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1329 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1330 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%

```

```

1331 \fi
1332 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1333 \def\HyPsd@CJKhook@unicode{%
1334 \let\Unicode\HyPsd@CJK@Unicode
1335 \let\CJKnumber\HyPsd@CJKnumber
1336 \let\CJKdigits\HyPsd@CJKdigits
1337 }

```

\HyPsd@CJK@Unicode

```

1338 \def\HyPsd@CJK@Unicode#1#2{%
1339 \ifnum#1<256 %
1340 \HyPsd@DecimalToOctalFirst{#1}%
1341 \HyPsd@DecimalToOctalSecond{#2}%
1342 \else
1343 \933%
1344 \expandafter\expandafter\expandafter\HyPsd@HighA
1345 \intcalcDiv{#1}{4}!%
1346 \933%
1347 \ifcase\intcalcMod{#1}{4} %
1348 4\or 5\or 6\or 7%
1349 \fi
1350 \HyPsd@DecimalToOctalSecond{#2}%
1351 \fi
1352 }

1353 \def\HyPsd@HighA#1!{%
1354 \expandafter\expandafter\expandafter\HyPsd@HighB
1355 \IntCalcDiv#1!64!!%
1356 \expandafter\expandafter\expandafter\HyPsd@HighD
1357 \IntCalcMod#1!64!!%
1358 }
1359 \def\HyPsd@HighB#1!{%
1360 \expandafter\expandafter\expandafter\HyPsd@HighC
1361 \IntCalcDec#1!!%
1362 }
1363 \def\HyPsd@HighC#1!{%
1364 \IntCalcDiv#1!4!%
1365 \@backslashchar
1366 \IntCalcMod#1!4!%
1367 }
1368 \def\HyPsd@HighD#1!{%
1369 \ifcase\IntCalcDiv#1!8! %
1370 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1371 \fi
1372 \ifcase\IntCalcMod#1!8! %
1373 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1374 \fi
1375 }
1376 \def\HyPsd@DecimalToOctalFirst#1{%
1377 \9%
1378 \ifcase#1 %
1379 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1380 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%

```

```

1381 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1382 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1383 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1384 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1385 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1386 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1387 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1388 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1389 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1390 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1391 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1392 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1393 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1394 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1395 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1396 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1397 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1398 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1399 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1400 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1401 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1402 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1403 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1404 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1405 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1406 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1407 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1408 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1409 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1410 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1411 \fi
1412 }
1413 \def\HyPsd@DecimalToOctalSecond#1{%
1414 \ifcase #1 %
1415 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1416 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1417 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1418 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1419 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1420 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1421 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1422 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1423 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1424 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1425 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1426 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1427 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1428 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1429 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1430 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1431 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1432 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1433 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1434 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1435 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1436 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1437 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%

```

```

1438 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1439 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1440 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1441 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1442 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1443 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1444 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1445 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1446 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1447 \fi
1448 }

1449 \def\HyPsd@CJkNumber#1{%
1450 \ifnum#1<\z@
1451 \CJK@minus
1452 \expandafter\HyPsd@@CJkNumber\expandafter{\number-\number#1}%
1453 \else
1454 \expandafter\HyPsd@@CJkNumber\expandafter{\number#1}%
1455 \fi
1456 }

1457 \def\HyPsd@@CJkNumber#1{%
1458 \ifcase#1 %
1459 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1460 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1461 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1462 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1463 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1464 \CJK@ten\CJK@nine
1465 \else
1466 \ifnum#1<10000 %
1467 \HyPsd@CJkNumberFour#1!\@empty{20}%
1468 \@empty
1469 \else
1470 \ifnum#1<100000000 %
1471 \expandafter\expandafter\expandafter\HyPsd@CJkNumberFour
1472 \IntCalcDiv#1!10000!%
1473 !}{20}%
1474 \CJK@tenthousand
1475 \expandafter\expandafter\expandafter\HyPsd@CJkNumberFour
1476 \IntCalcMod#1!10000!%
1477 !\CJK@zero{10}%
1478 \@empty
1479 \else
1480 \expandafter\HyPsd@CJkNumberLarge
1481 \number\IntCalcDiv#1!100000000!\expandafter!%
1482 \number\IntCalcMod#1!100000000!!%
1483 \fi
1484 \fi
1485 \fi
1486 }

1487 \def\HyPsd@CJkNumberLarge#1!#2!{%
1488 \HyPsd@CJkNumberFour#1!}{20}%
1489 \CJK@hundredmillion
1490 \ifnum#2=\z@
1491 \else
1492 \expandafter\expandafter\expandafter\HyPsd@CJkNumberFour
1493 \IntCalcDiv#2!10000!%
1494 !\CJK@zero{10}%

```

```

1495 \CJK@tenthousand
1496 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1497 \IntCalcMod#2!10000!%
1498 !\CJK@zero{10}%
1499 \@empty
1500 \fi
1501 }
1502 \def\HyPsd@CJKnumberFour#1!#2#3{%
1503 \ifnum#1=\z@
1504 \expandafter\@gobble
1505 \else
1506 \ifnum#1<1000 %
1507 #2%
1508 \HyPsd@CJKnumberThree#1!#{#3}%
1509 \else
1510 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1511 \CJK@thousand
1512 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1513 \IntCalcMod#1!1000!%
1514 !\CJK@zero{10}%
1515 \fi
1516 \fi
1517 }
1518 \def\HyPsd@CJKnumberThree#1!#2#3{%
1519 \ifnum#1=\z@
1520 \else
1521 \ifnum#1<100 %
1522 #2%
1523 \HyPsd@CJKnumberTwo#1!#{#3}%
1524 \else
1525 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1526 \CJK@hundred
1527 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1528 \IntCalcMod#1!100!%
1529 !\CJK@zero{10}%
1530 \fi
1531 \fi
1532 }
1533 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1534 \ifnum#1=\z@
1535 \else
1536 \ifnum#1<#3 %
1537 #2%
1538 \HyPsd@@CJKnumber{#1}%
1539 \else
1540 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1541 \CJK@ten
1542 \ifnum\IntCalcMod#1!10!=\z@
1543 \else
1544 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1545 \fi
1546 \fi
1547 \fi
1548 }
1549 \def\HyPsd@CJKdigits#1{%
1550 \ifx*#1\relax
1551 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero

```

```

1552 \else
1553   \HyPsd@@CJKdigits\CJK@null{#1}%
1554 \fi
1555 }
1556 \def\HyPsd@@CJKdigits#1#2{%
1557   \ifx\\#2\\%
1558   \else
1559     \HyPsd@@@CJKdigits#1#2\@nil
1560   \fi
1561 }%
1562 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1563   \HyPsd@CJKdigit#1{#2}%
1564   \ifx\\#3\\%
1565     \expandafter\@gobble
1566   \else
1567     \expandafter\@firstofone
1568   \fi
1569   {%
1570     \HyPsd@@@CJKdigits#1#3\@nil
1571   }%
1572 }
1573 \def\HyPsd@CJKdigit#1#2{%
1574   \ifcase#2 %
1575     #1\or
1576     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1577     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1578   \fi
1579 }

```

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 $\TeX 2_{\epsilon}$ versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

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

```

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

1580 \def\HyPsd@inmathwarn#1#2{%
1581 \ifx#2\expandafter
1582 \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1583 \HyPsd@GLYPHERR
1584 \expandafter\@gobble\string#1%
1585 >%
1586 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1587 \else
1588 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1589 \fi
1590 \else
1591 \expandafter#2%
1592 \fi
1593 }
1594 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1595 \def\HyPsd@EndWithElse#1\else\else{}

\HyPsd@add@accent

1596 \def\HyPsd@add@accent#1#2{%
1597 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1598 #2%
1599 }%

```

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, `dimen`, and `skip` assignments.

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

```

1600 \def\HyPsd@LetUnexpandableSpace#1{%
1601 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1602 }

```

`\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.

```

1603 \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.

```
1604 \edef\HyPsd@XSPACE{\string#\string X}
1605 \edef\HyPsd@ITALCORR{\string#\string I}
1606 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1607 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1608 \def\HyPsd@@hspace#1*#2\END{%
1609   \ifx\#2\%
1610     \HyPsd@hspacetest{#1}%
1611   \else
1612     \expandafter\HyPsd@hspacetest
1613   \fi
1614 }
```

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

```
1615 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1616 \ltx@ifundefined{tocsection}{%
1617   \let\HyPsd@AMSclassfix\relax
1618 }{%
1619   \def\HyPsd@AMSclassfix{%
1620     \let\tocpart\HyPsd@tocsection
1621     \let\tocchapter\HyPsd@tocsection
1622     \let\tocappendix\HyPsd@tocsection
1623     \let\tocsection\HyPsd@tocsection
1624     \let\tocsubsection\HyPsd@tocsection
1625     \let\tocsubsubsection\HyPsd@tocsection
1626     \let\tocparagraph\HyPsd@tocsection
1627   }%
1628   \def\HyPsd@tocsection#1#2#3{%
1629     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1630     #3%
1631   }%
1632 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1633 \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.

```
1634 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```


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

```
1635 \def\HyPsd@@ref#1*#2\END{%
1636   \ifx\#2\%
1637     \HyPsd@@@ref{#1}%
1638   \else
1639     \expandafter\HyPsd@@@ref
1640   \fi
1641 }%
```

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

```
1642 \def\HyPsd@@@ref#1{%
1643   \expandafter\ifx\csname r@#1\endcsname\relax
1644     ??%
1645   \else
1646     \expandafter\expandafter\expandafter
1647     \@car\csname r@#1\endcsname\@nil
1648   \fi
1649 }
```

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

```
1650 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```
1651 \def\HyPsd@@pageref#1*#2\END{%
1652   \ifx\#2\%
1653     \HyPsd@@@pageref{#1}%
1654   \else
1655     \expandafter\HyPsd@@@pageref
1656   \fi
1657 }
```

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

```
1658 \def\HyPsd@@@pageref#1{%
1659   \expandafter\ifx\csname r@#1\endcsname\relax
1660     ??%
1661   \else
1662     \expandafter\expandafter\expandafter\expandafter
1663     \expandafter\expandafter\expandafter\@car
1664     \expandafter\expandafter\expandafter\@gobble
1665     \csname r@#1\endcsname{}\@nil
1666   \fi
1667 }
```

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

```
1668 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}
```

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

```
1669 \def\HyPsd@@nameref#1*#2\END{%
1670   \ifx\#2\%
1671     \HyPsd@@@nameref{#1}%
1672   \else
1673     \expandafter\HyPsd@@@nameref
1674   \fi
1675 }
```

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

```

1676 \def\HyPsd@@@nameref#1{%
1677   \expandafter\ifx\csname r@#1\endcsname\relax
1678     ??%
1679   \else
1680     \expandafter\expandafter\expandafter\expandafter
1681     \expandafter\expandafter\expandafter\@car
1682     \expandafter\expandafter\expandafter\@gobbletwo
1683     \csname r@#1\endcsname\}\}\@nil
1684   \fi
1685 }

```

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

```

1686 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1687 \def\HyPsd@@autoref#1*#2\END{%
1688   \ifx\#2\%
1689     \HyPsd@@@autoref{#1}%
1690   \else
1691     \expandafter\HyPsd@@@autoref
1692   \fi
1693 }

```

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

```

1694 \def\HyPsd@@@autoref#1{%
1695   \expandafter\ifx\csname r@#1\endcsname\relax
1696     ??%
1697   \else
1698     \expandafter\expandafter\expandafter\HyPsd@autorefname
1699     \csname r@#1\endcsname\}\}\@nil
1700   \expandafter\expandafter\expandafter
1701   \@car\csname r@#1\endcsname\@nil
1702   \fi
1703 }

```

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

```

1704 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1705   \ifx\#4\%
1706   \else
1707     \HyPsd@@autorefname#4.\@nil
1708   \fi
1709 }

```

`\HyPsd@@autorefname`

```

1710 \def\HyPsd@@autorefname#1.#2\@nil{%
1711   \ltx@ifundefined{#1autorefname}{%
1712     \ltx@ifundefined{#1name}{%
1713       }{%
1714         \csname#1name\endcsname\space
1715       }%
1716     }{%
1717       \csname#1autorefname\endcsname\space
1718     }%
1719 }

```

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 argument, 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
1720 \begingroup
1721 \def\x#1#2{%
1722 \endgroup
1723 \let#1\def
1724 \def\HyPsd@DefCommand##1##2##3{%
1725   #1%
1726   \expandafter\noexpand
1727   \csname\expandafter\@gobble\string##1\@empty\endcsname
1728   \@gobble
1729 }%
1730 \let#2\let
1731 \def\HyPsd@LetCommand##1{%
1732   \expandafter\ifx\csname##1\expandafter\endcsname
1733     \csname iftrue\endcsname
1734     \pdfstringdefWarn\let
1735     \expandafter\@gobble
1736   \else
1737     \expandafter\ifx\csname##1\expandafter\endcsname
1738       \csname iffalse\endcsname
1739       \pdfstringdefWarn\let
1740       \expandafter\expandafter\expandafter\@gobble
1741     \else
1742       #2%
1743       \expandafter\noexpand
1744       \csname##1\expandafter\expandafter\expandafter\endcsname

```

```

1745     \fi
1746     \fi
1747   }%
1748 }%
1749 \expandafter\x\csname <def>-command\expandafter\endcsname
1750     \csname <let>-command\endcsname
1751 \def\HyPsd@LetCommand#1{%
1752   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1753     \expandafter\expandafter\expandafter{%
1754     \expandafter\@gobble\string#1\@empty
1755   }%
1756 }

```

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).

```

1757 \def\HyPsd@ifnextchar#1{%
1758   \pdfstringdefWarn#1%
1759   \expandafter\@gobbletwo\@gobble
1760 }

```

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`.

```

1761 \def\HyPsd@protected@testopt#1{%
1762   \pdfstringdefWarn#1%
1763   \@gobbletwo
1764 }

```

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:

```

1765 \def\HyPsd@Warning#1{%
1766   \begingroup
1767   \let\space\ltx@space
1768   \Hy@Warning{#1}%
1769   \endgroup
1770 }

```

6.6.2 Protecting spaces

```

1771 \RequirePackage{etexcmds}[2007/09/09]
1772 \ifetex@unexpanded
1773   \expandafter\@secondoftwo
1774 \else
1775   \expandafter\@firstoftwo
1776 \fi
1777 {%

```

`\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`.

```

1778   \def\HyPsd@ProtectSpaces#1{%
1779     \iftrue
1780       \expandafter\HyPsd@@ProtectSpacesFi
1781       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1782     \fi
1783   }%

```

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

```

1784   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1785     \fi
1786     \ifx\scrollmode#2\scrollmode
1787       \HyPsd@RemoveMask#1\HyPsd@End#3%
1788     \else
1789       \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1790       \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1791     \fi
1792   }%

```

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.

```

1793   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1794     \toks@ \expandafter{#1}%
1795     \xdef#2{\the\toks@}%
1796   }%

1797 }{%
1798   \let\HyPsd@fi\fi
1799   \def\HyPsd@ProtectSpaces#1{%
1800     \xdef#1{%
1801       \iftrue
1802         \expandafter\HyPsd@@ProtectSpacesFi
1803         \expandafter|\expandafter\@empty#1| %
1804       \HyPsd@fi
1805     }%
1806     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1807   }%
1808   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1809     \fi
1810     \etex@unexpanded{#1}%
1811     \ifx\scrollmode#2\scrollmode
1812     \else
1813       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%

```

```

1814 \HyPsd@fi
1815 }%
1816 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1817 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1818 }%
1819 }

```

6.6.3 Remove grouping braces

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

```

1820 \def\HyPsd@RemoveBraces#1{%
1821 \ifx\scrollmode#1\scrollmode
1822 \else
1823 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1824 \fi
1825 }

```

`\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 `\ltx@ReturnAfterFi`.

```

1826 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1827 \fi
1828 \def\Hy@temp@A{#1#2}%
1829 \def\Hy@temp@B{#3}%
1830 \ifx\Hy@temp@A\Hy@temp@B
1831 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1832 \HyPsd@String#1%
1833 }%
1834 \ifx\scrollmode#2\scrollmode
1835 \else
1836 \Hy@ReturnAfterFiFiEnd{%
1837 \HyPsd@RemoveBraces{#2}%
1838 }%
1839 \fi
1840 \else
1841 \def\Hy@temp@A{#1}%
1842 \HyPsd@AppendItalcrr\HyPsd@String
1843 \ifx\Hy@temp@A\@empty
1844 \Hy@ReturnAfterElseFiFiEnd{%
1845 \HyPsd@RemoveBraces{#2}%
1846 }%
1847 \else
1848 \HyPsd@ProtectSpaces\Hy@temp@A
1849 \HyPsd@AppendItalcrr\Hy@temp@A
1850 \Hy@ReturnAfterFiFiEnd{%
1851 \expandafter\HyPsd@RemoveBraces\expandafter
1852 {\Hy@temp@A#2}%
1853 }%
1854 \fi
1855 \fi

```

```

1856 \Hy@ReturnEnd
1857 }

```

\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.

```

1858 \def\HyPsd@AppendItalcrr#1{%
1859   \expandafter\HyPsd@@AppendItalcrr\expandafter{/}#1%
1860 }
1861 \def\HyPsd@@AppendItalcrr#1#2{%
1862   \expandafter\def\expandafter#2\expandafter{#2#1}%
1863 }

```

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).

```

1864 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1865   \global\let\HyPsd@Rest\relax
1866   \ifcat\relax\noexpand#1\relax
1867     \ifx#1\protect
1868       \else
1869         \ifx#1\penalty
1870           \setbox\z@=\hbox{%
1871             \afterassignment\HyPsd@AfterCountRemove
1872             \count@=#2\HyPsd@End
1873           }%
1874         \else
1875           \ifx#1\kern
1876             \setbox\z@=\hbox{%
1877               \afterassignment\HyPsd@AfterDimenRemove
1878               \dimen@=#2\HyPsd@End
1879             }%
1880           \else
1881             \ifx#1\hskip
1882               \setbox\z@=\hbox{%
1883                 \afterassignment\HyPsd@AfterSkipRemove
1884                 \skip@=#2\HyPsd@End
1885               }%
1886             \else
1887               \HyPsd@CatcodeWarning{#1}%
1888             \fi
1889           \fi
1890         \fi
1891       \fi
1892     \else
1893       \ifcat#1A% letter
1894         \expandafter\def\expandafter\HyPsd@String\expandafter{%

```

```

1895     \HyPsd@String#1%
1896   }%
1897 \else
1898   \ifcat#1 % SPACE
1899     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1900       \HyPsd@String\HyPsd@SPACEOPTI
1901     }%
1902 \else
1903   \ifcat$#1%
1904     \HyPsd@CatcodeWarning{math shift}%
1905 \else
1906   \ifcat&#1%
1907     \HyPsd@CatcodeWarning{alignment tab}%
1908 \else
1909   \ifcat^#1%
1910     \HyPsd@CatcodeWarning{superscript}%
1911 \else
1912   \ifcat_#1%
1913     \HyPsd@CatcodeWarning{subscript}%
1914 \else
1915     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1916       \HyPsd@String#1%
1917     }%
1918   \fi
1919 \fi
1920 \fi
1921 \fi
1922 \fi
1923 \fi
1924 \fi
1925 \ifx\HyPsd@Rest\relax
1926   \ifx\scrollmode#2\scrollmode
1927   \else
1928     \Hy@ReturnAfterFiFiEnd{%
1929       \HyPsd@CheckCatcodes#2\HyPsd@End
1930     }%
1931   \fi
1932 \else
1933   \ifx\HyPsd@Rest\@empty
1934   \else
1935     \Hy@ReturnAfterFiFiEnd{%
1936       \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1937     }%
1938   \fi
1939 \fi
1940 \Hy@ReturnEnd
1941 }

```

Remove counts, dimens, skips.

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

```

1942 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1943   \gdef\HyPsd@Rest{#1}%
1944 }

```

\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.

```

1945 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
1946 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1947 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1948 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1949 \else
1950 \ifdim\dimen@=\z@
1951 \else
1952 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1953 \fi
1954 \gdef\HyPsd@Rest{#1}%
1955 \fi
1956 }

```

`\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).

```

1957 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1958 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1959 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1960 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1961 \else
1962 \ifdim\skip@=\z@
1963 \else
1964 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1965 \fi
1966 \gdef\HyPsd@Rest{#1}%
1967 \fi
1968 }

```

Catcode warnings.

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

```

1969 \def\HyPsd@CatcodeWarning#1{%
1970 \HyPsd@Warning{%
1971 Token not allowed in a PDF string (%
1972 \ifHy@unicode
1973 Unicode%
1974 \else
1975 PDFDocEncoding%
1976 \fi
1977 ):%
1978 \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1979 }%
1980 }
1981 \begingroup
1982 \catcode‘\|=0 %
1983 \catcode‘\|=12 %
1984 |gdef|HyPsd@RemoveCmdPrefix#1{%
1985 |expandafter|HyPsd@@RemoveCmdPrefix
1986 |string#1|@empty\<>-|@empty|@empty
1987 }%
1988 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1989 |endgroup

```

`\HyPsd@RemoveSpaceWarning`

```

1990 \def\HyPsd@RemoveSpaceWarning#1{%
1991   \HyPsd@Warning{%
1992     Token not allowed in a PDF string (%)
1993     \ifHy@unicode
1994       Unicode%
1995     \else
1996       PDFDocEncoding%
1997     \fi
1998   }:%
1999   \MessageBreak #1\MessageBreak
2000   removed%
2001 }%
2002 }

```

\HyPsd@ReplaceSpaceWarning

```

2003 \def\HyPsd@ReplaceSpaceWarning#1{%
2004   \HyPsd@Warning{%
2005     Token not allowed in a PDF string (%)
2006     \ifHy@unicode
2007       Unicode%
2008     \else
2009       PDFDocEncoding%
2010     \fi
2011   }:%
2012   \MessageBreak #1\MessageBreak
2013   replaced by space%
2014 }%
2015 }

```

6.6.5 Check for wrong glyphs

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

```

2016 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
2017   \expandafter\def\expandafter\HyPsd@String\expandafter{%
2018     \HyPsd@String#1%
2019   }%
2020   \ifx\#2\%
2021   \else
2022     \ltx@ReturnAfterFi{%
2023       \HyPsd@GlyphProcessWarning#2\@empty
2024     }%
2025   \fi
2026 }
2027 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2028   \HyPsd@@@GlyphProcessWarning#1++>%
2029   \HyPsd@GlyphProcess#2\@empty
2030 }
2031 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2032   \ifx\#2\%
2033     \HyPsd@Warning{%
2034       Glyph not defined in %
2035       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2036       removing ‘\@backslashchar#1’%
2037     }%
2038   \else
2039     \HyPsd@Warning{%

```

```

2040 Composite letter '@backslashchar#1+#2'\MessageBreak
2041 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2042 \MessageBreak
2043 removing '@backslashchar#1'%
2044 }%
2045 \fi
2046 }

```

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`.

```

2047 \def\HyPsd@spaceopti#1{ % first space
2048 \ifx\HyPsd@spaceopti#1%
2049 \040%
2050 \else
2051 #1%
2052 \fi
2053 }%

```

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.

2054 \def\HyPsd@Subst#1#2#3{%
2055 \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
2056 \fi
2057 ##1%
2058 \ifx\scrollmode##2\scrollmode
2059 \else
2060 #2%
2061 \HyPsd@@ReplaceFi##2\END
2062 \fi
2063 }%
2064 \xdef#3{%
2065 \iftrue
2066 \expandafter\HyPsd@@ReplaceFi#3#1\END
2067 \fi
2068 }%
2069 }

```

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

```

2070 \def\HyPsd@StringSubst#1{%
2071 \expandafter\HyPsd@Subst\expandafter{\string#1}%
2072 }

```

`\HyPsd@EscapeTeX`

```

2073 \begingroup
2074 \lccode'\!='\%%
2075 \lccode'\|='\%%

```

```

2076 \lccode'\(=\{\%
2077 \lccode'\)=\}%
2078 \lccode'0=\ltx@zero
2079 \lccode'1=\ltx@zero
2080 \lccode'3=\ltx@zero
2081 \lccode'4=\ltx@zero
2082 \lccode'5=\ltx@zero
2083 \lccode'7=\ltx@zero
2084 \lowercase{\endgroup
2085 \def\HyPsd@EscapeTeX#1{%
2086   \HyPsd@Subst!{|045}#1%
2087   \HyPsd@Subst({|173}#1%
2088   \HyPsd@Subst){|175}#1%
2089 }%
2090 }

```

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.

```

2091 \def\HyPsd@doxspace#1{%
2092   \ifx#1\relax\else
2093     \ifx#1.\else
2094       \ifx#1:\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                       \HyPsd@SPACEOPTI
2103                     \fi
2104                   \fi
2105                 \fi
2106               \fi
2107             \fi
2108           \fi
2109         \fi
2110       \fi
2111     \fi
2112   \fi
2113   #1%
2114 }%

```

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.

```

2115 \begingroup
2116 \catcode'\|=0 %
2117 \catcode'\=12 %

```

`\HyPsd@ConvertToUnicode`

```

2118 |gdef|HyPsd@ConvertToUnicode#1{%
2119 |xdef#1{%
2120 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2121 }%
2122 |ifx#1|@empty
2123 |else
2124 |xdef#1{%
2125 \376\377%
2126 #1%
2127 }%
2128 |fi
2129 }%

```

\HyPsd@DoConvert

```

2130 |gdef|HyPsd@DoConvert#1{%
2131 |ifx#1|@empty
2132 |else
2133 |ltx@ReturnAfterFi{%
2134 |ifx#1\%%
2135 \%%
2136 |expandafter|HyPsd@DoEscape
2137 |else
2138 |HyPsd@Char{#1}%
2139 |expandafter|HyPsd@DoConvert
2140 |fi
2141 }%
2142 |fi
2143 }%

```

\HyPsd@DoEscape

```

2144 |gdef|HyPsd@DoEscape#1{%
2145 |ifx#19%
2146 |expandafter|HyPsd@GetTwoBytes
2147 |else
2148 |ltx@ReturnAfterFi{%
2149 |ifx#18%
2150 00%
2151 |expandafter|HyPsd@GetTwoBytes
2152 |else
2153 #1%
2154 |expandafter|HyPsd@GetOneByte
2155 |fi
2156 }%
2157 |fi
2158 }%

```

\HyPsd@GetTwoBytes

```

2159 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2160 #1\#2#3#4%
2161 |HyPsd@DoConvert
2162 }%

```

\HyPsd@GetOneByte

```

2163 |gdef|HyPsd@GetOneByte#1#2{%
2164 #1#2%
2165 |HyPsd@DoConvert
2166 }%

```

2167 |endgroup

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

```
2168 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%  
2169   \xdef#4{#4#1#2}%  
2170   \HyPsd@@ConvertToUnicode#3\END#4%  
2171 }
```

\HyPsd@Char

```
2172 \begingroup  
2173   \catcode0=9 %  
2174   \catcode'\^=7 %  
2175   \catcode'\^^=12 %  
2176   \def\x{^^^0000}%  
2177 \expandafter\endgroup  
2178 \ifx\x\@empty  
2179   \def\HyPsd@Char#1{%  
2180     \ifnum'#1<128 %  
2181       \@backslashchar 000#1%  
2182     \else  
2183       \ifnum'#1<65536 %  
2184         \expandafter\HyPsd@CharTwoByte\number'#1!%  
2185       \else  
2186         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate  
2187         \intcalcSub{'#1}{65536}!%  
2188       \fi  
2189     \fi  
2190   }%  
2191   \def\HyPsd@CharTwoByte#1!{%  
2192     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2193     \IntCalcDiv#1!256!!%  
2194     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2195     \IntCalcMod#1!256!!%  
2196   }%  
2197   \def\HyPsd@CharOctByte#1!{%  
2198     \@backslashchar  
2199     \IntCalcDiv#1!64!%  
2200     \intcalcDiv{\IntCalcMod#1!64!}{8}%  
2201     \IntCalcMod#1!8!%  
2202   }%  
2203   \def\HyPsd@CharSurrogate#1!{%  
2204     \@backslashchar 33%  
2205     \IntCalcDiv#1!262144!%  
2206     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2207     \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%  
2208     \@backslashchar 33%  
2209     \expandafter\expandafter\expandafter\IntCalcAdd  
2210     \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%  
2211     \expandafter\expandafter\expandafter\HyPsd@CharOctByte  
2212     \IntCalcMod#1!256!!%  
2213   }%  
2214 \else  
2215   \def\HyPsd@Char#1{%  
2216     \@backslashchar 000#1%  
2217   }%  
2218 \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

2219 \begingroup\expandafter\expandafter\expandafter\endgroup
2220 \expandafter\ifx\csname numexpr\endcsname\relax
2221   \let\HyPsd@UTFviii\relax
2222 \else
2223   \begingroup
2224     \lccode'\~='^f4\relax
2225   \lowercase{\endgroup
2226     \def\HyPsd@UTFviii{%
2227       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2228       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2229       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2230       \ifx~\HyPsd@UTFviii@ccxliv@undef
2231         \let~\HyPsd@UTFviii@ccxliv@def
2232       \fi
2233       \let\unichar\HyPsd@unichar
2234     }%
2235   }%
2236   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2237   \edef\HyPsd@UTFviii@ccxliv@def{%
2238     \noexpand\UTFviii@four@octets\string ^f4%
2239   }%
```

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.

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

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

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

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

$$(5)$$

```

2240 \def\HyPsd@UTFviii@two#1#2{%
2241   \expandafter\HyPsd@UTFviii@@two
2242   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2243   \number'#1\expandafter| %
2244   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2245   \number'#2 \@nil
2246 }%
2247 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2248   \expandafter\8%
2249   \number\numexpr #1-48\expandafter\relax
2250   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2251   \number\numexpr #3-8*%
```

```

2252 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2253 \number\dimexpr #4-8*#3\relax
2254 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2255 \def\HyPsd@UTFviii@three#1#2#3{%
2256 \expandafter\HyPsd@UTFviii@three
2257 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2258 \number'#1\expandafter| %
2259 \number\ifnum\dimexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2260 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2261 \number'#2\expandafter| %
2262 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2263 \number'#3 \@nil
2264 }%
2265 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2266 \expandafter\9%
2267 \number\dimexpr #1-56\expandafter\relax
2268 \number\dimexpr 2* (#2-4*#1)+#3\expandafter\relax
2269 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2270 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2271 \number\dimexpr #6-16\expandafter\relax
2272 \number\dimexpr #7-8*#6\relax
2273 }%

```

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

```

```

2274 \def\HyPsd@UTFviii@four#1#2{%
2275 \expandafter\HyPsd@UTFviii@four\number
2276 \dimexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2277 \expandafter|\number
2278 \dimexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2279 }%
2280 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2281 \933\number\dimexpr.25\dimexpr'#1sp\relax\relax
2282 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr'#1sp\endcsname
2283 \ifodd#2 %
2284 \number\dimexpr(#2-1)/2\relax
2285 \else
2286 \number\dimexpr#2/2\relax
2287 \fi

```



```

2288 \number\numexpr\ifodd#2 4+\fi
2289 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2290 \933%
2291 \expandafter\HyPsd@@@UTFviii@four\number
2292 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2293 }%
2294 \def\HyPsd@@@UTFviii@four#1|#2{%
2295 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2296 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2297 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2298 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2299 }%

```

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

```

2300 \def\HyPsd@unichar#1{%
2301 \ifHy@unicode
2302 \ifnum#1>"10FFFF %
2303 \HyPsd@UnicodeReplacementCharacter % illegal
2304 \else
2305 \ifnum#1>"FFFF %

```

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

```

2306 \expandafter\HyPsd@unichar\expandafter{%
2307 \number\numexpr 55296+%
2308 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2309 \relax\relax\relax
2310 }%

```

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

```

2311 \expandafter\HyPsd@unichar\expandafter{%
2312 \number\numexpr#1-9216%
2313 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2314 \relax\relax\relax
2315 }%
2316 \else
2317 \ifnum#1>"7FF %
2318 \9%
2319 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2320 \number
2321 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2322 }%
2323 \else
2324 \8%
2325 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2326 \fi
2327 \expandafter\HyPsd@unichar@second@byte\expandafter{%
2328 \number
2329 \numexpr#1-256*\number
2330 \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2331 }%
2332 \fi
2333 \fi
2334 \else
2335 .% unsupported (Unicode -> PDF Doc Encoding)
2336 \fi
2337 }%
2338 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%

```

```

2339 \def\HyPsd@unichar@first@byte#1{%
2340 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2341 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2342 \number
2343 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2344 \relax\relax\relax
2345 }%
2346 }%
2347 \def\HyPsd@unichar@second@byte#1{%
2348 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2349 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2350 \number
2351 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2352 \relax\relax\relax
2353 }%
2354 }%
2355 \def\HyPsd@unichar@octtwo#1{%
2356 \number\dimexpr.125\dimexpr#1sp\relax\relax
2357 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2358 \relax\relax\relax
2359 }%
2360 \fi

```

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

```

2361 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2362 \ifx\@gobble#1%
2363 \else
2364 [Please insert \textbackslash PrerenderUnicode%
2365 \textbraceleft#1\textbraceright\space
2366 into preamble]%
2367 \fi
2368 }%

```

7 Support of other packages

7.1 Class memoir

```

2369 \@ifclassloaded{memoir}{%
2370 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2371 }{}

```

7.2 Package subfigure

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

```

2372 \@ifpackageloaded{subfigure}{%
2373 \ltx@ifundefined{sub@label}{%
2374 \Hy@hypertextnamesfalse
2375 }{%
2376 \renewcommand*{\sub@label}[1]{%
2377 \@bsphack
2378 \subfig@oldlabel{#1}%
2379 \if@filesw
2380 \beginngroup
2381 \edef\@currentlabstr{%
2382 \expandafter\strip@prefix\meaning\@currentlabelname
2383 }%

```

```

2384 \protected@write\@auxout{}\{}%
2385 \string\newlabel{sub@#1}\{}%
2386 {\@nameuse{@@thesub\@capytype}}%
2387 {\thepage}%
2388 {\%
2389 \expandafter\strip@period\@currentlabstr
2390 \relax.\relax\@@@%
2391 }%
2392 {\@currentHref}%
2393 {\}%
2394 }%
2395 }%
2396 \endgroup
2397 \fi
2398 \@esphack
2399 }%
2400 \@ifpackagelater{subfigure}{2002/03/26}\{}%
2401 \providecommand*\@toclevel@subfigure{1}%
2402 \providecommand*\@toclevel@subtable{1}%
2403 }%
2404 }%
2405 \{}

```

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:

```

2406 \ltx@ifundefined{XR@addURL}\{}%
2407 \{}%

```

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.

```

2408 \def\xr@addURL#1{\xr@dURL#1\{}%
2409 \def\xr@dURL#1#2#3#4#5\{}%
2410 {\#1}\#2}%
2411 \if!#4!%
2412 \else
2413 {\#3}\#4}\xr@URL}%
2414 \fi
2415 }%
2416 }

2417 \def\Hy@true{true}
2418 \def\Hy@false{false}

```

Providing dummy definitions.

```

2419 \let\literalps@out\@gobble
2420 \newcommand\pdfbookmark[3]{}
2421 \def\Acrobatmenu#1#2{\leavevmode#2}
2422 \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

```
2423 \let\HyperRaiseLinkHook\@empty
2424 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2425 \newcount\Hy@SavedSpaceFactor
2426 \def\Hy@SaveSpaceFactor{%
2427   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2428 }
2429 \def\Hy@RestoreSpaceFactor{%
2430   \relax
2431   \ifhmode
2432     \ifnum\Hy@SavedSpaceFactor>\z@
2433       \spacefactor=\Hy@SavedSpaceFactor
2434     \fi
2435   \fi
2436 }
2437 \def\Hy@SaveSavedSpaceFactor{%
2438   \edef\Hy@RestoreSavedSpaceFactor{%
2439     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2440   }%
2441 }
2442 \def\Hy@raisedlink#1{%
2443   \ifvmode
2444     #1%
2445   \else
2446     \Hy@SaveSpaceFactor
2447     \penalty\@M
2448     \smash{%
2449       \begingroup
2450         \let\HyperRaiseLinkLength\@tempdima
2451         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2452         \HyperRaiseLinkHook
2453       \expandafter\endgroup
2454       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2455         \Hy@RestoreSpaceFactor
2456         #1%
2457         \Hy@SaveSpaceFactor
2458       }%
2459     }%
2460     \Hy@RestoreSpaceFactor
2461   \fi
2462 }
```

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

```
2463 \def\Hy@SaveLastskip{%
2464   \let\Hy@RestoreLastskip\relax
2465   \ifvmode
2466     \ifdim\lastskip=\z@
2467       \let\Hy@RestoreLastskip\nobreak
2468     \else
```

```

2469 \begingroup
2470 \skip@=-\lastskip
2471 \edef\x{%
2472   \endgroup
2473   \def\noexpand\Hy@RestoreLastskip{%
2474     \noexpand\ifvmode
2475     \noexpand\nobreak
2476     \vskip\the\skip@
2477     \vskip\the\lastskip\relax
2478     \noexpand\fi
2479   }%
2480 }%
2481 \x
2482 \fi
2483 \else
2484 \ifhmode
2485 \ifdim\lastskip=\z@
2486 \let\Hy@RestoreLastskip\nobreak
2487 \else
2488 \begingroup
2489 \skip@=-\lastskip
2490 \edef\x{%
2491   \endgroup
2492   \def\noexpand\Hy@RestoreLastskip{%
2493     \noexpand\ifhmode
2494     \noexpand\nobreak
2495     \hskip\the\skip@
2496     \hskip\the\lastskip\relax
2497     \noexpand\fi
2498   }%
2499 }%
2500 \x
2501 \fi
2502 \fi
2503 \fi
2504 }%

```

9 Options

```

2505 \SetupKeyvalOptions{%
2506   family=Hyp,%
2507   prefix=HyOpt%
2508 }

```

9.1 Help macros

\Hy@boolkey

```

2509 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2510 \def\Hy@@boolkey[#1]#2#3{%
2511   \edef\Hy@tempa{#3}%
2512   \lowercase\expandafter{%
2513     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2514   }%
2515   \ifx\Hy@tempa\@empty
2516     \let\Hy@tempa\Hy@true
2517   \fi
2518   \ifx\Hy@tempa\Hy@true

```

```

2519 \else
2520 \ifx\Hy@tempa\Hy>false
2521 \else
2522 \let\Hy@tempa\relax
2523 \fi
2524 \fi
2525 \ifx\Hy@tempa\relax
2526 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2527 \else
2528 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2529 \csname Hy@#2\Hy@tempa\endcsname
2530 \fi
2531 }

```

\Hy@WarnOptionValue

```

2532 \def\Hy@WarnOptionValue#1#2#3{%
2533 \Hy@Warning{%
2534 Unexpected value ‘#1’\MessageBreak
2535 of option ‘#2’ instead of\MessageBreak
2536 #3%
2537 }%
2538 }

```

\Hy@DisableOption

```

2539 \def\Hy@DisableOption#1{%
2540 \@ifundefined{KV@Hyp@#1@default}{%
2541 \define@key{Hyp}{#1}%
2542 }{%
2543 \define@key{Hyp}{#1}[]%
2544 }%
2545 {\Hy@WarnOptionDisabled{#1}}%
2546 }

```

\Hy@WarnOptionDisabled

```

2547 \def\Hy@WarnOptionDisabled#1{%
2548 \Hy@Warning{%
2549 Option ‘#1’ has already been used,\MessageBreak
2550 setting the option has no effect%
2551 }%
2552 }

```

\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.

```

2553 \def\Hy@CheckOptionValue#1#2#3{%
2554 \begingroup
2555 \edef\x{#1}%
2556 \@onelevel@sanitize\x
2557 \let\y=y%
2558 \def\do##1##2{%
2559 \def\z{##1}%
2560 \@onelevel@sanitize\z
2561 \ifx\x\z
2562 \let\y=n%
2563 \let\do\@gobbletwo
2564 \fi
2565 }%
2566 #3%

```

```

2567 \ifx\y y%
2568 \def\do##1##2{%
2569 * '##1'%
2570 \ifx\\##2\\\else\space(##2)\fi
2571 \MessageBreak
2572 }%
2573 \Hy@Warning{%
2574 Values of option '#2':\MessageBreak
2575 ##3%
2576 * An empty value disables the option.\MessageBreak
2577 Unknown value '\x'%
2578 }%
2579 \fi
2580 \endgroup
2581 }

```

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

```

2582 \def\Hy@DefNameKey#1{%
2583 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2584 }

```

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

```

2585 \def\Hy@@DefNameKey#1#2#3{%
2586 \define@key{Hyp}{#2}{%
2587 \edef#1{##1}%
2588 \ifx#1\@empty
2589 \else
2590 \Hy@CheckOptionValue{##1}{#2}{#3}%
2591 \fi
2592 }%
2593 \let#1\@empty
2594 }

```

`\Hy@UseNameKey`

```

2595 \def\Hy@UseNameKey#1#2{%
2596 \ifx#2\@empty
2597 \else
2598 /#1/#2%
2599 \fi
2600 }

```

9.2 Defining the options

```

2601 \define@key{Hyp}{implicit}[true]{%
2602 \Hy@boolkey{implicit}{#1}%
2603 }
2604 \define@key{Hyp}{draft}[true]{%
2605 \Hy@boolkey{draft}{#1}%
2606 }
2607 \define@key{Hyp}{final}[true]{%
2608 \Hy@boolkey{final}{#1}%
2609 }

```

```

2610 \let\KV@Hyp@nolinks\KV@Hyp@draft
2611 \def\Hy@ObsoletePaperOption#1{%
2612   \Hy@WarningNoLine{%
2613     Option '#1' is no longer used%
2614   }%
2615   \define@key{Hyp}{#1}[true]{}%
2616 }
2617 \def\Hy@temp#1{%
2618   \define@key{Hyp}{#1}[true]{%
2619     \Hy@ObsoletePaperOption{#1}%
2620   }%
2621 }
2622 \Hy@temp{a4paper}
2623 \Hy@temp{a5paper}
2624 \Hy@temp{b5paper}
2625 \Hy@temp{letterpaper}
2626 \Hy@temp{legalpaper}
2627 \Hy@temp{executivepaper}
2628 \define@key{Hyp}{setpagesize}[true]{%
2629   \Hy@boolkey{setpagesize}{#1}%
2630 }
2631 \define@key{Hyp}{debug}[true]{%
2632   \Hy@boolkey[debug]{verbose}{#1}%
2633 }
2634 \define@key{Hyp}{linktocpage}[true]{%
2635   \Hy@boolkey{linktocpage}{#1}%
2636   \ifHy@linktocpage
2637     \let\Hy@linktoc\Hy@linktoc@page
2638   \else
2639     \let\Hy@linktoc\Hy@linktoc@section
2640   \fi
2641 }
2642 \chardef\Hy@linktoc@none=0 %
2643 \chardef\Hy@linktoc@section=1 %
2644 \chardef\Hy@linktoc@page=2 %
2645 \chardef\Hy@linktoc@all=3 %
2646 \ifHy@linktocpage
2647   \let\Hy@linktoc\Hy@linktoc@page
2648 \else
2649   \let\Hy@linktoc\Hy@linktoc@section
2650 \fi
2651 \define@key{Hyp}{linktoc}{%
2652   \@ifundefined{Hy@linktoc@#1}{%
2653     \Hy@Warning{%
2654       Unexpected value '#1' of\MessageBreak
2655       option 'linktoc' instead of 'none',\MessageBreak
2656       'section', 'page' or 'all'%
2657     }%
2658   }{%
2659     \expandafter\let\expandafter\Hy@linktoc
2660     \csname Hy@linktoc@#1\endcsname
2661   }%
2662 }
2663 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2664 \let\XR@ext\relax
2665 \define@key{Hyp}{verbose}[true]{%
2666   \Hy@boolkey{verbose}{#1}%

```



```

2667 }
2668 \define@key{Hyp}{typexml}[true]{%
2669   \Hy@boolkey{typexml}{#1}%
2670 }

```

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.

```

2671 \define@key{Hyp}{raiselinks}[true]{%
2672   \Hy@boolkey{raiselinks}{#1}%
2673 }

```

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

```

2674 \def\Hy@setbreaklinks#1{%
2675   \csname breaklinks#1\endcsname
2676 }

2677 \def\Hy@breaklinks@unsupported{%
2678   \ifx\Hy@setbreaklinks\@gobble
2679     \ifHy@breaklinks
2680       \Hy@WarningNoLine{%
2681         You have enabled option 'breaklinks'.\MessageBreak
2682         But driver '\Hy@driver.def' does not support this.\MessageBreak
2683         Expect trouble with the link areas of broken links%
2684       }%
2685     \fi
2686   \fi
2687 }

2688 \define@key{Hyp}{breaklinks}[true]{%
2689   \Hy@boolkey{breaklinks}{#1}%
2690   \let\Hy@setbreaklinks\@gobble
2691 }

2692 \define@key{Hyp}{localanchorname}[true]{%
2693   \Hy@boolkey{localanchorname}{#1}%
2694 }

```

Determines whether an automatic anchor is put on each page

```

2695 \define@key{Hyp}{pageanchor}[true]{%
2696   \Hy@boolkey{pageanchor}{#1}%
2697 }

```

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.

```

2698 \define@key{Hyp}{plainpages}[true]{%
2699   \Hy@boolkey{plainpages}{#1}%
2700 }

```

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

```

2701 \define@key{Hyp}{naturalnames}[true]{%
2702   \Hy@boolkey{naturalnames}{#1}%
2703 }

```

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

```

2704 \define@key{Hyp}{hypertexnames}[true]{%
2705   \Hy@boolkey{hypertexnames}{#1}%
2706 }

```

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

```

2707 \define@key{Hyp}{nesting}[true]{%
2708   \Hy@boolkey{nesting}{#1}%
2709 }

2710 \define@key{Hyp}{unicode}[true]{%
2711   \Hy@boolkey{unicode}{#1}%
2712   \ifHy@unicode
2713     \def\HyPsd@pdfencoding{unicode}%
2714     \HyPsd@LoadUnicode
2715   \else
2716     \def\HyPsd@pdfencoding{pdfdoc}%
2717   \fi
2718 }

2719 \def\HyPsd@LoadUnicode{%
2720   \@ifundefined{T@PU}{%
2721     \input{puenc.def}%
2722     \HyLinguex@Restore
2723   }{}%
2724   \DeclareFontFamily{PU}{pdf}{}%
2725   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2726   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2727   \global\let\HyPsd@LoadUnicode\relax
2728 }

2729 \Hy@AtBeginDocument{%
2730   \ifx\HyPsd@LoadUnicode\relax
2731   \else
2732     \def\HyPsd@LoadUnicode{%
2733       \Hy@Error{%
2734         Unicode support for bookmarks is not available.\MessageBreak
2735         Activate unicode support by using one of the options\MessageBreak
2736         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2737         in the preamble%
2738       }\@ehc
2739       \global\let\HyPsd@LoadUnicode\relax
2740       \global\Hy@unicodedefalse
2741       \global\let\Hy@unicodetrue\Hy@unicodedefalse
2742     }%
2743   \fi
2744 }

2745 \define@key{Hyp}{pdfencoding}{%
2746   \edef\HyPsd@temp{#1}%
2747   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2748     \let\HyPsd@pdfencoding\HyPsd@temp
2749     \Hy@unicodedefalse
2750   \else
2751     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2752       \z@
2753     \else
2754       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2755         \z@
2756       \else
2757         \@ne
2758       \fi
2759     \fi
2760     \let\HyPsd@pdfencoding\HyPsd@temp
2761     \hypersetup{unicode}%
2762     \ifHy@unicode
2763       \def\HyPsd@pdfencoding{#1}%

```

```

2764 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2765 \HyPsd@LoadStringEnc
2766 \fi
2767 \else
2768 \Hy@Warning{Cannot switch to unicode bookmarks}%
2769 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2770 \fi
2771 \else
2772 \@onelevel@sanitize\HyPsd@temp
2773 \Hy@Warning{%
2774 Values of option 'pdfencoding':\MessageBreak
2775 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2776 Ignoring unknown value '\HyPsd@temp'%
2777 }%
2778 \fi
2779 \fi
2780 }
2781 \def\HyPsd@pdfencoding@auto{auto}
2782 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2783 \def\HyPsd@pdfencoding@unicode{unicode}
2784 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2785 \def\HyPsd@LoadStringEnc{%
2786 \RequirePackage{stringenc}[2009/12/15]%
2787 \let\HyPsd@LoadStringEnc\relax
2788 }
2789 \Hy@AtBeginDocument{%
2790 \@ifpackageloaded{stringenc}{%
2791 \let\HyPsd@LoadStringEnc\relax
2792 }{%
2793 \def\HyPsd@LoadStringEnc{%
2794 \Hy@WarningNoLine{%
2795 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2796 in the preamble or load the package there%
2797 }%
2798 }%
2799 }%
2800 }
2801 \def\hypersetup{\kvsetkeys{Hyp}}
2802 \newif\ifHy@setpdfversion
2803 \define@key{Hyp}{pdfversion}{%
2804 \@ifundefined{Hy@pdfversion@#1}{%
2805 \PackageWarning{hyperref}{%
2806 Unsupported PDF version '#1'.\MessageBreak
2807 Valid values: 1.2 until 1.9%
2808 }%
2809 }{%
2810 \Hy@setpdfversiontrue
2811 \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2812 }%
2813 }
2814 \@namedef{Hy@pdfversion@1.2}{2}%
2815 \@namedef{Hy@pdfversion@1.3}{3}%
2816 \@namedef{Hy@pdfversion@1.4}{4}%
2817 \@namedef{Hy@pdfversion@1.5}{5}%
2818 \@namedef{Hy@pdfversion@1.6}{6}%
2819 \@namedef{Hy@pdfversion@1.7}{7}%
2820 \@namedef{Hy@pdfversion@1.8}{8}%

```

```

2821 \@namedef{Hy@pdfversion@1.9}{9}%
2822 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2823 \newif\ifHy@DviMode
2824 \let\Hy@DviErrMsg\ltx@empty
2825 \ifpdf
2826   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2827 \else
2828   \ifxetex
2829     \def\Hy@DviErrMsg{XeTeX is running}%
2830   \else
2831     \ifvtex
2832       \ifvtexdvi
2833         \Hy@DviModetrue
2834       \else
2835         \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2836       \fi
2837     \else
2838       \Hy@DviModetrue
2839     \fi
2840   \fi
2841 \fi
2842 \def\HyOpt@CheckDvi#1{%
2843   \ifHy@DviMode
2844     \expandafter\ltx@firstofone
2845   \else
2846     \Hy@Error{%
2847       Wrong DVI mode driver option ‘#1’,\MessageBreak
2848       because \Hy@DviErrMsg
2849     }\@ehc
2850     \expandafter\ltx@gobble
2851   \fi
2852 }

2853 \DeclareVoidOption{tex4ht}{%
2854   \Hy@texhttrue
2855   \kvsetkeys{Hyp}{colorlinks=true}%
2856   \def\BeforeTeXIVht{\RequirePackage{color}}}%
2857 \def\Hy@driver{htex4ht}%
2858 \def\MaybeStopEarly{%
2859   \Hy@Message{Stopped early}%
2860   \Hy@AtBeginDocument{%
2861     \PDF@FinishDoc
2862     \gdef\PDF@FinishDoc{}%
2863   }%
2864   \endinput
2865 }%
2866 }

2867 \DeclareVoidOption{pdftex}{%
2868   \ifpdf
2869     \def\Hy@driver{hpdftex}%
2870   \else
2871     \Hy@Error{%
2872       Wrong driver option ‘pdftex’,\MessageBreak
2873       because pdfTeX in PDF mode is not detected%
2874     }\@ehc

```

```

2875 \fi
2876 }
2877 \DeclareVoidOption{nativepdf}{%
2878 \HyOpt@CheckDvi{nativepdf}{%
2879 \def\Hy@driver{hdvips}%
2880 }%
2881 }
2882 \DeclareVoidOption{dvipdfm}{%
2883 \HyOpt@CheckDvi{dvipdfm}{%
2884 \def\Hy@driver{hdvipdfm}%
2885 }%
2886 }
2887 \DeclareVoidOption{dvipdfmx}{%
2888 \HyOpt@CheckDvi{dvipdfmx}{%
2889 \def\Hy@driver{hdvipdfm}%
2890 }%
2891 }
2892 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2893 \expandafter\ifx\csname if#1\expandafter\endcsname
2894 \csname iftrue\endcsname
2895 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2896 \else
2897 \chardef\SpecialDvipdfmxOutlineOpen\z@
2898 \fi
2899 }
2900 \DeclareVoidOption{xetex}{%
2901 \ifxetex
2902 \def\Hy@driver{hxetex}%
2903 \else
2904 \Hy@Error{%
2905 Wrong driver option 'xetex',\MessageBreak
2906 because XeTeX is not detected%
2907 }\@ehc
2908 \fi
2909 }
2910 \DeclareVoidOption{pdfmark}{%
2911 \HyOpt@CheckDvi{pdfmark}{%
2912 \def\Hy@driver{hdvips}%
2913 }%
2914 }
2915 \DeclareVoidOption{dvips}{%
2916 \HyOpt@CheckDvi{dvips}{%
2917 \def\Hy@driver{hdvips}%
2918 }%
2919 }
2920 \DeclareVoidOption{hypertex}{%
2921 \HyOpt@CheckDvi{hypertex}{%
2922 \def\Hy@driver{hypertex}%
2923 }%
2924 }
2925 \let\Hy@MaybeStopNow\relax
2926 \DeclareVoidOption{vtex}{%
2927 \ifvtex
2928 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2929 \def\Hy@driver{hvtex}%
2930 \else
2931 \ifnum\OpMode=10\relax

```

```

2932 \def\Hy@driver{hvtexhtm}%
2933 \def\MaybeStopEarly{%
2934   \Hy@Message{Stopped early}%
2935   \Hy@AtBeginDocument{%
2936     \PDF@FinishDoc
2937     \gdef\PDF@FinishDoc{}}%
2938   }%
2939   \endinput
2940 }%
2941 \else
2942   \Hy@Error{%
2943     Wrong driver option 'vtex',\MessageBreak
2944     because of wrong OpMode (\the\OpMode)%
2945   }\@ehc
2946 \fi
2947 \fi
2948 \else
2949   \Hy@Error{%
2950     Wrong driver option 'vtex',\MessageBreak
2951     because VTeX is not running%
2952   }\@ehc
2953 \fi
2954 }
2955 \DeclareVoidOption{vtexpdfmark}{%
2956   \ifvtex
2957     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2958     \def\Hy@driver{hvtexmrk}%
2959   \else
2960     \Hy@Error{%
2961       Wrong driver option 'vtexpdfmark',\MessageBreak
2962       because of wrong OpMode (\the\OpMode)%
2963     }\@ehc
2964   \fi
2965 \else
2966   \Hy@Error{%
2967     Wrong driver option 'vtexpdfmark,\MessageBreak
2968     because VTeX is not running%
2969   }\@ehc
2970 \fi
2971 }
2972 \DeclareVoidOption{dviwindo}{%
2973   \HyOpt@CheckDvi{dviwindo}{%
2974     \def\Hy@driver{hdviwind}%
2975     \kvsetkeys{Hyp}{colorlinks}%
2976     \PassOptionsToPackage{dviwindo}{color}%
2977   }%
2978 }
2979 \DeclareVoidOption{dvipsone}{%
2980   \HyOpt@CheckDvi{dvipsone}{%
2981     \def\Hy@driver{hdvipson}%
2982   }%
2983 }
2984 \DeclareVoidOption{textures}{%
2985   \HyOpt@CheckDvi{textures}{%
2986     \def\Hy@driver{htexture}%
2987   }%
2988 }

```

```

2989 \DeclareVoidOption{latex2html}{%
2990   \HyOpt@CheckDvi{latex2html}{%
2991     \Hy@AtBeginDocument{\@@@latex2htmlX}%
2992   }%
2993 }

```

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

```

2994 \DeclareVoidOption{ps2pdf}{%
2995   \HyOpt@CheckDvi{ps2pdf}{%
2996     \def\Hy@driver{hdvips}%
2997   }%
2998 }

2999 \let\HyOpt@DriverFallback\ltx@empty
3000 \define@key{Hyp}{driverfallback}{%
3001   \ifHy@DviMode
3002     \def\HyOpt@DriverFallback{#1}%
3003     \Hy@Match\HyOpt@DriverFallback{%
3004       ~(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
3005       latex2html|tex4ht)$%
3006     }{}%
3007     \let\HyOpt@DriverFallback\ltx@empty
3008   }%
3009 \fi
3010 }

```

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.

```

3011 \define@key{Hyp}{hyperfigures}[true]{%
3012   \Hy@boolkey[hyperfigures]{figures}{#1}%
3013 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

3014 \define@key{Hyp}{hyperfootnotes}[true]{%
3015   \Hy@boolkey[hyperfootnotes]{#1}%
3016 }

```

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

```

3017 \def\back@none{none}
3018 \def\back@section{section}
3019 \def\back@page{page}
3020 \def\back@slide{slide}
3021 \define@key{Hyp}{backref}[section]{%
3022   \lowercase{\def\Hy@tempa{#1}}%
3023   \ifx\Hy@tempa\@empty
3024     \let\Hy@tempa\back@section
3025   \fi
3026   \ifx\Hy@tempa\Hy@false
3027     \let\Hy@tempa\back@none
3028   \fi
3029   \ifx\Hy@tempa\back@slide
3030     \let\Hy@tempa\back@section
3031   \fi
3032   \ifx\Hy@tempa\back@page
3033     \PassOptionsToPackage{hyperpageref}{backref}%
3034     \Hy@backreftrue
3035   \else

```

```

3036 \ifx\Hy@tempa\back@section
3037   \PassOptionsToPackage{hyperref}{backref}%
3038   \Hy@backreftrue
3039 \else
3040   \ifx\Hy@tempa\back@none
3041     \Hy@backreffalse
3042   \else
3043     \Hy@WarnOptionValue{#1}{backref}{%
3044       'section', 'slide', 'page', 'none',\MessageBreak
3045       or 'false'}%
3046   \fi
3047 \fi
3048 \fi
3049 }
3050 \define@key{Hyp}{pagebackref}[true]{%
3051   \edef\Hy@tempa{#1}%
3052   \lowercase\expandafter{%
3053     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3054   }%
3055   \ifx\Hy@tempa\@empty
3056     \let\Hy@tempa\Hy>true
3057   \fi
3058   \ifx\Hy@tempa\Hy>true
3059     \PassOptionsToPackage{hyperpageref}{backref}%
3060     \Hy@backreftrue
3061   \else
3062     \ifx\Hy@tempa\Hy>false
3063       \Hy@backreffalse
3064     \else
3065       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
3066     \fi
3067   \fi
3068 }

```

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

```

3069 \define@key{Hyp}{hyperindex}[true]{%
3070   \Hy@boolkey{hyperindex}{#1}%
3071 }

```

Configuration of encap char.

```

3072 \define@key{Hyp}{encap}[|]{%
3073   \def\HyInd@EncapChar{#1}%
3074 }

```

12 Language options

The `\autoref` feature depends on the language.

```

3075 \def\HyLang@afrikaans{%
3076   \def\equationautorefname{Vergelyking}%
3077   \def\footnoteautorefname{Voetnota}%
3078   \def\itemautorefname{Item}%
3079   \def\figureautorefname{Figuur}%
3080   \def\tableautorefname{Tabel}%
3081   \def\partautorefname{Deel}%
3082   \def\appendixautorefname{Bylae}%
3083   \def\chapterautorefname{Hoofstuk}%

```



```

3084 \def\sectionautorefname{Afdeling}%
3085 \def\subsectionautorefname{Subafdeling}%
3086 \def\subsubsectionautorefname{Subsubafdeling}%
3087 \def\paragraphautorefname{Paragraaf}%
3088 \def\subparagraphautorefname{Subparagraaf}%
3089 \def\FancyVerbLineautorefname{Lyn}%
3090 \def\theoremautorefname{Teorema}%
3091 \def\pageautorefname{Bladsy}%
3092 }
3093 \def\HyLang@english{%
3094 \def\equationautorefname{Equation}%
3095 \def\footnoteautorefname{footnote}%
3096 \def\itemautorefname{item}%
3097 \def\figureautorefname{Figure}%
3098 \def\tableautorefname{Table}%
3099 \def\partautorefname{Part}%
3100 \def\appendixautorefname{Appendix}%
3101 \def\chapterautorefname{chapter}%
3102 \def\sectionautorefname{section}%
3103 \def\subsectionautorefname{subsection}%
3104 \def\subsubsectionautorefname{subsubsection}%
3105 \def\paragraphautorefname{paragraph}%
3106 \def\subparagraphautorefname{subparagraph}%
3107 \def\FancyVerbLineautorefname{line}%
3108 \def\theoremautorefname{Theorem}%
3109 \def\pageautorefname{page}%
3110 }
3111 \def\HyLang@french{%
3112 \def\equationautorefname{'Equation}%
3113 \def\footnoteautorefname{note}%
3114 \def\itemautorefname{item}%
3115 \def\figureautorefname{Figure}%
3116 \def\tableautorefname{Tableau}%
3117 \def\partautorefname{Partie}%
3118 \def\appendixautorefname{Appendice}%
3119 \def\chapterautorefname{chapitre}%
3120 \def\sectionautorefname{section}%
3121 \def\subsectionautorefname{sous-section}%
3122 \def\subsubsectionautorefname{sous-sous-section}%
3123 \def\paragraphautorefname{paragraphe}%
3124 \def\subparagraphautorefname{sous-paragraphe}%
3125 \def\FancyVerbLineautorefname{ligne}%
3126 \def\theoremautorefname{Th\'eor\'eme}%
3127 \def\pageautorefname{page}%
3128 }
3129 \def\HyLang@german{%
3130 \def\equationautorefname{Gleichung}%
3131 \def\footnoteautorefname{Fu\ss note}%
3132 \def\itemautorefname{Punkt}%
3133 \def\figureautorefname{Abbildung}%
3134 \def\tableautorefname{Tabelle}%
3135 \def\partautorefname{Teil}%
3136 \def\appendixautorefname{Anhang}%
3137 \def\chapterautorefname{Kapitel}%
3138 \def\sectionautorefname{Abschnitt}%
3139 \def\subsectionautorefname{Unterabschnitt}%
3140 \def\subsubsectionautorefname{Unterunterabschnitt}%

```

```

3141 \def\paragraphautorefname{Absatz}%
3142 \def\subparagraphautorefname{Unterabsatz}%
3143 \def\FancyVerbLineautorefname{Zeile}%
3144 \def\theoremautorefname{Theorem}%
3145 \def\pageautorefname{Seite}%
3146 }
3147 \def\HyLang@italian{%
3148 \def\equationautorefname{Equazione}%
3149 \def\footnoteautorefname{nota}%
3150 \def\itemautorefname{punto}%
3151 \def\figureautorefname{Figura}%
3152 \def\tableautorefname{Tabella}%
3153 \def\partautorefname{Parte}%
3154 \def\appendixautorefname{Appendice}%
3155 \def\chapterautorefname{Capitolo}%
3156 \def\sectionautorefname{sezione}%
3157 \def\subsectionautorefname{sottosezione}%
3158 \def\subsubsectionautorefname{sottosottosezione}%
3159 \def\paragraphautorefname{paragrafo}%
3160 \def\subparagraphautorefname{sottoparagrafo}%
3161 \def\FancyVerbLineautorefname{linea}%
3162 \def\theoremautorefname{Teorema}%
3163 \def\pageautorefname{Pag.\@}%
3164 }
3165 \def\HyLang@magyar{%
3166 \def\equationautorefname{Egyenlet}%
3167 \def\footnoteautorefname{[\'abjegyzet]}%
3168 \def\itemautorefname{Elem}%
3169 \def\figureautorefname{\'Abra}%
3170 \def\tableautorefname{T\'abl\'azat}%
3171 \def\partautorefname{R\'esz}%
3172 \def\appendixautorefname{F\'uggel\'ek}%
3173 \def\chapterautorefname{fejezet}%
3174 \def\sectionautorefname{szakasz}%
3175 \def\subsectionautorefname{alszakasz}%
3176 \def\subsubsectionautorefname{alalszakasz}%
3177 \def\paragraphautorefname{bekezd\'es}%
3178 \def\subparagraphautorefname{albekezd\'es}%
3179 \def\FancyVerbLineautorefname{sor}%
3180 \def\theoremautorefname{T\'etel}%
3181 \def\pageautorefname{oldal}%
3182 }
3183 \def\HyLang@portuges{%
3184 \def\equationautorefname{Equa\c c\~ao}%
3185 \def\footnoteautorefname{Nota de rodap\'e}%
3186 \def\itemautorefname{Item}%
3187 \def\figureautorefname{Figura}%
3188 \def\tableautorefname{Tabela}%
3189 \def\partautorefname{Parte}%
3190 \def\appendixautorefname{Ap\^endice}%
3191 \def\chapterautorefname{Cap\'itulo}%
3192 \def\sectionautorefname{Se\c c\~ao}%
3193 \def\subsectionautorefname{Subse\c c\~ao}%
3194 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3195 \def\paragraphautorefname{par\'agrafo}%
3196 \def\subparagraphautorefname{subpar\'agrafo}%
3197 \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.

```
3222 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrI.}%
3223 % \def\appendixautorefname{%
3224 % \cyr\cyrp\cyrr\cyri\cyrI\cyro\cyrzh\cyre\cyrn\cyri\cyre
3225 % }%
```

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.

```
3226 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3227 \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.

```
3228 \def\paragraphautorefname{\cyr\cyrp.}%
3229 \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.

```
3230 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3231 % \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.

```
3232 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3233 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3234 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3235 % \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 ...

```
3236 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3237 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3238 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3239 \def\pageautorefname{\cyr\cyrs.}%
3240 }
```

```
3241 \def\HyLang@spanish{%
3242 \def\equationautorefname{Ecuaci'on}%
3243 \def\footnoteautorefname{Nota a pie de p'agina}%
3244 \def\itemautorefname{Elemento}%
3245 \def\figureautorefname{Figura}%
3246 \def\tableautorefname{Tabla}%
3247 \def\partautorefname{Parte}%
```

```

3248 \def\appendixautorefname{Ap\'endice}%
3249 \def\chapterautorefname{Cap\'itulo}%
3250 \def\sectionautorefname{Secci\'on}%
3251 \def\subsectionautorefname{Subsecci\'on}%
3252 \def\subsubsectionautorefname{Subsubsecci\'on}%
3253 \def\paragraphautorefname{P\'arrafo}%
3254 \def\subparagraphautorefname{Subp\'arrafo}%
3255 \def\FancyVerbLineautorefname{L\'inea}%
3256 \def\theoremautorefname{Teorema}%
3257 \def\pageautorefname{P\'agina}%
3258 }
3259 \def\HyLang@vietnamese{%
3260 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr\'inh}%
3261 \def\footnoteautorefname{Ch\'u th\'ich}%
3262 \def\itemautorefname{m\du{c}%
3263 \def\figureautorefname{H\'inh}%
3264 \def\tableautorefname{B\h{a}ng}%
3265 \def\partautorefname{Ph\'acircumflex{}n}%
3266 \def\appendixautorefname{Ph\du{l}\du{c}%
3267 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
3268 \def\sectionautorefname{m\du{c}%
3269 \def\subsectionautorefname{m\du{c}%
3270 \def\subsubsectionautorefname{m\du{c}%
3271 \def\paragraphautorefname{\dj{}o\da{n}%
3272 \def\subparagraphautorefname{\dj{}o\da{n}%
3273 \def\FancyVerbLineautorefname{d\'ong}%
3274 \def\theoremautorefname{DJ{}\di{nh l\'y}%
3275 \def\pageautorefname{Trang}%
3276 }

```

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

```

3277 \def\HyLang@addto#1#2{%
3278   #2%
3279   \@temptokena{#2}%
3280   \ifx#1\relax
3281     \let#1\@empty
3282   \fi
3283   \ifx#1\@undefined
3284     \edef#1{\the\@temptokena}%
3285   \else
3286     \toks@\expandafter{#1}%
3287     \edef#1{\the\toks@\the\@temptokena}%
3288   \fi
3289   \@temptokena{}\toks@\@temptokena
3290 }
3291 \def\HyLang@DeclareLang#1#2#3{%
3292   \@ifpackagewith{babel}{#1}{%
3293     \expandafter\HyLang@addto
3294     \csname extras#1\expandafter\endcsname
3295     \csname HyLang@#2\endcsname
3296     \begingroup
3297     \edef\x{\endgroup
3298       #3%
3299     }%
3300     \x
3301     \@namedef{HyLang@#1@done}{}%

```

```

3302 }{}%
3303 \begingroup
3304 \edef\x##1##2{%
3305   \noexpand\ifx##2\relax
3306     \errmessage{No definitions for language #2' found!}%
3307   \noexpand\fi
3308 \endgroup
3309 \noexpand\define@key{Hyp}{#1}[]{}%
3310 \noexpand\@ifundefined{HyLang@#1@done}{}%
3311 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3312 #3%
3313 \noexpand\@namedef{HyLang@#1@done}{}%
3314 }{}%
3315 }%
3316 }%
3317 \expandafter\x\csname extras#1\expandafter\endcsname
3318 \csname HyLang@#2\endcsname
3319 }
3320 \HyLang@DeclareLang{english}{english}{}
3321 \HyLang@DeclareLang{UKenglish}{english}{}
3322 \HyLang@DeclareLang{british}{english}{}
3323 \HyLang@DeclareLang{USenglish}{english}{}
3324 \HyLang@DeclareLang{american}{english}{}
3325 \HyLang@DeclareLang{german}{german}{}
3326 \HyLang@DeclareLang{austrian}{german}{}
3327 \HyLang@DeclareLang{ngerman}{german}{}
3328 \HyLang@DeclareLang{naustrian}{german}{}
3329 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3330 \HyLang@DeclareLang{brazil}{portuges}{}
3331 \HyLang@DeclareLang{brazilian}{portuges}{}
3332 \HyLang@DeclareLang{portuguese}{portuges}{}
3333 \HyLang@DeclareLang{spanish}{spanish}{}
3334 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3335 \HyLang@DeclareLang{french}{french}{}
3336 \HyLang@DeclareLang{frenchb}{french}{}
3337 \HyLang@DeclareLang{francais}{french}{}
3338 \HyLang@DeclareLang{acadian}{french}{}
3339 \HyLang@DeclareLang{canadien}{french}{}
3340 \HyLang@DeclareLang{italian}{italian}{}
3341 \HyLang@DeclareLang{magyar}{magyar}{}
3342 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3343 \DeclareVoidOption{vietnamese}{%
3344   \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3345   \Hy@AtEndOfPackage{%
3346     \@ifundefined{T@PU}{}{}%
3347     \input{puvnenc.def}%
3348   }%
3349 }%
3350 }
3351 \DeclareVoidOption{vietnam}{%
3352   \HyLang@addto\extravietnam\HyLang@vietnamese
3353   \Hy@AtEndOfPackage{%
3354     \@ifundefined{T@PU}{}{}%
3355     \input{puvnenc.def}%
3356   }%
3357 }%

```

```
3358 }
```

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

```
3359 \DeclareVoidOption{arabic}{}%
3360 \Hy@AtEndOfPackage{%
3361   \ifundefined{T@PU}{}%
3362     \input{puarenc.def}%
3363   }%
3364 }%
3365 }
```

13 Options to change appearance of links

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

```
3366 \define@key{Hyp}{colorlinks}[true]{%
3367   \Hy@boolkey{colorlinks}{#1}%
3368 }
3369 \DeclareVoidOption{hidelinks}{%
3370   \Hy@colorlinksfalse
3371   \Hy@ocgcolorlinksfalse
3372   \Hy@frenchlinksfalse
3373   \def\Hy@colorlink##1{\begingroup}%
3374   \def\Hy@endcolorlink{\endgroup}%
3375   \def\@pdfborder{0 0 0}%
3376   \let\@pdfborderstyle\ltx@empty
3377 }
3378 \define@key{Hyp}{ocgcolorlinks}[true]{%
3379   \Hy@boolkey{ocgcolorlinks}{#1}%
3380 }
3381 \Hy@AtBeginDocument{%
3382   \begingroup
3383   \ifundefined{OBJ@OCG@view}{%
3384     \ifHy@ocgcolorlinks
3385       \Hy@Warning{%
3386         Driver does not support 'ocgcolorlinks',\MessageBreak
3387         using 'colorlinks' instead%
3388       }%
3389     \fi
3390   }{}%
3391   \endgroup
3392 }
3393 \define@key{Hyp}{frenchlinks}[true]{%
3394   \Hy@boolkey{frenchlinks}{#1}%
3395 }
```

14 Bookmarking

```
3396 \begingroup\expandafter\expandafter\expandafter\endgroup
3397 \expandafter\ifx\csname chapter\endcsname\relax
3398   \def\toclevel@part{0}%
3399 \else
3400   \def\toclevel@part{-1}%
3401 \fi
3402 \def\toclevel@chapter{0}
3403 \def\toclevel@section{1}
```

```

3404 \def\toclevel@subsection{2}
3405 \def\toclevel@subsubsection{3}
3406 \def\toclevel@paragraph{4}
3407 \def\toclevel@subparagraph{5}
3408 \def\toclevel@figure{0}
3409 \def\toclevel@table{0}
3410 \ifpackageloaded{listings}{%
3411   \providecommand*\theHlstlisting{\thelstlisting}%
3412   \providecommand*\toclevel@lstlisting{0}%
3413 }{}
3414 \ifpackageloaded{listing}{%
3415   \providecommand*\theHlisting{\thelisting}%
3416   \providecommand*\toclevel@listing{0}%
3417 }{}

3418 \define@key{Hyp}{bookmarks}[true]{%
3419   \Hy@boolkey{bookmarks}{#1}%
3420 }

3421 \define@key{Hyp}{bookmarksopen}[true]{%
3422   \Hy@boolkey{bookmarksopen}{#1}%
3423 }

```

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.

```

3424 \let\Hy@bookmarksdepth\c@tocdepth
3425 \define@key{Hyp}{bookmarksdepth}[]{}%
3426 \begingroup
3427   \edef\x{#1}%
3428   \ifx\x\empty
3429     \global\let\Hy@bookmarksdepth\c@tocdepth
3430   \else
3431     \ifundefined{toclevel@\x}{%
3432       \@onelevel@sanitize\x
3433       \edef\y{\expandafter\@car\x\@nil}%
3434       \ifcase 0\expandafter\ifx\y-1\fi
3435         \expandafter\ifnum\expandafter\y>47 %
3436         \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
3437       \Hy@Warning{Unknown document division name (\x)}%
3438     \else
3439       \setbox\z@=\hbox{%
3440         \count@=\x
3441         \xdef\Hy@bookmarksdepth{\the\count@}%
3442       }%
3443     \fi
3444   }{}%
3445   \setbox\z@=\hbox{%
3446     \count@=\csname toclevel@\x\endcsname
3447     \xdef\Hy@bookmarksdepth{\the\count@}%
3448   }%

```



```

3449 }%
3450 \fi
3451 \endgroup
3452 }

```

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

```

3453 \define@key{Hyp}{bookmarksopenlevel}{%
3454 \def\@bookmarksopenlevel{#1}%
3455 }
3456 \def\@bookmarksopenlevel{\maxdimen}
3457 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3458 \define@key{Hyp}{bookmarkstype}{%
3459 \def\Hy@bookmarkstype{#1}%
3460 }
3461 \def\Hy@bookmarkstype{toc}

```

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

```

3462 \define@key{Hyp}{bookmarksnumbered}[true]{%
3463 \Hy@boolkey{bookmarksnumbered}{#1}%
3464 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3465 \define@key{Hyp}{CJKbookmarks}[true]{%
3466 \Hy@boolkey{CJKbookmarks}{#1}%
3467 }

3468 \def\Hy@temp#1{%
3469 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3470 }
3471 \def\Hy@@temp#1#2#3{%
3472 \define@key{Hyp}{#2color}{%
3473 \HyColor@HyperrefColor{##1}#1%
3474 }%
3475 \def#1{#3}%
3476 }
3477 \Hy@temp{link}{red}
3478 \Hy@temp{anchor}{black}
3479 \Hy@temp{cite}{green}
3480 \Hy@temp{file}{cyan}
3481 \Hy@temp{url}{magenta}
3482 \Hy@temp{menu}{red}
3483 \Hy@temp{run}{\@filecolor}
3484 \define@key{Hyp}{pagecolor}{%
3485 \Hy@WarningPageColor
3486 }
3487 \def\Hy@WarningPageColor{%
3488 \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3489 \global\let\Hy@WarningPageColor\relax
3490 }
3491 \define@key{Hyp}{allcolors}{%
3492 \HyColor@HyperrefColor{#1}\@linkcolor
3493 \HyColor@HyperrefColor{#1}\@anchorcolor
3494 \HyColor@HyperrefColor{#1}\@citecolor
3495 \HyColor@HyperrefColor{#1}\@filecolor
3496 \HyColor@HyperrefColor{#1}\@urlcolor
3497 \HyColor@HyperrefColor{#1}\@menucolor
3498 \HyColor@HyperrefColor{#1}\@runcolor
3499 }

```

```

3500 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3501 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3502 \let\@baseurl\@empty
3503 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3504 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3505 \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.

```

3506 \let\@pdfpagetransition\relax
3507 \define@key{Hyp}{pdfpagetransition}{%
3508   \def\@pdfpagetransition{#1}%
3509 }

```

`\@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.

```

3510 \let\@pdfpageduration\relax
3511 \define@key{Hyp}{pdfpageduration}{%
3512   \def\@pdfpageduration{#1}%
3513   \Hy@Match\@pdfpageduration{%
3514     ^([|0-9]+\.\?[0-9]*|[0-9]*\.[0-9]+)$%
3515   }{ }{%
3516     \Hy@Warning{%
3517       Invalid value '\@pdfpageduration'\MessageBreak
3518       of option 'pdfpageduration'\MessageBreak
3519       is replaced by an empty value%
3520     }%
3521     \let\@pdfpageduration\ltx@empty
3522   }%
3523 }

```

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.

```

3524 \newif\ifHy@useHidKey
3525 \Hy@useHidKeyfalse
3526 \define@key{Hyp}{pdfpagehidden}[true]{%
3527   \Hy@boolkey{pdfpagehidden}{#1}%
3528   \ifHy@pdfpagehidden
3529     \global\Hy@useHidKeytrue
3530   \fi
3531 }

```

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).

```

3532 \def\Hy@ColorList{cite,file,link,menu,run,url}

```

```

3533 \@for\Hy@temp:=\Hy@ColorList\do{%
3534   \edef\Hy@temp{%
3535     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3536       \noexpand\HyColor@HyperrefBorderColor
3537         {##1}%
3538       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3539       {hyperref}%
3540       {\Hy@temp bordercolor}%
3541     }%
3542   }%
3543   \Hy@temp
3544 }
3545 \define@key{Hyp}{pagebordercolor}{%
3546   \Hy@WarningPageBorderColor
3547 }
3548 \def\Hy@WarningPageBorderColor{%
3549   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3550   \global\let\Hy@WarningPageBorderColor\relax
3551 }
3552 \define@key{Hyp}{allbordercolors}{%
3553   \def\Hy@temp##1##2{%
3554     \HyColor@HyperrefBorderColor{#1}##1{hyperref}{##2bordercolor}%
3555   }%
3556   \Hy@temp\@citebordercolor{cite}%
3557   \Hy@temp\@filebordercolor{file}%
3558   \Hy@temp\@linkbordercolor{link}%
3559   \Hy@temp\@menubordercolor{menu}%
3560   \Hy@temp\@runbordercolor{run}%
3561   \Hy@temp\@urlbordercolor{url}%
3562 }
3563 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3564 \Hy@DefNameKey{pdfhighlight}{%
3565   \do{/I}{Invert}%
3566   \do{/N}{None}%
3567   \do{/O}{Outline}%
3568   \do{/P}{Push}%
3569 }
3570 \define@key{Hyp}{pdfborder}{%
3571   \let\Hy@temp\@pdfborder
3572   \def\@pdfborder{#1}%
3573   \Hy@Match\@pdfborder{%
3574     ^\HyPat@NonNegativeReal/ %
3575     \HyPat@NonNegativeReal/ %
3576     \HyPat@NonNegativeReal/%
3577     ( ?[\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)*])?%%
3578   }{}{%
3579     \Hy@Warning{%
3580       Invalid value '\@pdfborder'\MessageBreak
3581       for option 'pdfborder'\MessageBreak
3582       Option setting is ignored%
3583     }%
3584     \let\@pdfborder\Hy@temp
3585   }%
3586 }
3587 \define@key{Hyp}{pdfborderstyle}{%
3588   \let\Hy@temp\@pdfborderstyle
3589   \def\@pdfborderstyle{#1}%

```

```

3590 \Hy@Match\@pdfborderstyle{%
3591   ^%
3592   ( */Type */Border%
3593   | */W +\HyPat@NonNegativeReal/%
3594   | */S */[SDBIU]%
3595   | */D *[\ *(\HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?)]%
3596   )* *$%
3597 }{}{%
3598   \Hy@Warning{%
3599     Invalid value '\@pdfborderstyle'\MessageBreak
3600     for option 'pdfborderstyle'\MessageBreak
3601     Option setting is ignored%
3602   }%
3603   \let\@pdfborderstyle\Hy@temp
3604 }%
3605 }
3606 \def\Hy@setpdfborder{%
3607   \ifx\@pdfborder\@empty
3608   \else
3609     /Border[\@pdfborder]%
3610   \fi
3611   \ifx\@pdfborderstyle\@empty
3612   \else
3613     /BS<<\@pdfborderstyle>>%
3614   \fi
3615 }
3616 \Hy@DefNameKey{pdfpagemode}{%
3617   \do{UseNone}{}%
3618   \do{UseOutlines}{}%
3619   \do{UseThumbs}{}%
3620   \do{FullScreen}{}%
3621   \do{UseOC}{PDF 1.5}%
3622   \do{UseAttachments}{PDF 1.6}%
3623 }
3624 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3625   \do{UseNone}{}%
3626   \do{UseOutlines}{}%
3627   \do{UseThumbs}{}%
3628   \do{FullScreen}{}%
3629   \do{UseOC}{PDF 1.5}%
3630   \do{UseAttachments}{PDF 1.6}%
3631 }
3632 \Hy@DefNameKey{pdfdirection}{%
3633   \do{L2R}{Left to right}%
3634   \do{R2L}{Right to left}%
3635 }
3636 \Hy@DefNameKey{pdfviewarea}{%
3637   \do{MediaBox}{}%
3638   \do{CropBox}{}%
3639   \do{BleedBox}{}%
3640   \do{TrimBox}{}%
3641   \do{ArtBox}{}%
3642 }
3643 \Hy@DefNameKey{pdfviewclip}{%
3644   \do{MediaBox}{}%
3645   \do{CropBox}{}%
3646   \do{BleedBox}{}%

```

```

3647 \do{TrimBox}{}%
3648 \do{ArtBox}{}%
3649 }
3650 \Hy@DefNameKey{pdfprintarea}{%
3651 \do{MediaBox}{}%
3652 \do{CropBox}{}%
3653 \do{BleedBox}{}%
3654 \do{TrimBox}{}%
3655 \do{ArtBox}{}%
3656 }
3657 \Hy@DefNameKey{pdfprintclip}{%
3658 \do{MediaBox}{}%
3659 \do{CropBox}{}%
3660 \do{BleedBox}{}%
3661 \do{TrimBox}{}%
3662 \do{ArtBox}{}%
3663 }
3664 \Hy@DefNameKey{pdfprintscaling}{%
3665 \do{AppDefault}{}%
3666 \do{None}{}%
3667 }
3668 \Hy@DefNameKey{pdfduplex}{%
3669 \do{Simplex}{}%
3670 \do{DuplexFlipShortEdge}{}%
3671 \do{DuplexFlipLongEdge}{}%
3672 }
3673 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3674 \do{true}{}%
3675 \do{false}{}%
3676 }
3677 \define@key{Hyp}{pdfprintpagerange}{%
3678 \def\@pdfprintpagerange{#1}%
3679 }
3680 \Hy@DefNameKey{pdfnumcopies}{%
3681 \do{2}{two copies}%
3682 \do{3}{three copies}%
3683 \do{4}{four copies}%
3684 \do{5}{five copies}%
3685 }
3686 \define@key{Hyp}{pdfusetitle}[true]{%
3687 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3688 }
3689 \def\HyXeTeX@CheckUnicode{%
3690 \ifxetex
3691 \ifHy@unicode
3692 \else
3693 \Hy@WarningNoLine{%
3694 XeTeX driver only supports unicode.\MessageBreak
3695 Enabling option 'unicode'%
3696 }%
3697 \kvsetkeys{Hyp}{unicode}%
3698 \fi
3699 \else
3700 \let\HyXeTeX@CheckUnicode\relax
3701 \fi
3702 }
3703 \def\HyPsd@PrerenderUnicode#1{%

```

```

3704 \begingroup
3705 \expandafter\ifx\cscname PrerenderUnicode\endcsname\relax
3706 \else
3707 \sbox0{%
3708 \let\GenericInfo\@gobbletwo
3709 \let\GenericWarning\@gobbletwo
3710 \let\GenericError\@gobblefour
3711 \PrerenderUnicode{#1}%
3712 }%
3713 \fi
3714 \endgroup
3715 }
3716 \define@key{Hyp}{pdftitle}{%
3717 \HyXeTeX@CheckUnicode
3718 \HyPsd@XeTeXBigCharstrue
3719 \HyPsd@PrerenderUnicode{#1}%
3720 \pdfstringdef\@pdftitle{#1}%
3721 }
3722 \define@key{Hyp}{pdfauthor}{%
3723 \HyXeTeX@CheckUnicode
3724 \HyPsd@XeTeXBigCharstrue
3725 \HyPsd@PrerenderUnicode{#1}%
3726 \pdfstringdef\@pdfauthor{#1}%
3727 }
3728 \define@key{Hyp}{pdfproducer}{%
3729 \HyXeTeX@CheckUnicode
3730 \HyPsd@XeTeXBigCharstrue
3731 \HyPsd@PrerenderUnicode{#1}%
3732 \pdfstringdef\@pdfproducer{#1}%
3733 }
3734 \define@key{Hyp}{pdfcreator}{%
3735 \HyXeTeX@CheckUnicode
3736 \HyPsd@XeTeXBigCharstrue
3737 \HyPsd@PrerenderUnicode{#1}%
3738 \pdfstringdef\@pdfcreator{#1}%
3739 }
3740 \define@key{Hyp}{pdfcreationdate}{%
3741 \begingroup
3742 \Hy@unicodedefalse
3743 \pdfstringdef\@pdfcreationdate{#1}%
3744 \endgroup
3745 }
3746 \define@key{Hyp}{pdfmoddate}{%
3747 \begingroup
3748 \Hy@unicodedefalse
3749 \pdfstringdef\@pdfmoddate{#1}%
3750 \endgroup
3751 }
3752 \define@key{Hyp}{pdfsubject}{%
3753 \HyXeTeX@CheckUnicode
3754 \HyPsd@XeTeXBigCharstrue
3755 \HyPsd@PrerenderUnicode{#1}%
3756 \pdfstringdef\@pdfsubject{#1}%
3757 }
3758 \define@key{Hyp}{pdfkeywords}{%
3759 \HyXeTeX@CheckUnicode
3760 \HyPsd@XeTeXBigCharstrue

```

```

3761 \HyPsd@PrerenderUnicode{#1}%
3762 \pdfstringdef\@pdfkeywords{#1}%
3763 }
3764 \define@key{Hyp}{pdftrapped}{%
3765 \lowercase{\edef\Hy@temp{#1}}%
3766 \ifx\Hy@temp\HyInfo@trapped@true
3767 \def\@pdftrapped{True}%
3768 \else
3769 \ifx\Hy@temp\HyInfo@trapped@false
3770 \def\@pdftrapped{False}%
3771 \else
3772 \ifx\Hy@temp\HyInfo@trapped@unknown
3773 \def\@pdftrapped{Unknown}%
3774 \else
3775 \ifx\Hy@temp\@empty
3776 \else
3777 \Hy@Warning{%
3778 Unsupported value '#1'\MessageBreak
3779 for option 'pdftrapped'%
3780 }%
3781 \fi
3782 \def\@pdftrapped{}}%
3783 \fi
3784 \fi
3785 \fi
3786 }
3787 \def\HyInfo@trapped@true{true}
3788 \def\HyInfo@trapped@false{false}
3789 \def\HyInfo@trapped@unknown{unknown}
3790 \def\HyInfo@TrappedUnsupported{%
3791 \ifx\@pdftrapped\@empty
3792 \else
3793 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3794 \gdef\HyInfo@TrappedUnsupported{}}%
3795 \fi
3796 }
3797 \define@key{Hyp}{pdfinfo}{%
3798 \kvsetkeys{pdfinfo}{#1}%
3799 }
3800 \def\Hy@temp#1{%
3801 \lowercase{\Hy@temp@A{#1}}{#1}%
3802 }
3803 \def\Hy@temp@A#1#2{%
3804 \define@key{pdfinfo}{#2}{%
3805 \hypersetup{pdf#1={##1}}%
3806 }%
3807 }
3808 \Hy@temp{Title}
3809 \Hy@temp{Author}
3810 \Hy@temp{Keywords}
3811 \Hy@temp{Subject}
3812 \Hy@temp{Creator}
3813 \Hy@temp{Producer}
3814 \Hy@temp{CreationDate}
3815 \Hy@temp{ModDate}
3816 \Hy@temp{Trapped}
3817 \newif\ifHyInfo@AddonUnsupported

```

```

3818 \kv@set@family@handler{pdfinfo}{%
3819   \HyInfo@AddonHandler{#1}{#2}%
3820 }
3821 \let\HyInfo@do\relax
3822 \def\HyInfo@AddonHandler#1#2{%
3823   \ifx\kv@value\relax
3824     \Hy@Warning{%
3825       Option 'pdfinfo': ignoring key '\kv@key' without value%
3826     }%
3827   \else
3828     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3829     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3830     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3831       \ifHyInfo@AddonUnsupported
3832         \Hy@Warning{%
3833           This driver does not support additional\MessageBreak
3834           information entries, therefore\MessageBreak
3835           '\kv@key' is ignored%
3836         }%
3837       \else
3838         \define@key{pdfinfo}{\HyInfo@Key}{%
3839           \HyXeTeX@CheckUnicode
3840           \HyPsd@XeTeXBigCharstrue
3841           \HyPsd@PrerenderUnicode{##1}%
3842           \pdfstringdef\HyInfo@Value{##1}%
3843           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3844             \HyInfo@Value
3845         }%
3846         \edef\HyInfo@AddonList{%
3847           \HyInfo@AddonList
3848           \HyInfo@do{\HyInfo@Key}%
3849         }%
3850         \kv@parse@normalized{%
3851           \HyInfo@Key={#2}%
3852         }{%
3853           \kv@processor@default{pdfinfo}%
3854         }%
3855       \fi
3856     \else
3857       \kv@parse@normalized{%
3858         \HyInfo@Key={#2}%
3859       }{%
3860         \kv@processor@default{pdfinfo}%
3861       }%
3862     \fi
3863   \fi
3864 }
3865 \def\HyInfo@GenerateAddons{%
3866   \ifHyInfo@AddonUnsupported
3867     \def\HyInfo@Addons{}%
3868   \else
3869     \begingroup
3870     \toks@{}%
3871     \def\HyInfo@do##1{%
3872       \EdefEscapeName\HyInfo@Key{##1}%
3873       \edef\x{%
3874         \toks@{

```



```

3875         \the\toks@
3876         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3877     }%
3878 }%
3879 \x
3880 }%
3881 \HyInfo@AddonList
3882 \edef\x{\endgroup
3883     \def\noexpand\HyInfo@Addons{\the\toks@}%
3884 }%
3885 \x
3886 \fi
3887 }
3888 \let\HyInfo@AddonList\ltx@empty

3889 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3890 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3891 \let\setpdfinkmargin\@gobble
3892 \def\calculate@pdfview#1 #2\{\%
3893     \def\@pdfview{#1}%
3894     \ifx\#2\%
3895         \def\@pdfviewparams{-32768}%
3896     \else
3897         \def\@pdfviewparams{#2}%
3898     \fi
3899 }

3900 \begingroup\expandafter\expandafter\expandafter\endgroup
3901 \expandafter\ifx\csname numexpr\endcsname\relax
3902     \def\Hy@number#1{%
3903         \expandafter\@firstofone\expandafter{\number#1}%
3904     }%
3905 \else
3906     \def\Hy@number#1{%
3907         \the\numexpr#1\relax
3908     }%
3909 \fi

3910 \define@key{Hyp}{pdfstartpage}{%
3911     \ifx\#1\%
3912         \let\@pdfstartpage\ltx@empty
3913     \else
3914         \def\@pdfstartpage{\Hy@number{#1}}%
3915     \fi
3916 }%

3917 \define@key{Hyp}{pdfstartview}{%
3918     \ifx\#1\%
3919         \let\@pdfstartview\ltx@empty
3920     \else
3921         \hypercalcbpdef\@pdfstartview{/#1}%
3922     \fi
3923 }

3924 \def\HyPat@NonNegativeReal/{%
3925     \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3926 }

3927 \define@key{Hyp}{pdfremotestartview}{%
3928     \ifx\#1\%
3929         \def\@pdfremotestartview{/Fit}%
3930     \else
3931         \hypercalcbpdef\@pdfremotestartview{#1}%

```

```

3932 \edef\@pdfremotestartview{\@pdfremotestartview}%
3933 \Hy@Match\@pdfremotestartview{%
3934   ~(XYZ -?(null|\HyPat@NonNegativeReal/) %
3935     -?(null|\HyPat@NonNegativeReal/) %
3936     (null|\HyPat@NonNegativeReal/)|%
3937     Fit(|B|%
3938       (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
3939       R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
3940       \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
3941     )$%
3942   }-{}-%
3943   \Hy@Warning{%
3944     Invalid value '\@pdfremotestartview'\MessageBreak
3945     of 'pdfremotestartview'\MessageBreak
3946     is replaced by 'Fit'%
3947   }%
3948   \let\@pdfremotestartview\@empty
3949 }-%
3950 \ifx\@pdfremotestartview\@empty
3951   \def\@pdfremotestartview{/Fit}%
3952 \else
3953   \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3954   \fi
3955 \fi
3956 }
3957 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3958 \define@key{Hyp}{pdftoolbar}[true]{%
3959   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3960 }
3961 \define@key{Hyp}{pdfmenubar}[true]{%
3962   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3963 }
3964 \define@key{Hyp}{pdfwindowui}[true]{%
3965   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3966 }
3967 \define@key{Hyp}{pdffitwindow}[true]{%
3968   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3969 }
3970 \define@key{Hyp}{pdfcenterwindow}[true]{%
3971   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3972 }
3973 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3974   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3975 }
3976 \define@key{Hyp}{pdfa}[true]{%
3977   \Hy@boolkey[pdfa]{#1}%
3978 }
3979 \define@key{Hyp}{pdfnewwindow}[true]{%
3980   \def\Hy@temp{#1}%
3981   \ifx\Hy@temp\@empty
3982     \Hy@newwindowsetfalse
3983   \else
3984     \Hy@newwindowsettrue
3985     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3986   \fi
3987 }
3988 \def\Hy@SetNewWindow{%

```

```

3989 \ifHy@newwindowset
3990 /NewWindow %
3991 \ifHy@newwindow true\else false\fi
3992 \fi
3993 }
3994 \Hy@DefNameKey{pdfpagelayout}{%
3995 \do{SinglePage}{}%
3996 \do{OneColumn}{}%
3997 \do{TwoColumnLeft}{}%
3998 \do{TwoColumnRight}{}%
3999 \do{TwoPageLeft}{PDF 1.5}%
4000 \do{TwoPageRight}{PDF 1.5}%
4001 }
4002 \define@key{Hyp}{pdflang}{%
4003 \def\@pdflang{#1}%
4004 }
4005 \define@key{Hyp}{pdfpagelabels}[true]{%
4006 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
4007 }
4008 \define@key{Hyp}{pdfescapeform}[true]{%
4009 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
4010 }

```

Default values:

```

4011 \def\@linkbordercolor{1 0 0}
4012 \def\@urlbordercolor{0 1 1}
4013 \def\@menubordercolor{1 0 0}
4014 \def\@filebordercolor{0 .5 .5}
4015 \def\@runbordercolor{0 .7 .7}
4016 \def\@citebordercolor{0 1 0}
4017 \def\@pdfhighlight{/I}
4018 \let\@pdftitle\ltx@empty
4019 \let\@pdfauthor\ltx@empty
4020 \let\@pdfproducer\relax
4021 \def\@pdfcreator{LaTeX with hyperref package}
4022 \let\@pdfcreationdate\ltx@empty
4023 \let\@pdfmoddate\ltx@empty
4024 \let\@pdfsubject\ltx@empty
4025 \let\@pdfkeywords\ltx@empty
4026 \let\@pdftrapped\ltx@empty
4027 \let\@pdfpagescrop\ltx@empty
4028 \def\@pdfstartview{/Fit}
4029 \def\@pdfremotestartview{/Fit}
4030 \def\@pdfstartpage{1}
4031 \let\@pdfprintpagerange\ltx@empty
4032 \let\@pdflang\ltx@empty
4033 \let\PDF@SetupDoc\@empty
4034 \let\PDF@FinishDoc\@empty
4035 \let\phantomsection\@empty
4036 \let\special@paper\@empty
4037 \def\HyperDestNameFilter#1{#1}
4038 \Hy@AtBeginDocument{%
4039 \begingroup
4040 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
4041 \dimen@=\x\relax
4042 \ifdim\dimen@>\z@
4043 \else
4044 \dimen@=11in\relax

```

```

4045 \Hy@WarningNoLine{%
4046   Height of page (\expandafter\string\x) %
4047   is invalid (\the\x),\MessageBreak
4048   using 11in%
4049 }%
4050 \fi
4051 \dimen@=0.99626401\dimen@
4052 \xdef\Hy@pageheight{\strip@pt\dimen@}%
4053 \endgroup
4054 }
4055 \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.

```

4056 \let\hyper@normalise\ExecuteOptions
4057 \let\ExecuteOptions\hypersetup
4058 \Hy@RestoreCatcodes
4059 \InputIfFileExists{hyperref.cfg}{-}{-}
4060 \Hy@SetCatcodes
4061 \let\ExecuteOptions\hyper@normalise
4062 \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.

```

4063 \SetupKeyvalOptions{family=Hyp}
4064 \DeclareLocalOptions{%
4065   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4066 }

```

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

```

4067 \@ifpackageloaded{tex4ht}{%
4068   \@ifpackagewith{hyperref}{tex4ht}{-}{-}
4069   \PassOptionsToPackage{tex4ht}{hyperref}%
4070 }%
4071 }{-}

4072 \let\ReadBookmarks\relax
4073 \ProcessKeyvalOptions{Hyp}

```

After processing options.

15.1 Package `xspace` support

```

4074 \def\Hy@xspace@end{}
4075 \ltx@ifundefined{xspaceaddexceptions}{%
4076   \Hy@AtBeginDocument{%
4077     \ltx@ifundefined{xspaceaddexceptions}{%
4078       }{%
4079         \def\Hy@xspace@end{%
4080           \ltx@gobble{end for xspace}%
4081         }%
4082         \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4083       }%
4084     }%
4085   }{-}
4086   \def\Hy@xspace@end{%
4087     \ltx@gobble{end for xspace}%
4088   }%

```

```

4089 \xspaceaddexceptions{\Hy@xspace@end,\hyper@linkend,\hyper@anchorend}%
4090 }

```

15.2 Option draft

```

4091 \Hy@AtBeginDocument{%
4092   \ifHy@draft
4093     \let\hyper@@anchor\@gobble
4094     \gdef\hyper@link#1#2#3{#3\Hy@xspace@end}%
4095     \def\hyper@anchorstart#1#2{#2\Hy@xspace@end}%
4096     \def\hyper@anchorend{\Hy@xspace@end}%
4097     \let\hyper@linkstart\@gobbletwo
4098     \def\hyper@linkend{\Hy@xspace@end}%
4099     \def\hyper@linkurl#1#2{#1\Hy@xspace@end}%
4100     \def\hyper@linkfile#1#2#3{#1\Hy@xspace@end}%
4101     \def\hyper@link@{#1}#2#3#4{#4\Hy@xspace@end}%
4102     \def\Acrobatmenu#1#2{\leavevmode#2\Hy@xspace@end}%
4103     \let\PDF@SetupDoc\@empty
4104     \let\PDF@FinishDoc\@empty
4105     \let\@fifthoffive\@secondoftwo
4106     \let\@secondoffive\@secondoftwo
4107     \let\ReadBookmarks\relax
4108     \let\WriteBookmarks\relax
4109     \Hy@WarningNoLine{Draft mode on}%
4110   \fi
4111   \Hy@DisableOption{draft}%
4112   \Hy@DisableOption{nolinks}%
4113   \Hy@DisableOption{final}%
4114 }

```

15.3 PDF/A

```

4115 \Hy@DisableOption{pdfa}
4116 \ifHy@pdfa
4117   \kvsetkeys{Hyp}{pdfversion=1.4}%
4118   \def\Hy@Acrobatmenu#1#2{%
4119     \leavevmode
4120     \begingroup
4121     \edef\x{#1}%
4122     \@onelevel@sanitize\x
4123     \ifx\x\Hy@NextPage
4124       \let\y=Y%
4125     \else
4126       \ifx\x\Hy@PrevPage
4127         \let\y=Y%
4128       \else
4129         \ifx\x\Hy@FirstPage
4130           \let\y=Y%
4131         \else
4132           \ifx\x\Hy@LastPage
4133             \let\y=Y%
4134           \else
4135             \let\y=N%
4136           \fi
4137         \fi
4138       \fi
4139     \fi
4140   \expandafter\endgroup
4141   \ifx\y Y%

```

```

4142 \else
4143   \Hy@Error{%
4144     PDF/A: Named action '#1' is not permitted%
4145   }\@ehc
4146   {#2}%
4147   \expandafter\@gobble
4148 \fi
4149 }%
4150 \def\Hy@temp#1{%
4151   \expandafter\def\csname Hy@#1\endcsname{#1}%
4152   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4153 }%
4154 \Hy@temp{NextPage}%
4155 \Hy@temp{PrevPage}%
4156 \Hy@temp{FirstPage}%
4157 \Hy@temp{LastPage}%
4158 \else
4159 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4160 \fi

```

15.4 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.

```

4161 \Hy@nextfalse
4162 \ltx@ifundefined{spanish@sh@}{\Hy@nexttrue}
4163 \ltx@ifundefined{galician@sh@}{\Hy@nexttrue}
4164 \ltx@ifundefined{estonian@sh@}{\Hy@nexttrue}
4165 \ifHy@next
4166   \let\texttilde\~%
4167 \fi

4168 \def\Hy@wrapper@babel#1#2{%
4169   \begingroup
4170   \Hy@safe@activetrue
4171   \set@display@protect
4172   \edef\x{#2}%
4173   \@onelevel@sanitize\x
4174   \toks@{#1}%
4175   \edef\x{\endgroup\the\toks@{x}}%
4176   \x
4177 }
4178 \def\Hy@WrapperDef#1{%
4179   \begingroup
4180   \escapechar=\m@ne
4181   \xdef\Hy@gtemp{%
4182     \expandafter\noexpand\csname HyWrap@string#1\endcsname
4183   }%
4184   \endgroup
4185   \edef#1{%
4186     \noexpand\Hy@wrapper@babel
4187     \expandafter\noexpand\Hy@gtemp
4188   }%
4189   \expandafter\def\Hy@gtemp
4190 }

4191 \ifHy@figures
4192   \Hy@Info{Hyper figures ON}%
4193 \else

```

```

4194 \Hy@Info{Hyper figures OFF}%
4195 \fi
4196 \ifHy@nesting
4197 \Hy@Info{Link nesting ON}%
4198 \else
4199 \Hy@Info{Link nesting OFF}%
4200 \fi
4201 \ifHy@hyperindex
4202 \Hy@Info{Hyper index ON}%
4203 \else
4204 \Hy@Info{Hyper index OFF}%
4205 \fi
4206 \ifHy@plainpages
4207 \Hy@Info{Plain pages ON}%
4208 \else
4209 \Hy@Info{Plain pages OFF}%
4210 \fi
4211 \ifHy@backref
4212 \Hy@Info{Backreferencing ON}%
4213 \else
4214 \Hy@Info{Backreferencing OFF}%
4215 \fi
4216 \ifHy@typexml
4217 \Hy@AtEndOfPackage{%
4218 \RequirePackage{color}%
4219 \RequirePackage{nameref}%
4220 }%
4221 \fi
4222 \Hy@DisableOption{typexml}
4223 \ifHy@implicit
4224 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4225 \else
4226 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4227 \def\MaybeStopEarly{%
4228 \Hy@Message{Stopped early}}%
4229 \Hy@AtBeginDocument{%
4230 \PDF@FinishDoc
4231 \gdef\PDF@FinishDoc{}%
4232 }%
4233 \endinput
4234 }%
4235 \Hy@AtBeginDocument{%
4236 \let\autoref\ref
4237 \let\autopageref\pageref
4238 \ifx\@pdfpagemode\@empty
4239 \gdef\@pdfpagemode{UseNone}%
4240 \fi
4241 \global\Hy@backreffalse
4242 }%
4243 \Hy@AtEndOfPackage{%
4244 \global\let\ReadBookmarks\relax
4245 \global\let\WriteBookmarks\relax
4246 }%
4247 \fi
4248 \Hy@DisableOption{implicit}

```

15.4.1 Driver loading

```
4249 \Hy@AtEndOfPackage{%  
4250 \ifpackageloaded{tex4ht}{%  
4251 \def\Hy@driver{htex4ht}%  
4252 \Hy@texhttrue  
4253 }{}}%
```

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.

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



```

4302 \Hy@WarningNoLine{%
4303   Wrong driver '\Hy@driver.def';\MessageBreak
4304   VTeX is running in HTML mode.\MessageBreak
4305   Forcing driver '\Hy@temp.def'%
4306 }%
4307 \let\Hy@driver\Hy@temp
4308 \fi
4309 \else
4310 \ifx\Hy@driver\Hy@temp
4311 \Hy@WarningNoLine{%
4312   Wrong driver '\Hy@driver.def';\MessageBreak
4313   VTeX is not running in HTML mode.\MessageBreak
4314   Using default driver%
4315 }%
4316 \let\Hy@driver\@empty
4317 \fi
4318 \fi
4319 \fi

```

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

```

4320 \def\HyOpt@DriverType{%
4321 \ifx\Hy@driver\@empty
4322 \def\HyOpt@DriverType{ (autodetected)}%
4323 \providecommand*{\Hy@defaultdriver}{hypertex}%
4324 \ifpdf
4325 \def\Hy@driver{hpdftex}%
4326 \else
4327 \ifxetex
4328 \def\Hy@driver{hxetex}%
4329 \else
4330 \ifvtexhtml
4331 \def\Hy@driver{hvtexhtm}%
4332 \def\MaybeStopEarly{%
4333 \Hy@Message{Stopped early}%
4334 \Hy@AtBeginDocument{%
4335 \PDF@FinishDoc
4336 \gdef\PDF@FinishDoc{}%
4337 }%
4338 \endinput
4339 }%
4340 \else
4341 \ifvtexpdf
4342 \def\Hy@driver{hvtex}%
4343 \else
4344 \ifvtexps
4345 \def\Hy@driver{hvtex}%
4346 \else
4347 \ifx\HyOpt@DriverFallback\ltx@empty
4348 \let\Hy@driver\Hy@defaultdriver
4349 \def\HyOpt@DriverType{ (default)}%
4350 \else
4351 \begingroup
4352 \toks@\expandafter{\HyOpt@DriverFallback}%
4353 \edef\x{\endgroup
4354 \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4355 }%
4356 \x
4357 \ifx\Hy@driver\ltx@empty

```

```

4358         \let\Hy@driver\Hy@defaultdriver
4359         \def\HyOpt@DriverType{ (default)}%
4360     \else
4361         \def\HyOpt@DriverType{ (fallback)}%
4362     \fi
4363 \fi
4364 \fi
4365 \fi
4366 \fi
4367 \fi
4368 \fi
4369 \ifx\Hy@driver\Hy@defaultdriver
4370     \def\Hy@temp{hdwind}%
4371     \ifx\Hy@temp\Hy@driver
4372         \kvsetkeys{Hyp}{colorlinks}%
4373         \PassOptionsToPackage{dviwindo}{color}%
4374     \fi
4375 \fi
4376 \fi
4377 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4378 \chardef\Hy@VersionChecked=0 %
4379 \input{\Hy@driver.def}%
4380 \ifcase\Hy@VersionChecked
4381     \Hy@VersionCheck{\Hy@driver.def}%
4382 \fi
4383 \let\@unprocessedoptions\relax
4384 \Hy@RestoreCatcodes
4385 \Hy@DisableOption{tex4ht}%
4386 \Hy@DisableOption{pdftex}%
4387 \Hy@DisableOption{nativepdf}%
4388 \Hy@DisableOption{dvipdfm}%
4389 \Hy@DisableOption{dvipdfmx}%
4390 \Hy@DisableOption{dvipdfmx-outline-open}%
4391 \Hy@DisableOption{pdfmark}%
4392 \Hy@DisableOption{dvips}%
4393 \Hy@DisableOption{hypertex}%
4394 \Hy@DisableOption{vtex}%
4395 \Hy@DisableOption{vtexpdfmark}%
4396 \Hy@DisableOption{dviwindo}%
4397 \Hy@DisableOption{dvipsone}%
4398 \Hy@DisableOption{textures}%
4399 \Hy@DisableOption{latex2html}%
4400 \Hy@DisableOption{ps2pdf}%
4401 \Hy@DisableOption{xetex}%
4402 \Hy@DisableOption{pdfversion}%
4403 }

```

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.

```

4404 \newif\ifHy@DvipdfmxOutlineOpen
4405 \ifxetex
4406     \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4407     \else
4408         \chardef\SpecialDvipdfmxOutlineOpen\@ne
4409         \Hy@DvipdfmxOutlineOpentrue
4410     \fi
4411 \fi

```

```

4412 \begingroup\expandafter\expandafter\expandafter\endgroup
4413 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4414 \else
4415   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4416     \Hy@DvipdfmxOutlineOpentruer
4417   \fi
4418 \fi

```

15.4.2 Bookmarks

```

4419 \def\WriteBookmarks{0}
4420 \def\@bookmarkopenstatus#1{%
4421   \ifHy@bookmarksopen

```

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

```

4422   \ifnum#1<\expandafter\@firstofone\expandafter
4423     {\number\@bookmarksopenlevel} % explicit space
4424   \else
4425     -%
4426   \fi
4427 \else
4428   -%
4429 \fi
4430 }
4431 \ifHy@bookmarks
4432   \Hy@Info{Bookmarks ON}%
4433   \ifx\@pdfpagemode\@empty
4434     \def\@pdfpagemode{UseOutlines}%
4435   \fi
4436 \else
4437   \let\@bookmarkopenstatus\ltx@gobble
4438   \Hy@Info{Bookmarks OFF}%
4439   \Hy@AtEndOfPackage{%
4440     \global\let\ReadBookmarks\relax
4441     \global\let\WriteBookmarks\relax
4442   }%
4443   \ifx\@pdfpagemode\@empty
4444     \def\@pdfpagemode{UseNone}%
4445   \fi
4446 \fi
4447 \Hy@DisableOption{bookmarks}

```

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

```

4448 \def\Hy@CatcodeWrapper#1{%
4449   \let\Hy@endWrap\ltx@empty
4450   \def\TMP@EnsureCode##1##2{%
4451     \edef\Hy@endWrap{%
4452       \catcode##1 \the\catcode##1\relax
4453     }%
4454     \catcode##1 ##2\relax
4455   }%
4456   \TMP@EnsureCode{10}{12}% ^^J
4457   \TMP@EnsureCode{33}{12}% !
4458   \TMP@EnsureCode{34}{12}% "
4459   \TMP@EnsureCode{36}{3}% $ (math)
4460   \TMP@EnsureCode{38}{4}% & (alignment)
4461   \TMP@EnsureCode{39}{12}% '
4462   \TMP@EnsureCode{40}{12}% (

```

```

4464 \TMP@EnsureCode{41}{12}% )
4465 \TMP@EnsureCode{42}{12}% *
4466 \TMP@EnsureCode{43}{12}% +
4467 \TMP@EnsureCode{44}{12}% ,
4468 \TMP@EnsureCode{45}{12}% -
4469 \TMP@EnsureCode{46}{12}% .
4470 \TMP@EnsureCode{47}{12}% /
4471 \TMP@EnsureCode{58}{12}% :
4472 \TMP@EnsureCode{59}{12}% ;
4473 \TMP@EnsureCode{60}{12}% <
4474 \TMP@EnsureCode{61}{12}% =
4475 \TMP@EnsureCode{62}{12}% >
4476 \TMP@EnsureCode{63}{12}% ?
4477 \TMP@EnsureCode{91}{12}% [
4478 \TMP@EnsureCode{93}{12}% ]
4479 \TMP@EnsureCode{94}{7}% ^ (superscript)
4480 \TMP@EnsureCode{95}{8}% _ (subscript)
4481 \TMP@EnsureCode{96}{12}% '
4482 \TMP@EnsureCode{124}{12}% |
4483 \TMP@EnsureCode{126}{13}% ~ (active)
4484 #1\relax
4485 \Hy@endWrap
4486 }

```

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

```

4487 \Hy@AtBeginDocument{%
4488   \ifHy@ocgcolorlinks
4489     \kvsetkeys{Hyp}{colorlinks}%
4490     \ifHy@pdfa
4491       \Hy@Warning{%
4492         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4493         using 'colorlinks' instead of 'ocgcolorlinks'%
4494       }%
4495       \Hy@ocgcolorlinksfalse
4496     \fi
4497   \fi
4498   \ifHy@ocgcolorlinks
4499   \else
4500     \Hy@DisableOption{ocgcolorlinks}%
4501   \fi
4502   \ifHy@colorlinks
4503     \def\@pdfborder{0 0 0}%
4504     \let\@pdfborderstyle\@empty
4505     \ifHy@typexml
4506     \else
4507       \Hy@CatcodeWrapper{%
4508         \RequirePackage{color}%
4509       }%
4510     \fi
4511     \def\Hy@colorlink#1{%
4512       \begingroup
4513       \HyColor@UseColor#1%
4514     }%
4515     \def\Hy@endcolorlink{\endgroup}%
4516     \Hy@Info{Link coloring ON}%
4517   \else
4518     \ifHy@frenchlinks

```

```

4519 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4520 \def\Hy@endcolorlink{\endgroup}%
4521 \Hy@Info{French linking ON}%
4522 \else
for grouping consistency:
4523 \def\Hy@colorlink#1{\begingroup}%
4524 \def\Hy@endcolorlink{\endgroup}%
4525 \Hy@Info{Link coloring OFF}%
4526 \fi
4527 \fi
4528 \Hy@DisableOption{colorlinks}%
4529 \Hy@DisableOption{frenchlinks}%
4530 \ifHy@texht
4531 \long\def\@firstoffive#1#2#3#4#5{#1}%
4532 \long\def\@secondoffive#1#2#3#4#5{#2}%
4533 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4534 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4535 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4536 \providecommand*\@safe@activetrue{}%
4537 \providecommand*\@safe@activesfalse{}%
4538 \def\T@ref#1{%
4539 \Hy@safe@activetrue
4540 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4541 \Hy@safe@activesfalse
4542 }%
4543 \def\T@pageref#1{%
4544 \Hy@safe@activetrue
4545 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4546 \Hy@safe@activesfalse
4547 }%
4548 \else
4549 \ifHy@typexml
4550 \else
4551 \Hy@CatcodeWrapper{%
4552 \RequirePackage{nameref}%
4553 }%
4554 \fi
4555 \fi
4556 \DeclareRobustCommand\ref{%
4557 \@ifstar\@refstar\T@ref
4558 }%
4559 \DeclareRobustCommand\pageref{%
4560 \@ifstar\@pagerefstar\T@pageref
4561 }%
4562 % \@ifclassloaded{memoir}{%
4563 % \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4564 % \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4565 % }%
4566 % }\ltx@secondoftwo
4567 % {%
4568 % \DeclareRobustCommand*{\nameref}{%
4569 % \@ifstar\@mem@titlerefno link\@mem@titleref
4570 % }%
4571 % }{%
4572 \DeclareRobustCommand*{\nameref}{%
4573 \@ifstar\@namerefstar\T@nameref
4574 }%

```

```

4575 % }%
4576 }
4577 \Hy@AtBeginDocument{%
4578   \ifHy@texht
4579   \else
4580     \Hy@CatcodeWrapper\ReadBookmarks
4581   \fi
4582 }

4583 \ifHy@backref
4584   \RequirePackage{backref}%
4585 \else
4586   \let\Hy@backout\@gobble
4587 \fi
4588 \Hy@DisableOption{backref}
4589 \Hy@DisableOption{pagebackref}

4590 \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`.

```

4591 \begingroup
4592   \endlinechar=-1 %
4593   \catcode'\^^A=14 %
4594   \catcode'\^^M\active
4595   \catcode'\%\active
4596   \catcode'\#\active
4597   \catcode'\_\active
4598   \catcode'\$\active
4599   \catcode'\&\active
4600   \gdef\hyper@normalise{^^A
4601     \begingroup
4602       \catcode'\^^M\active
4603       \def^^M{ }^^A
4604       \catcode'\%\active
4605       \let%\@percentchar
4606       \let%\@percentchar
4607       \catcode'\#\active
4608       \def#{\hyper@hash}^^A
4609       \def\#{\hyper@hash}^^A
4610       \@makeother\&^^A
4611       \edef&{\string&}^^A
4612       \edef\&{\string&}^^A
4613       \edef\textunderscore{\string_}^^A
4614       \let_\textunderscore
4615       \catcode'\_\active
4616       \let_\textunderscore
4617       \let~\hyper@tilde
4618       \let~\hyper@tilde
4619       \let\textasciitilde\hyper@tilde
4620       \let\\ \@backslashchar
4621       \edef$\string$}^^A

```

```

4622 \Hy@safe@activetrue
4623 \hyper@n@rmalise
4624 }^^A
4625 \catcode'\#=6 ^^A
4626 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4627 \gdef\hyper@n@rmalise#1#2{^^A
4628 \def\Hy@tempa{#2}^^A
4629 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4630 \ltx@ReturnAfterElseFi{^^A
4631 \hyper@@normalise{#1}^^A
4632 }^^A
4633 \else
4634 \ltx@ReturnAfterFi{^^A
4635 \hyper@@normalise{#1}{#2}^^A
4636 }^^A
4637 \fi
4638 }^^A
4639 \gdef\hyper@@normalise#1#2{^^A
4640 \edef\Hy@tempa{^^A
4641 \endgroup
4642 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4643 }^^A
4644 \Hy@tempa
4645 }^^A
4646 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4647 #1^^A
4648 \ifx\limits#2\limits
4649 \else
4650 \ltx@ReturnAfterFi{^^A
4651 \Hy@RemovePercentCr #2\@nil
4652 }^^A
4653 \fi
4654 }^^A
4655 \endgroup
4656 \providecommand*\hyper@chars{%
4657 \let\#\hyper@hash
4658 \let\%\@percentchar
4659 \Hy@safe@activetrue
4660 }

4661 \def\hyperlink#1#2{%
4662 \hyper@@link{#1}{#2}%
4663 }

4664 \def\Hy@VerboseLinkStart#1#2{%
4665 \ifHy@verbose
4666 \begingroup
4667 \Hy@safe@activetrue
4668 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4669 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4670 \xdef\Hy@VerboseGlobalTemp{%
4671 \Hy@VerboseGlobalTemp, %
4672 line \the\inputlineno
4673 }%
4674 \endgroup
4675 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4676 \@onelevel@sanitize\Hy@VerboseLinkInfo
4677 \fi
4678 }

```

```

4679 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4680 \def\Hy@VerboseLinkStop{%
4681   \ifHy@verbose
4682     \begingroup
4683     \edef\x{\endgroup
4684       \write\m@ne{%
4685         Package 'hyperref' Info: %
4686         End of reference \Hy@VerboseLinkInfo.%
4687       }%
4688     }%
4689   \x
4690 \fi
4691 }

4692 \def\Hy@VerboseAnchor#1{%
4693   \ifHy@verbose
4694     \begingroup
4695     \Hy@safe@activetrue
4696     \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4697   \endgroup
4698 \fi
4699 }

4700 \def\Hy@AllowHyphens{%
4701   \relax
4702   \ifhmode
4703     \penalty\@M
4704     \hskip\z@skip
4705   \fi
4706 }

4707 \DeclareRobustCommand*\href{[1][]{%
4708   \begingroup
4709   \setkeys{href}{#1}%
4710   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4711 }

4712 \def\Hy@href#1{%
4713   \hyper@normalise\href@
4714 }

4715 \begingroup
4716 \catcode'\$=6 %
4717 \catcode'\#=12 %
4718 \gdef\href@1{\expandafter\href@split$1##\}%
4719 \gdef\href@split$1#$2#$3\\$4{%
4720   \hyper@@link{$1}{$2}{$4}%
4721   \endgroup
4722 }%
4723 \endgroup

Option 'page'.
4724 \define@key{href}{page}{%
4725   \def\Hy@href@page{#1}%
4726 }

4727 \let\Hy@href@page\@empty
4728 \newcount\c@Hy@tempcnt
4729 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4730 \def\Hy@MakeRemoteAction{%
4731   \ifx\Hy@href@page\@empty
4732     \def\Hy@href@page{0}%
4733   \else

```



```

4734 \setcounter{Hy@tempcnt}{\Hy@href@page}%
4735 \ifnum\c@Hy@tempcnt<\@ne
4736 \Hy@Warning{%
4737   Invalid page number (\theHy@tempcnt)\MessageBreak
4738   for remote PDF file.\MessageBreak
4739   Using page 1%
4740 }%
4741 \def\Hy@href@page{0}%
4742 \else
4743 \global\advance\c@Hy@tempcnt\m@ne
4744 \edef\Hy@href@page{\theHy@tempcnt}%
4745 \fi
4746 \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.

```

4747 \ifx\Hy@href@nextactionraw\@empty
4748 \else
4749 \Hy@newwindowsettrue
4750 \Hy@newwindowtrue
4751 \fi
4752 }

```

Option ‘pdfremotestartview’.

```

4753 \define@key{href}{pdfremotestartview}{%
4754 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4755 }

```

Option ‘pdfnewwindow’.

```

4756 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4757 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4758 \newif\ifHy@href@ismap
4759 \define@key{href}{ismap}[true]{%
4760 \ltx@ifundefined{Hy@href@ismap#1}{%
4761 \Hy@Error{%
4762   Invalid value (#1) for key ‘ismap’.\MessageBreak
4763   Permitted values are ‘true’ or ‘false’.\MessageBreak
4764   Ignoring ‘ismap’%
4765 }\@ehc
4766 }{%
4767 \csname Hy@href@ismap#1\endcsname
4768 }%
4769 }

```

Option ‘nextactionraw’.

```

4770 \let\Hy@href@nextactionraw\@empty
4771 \define@key{href}{nextactionraw}{%
4772 \edef\Hy@href@nextactionraw{#1}%
4773 \ifx\Hy@href@nextactionraw\@empty
4774 \else
4775 \Hy@Match\Hy@href@nextactionraw{%
4776   ^(\HyPat@ObjRef/|<<.*[/S[/].+>>|%
4777   \[( ?\HyPat@ObjRef/|<<.*[/S[/].+>>)+ ?)]$%
4778 }{ }{%
4779 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
4780 \Hy@href@nextactionraw\MessageBreak
4781 The action is discarded%

```

```

4782 }%
4783 }%
4784 \ifx\Hy@href@nextactionraw\@empty
4785 \else
4786 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4787 \fi
4788 \fi
4789 }
4790 \def\HyPat@ObjRef/{.+}

```

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

```

4791 \RequirePackage{url}
4792 \let\HyOrg@url\url
4793 \def\Hurl{\begingroup \Url}
4794 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4795 \def\nolinkurl@#1{\Hurl{#1}}
4796 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4797 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4798 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4799 \providecommand\hyper@image[2]{#2}
4800 \def\hypertarget#1#2{%
4801 \ifHy@nesting
4802 \hyper@@anchor{#1}{#2}%
4803 \else
4804 \hyper@@anchor{#1}{\relax}#2%
4805 \fi
4806 }

```

\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.

```

4807 \DeclareRobustCommand*\hyperref{%
4808 \@ifnextchar[\Hy@babelnormalise\label@hyperref]\@hyperref
4809 }
4810 \def\Hy@babelnormalise#1[#2]{%
4811 \begingroup
4812 \Hy@safe@activetrue
4813 \edef\Hy@tempa{%
4814 \endgroup
4815 \noexpand#1[#2]}%
4816 }%
4817 \Hy@tempa
4818 }
4819 \def\@hyperref{\hyper@normalise\@hyperref}
4820 \def\@hyperref#1#2#3{%
4821 \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4822 \expandafter\tryhyper@link\ref@one\{#1}%
4823 }
4824 \def\tryhyper@link#1\#2{%
4825 \hyper@@link{#2}{#1}%
4826 }
4827 \def\hyperdef{\@ifnextchar[\label@hyperdef]\@hyperdef}
4828 \def\@hyperdef#1#2#3{%, category, name, text

```

```

4829 \ifx\#1\%
4830 \def\Hy@AnchorName{#2}%
4831 \else
4832 \def\Hy@AnchorName{#1.#2}%
4833 \fi
4834 \ifHy@nesting
4835 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4836 \else
4837 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4838 \fi
4839 }

```

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

```

4840 \def\label@hyperref[#1]{%
4841 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4842 }%
4843 \def\label@@hyperref#1#2#3{%
4844 \ifx#1\relax
4845 \protect\G@refundefinedtrue
4846 \@latex@warning{%
4847 Hyper reference ‘#2’ on page \thepage \space undefined%
4848 }%
4849 \hyper@@link{}{??}{#3}%
4850 \else
4851 \hyper@@link{\expandafter\@fifthoffive#1}%
4852 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4853 \fi
4854 }
4855 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4856 % anchor text
4857 \@bsphack
4858 \ifx\#2\%
4859 \def\Hy@AnchorName{#3}%
4860 \else
4861 \def\Hy@AnchorName{#2.#3}%
4862 \fi
4863 \if@filesw
4864 \protected@write\@auxout{}{%
4865 \string\newlabel{#1}{\{}{\}\{\}\{\Hy@AnchorName\}\}%
4866 }%
4867 \fi
4868 \@esphack
4869 \ifHy@nesting
4870 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4871 \else
4872 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4873 \fi
4874 }

```

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.

```

4875 \def\hyper@@link{\let\Hy@reserved@a\relax
4876 \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
4877 }
4878 \def\hyper@link@[#1]#2#3#4{%
4879 \begingroup
4880 \protected@edef\Hy@tempa{#2}%
4881 \Hy@safe@activetrue
4882 \edef\x{#3}%
4883 \ifx\Hy@tempa\@empty
4884 \toks0{\hyper@link{#1}}%
4885 \else
4886 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4887 \fi
4888 \toks2{%
4889 \Hy@safe@activesfalse
4890 #4%
4891 }%
4892 \edef\Hy@tempa{\the\toks2}%
4893 \edef\x{\endgroup
4894 \ifx\Hy@tempa\@empty
4895 \noexpand\Hy@Warning{Suppressing empty link}%
4896 \else
4897 \the\toks0 {\x}{\the\toks2}}%
4898 \fi
4899 }%
4900 \x
4901 }

```

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.

```

4902 \def\hyper@readexternallink#1\{#2#3#4{%
4903 \begingroup
4904 \let\\relax
4905 \expandafter\endgroup
4906 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
4907 }
4908 \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.

```

4909 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4910 }

```

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

```

4911 \def\@pdftempwordfile{file}%

```

```

4912 \def\@pdftempwordrun{run}%
4913 \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:

```

4914 \ifx\\#6\\%
4915 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
4916 \else
4917 \ifx\\#4\\%
4918 \@hyper@linkfile file:#7\\{#3}{#2}{#7}%
4919 \else

```

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

```

4920 \def\@pdftempa{#4}%
4921 \ifx\@pdftempa\@pdftempwordfile
4922 \@hyper@linkfile#7\\{#3}{#2}{#7}%
4923 \else

```

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

```

4924 \ifx\@pdftempa\@pdftempwordrun
4925 \ifHy@pdfa
4926 \Hy@Error{%
4927 PDF/A: Launch action is prohibited%
4928 } \@ehc
4929 \begingroup
4930 \leavevmode
4931 #2%
4932 \endgroup
4933 \else
4934 \@hyper@launch#7\\{#3}{#2}%
4935 \fi
4936 \else

```

otherwise its a URL

```

4937 \hyper@linkurl{#3}{#7\ifx\\#2\\% filename, anchor text, linkname
4938 \fi
4939 \fi
4940 \fi
4941 \fi
4942 }

```

By default, turn run: into file:

```

4943 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
4944 \hyper@linkurl{#2}{%
4945 \Hy@linkfileprefix
4946 #1%
4947 \ifx\\#3\\%
4948 \else
4949 \hyper@hash
4950 #3%
4951 \fi
4952 }%
4953 }

```

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

```

4954 \def\@hyper@linkfile file:#1\\#2#3#4{%

```

```

4955 %file url,link string, name, original uri
4956 \filename@parse{#1}%
4957 \ifx\filename@ext\relax
4958 \edef\filename@ext{\XR@ext}%
4959 \fi
4960 \def\use@file{\filename@area\filename@base.\filename@ext}%
4961 \Hy@IfStringEndsWith\filename@ext\XR@ext{%
4962 \hyper@linkfile{#2}{\use@file}{#3}%
4963 }{%
4964 \ifx\@baseurl\@empty
4965 \hyper@linkurl{#2}{%
4966 #4\ifx\\#3\\else\hyper@hash#3\fi
4967 }%
4968 \else
4969 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4970 \fi
4971 }%
4972 }

4973 \def\Hy@IfStringEndsWith#1#2{%
4974 \begingroup
4975 \edef\x{#1}%
4976 \@onelevel@sanitize\x
4977 \edef\x{.\x$}%
4978 \edef\y{#2}%
4979 \@onelevel@sanitize\y
4980 \edef\y{.\y$}%
4981 \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4982 \endgroup
4983 \ifx\relax##2\relax
4984 \expandafter\ltx@secondoftwo
4985 \else
4986 \expandafter\ltx@firstoftwo
4987 \fi
4988 }%
4989 \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4990 }

4991 \def\Hy@StringLocalhost{localhost}
4992 \@onelevel@sanitize\Hy@StringLocalhost
4993 \def\Hy@CleanupFile#1{%
4994 \edef#1{#1}%
4995 \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
4996 }
4997 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
4998 \begingroup
4999 \toks@{\endgroup}%
5000 \def\x{#1}%
5001 \ifx\x\@empty
5002 \def\x{#2}%
5003 \ifx\x\@empty
5004 \toks@{\endgroup\def#5{/#3}}%
5005 \else
5006 \@onelevel@sanitize\x
5007 \ifx\x\Hy@StringLocalhost
5008 \toks@{\endgroup\def#5{/#3}}%
5009 \fi
5010 \fi
5011 \fi

```

```

5012 \the\toks@
5013 }

```

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.

```

5014 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
5015 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
5016   \ifx\#1\%
5017     #2\Hy@Warning{Ignoring empty anchor}%
5018   \else
5019     \def\anchor@spot{#2#3}%
5020     \let\put@me@back\@empty
5021     \ifx\relax#2\relax
5022     \else
5023       \ifHy@nesting
5024       \else
5025         \ifcat a\noexpand#2\relax
5026         \else
5027           \ifcat 0\noexpand#2 \relax
5028           \else
5029             \typeout{Anchor start is not alphanumeric %
5030             on input line\the\inputlineno%
5031             }%
5032             \let\anchor@spot\@empty
5033             \def\put@me@back{#2#3}%
5034           \fi
5035         \fi
5036       \fi
5037     \fi
5038     \ifHy@activeanchor
5039       \anchor@spot
5040     \else
5041       \hyper@anchor{#1}%
5042     \fi
5043     \expandafter\put@me@back
5044   \fi
5045   \let\anchor@spot\@empty
5046 }
5047 \let\anchor@spot\tx@empty

```

18 Compatibility with the *LaTeX2html* 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.

```

5048 \let\htmladdimg\hyperimage
5049 \def\htmladdnormallink#1#2{\href{#2}{#1}}

```

```

5050 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
5051 \def\htmlref#1#2{% anchor text, label
5052   \label@hyperref[{#2}]{#1}%
5053 }

```

This is really too much. The \LaTeX 2html 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.

```

5054 \def\@@latextohtmlX{%
5055   \let\hhyperref\hyperref
5056   \def\hyperref##1##2##3##4{% anchor text for HTML
5057     % text to print before label in print
5058     % label
5059     % post-label text in print
5060     ##2\ref{##4}##3%
5061   }%
5062 }

```

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.

```

5063 \RequirePackage{bitset}

```

Each flag has an 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

```

5064 \def\HyField@NewFlag#1#2{%
5065   \lowercase{\HyField@NewOption{#2}}%
5066   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5067 }

```

`\HyField@NewFlagOnly`

```

5068 \def\HyField@NewFlagOnly#1#2{%
5069   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5070 }

```

`\HyField@NewOption` #1: option name

```

5071 \def\HyField@NewOption#1{%
5072   \expandafter\newif\csname ifFld@#1\endcsname
5073   \define@key{Field}{#1}[true]{%
5074     \lowercase{\Field@boolkey{##1}}{#1}%
5075   }%
5076 }

```


\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

```
5077 \def\HyField@NewBitsetFlag#1#2#3#4{%
5078   \begingroup
5079   \count@=#4\relax
5080   \advance\count@\m@ne
5081   \def\x##1{%
5082     \endgroup
5083     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5084     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5085       \expandafter\edef\csname HyField@#3@##1\endcsname{%
5086         (\number#4) #2%
5087       }%
5088     \else
5089       \expandafter\edef\csname HyField@#3@##1\endcsname{%
5090         \csname HyField@#3@##1\endcsname
5091         /#2%
5092       }%
5093     \fi
5094   }%
5095   \expandafter\x\expandafter{\the\count@}%
5096 }
```

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

```
5097 \def\HyField@UseFlag#1#2{%
5098   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5099 }
```

\HyField@@UseFlag

```
5100 \def\HyField@@UseFlag#1#2{%
5101   \bitsetSetValue{HyField@#2}{%
5102     \csname HyField@#2@#1\endcsname
5103   }{%
5104     \csname ifFld@#1\endcsname 1\else 0\fi
5105   }%
5106 }
```

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

```
5107 \def\HyField@SetFlag#1#2{%
5108   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5109 }
```

\HyField@@SetFlag

```
5110 \def\HyField@@SetFlag#1#2{%
5111   \bitsetSetValue{HyField@#2}{%
5112     \csname HyField@#2@#1\endcsname
5113   }{1}%
5114 }
```

\HyField@PrintFlags

```
5115 \def\HyField@PrintFlags#1#2{%
5116   \ifHy@verbose
5117     \begingroup
```

```

5118 \let\Hy@temp\@empty
5119 \let\MessageBreak\relax
5120 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
5121 \bitsetGetSetBitList{HyField@#1}\do{%
5122 \edef\Hy@temp{%
5123 \Hy@temp
5124 \csname HyField@#1@\x\endcsname\MessageBreak
5125 }%
5126 }%
5127 \edef\x{\endgroup
5128 \noexpand\Hy@Info{%
5129 Field flags: %
5130 \expandafter\ifx\@car#1\@nil S\else/\fi
5131 #1 %
5132 \bitsetGetDec{HyField@#1} %
5133 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5134 \Hy@temp
5135 for #2%
5136 }%
5137 }\x
5138 \fi
5139 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5140 \HyField@NewFlag{Ff}{ReadOnly}{1}
5141 \HyField@NewFlag{Ff}{Required}{2}
5142 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5143 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5144 \HyField@NewFlag{Ff}{Radio}{16}
5145 \HyField@NewFlag{Ff}{Pushbutton}{17}
5146 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5147 \HyField@NewFlag{Ff}{Multiline}{13}
5148 \HyField@NewFlag{Ff}{Password}{14}
5149 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5150 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5151 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5152 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5153 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5154 \HyField@NewFlag{Ff}{Combo}{18}
5155 \HyField@NewFlag{Ff}{Edit}{19}
5156 \HyField@NewFlag{Ff}{Sort}{20}
5157 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5158 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5159 \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.

```

5160 \newif\iffld@popdown
5161 \define@key{Field}{popdown}[true]{%

```

```

5162 \lowercase{\Field@boolkey{#1}}{popdown}%
5163 }

```

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.

```

5164 \HyField@NewFlag{F}{Invisible}{1}
5165 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5166 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5167 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5168 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5169 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5170 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5171 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5172 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5173 \ifHy@pdfa
5174 \def\HyField@PDFAFldWarning#1#2{%
5175   \Hy@Warning{%
5176     PDF/A: Annotation flag '#1' must\MessageBreak
5177     be set to '#2'%
5178   }%
5179 }%
5180 \Fld@invisiblefalse
5181 \def\Fld@invisibletrue{%
5182   \HyField@PDFAFldWarning{invisible}{false}%
5183 }%
5184 \Fld@hiddenfalse
5185 \def\Fld@hiddentrue{%
5186   \HyField@PDFAFldWarning{hidden}{false}%
5187 }%
5188 \Fld@printtrue
5189 \def\Fld@printfalse{%
5190   \HyField@PDFAFldWarning{print}{true}%
5191 }%
5192 \Fld@nozoomtrue
5193 \def\Fld@nozoomfalse{%
5194   \HyField@PDFAFldWarning{nozoom}{true}%
5195 }%
5196 \Fld@norotatefalse
5197 \def\Fld@norotatefalse{%
5198   \HyField@PDFAFldWarning{norotate}{true}%
5199 }%
5200 \Fld@noviewfalse
5201 \def\Fld@noviewtrue{%
5202   \HyField@PDFAFldWarning{noview}{false}%
5203 }%
5204 \fi

```

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

```

5205 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5206 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5207 \HyField@NewFlag{Submit}{GetMethod}{4}
5208 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5209 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5210 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}

```

```

5211 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5212 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5213 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
5214 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5215 \HyField@NewFlag{Submit}{ExclFKey}{12}
5216 \HyField@NewFlag{Submit}{EmbedForm}{14}

5217 \define@key{Field}{export}{%
5218   \lowercase{\def\Hy@temp{#1}}%
5219   \@ifundefined{Fld@export@\Hy@temp}{%
5220     \@onelevel@sanitize\Hy@temp
5221     \Hy@Error{%
5222       Unknown export format '\Hy@temp'.\MessageBreak
5223       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5224     }\@ehc
5225   }{%
5226     \let\Fld@export\Hy@temp
5227   }%
5228 }
5229 \def\Fld@export{fdf}
5230 \@namedef{Fld@export@fdf}{0}%
5231 \@namedef{Fld@export@html}{1}%
5232 \@namedef{Fld@export@xfdf}{2}%
5233 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5234 \def\HyField@FlagsSubmit{%
5235   \bitsetReset{HyField@Submit}%
5236   \ifcase\@nameuse{Fld@export@\Fld@export} %
5237     % FDF
5238     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5239     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5240     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5241     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5242     \HyField@UseFlag{Submit}{CanonicalFormat}%
5243     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5244     \HyField@UseFlag{Submit}{ExclFKey}%
5245     \HyField@UseFlag{Submit}{EmbedForm}%
5246   \or % HTML
5247     \HyField@SetFlag{Submit}{ExportFormat}%
5248     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5249     \HyField@UseFlag{Submit}{GetMethod}%
5250     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5251     \HyField@UseFlag{Submit}{CanonicalFormat}%
5252   \or % XFDF
5253     \HyField@SetFlag{Submit}{XFDF}%
5254     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5255     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5256     \HyField@UseFlag{Submit}{CanonicalFormat}%
5257   \or % PDF
5258     \HyField@SetFlag{Submit}{SubmitPDF}%
5259     \HyField@UseFlag{Submit}{GetMethod}%
5260   \fi
5261   \HyField@PrintFlags{Submit}{submit button field}%
5262   \bitsetIsEmpty{HyField@Submit}{%
5263     \let\Fld@submitflags\ltx@empty

```

```

5264 }{%
5265     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
5266 }%
5267 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

5268 \def\HyField@FlagsAnnot#1{%
5269     \bitsetReset{HyField@F}%
5270     \HyField@UseFlag{F}{Invisible}%
5271     \HyField@UseFlag{F}{Hidden}%
5272     \HyField@UseFlag{F}{Print}%
5273     \HyField@UseFlag{F}{NoZoom}%
5274     \HyField@UseFlag{F}{NoRotate}%
5275     \HyField@UseFlag{F}{NoView}%
5276     \HyField@UseFlag{F}{Locked}%
5277     \HyField@UseFlag{F}{ToggleNoView}%
5278     \HyField@UseFlag{F}{LockedContents}%
5279     \HyField@PrintFlags{F}{#1}%
5280     \bitsetIsEmpty{HyField@F}{%
5281         \let\Fld@annotflags\ltx@empty
5282     }{%
5283         \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5284     }%
5285 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

5286 \def\HyField@FlagsPushButton{%
5287     \HyField@FlagsAnnot{push button field}%
5288     \bitsetReset{HyField@Ff}%
5289     \HyField@UseFlag{Ff}{ReadOnly}%
5290     \HyField@UseFlag{Ff}{Required}%
5291     \HyField@UseFlag{Ff}{NoExport}%
5292     \HyField@SetFlag{Ff}{Pushbutton}%
5293     \HyField@PrintFlags{Ff}{push button field}%
5294     \bitsetIsEmpty{HyField@Ff}{%
5295         \let\Fld@flags\ltx@empty
5296     }{%
5297         \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5298     }%
5299 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

5300 \def\HyField@FlagsCheckBox{%
5301     \HyField@FlagsAnnot{check box field}%
5302     \bitsetReset{HyField@Ff}%
5303     \HyField@UseFlag{Ff}{ReadOnly}%
5304     \HyField@UseFlag{Ff}{Required}%
5305     \HyField@UseFlag{Ff}{NoExport}%
5306     \HyField@PrintFlags{Ff}{check box field}%
5307     \bitsetIsEmpty{HyField@Ff}{%

```

```

5308 \let\Fld@flags\ltx@empty
5309 }{%
5310 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5311 }%
5312 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5313 \def\HyField@FlagsRadioButton{%
5314 \HyField@FlagsAnnot{radio button field}%
5315 \bitsetReset{HyField@Ff}%
5316 \HyField@UseFlag{Ff}{ReadOnly}%
5317 \HyField@UseFlag{Ff}{Required}%
5318 \HyField@UseFlag{Ff}{NoExport}%
5319 \HyField@UseFlag{Ff}{NoToggleToOff}%
5320 \HyField@SetFlag{Ff}{Radio}%
5321 \HyField@UseFlag{Ff}{RadiosInUnison}%
5322 \HyField@PrintFlags{Ff}{radio button field}%
5323 \bitsetIsEmpty{HyField@Ff}{%
5324 \let\Fld@flags\ltx@empty
5325 }{%
5326 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5327 }%
5328 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5329 \def\HyField@FlagsText{%
5330 \HyField@FlagsAnnot{text field}%
5331 \bitsetReset{HyField@Ff}%
5332 \HyField@UseFlag{Ff}{ReadOnly}%
5333 \HyField@UseFlag{Ff}{Required}%
5334 \HyField@UseFlag{Ff}{NoExport}%
5335 \HyField@UseFlag{Ff}{Multiline}%
5336 \HyField@UseFlag{Ff}{Password}%
5337 \HyField@UseFlag{Ff}{FileSelect}%
5338 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5339 \HyField@UseFlag{Ff}{DoNotScroll}%
5340 \ifFld@comb
5341 \ifcase0\ifFld@multiline
5342 \else\ifFld@password
5343 \else\ifFld@fileselect
5344 \else 1\fi\fi\fi\relax
5345 \Hy@Error{%
5346 Field option ‘comb’ cannot used together with\MessageBreak
5347 ‘multiline’, ‘password’, or ‘fileselect’%
5348 }\@ehc
5349 \else
5350 \HyField@UseFlag{Ff}{Comb}%
5351 \fi
5352 \fi
5353 \HyField@UseFlag{Ff}{RichText}%
5354 \HyField@PrintFlags{Ff}{text field}%
5355 \bitsetIsEmpty{HyField@Ff}{%

```

```

5356 \let\Fld@flags\ltx@empty
5357 }{%
5358 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5359 }%
5360 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5361 \def\HyField@FlagsChoice{%
5362 \HyField@FlagsAnnot{choice field}%
5363 \bitsetReset{HyField@Ff}%
5364 \HyField@UseFlag{Ff}{ReadOnly}%
5365 \HyField@UseFlag{Ff}{Required}%
5366 \HyField@UseFlag{Ff}{NoExport}%
5367 \HyField@UseFlag{Ff}{Combo}%
5368 \ifFld@combo
5369 \HyField@UseFlag{Ff}{Edit}%
5370 \fi
5371 \HyField@UseFlag{Ff}{Sort}%
5372 \HyField@UseFlag{Ff}{MultiSelect}%
5373 \ifFld@combo
5374 \ifFld@edit
5375 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5376 \fi
5377 \fi
5378 \HyField@UseFlag{Ff}{CommitOnSelChange}%
5379 \HyField@PrintFlags{Ff}{choice field}%
5380 \bitsetIsEmpty{HyField@Ff}{%
5381 \let\Fld@flags\ltx@empty
5382 }{%
5383 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5384 }%
5385 }

```

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.

```

5386 \def\HyField@PDFChoices#1{%
5387 \begingroup
5388 \global\let\Fld@choices\ltx@empty
5389 \let\HyTmp@optlist\ltx@empty
5390 \let\HyTmp@optitem\relax
5391 \count@=0 %
5392 \kv@parse{#1}{%
5393 \Hy@pdfstringdef\kv@key\kv@key
5394 \ifx\kv@value\relax
5395 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5396 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
5397 \else
5398 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5399 \fi
5400 \else
5401 \Hy@pdfstringdef\kv@value\kv@value

```

```

5402     \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
5403     \fi
5404     \edef\HyTmp@optlist{%
5405         \HyTmp@optlist
5406         \HyTmp@optitem{\the\count@}{\kv@key}0%
5407     }%
5408     \advance\count@ by 1 %
5409     \@gobbletwo
5410 }%
5411 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5412 \ifFld@multiselect
5413     \HyField@@PDFChoices{DV}\Fld@default
5414     \HyField@@PDFChoices{V}\Fld@value
5415 \else
5416     \ifx\Fld@default\relax
5417     \else
5418         \pdfstringdef\Hy@gtemp\Fld@default
5419         \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
5420     \fi
5421     \ifx\Fld@value\relax
5422     \else
5423         \pdfstringdef\Hy@gtemp\Fld@value
5424         \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
5425     \fi
5426 \fi
5427 \endgroup
5428 }

```

\HyField@@PDFChoices

```

5429 \def\HyField@@PDFChoices#1#2{%
5430     \ifx#2\relax
5431     \else
5432         \count@=0 %
5433         \def\HyTmp@optitem##1##2##3{%
5434             \def\HyTmp@key{##2}%
5435             \ifx\HyTmp@key\Hy@gtemp
5436                 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5437                     \HyTmp@optlist
5438                     \HyTmp@optitem{##1}{##2}1%
5439                 }%
5440             \let\HyTmp@found=Y%
5441         \else
5442             \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5443                 \HyTmp@optlist
5444                 \HyTmp@optitem{##1}{##2}##3%
5445             }%
5446         \fi
5447     }%
5448     \expandafter\comma@parse\expandafter{#2}{%
5449         \pdfstringdef\Hy@gtemp\comma@entry
5450         \let\HyTmp@found=N %
5451         \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5452         \HyTmp@optlist
5453         \ifx\HyTmp@found Y%
5454             \advance\count@ by 1 %
5455         \else
5456             \@onelevel@sanitize\comma@entry

```



```

5457 \PackageWarning{hyperref}{%
5458 \string\ChoiceBox: Ignoring value '\comma@entry',%
5459 \MessageBreak
5460 it cannot be found in the choices%
5461 }%
5462 \fi
5463 \@gobble
5464 }%
5465 \def\HyTmp@optitem##1##2##3{%
5466 \ifnum##3=1 %
5467 (##2)%
5468 \fi
5469 }%
5470 \ifcase\count@
5471 \or
5472 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5473 \else
5474 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5475 \ifx#1V%
5476 \def\HyTmp@optitem##1##2##3{%
5477 \ifnum##3=1 %
5478 \@firstofone{ ##1}%
5479 \fi
5480 }%
5481 \edef\HyTmp@optlist{\HyTmp@optlist}%
5482 \xdef\Fld@choices{%
5483 \Fld@choices
5484 /I[\expandafter\@firstofone\HyTmp@optlist]%
5485 }%
5486 \fi
5487 \fi
5488 \fi
5489 }

```

19.3 Forms

\HyField@SetKeys

```

5490 \def\HyField@SetKeys{%
5491 \kvsetkeys{Field}%
5492 }

5493 \newif\ifFld@checked
5494 \newif\ifFld@disabled
5495 \Fld@checkedfalse
5496 \Fld@disabledfalse
5497 \newcount\Fld@menulength
5498 \newdimen\Fld@Width
5499 \newdimen\Fld@charsize
5500 \Fld@charsize=10\p@
5501 \def\Fld@maxlen{0}
5502 \def\Fld@align{0}
5503 \def\Fld@color{0 0 0 rg}
5504 \def\Fld@bcolor{1 1 1}
5505 \def\Fld@bordercolor{1 0 0}
5506 \def\Fld@bordersep{1\p@}
5507 \def\Fld@borderwidth{1}
5508 \def\Fld@borderstyle{S}

```

```

5509 \def\Fld@cbsymbol{4}
5510 \def\Fld@radiosymbol{H}
5511 \def\Fld@rotation{0}
5512 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5513 \def\endForm{\@endForm}
5514 \newif\ifForm@html
5515 \Form@htmlfalse
5516 \def\Form@boolkey#1#2{%
5517   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5518 }
5519 \define@key{Form}{action}{%
5520   \hyper@normalise\Hy@DefFormAction{#1}%
5521 }
5522 \def\Hy@DefFormAction{\def\Form@action}
5523 \def\enc@html{html}
5524 \define@key{Form}{encoding}{%
5525   \def\Hy@tempa{#1}%
5526   \ifx\Hy@tempa\enc@html
5527     \Form@htmltrue
5528     \def\Fld@export{html}%
5529   \else
5530     \Hy@Warning{%
5531       Form 'encoding' key with \MessageBreak
5532       unknown value '#1'%
5533     }%
5534     \Form@htmlfalse
5535   \fi
5536 }
5537 \define@key{Form}{method}{%
5538   \lowercase{\def\Hy@temp{#1}}%
5539   \@ifundefined{Form@method@\Hy@temp}{%
5540     \@onelevel@sanitize\Hy@temp
5541     \Hy@Error{%
5542       Unknown method '\Hy@temp'\MessageBreak
5543       Known values are 'post' and 'get'%
5544     }\@ehc
5545   }{%
5546     \let\Form@method\Hy@temp
5547     \ifcase\@nameuse{Form@method@\Hy@temp} %
5548       \Fld@getmethodfalse
5549     \else
5550       \Fld@getmethodtrue
5551     \fi
5552   }%
5553 }
5554 \def\Form@method{}
5555 \@namedef{Form@method@post}{0}
5556 \@namedef{Form@method@get}{1}
5557 \newif\ifHyField@NeedAppearances
5558 \def\HyField@NeedAppearancesfalse{%
5559   \global\let\ifHyField@NeedAppearances\iffalse
5560 }
5561 \def\HyField@NeedAppearancetrue{%
5562   \global\let\ifHyField@NeedAppearances\iftrue
5563 }
5564 \HyField@NeedAppearancetrue
5565 \define@key{Form}{NeedAppearances}[true]{%

```

```

5566 \edef\Hy@tempa{#1}%
5567 \ifx\Hy@tempa\Hy>true
5568   \HyField@NeedAppearancetrue
5569 \else
5570   \ifx\Hy@tempa\Hy>false
5571     \HyField@NeedAppearancesfalse
5572   \else
5573     \Hy@Error{%
5574       Unexpected value '\Hy@tempa'\MessageBreak
5575       of option 'NeedAppearances' instead of\MessageBreak
5576       'true' or 'false'%
5577     }\@ehc
5578   \fi
5579 \fi
5580 }
5581 \def\Field@boolkey#1#2{%
5582   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5583 }
5584 \ifHy@texht
5585   \newtoks\Field@toks
5586   \Field@toks={ }%
5587   \def\Field@addtoks#1#2{%
5588     \edef\@processme{\Field@toks{the\Field@toks\space #1="#2"}}%
5589     \@processme
5590   }%
5591 \else
5592   \def\Hy@WarnHTMLFieldOption#1{%
5593     \Hy@Warning{%
5594       HTML field option '#1'\MessageBreak
5595       is ignored%
5596     }%
5597   }%
5598 \fi
5599 \def\Fld@checkequals#1=#2=#3\\{%
5600   \def\@currDisplay{#1}%
5601   \ifx\\#2\\%
5602     \def\@currValue{#1}%
5603   \else
5604     \def\@currValue{#2}%
5605   \fi
5606 }
5607 \define@key{Field}{loc}{%
5608   \def\Fld@loc{#1}%
5609 }
5610 \define@key{Field}{checked}[true]{%
5611   \lowercase{\Field@boolkey{#1}}{checked}%
5612 }
5613 \define@key{Field}{disabled}[true]{%
5614   \lowercase{\Field@boolkey{#1}}{disabled}%
5615 }
5616 \ifHy@texht
5617   \define@key{Field}{accesskey}{%
5618     \Field@addtoks{accesskey}{#1}%
5619   }%
5620   \define@key{Field}{tabkey}{%
5621     \Field@addtoks{tabkey}{#1}%
5622   }%

```

```

5623 \else
5624   \define@key{Field}{accesskey}{%
5625     \Hy@WarnHTMLFieldOption{accesskey}%
5626   }%
5627   \define@key{Field}{tabkey}{%
5628     \Hy@WarnHTMLFieldOption{tabkey}%
5629   }%
5630 \fi
5631 \define@key{Field}{name}{%
5632   \def\Fld@name{#1}%
5633 }
5634 \let\Fld@altname\relax
5635 \define@key{Field}{altname}{%
5636   \def\Fld@altname{#1}%
5637 }
5638 \let\Fld@mappingname\relax
5639 \define@key{Field}{mappingname}{%
5640   \def\Fld@mappingname{#1}%
5641 }
5642 \define@key{Field}{width}{%
5643   \def\Fld@width{#1}%
5644   \Field@Width#1\setbox0=\hbox{m}%
5645 }
5646 \define@key{Field}{maxlen}{%
5647   \def\Fld@maxlen{#1}%
5648 }
5649 \define@key{Field}{menulength}{%
5650   \Fld@menulength=#1\relax
5651 }
5652 \define@key{Field}{height}{%
5653   \def\Fld@height{#1}%
5654 }
5655 \define@key{Field}{charsize}{%
5656   \Fld@charsize#1%
5657 }
5658 \define@key{Field}{borderwidth}{%
5659   \def\Fld@borderwidth{#1}%
5660 }
5661 \define@key{Field}{borderstyle}{%
5662   \let\Hy@temp\Fld@borderstyle
5663   \def\Fld@borderstyle{#1}%
5664   \Hy@Match\Fld@borderstyle{%
5665     ~[SDBIU]$%
5666   }{}{%
5667     \Hy@Warning{%
5668       Invalid value ‘\@pdfborderstyle’\MessageBreak
5669       for option ‘pdfborderstyle’. Valid values:\MessageBreak
5670       \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5671       \space\space I (Inset), U (Underline)\MessageBreak
5672       Option setting is ignored%
5673     }%
5674     \let\Fld@borderstyle\Hy@temp
5675   }%
5676 }
5677 \define@key{Field}{bordersep}{%
5678   \def\Fld@bordersep{#1}%
5679 }

```

```

5680 \define@key{Field}{default}{%
5681   \def\Fld@default{#1}%
5682 }
5683 \define@key{Field}{align}{%
5684   \def\Fld@align{#1}%
5685 }
5686 \define@key{Field}{value}{%
5687   \def\Fld@value{#1}%
5688 }
5689 \define@key{Field}{checkboxsymbol}{%
5690   \Fld@DingDef\Fld@cbsymbol{#1}%
5691 }
5692 \define@key{Field}{radiosymbol}{%
5693   \Fld@DingDef\Fld@radiosymbol{#1}%
5694 }
5695 \def\Fld@DingDef#1#2{%
5696   \let\Fld@temp\ltx@empty
5697   \Fld@@DingDef#2\ding{}\@nil
5698   \let#1\Fld@temp
5699 }
5700 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5701   \expandafter\def\expandafter\Fld@temp\expandafter{%
5702     \Fld@temp
5703     #1%
5704   }%
5705   \ifx\\#3\\%
5706     \expandafter\@gobble
5707   \else
5708     \begingroup
5709     \lccode'0=#2\relax
5710     \lowercase{\endgroup
5711       \expandafter\def\expandafter\Fld@temp\expandafter{%
5712         \Fld@temp
5713         0%
5714       }%
5715     }%
5716     \expandafter\@firstofone
5717   \fi
5718   {%
5719     \Fld@@DingDef#3\@nil
5720   }%
5721 }

5722 \define@key{Field}{rotation}{%
5723   \def\Fld@rotation{#1}%
5724 }

5725 \define@key{Field}{backgroundcolor}{%
5726   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5727 }
5728 \define@key{Field}{bordercolor}{%
5729   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5730 }
5731 \define@key{Field}{color}{%
5732   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5733 }

5734 \let\Fld@onclick@code\ltx@empty
5735 \let\Fld@format@code\ltx@empty

```

```

5736 \let\Fld@validate@code\ltx@empty
5737 \let\Fld@calculate@code\ltx@empty
5738 \let\Fld@keystroke@code\ltx@empty
5739 \let\Fld@onfocus@code\ltx@empty
5740 \let\Fld@onblur@code\ltx@empty
5741 \let\Fld@onmousedown@code\ltx@empty
5742 \let\Fld@onmouseup@code\ltx@empty
5743 \let\Fld@onenter@code\ltx@empty
5744 \let\Fld@onexit@code\ltx@empty
5745 \def\Hy@temp#1{%
5746   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5747 }
5748 \def\Hy@@temp#1#2{%
5749   \ifHy@pdfa
5750     \define@key{Field}{#2}{%
5751       \Hy@Error{%
5752         PDF/A: Additional action ‘#2’ is prohibited%
5753       }\@ehc
5754     }%
5755   \else
5756     \define@key{Field}{#2}{%
5757       \def#1{##1}%
5758     }%
5759   \fi
5760 }
5761 \Hy@temp{keystroke}
5762 \Hy@temp{format}
5763 \Hy@temp{validate}
5764 \Hy@temp{calculate}
5765 \Hy@temp{onfocus}
5766 \Hy@temp{onblur}
5767 \Hy@temp{onenter}
5768 \Hy@temp{onexit}
5769 \ifHy@texht
5770   \def\Hy@temp#1{%
5771     \define@key{Field}{#1}{%
5772       \Field@addtoks{#1}{##1}%
5773     }%
5774   }%
5775 \else
5776   \def\Hy@temp#1{%
5777     \define@key{Field}{#1}{%
5778       \Hy@WarnHTMLFieldOption{#1}%
5779     }%
5780   }%
5781 \fi
5782 \Hy@temp{ondblclick}
5783 \Hy@temp{onmousedown}
5784 \Hy@temp{onmouseup}
5785 \Hy@temp{onmouseover}
5786 \Hy@temp{onmousemove}
5787 \Hy@temp{onmouseout}
5788 \Hy@temp{onkeydown}
5789 \Hy@temp{onkeyup}
5790 \Hy@temp{onselect}
5791 \Hy@temp{onchange}
5792 \Hy@temp{onkeypress}

```

```

5793 \ifHy@texht
5794   \define@key{Field}{onclick}{%
5795     \Field@addtoks{onclick}{#1}%
5796   }%
5797 \else
5798   \ifHy@pdfa
5799     \define@key{Field}{onclick}{%
5800       \Hy@Error{%
5801         PDF/A: Action 'onclick' is prohibited%
5802       }\@ehc
5803     }%
5804   \else
5805     \define@key{Field}{onclick}{%
5806       \def\Fld@onclick@code{#1}%
5807     }%
5808   \fi
5809 \fi

5810 \DeclareRobustCommand\TextField{%
5811   \@ifnextchar[{\@TextField}{\@TextField[]}%
5812 }
5813 \DeclareRobustCommand\ChoiceMenu{%
5814   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5815 }
5816 \DeclareRobustCommand\CheckBox{%
5817   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5818 }
5819 \DeclareRobustCommand\PushButton{%
5820   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5821 }
5822 \DeclareRobustCommand\Gauge{%
5823   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5824 }
5825 \DeclareRobustCommand\Submit{%
5826   \@ifnextchar[{\@Submit}{\@Submit[]}%
5827 }
5828 \DeclareRobustCommand\Reset{%
5829   \@ifnextchar[{\@Reset}{\@Reset[]}%
5830 }
5831 \def\LayoutTextField#1#2{% label, field
5832   #1 #2%
5833 }
5834 \def\LayoutChoiceField#1#2{% label, field
5835   #1 #2%
5836 }
5837 \def\LayoutCheckField#1#2{% label, field
5838   #1 #2%
5839 }
5840 \def\LayoutPushButtonField#1{% button
5841   #1%
5842 }
5843 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5844 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5845 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5846 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5847 \def\MakeButtonField#1{%
5848   \sbox0{%
5849     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%

```

```

5850 }%
5851 \@tempdima\ht0 %
5852 \advance\@tempdima by \Fld@borderwidth bp %
5853 \advance\@tempdima by \Fld@borderwidth bp %
5854 \ht0\@tempdima
5855 \@tempdima\dp0 %
5856 \advance\@tempdima by \Fld@borderwidth bp %
5857 \advance\@tempdima by \Fld@borderwidth bp %
5858 \dp0\@tempdima
5859 \box0\relax
5860 }
5861 \def\DefaultHeightofSubmit{14pt}
5862 \def\DefaultWidthofSubmit{2cm}
5863 \def\DefaultHeightofReset{14pt}
5864 \def\DefaultWidthofReset{2cm}
5865 \def\DefaultHeightofCheckBox{\baselineskip}
5866 \def\DefaultWidthofCheckBox{\baselineskip}
5867 \def\DefaultHeightofChoiceMenu{\baselineskip}
5868 \def\DefaultWidthofChoiceMenu{\baselineskip}
5869 \def\DefaultHeightofText{\baselineskip}
5870 \def\DefaultHeightofTextMultiline{4\baselineskip}
5871 \def\DefaultWidthofText{3cm}
5872 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5873 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5874 \def\DefaultOptionsofPushButton{print}
5875 \def\DefaultOptionsofCheckBox{print}
5876 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5877 \def\DefaultOptionsofListBox{print}
5878 \def\DefaultOptionsofComboBox{print,edit,sort}
5879 \def\DefaultOptionsofPopdownBox{print}
5880 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5881 \ifHy@figures
5882 \Hy@Info{Hyper figures ON}%
5883 \else
5884 \Hy@Info{Hyper figures OFF}%
5885 \fi
5886 \ifHy@nesting
5887 \Hy@Info{Link nesting ON}%
5888 \else
5889 \Hy@Info{Link nesting OFF}%
5890 \fi
5891 \ifHy@hyperindex
5892 \Hy@Info{Hyper index ON}%
5893 \else
5894 \Hy@Info{Hyper index OFF}%
5895 \fi
5896 \ifHy@backref
5897 \Hy@Info{backreferencing ON}%
5898 \else
5899 \Hy@Info{backreferencing OFF}%
5900 \fi
5901 \ifHy@colorlinks

```



```

5902 \Hy@Info{Link coloring ON}%
5903 \else
5904 \Hy@Info{Link coloring OFF}%
5905 \fi
5906 \ifHy@ocgcolorlinks
5907 \Hy@Info{Link coloring with OCG ON}%
5908 \else
5909 \Hy@Info{Link coloring with OCG OFF}%
5910 \fi
5911 \ifHy@pdfa
5912 \Hy@Info{PDF/A mode ON}%
5913 \else
5914 \Hy@Info{PDF/A mode OFF}%
5915 \fi

```

21 Low-level utility macros

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

```

5916 \edef\hyper@hash{\string#}
5917 \edef\hyper@tilde{\string~}
5918 \edef\hyper@quote{\string"}

```

Support \label before \begin{document}.

```

5919 \def\@currentHref{Doc-Start}
5920 \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.

```

5921 \Hy@AtBeginDocument{%
5922 \Hy@pdfstringtrue
5923 \PDF@SetupDoc
5924 \let\PDF@SetupDoc\@empty
5925 \Hy@DisableOption{pdfpagescrop}%
5926 \Hy@DisableOption{pdfpagemode}%
5927 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5928 \Hy@DisableOption{pdfdirection}%
5929 \Hy@DisableOption{pdfviewarea}%
5930 \Hy@DisableOption{pdfviewclip}%
5931 \Hy@DisableOption{pdfprintarea}%
5932 \Hy@DisableOption{pdfprintclip}%
5933 \Hy@DisableOption{pdfprintscaling}%
5934 \Hy@DisableOption{pdfduplex}%
5935 \Hy@DisableOption{pdfpicktraybypdfsize}%
5936 \Hy@DisableOption{pdfprintpagerange}%
5937 \Hy@DisableOption{pdfnumcopies}%
5938 \Hy@DisableOption{pdfstartview}%
5939 \Hy@DisableOption{pdfstartpage}%
5940 \Hy@DisableOption{pdftoolbar}%
5941 \Hy@DisableOption{pdfmenubar}%
5942 \Hy@DisableOption{pdfwindowui}%
5943 \Hy@DisableOption{pdfitwindow}%
5944 \Hy@DisableOption{pdfcenterwindow}%
5945 \Hy@DisableOption{pdfdisplaydoctitle}%
5946 \Hy@DisableOption{pdfpagelayout}%
5947 \Hy@DisableOption{pdflang}%
5948 \Hy@DisableOption{baseurl}%
5949 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5950 \Hy@pdfstringfalse

```

5951 }

Ignore star from referencing macros:

```
5952 \LetLtxMacro\NoHy@OrgRef\ref
5953 \DeclareRobustCommand*\ref{%
5954   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5955 }
5956 \LetLtxMacro\NoHy@OrgPageRef\pageref
5957 \DeclareRobustCommand*\pageref{%
5958   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5959 }
```

22 Localized nullifying of package

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

```
5960 \def\NoHyper{%
5961   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
5962   \def\hyper@@anchor##1##2{##2\Hy@xspace@end}%
5963   \global\let\hyper@livelink\hyper@link
5964   \gdef\hyper@link##1##2##3{##3\Hy@xspace@end}%
5965   \let\hyper@anchor\ltx@gobble
5966   \let\hyper@anchorstart\ltx@gobble
5967   \def\hyper@anchorend{\Hy@xspace@end}%
5968   \let\hyper@linkstart\ltx@gobbletwo
5969   \def\hyper@linkend{\Hy@xspace@end}%
5970   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
5971   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
5972   \let\Hy@backout\@gobble
5973 }
5974 \def\stop@hyper{%
5975   \def\hyper@link@{##1}##2##3##4{##4\Hy@xspace@end}%
5976   \let\Hy@backout\@gobble
5977   \let\hyper@@anchor\ltx@gobble
5978   \def\hyper@link##1##2##3{##3\Hy@xspace@end}%
5979   \let\hyper@anchor\ltx@gobble
5980   \let\hyper@anchorstart\ltx@gobble
5981   \def\hyper@anchorend{\Hy@xspace@end}%
5982   \let\hyper@linkstart\ltx@gobbletwo
5983   \def\hyper@linkend{\Hy@xspace@end}%
5984   \def\hyper@linkurl##1##2{##1\Hy@xspace@end}%
5985   \def\hyper@linkfile##1##2##3{##1\Hy@xspace@end}%
5986 }
5987 \def\endNoHyper{%
5988   \global\let\hyper@link\hyper@livelink
5989 }
5990 \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:

```

5991 <*nohyperref>
5992 \RequirePackage{letltxmacro}[2008/06/13]
5993 \let\hyper@@anchor\@gobble
5994 \def\hyper@link#1#2#3{#3}%
5995 \let\hyper@anchorstart\@gobble
5996 \let\hyper@anchorend\@empty
5997 \let\hyper@linkstart\@gobbletwo
5998 \let\hyper@linkend\@empty
5999 \def\hyper@linkurl#1#2{#1}%
6000 \def\hyper@linkfile#1#2#3{#1}%
6001 \def\hyper@link@{#1}#2#3{#3}%
6002 \let\PDF@SetupDoc\@empty
6003 \let\PDF@FinishDoc\@empty
6004 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

6005 \def\Acrobatmenu#1#2{\leavevmode#2}
6006 \let\pdfstringdefDisableCommands\@gobbletwo
6007 \let\texorpdfstring\@firstoftwo
6008 \let\pdfbookmark\@undefined
6009 \newcommand\pdfbookmark[3]{}{}
6010 \let\phantomsection\@empty
6011 \let\hypersetup\@gobble
6012 \let\hyperbaseurl\@gobble
6013 \newcommand*{\href}[3]{}{#3}
6014 \let\hyperdef\@gobbletwo
6015 \let\hyperlink\@gobble
6016 \let\hypertarget\@gobble
6017 \def\hyperref{%
6018   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
6019 }
6020 \long\def\@gobbleopt[#1]{}
6021 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

6022 \LetLtxMacro\NoHy@OrgRef\ref
6023 \DeclareRobustCommand*\ref{%
6024   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
6025 }
6026 \LetLtxMacro\NoHy@OrgPageRef\pageref
6027 \DeclareRobustCommand*\pageref{%
6028   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
6029 }
6030 </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}

```

6031 <*package>
6032 \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.

```

6033 \if@filesw
6034 \ifHy@typexml
6035 \immediate\closeout\@mainaux
6036 \immediate\openout\@mainaux\jobname.aux\relax
6037 \immediate\write\@auxout{<relaxxml>\relax}%
6038 \fi
6039 \immediate\write\@auxout{%
6040 \string\providecommand\string\HyperFirstAtBeginDocument{%
6041 \string\AtBeginDocument}^^J%
6042 \string\HyperFirstAtBeginDocument{%
6043 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6044 \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
6045 \string\gdef\string\contentsline%
6046 \string#1\string#2\string#3\string#4{%
6047 \string\oldcontentsline%
6048 {\string#1}{\string#2}{\string#3}}^^J%
6049 \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
6050 \string\gdef\string\newlabel\string#1\string#2{%
6051 \string\newlabelxx{\string#1}\string#2}^^J%
6052 \string\gdef\string\newlabelxx%
6053 \string#1\string#2\string#3\string#4\string#5\string#6{%
6054 \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.

```

6055 \string\AtEndDocument{%
6056 \string\ifx\string\hyper@anchor\string\@undefined^^J%
6057 \string\let\string\contentsline\string\oldcontentsline^^J%
6058 \string\let\string\newlabel\string\oldnewlabel^^J%
6059 \string\fi%
6060 }^^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.

```

6061 \string\fi%
6062 }^^J%
6063 \string\global\string\let\string\hyper@last\relax^^J%
6064 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
6065 }%
6066 \fi
6067 \let\HyperFirstAtBeginDocument\ltx@firstofone

```

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.

```

6068 \ifx\hyper@last\@undefined
6069 \def\@starttoc#1{%
6070 \begingroup
6071 \makeatletter
6072 \IfFileExists{\jobname.#1}{%
6073 \Hy@WarningNoLine{%
6074 old #1 file detected, not used; run LaTeX again%
6075 }%

```

```

6076     }{}%
6077     \if@filesw
6078         \expandafter\newwrite\csname tf@#1\endcsname
6079         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
6080     \fi
6081     \@nobreakfalse
6082 \endgroup
6083 }%
6084 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
6085 \fi
6086 }

```

25 Title strings

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

```

6087 \ifHy@usetitle
6088   \let\HyOrg@title\title
6089   \let\HyOrg@author\author
6090   \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6091   \def\Hy@scanopttitle[#1]{%
6092     \gdef\Hy@title{#1}%
6093     \HyOrg@title{#1}%
6094   }%
6095   \def\Hy@scantitle#1{%
6096     \gdef\Hy@title{#1}%
6097     \HyOrg@title{#1}%
6098   }%
6099   \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6100   \def\Hy@scanoptauthor[#1]{%
6101     \gdef\Hy@author{#1}%
6102     \HyOrg@author{#1}%
6103   }%
6104   \def\Hy@scanauthor#1{%
6105     \gdef\Hy@author{#1}%
6106     \HyOrg@author{#1}%
6107   }%

```

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.

```

6108 \begingroup
6109   \def\process@me#1\@nil#2{%
6110     \expandafter\let\expandafter\x\csname @#2\endcsname
6111     \edef\y{\expandafter\strip@prefix\meaning\x}%
6112     \def\c##1#1##2\@nil{%
6113       \ifx\##1\%
6114         \else
6115           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6116             \expandafter{x}%
6117         \fi
6118       }%
6119     \expandafter\c\y\relax#1\@nil
6120   }%
6121   \expandafter\process@me\string\@latex@\@nil{title}%
6122   \expandafter\process@me\string\@latex@\@nil{author}%
6123 \endgroup

```

```

6124 \fi
6125 \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.

```

6126 \def\Hy@UseMaketitleString#1{%
6127   \ltx@ifundefined{Hy@#1}{-}{%
6128     \begingroup
6129     \let\Hy@saved@hook\pdfstringdefPreHook
6130     \pdfstringdefDisableCommands{%
6131       \expandafter\let\expandafter\\csname Hy@newline@#1\endcsname
6132       \let\newline\\%
6133     }%
6134     \expandafter\ifx\csname @pdf#1\endcsname\@empty
6135       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6136         \csname Hy@#1\endcsname\@empty
6137       }%
6138     \fi
6139     \global\let\pdfstringdefPreHook\Hy@saved@hook
6140   \endgroup
6141 }%
6142 }
6143 \def\Hy@newline@title#1{ #1}
6144 \def\Hy@newline@author#1{, #1}
6145 \def\Hy@UseMaketitleInfos{%
6146   \Hy@UseMaketitleString{title}%
6147   \Hy@UseMaketitleString{author}%
6148 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6149 \RequirePackage{atbegshi}[2007/09/09]
6150 \let\Hy@EveryPageHook\ltx@empty
6151 \let\Hy@EveryPageBoxHook\ltx@empty
6152 \let\Hy@FirstPageHook\ltx@empty
6153 \AtBeginShipout{%
6154   \Hy@EveryPageHook
6155   \ifx\Hy@EveryPageBoxHook\ltx@empty
6156   \else
6157     \setbox\AtBeginShipoutBox=\vbox{%
6158       \offinterlineskip
6159       \Hy@EveryPageBoxHook
6160       \box\AtBeginShipoutBox
6161     }%

```

```

6162 \fi
6163 }
6164 \AtBeginShipoutFirst{%
6165 \Hy@FirstPageHook
6166 }
6167 \g@addto@macro\Hy@FirstPageHook{%
6168 \PDF@FinishDoc
6169 \global\let\PDF@FinishDoc\ltx@empty
6170 }

```

27.1 PDF /PageLabels

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

```

6171 \ifHy@pagelabels
6172 \begingroup\expandafter\expandafter\expandafter\endgroup
6173 \expandafter\ifx\csname thepage\endcsname\relax
6174 \Hy@pagelabelsfalse
6175 \Hy@WarningNoLine{%
6176 Option 'pdfpagelabels' is turned off\MessageBreak
6177 because \string\thepage\space is undefined%
6178 }%
6179 \csname fi\endcsname
6180 \csname iffalse\expandafter\endcsname
6181 \fi

```

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

```

6182 \def\thispdfpagelabel#1{%
6183 \gdef\HyPL@thisLabel{#1}%
6184 }%
6185 \global\let\HyPL@thisLabel\relax

```

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

```

6186 \let\HyPL@Labels\ltx@empty

```

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

```

6187 \newcount\Hy@abspage
6188 \Hy@abspage=0 %

```

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

```

6189 \def\HyPL@LastType{init}%
6190 \def\HyPL@LastNumber{0}%
6191 \let\HyPL@LastPrefix\ltx@empty

```

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

```

6192 \def\HyPL@arabic{D}%
6193 \def\HyPL@Roman{R}%
6194 \def\HyPL@roman{r}%
6195 \def\HyPL@Alph{A}%
6196 \def\HyPL@alph{a}%
6197 \let\HyPL@SlidesSetPage\ltx@empty
6198 \ltx@ifclassloaded{slides}{%
6199 \def\HyPL@SlidesSetPage{%
6200 \advance\c@page\ltx@one
6201 \ifnum\value{page}>\ltx@one
6202 \protected@edef\HyPL@SlidesOptionalPage{%
6203 \Hy@SlidesFormatOptionalPage{\thepage}%

```

```

6204     }%
6205     \else
6206         \let\HyPL@SlidesOptionalPage\ltx@empty
6207     \fi
6208     \advance\c@page-\ltx@one
6209     \def\HyPL@page{%
6210         \csname the\Hy@SlidesPage\endcsname
6211         \HyPL@SlidesOptionalPage
6212     }%
6213 }%
6214 }{}%

```

`\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.

```

6215 \def\HyPL@EveryPage{%
6216     \begingroup
6217     \ifx\HyPL@thisLabel\relax
6218         \let\HyPL@page\thepage
6219         \HyPL@SlidesSetPage
6220     \else
6221         \let\HyPL@page\HyPL@thisLabel
6222         \global\let\HyPL@thisLabel\relax
6223     \fi
6224     \let\HyPL@Type\relax
6225     \ifnum\the\c@page>0 %
6226         \ifx\HyPL@SlidesSetPage\ltx@empty
6227             \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6228         \fi
6229     \fi
6230     \let\Hy@temp Y%
6231     \ifx\HyPL@Type\HyPL@LastType
6232     \else
6233         \let\Hy@temp N%
6234     \fi
6235     \ifx\HyPL@Type\relax
6236         \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6237     \else
6238         \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6239     \fi
6240     \ifx\HyPL@Prefix\HyPL@LastPrefix
6241     \else
6242         \let\Hy@temp N%
6243     \fi
6244     \if Y\Hy@temp
6245         \advance\c@page by -1 %
6246         \ifnum\HyPL@LastNumber=\the\c@page\relax
6247         \else
6248             \let\Hy@temp N%
6249         \fi
6250         \Hy@StepCount\c@page
6251     \fi
6252     \if N\Hy@temp
6253         \ifx\HyPL@Type\relax
6254             \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6255         \else
6256             \HyPL@StorePageLabel{%
6257                 \ifx\HyPL@Prefix\@empty

```



```

6258     \else
6259       /P(\HyPL@Prefix)%
6260     \fi
6261     /S/\csname HyPL\HyPL@Type\endcsname
6262     \ifnum\the\c@page=1 %
6263     \else
6264       \space/St \the\c@page
6265     \fi
6266   }%
6267 \fi
6268 \fi
6269 \xdef\HyPL@LastNumber{\the\c@page}%
6270 \global\let\HyPL@LastType\HyPL@Type
6271 \global\let\HyPL@LastPrefix\HyPL@Prefix
6272 \endgroup
6273 \Hy@GlobalStepCount\Hy@abspage
6274 }%

```

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

```

6275 \def\HyPL@CheckThePage#1\@nil{%
6276   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6277 }%

```

`\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`.

```

6278 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6279   \def\Hy@tempa{#4}%
6280   \def\Hy@tempb{\csname\endcsname\c@page}%
6281   \ifx\Hy@tempa\Hy@tempb
6282     \expandafter\ifx\csname HyPL.#3\endcsname\relax
6283     \else
6284       \def\HyPL@Type{#3}%
6285       \def\HyPL@Prefix{#2}%
6286     \fi
6287   \else
6288     \begingroup
6289     \let\Hy@next\endgroup
6290     \let\HyPL@found\@undefined
6291     \def\arabic{\HyPL@Format{arabic}}%
6292     \def\Roman{\HyPL@Format{Roman}}%
6293     \def\roman{\HyPL@Format{roman}}%
6294     \def\Alph{\HyPL@Format{Alph}}%
6295     \def\alph{\HyPL@Format{alph}}%
6296     \protected@edef\Hy@temp{#1}%
6297     \ifx\HyPL@found\relax
6298       \toks@{\expandafter{\Hy@temp}}%
6299     \edef\Hy@next{\endgroup
6300       \noexpand\HyPL@@@CheckThePage\the\toks@
6301       \noexpand\HyPL@found\relax\noexpand\@nil
6302     }%
6303   \fi
6304   \Hy@next
6305 \fi
6306 }%

```

`\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`.

```

6307 \def\HyPL@Format#1#2{%
6308   \ifx\HyPL@found\@undefined
6309     \expandafter\ifx\csname c@#2\endcsname\c@page
6310       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6311     \else
6312       \expandafter\noexpand\csname#1\endcsname{#2}%
6313     \fi
6314   \else
6315     \expandafter\noexpand\csname#1\endcsname{#2}%
6316   \fi
6317 }%
```

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

```

6318 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6319   \def\Hy@tempa{#3}%
6320   \def\Hy@tempb{\HyPL@found\relax}%
6321   \ifx\Hy@tempa\Hy@tempb
6322     \def\HyPL@Type{#2}%
6323     \def\HyPL@Prefix{#1}%
6324   \fi
6325 }%
```

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

```

6326 \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`.

```

6327 \def\HyPL@Useless{0<</S/D>>}%
6328 \@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.

```

6329 \def\HyPL@SetPageLabels{%
6330   \@onelevel@sanitize\HyPL@Labels
6331   \ifx\HyPL@Labels\@empty
6332   \else
6333     \ifx\HyPL@Labels\HyPL@Useless
6334     \else
6335       \Hy@PutCatalog{/PageLabels<</Nums\HyPL@Labels>>}%
6336     \fi
6337   \fi
6338 }%
```

```

6339 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6340 \fi
```

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

```

6341 \Hy@DisableOption{pdfpagelabels}
6342 </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`

```
6343 <*pdfTeX>
6344 \pdf@ifdraftmode{%
6345   \let\Hy@PutCatalog\ltx@gobble
6346 }{%
6347   \let\Hy@PutCatalog\pdfcatalog
6348 }
6349 </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.

```
6350 <*vTeX>
6351 \providecommand*{\XR@ext}{pdf}
6352 \edef\Hy@VTeXversion{%
6353   \ifx\VTeXversion@undefined
6354     \z@
6355   \else
6356     \ifx\VTeXversion\relax
6357       \z@
6358     \else
6359       \VTeXversion
6360     \fi
6361   \fi
6362 }
6363 \begingroup
6364   \ifnum\Hy@VTeXversion<660 %
6365     \gdef\Hy@PutCatalog#1{%
6366       \Hy@WarningNoLine{%
6367         VTeX 6.59g or above required for pdfpagelabels%
6368       }%
6369     }%
6370   \else
6371     \gdef\Hy@PutCatalog#1{%
6372       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6373     }%
6374     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6375       \ifx\#2\%
6376         \else
6377           \immediate\special{!pdfpagelabels #2}%
6378         \fi
6379       }%
6380     \fi
6381 \endgroup
6382 </vTeX>

6383 <*pdfTeX | vTeX>
```

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

```
6384 \ifHy@pagelabels
6385   \def\HyPL@StorePageLabel#1{%
6386     \toks@ \expandafter{\HyPL@Labels}%
```

```

6387 \xdef\HyPL@Labels{%
6388 \the\toks@
6389 \the\Hy@abspage<<#1>>%
6390 }%
6391 }%

```

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.

```

6392 \RequirePackage{atveryend}[2009/12/07]%
6393 \AtVeryEndDocument{%
6394 \HyPL@SetPageLabels
6395 }%

6396 \fi
6397 </pdfTeX | vTeX>

```

27.1.2 xetex

```

6398 <*xetex>
6399 \HyPsd@LoadUnicode
6400 \Hy@unicodetrue
6401 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6402 \else
6403 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6404 \fi
6405 \HyPsd@LoadStringEncoding
6406 \define@key{Hyp}{unicode}[true]{%
6407 \Hy@boolkey{unicode}{#1}%
6408 \ifHy@unicode
6409 \else
6410 \Hy@Warning{%
6411 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6412 option setting 'unicode=false'%
6413 }%
6414 \Hy@unicodetrue
6415 \fi
6416 }
6417 \define@key{Hyp}{pdfencoding}{%
6418 \edef\HyPsd@temp{#1}%
6419 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6420 \let\HyPsd@pdfencoding\HyPsd@temp
6421 \else
6422 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6423 \let\HyPsd@pdfencoding\HyPsd@temp
6424 \else
6425 \Hy@Warning{%
6426 XeTeX driver only supports\MessageBreak
6427 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6428 setting 'pdfencoding=\HyPsd@temp'%
6429 }%
6430 \fi
6431 \fi
6432 }
6433 \let\HyXeTeX@CheckUnicode\relax
6434 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6435 <*pdfmarkbase>
6436 \beginngroup
6437 \ifundefined{headerps@out}{%
6438 \toks@ \expandafter{\Hy@FirstPageHook}%
6439 \xdef\Hy@FirstPageHook{%
6440 \noexpand\headerps@out{%
6441 systemdict /pdfmark known%
6442 {%
6443 userdict /?pdfmark systemdict /exec get put%
6444 }{%
6445 userdict /?pdfmark systemdict /pop get put %
6446 userdict /pdfmark systemdict /cleartomark get put%
6447 }%
6448 ifelse%
6449 }%
6450 \the\toks@
6451 }%
6452 }%
6453 \endgroup
6454 </pdfmarkbase>

```

\Hy@PutCatalog

```

6455 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
6456 <*pdfmarkbase>
6457 \def\Hy@PutCatalog#1{%
6458 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
6459 }
6460 </pdfmarkbase>

6461 <*pdfmarkbase | dvipdfm | xetex>
6462 \ifHy@pagelabels

```

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

```

6463 \def\HyPL@StorePageLabel#1{%
6464 \if@filesw
6465 \beginngroup
6466 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6467 \immediate\write\@mainaux{%
6468 \string\HyPL@Entry{\Hy@tempa}%
6469 }%
6470 \endgroup
6471 \fi
6472 }%

```

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.

```

6473 \Hy@AtBeginDocument{%
6474 \if@filesw
6475 \immediate\write\@mainaux{%
6476 \string\providecommand\string*\string\HyPL@Entry[1]{}%
6477 }%
6478 \fi
6479 \ifx\HyPL@Labels\@empty
6480 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6481 \else
6482 \HyPL@SetPageLabels
6483 \fi

```

```

6484 \let\HyPL@Entry\@gobble
6485 }%

\HyPL@Entry

6486 \def\HyPL@Entry#1{%
6487 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6488 \HyPL@Labels
6489 #1%
6490 }%
6491 }%

6492 \fi
6493 </pdfmarkbase | dvipdfm | xetex>
6494 <*package>
6495 \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

```

6496 \def\Hy@CounterExists#1{%
6497 \begingroup\expandafter\expandafter\expandafter\endgroup
6498 \expandafter\ifx\csname c@#1\endcsname\relax
6499 \expandafter\@gobble
6500 \else
6501 \begingroup\expandafter\expandafter\expandafter\endgroup
6502 \expandafter\ifx\csname the#1\endcsname\relax
6503 \expandafter\expandafter\expandafter\@gobble
6504 \else
6505 \expandafter\expandafter\expandafter\@firstofone
6506 \fi
6507 \fi
6508 }
6509 \Hy@CounterExists{section}{%
6510 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
6511 }
6512 \Hy@CounterExists{part}{%
6513 \newcommand\theHpart{\arabic{part}}}%
6514 }
6515 \ltx@ifundefined{thechapter}{%

```

```

6516 \newcommand\theHsection    {\arabic{section}}%
6517 \newcommand\theHfigure    {\arabic{figure}}%
6518 \newcommand\theHtable     {\arabic{table}}%
6519 }{%
6520 \newcommand\theHchapter    {\arabic{chapter}}%
6521 \newcommand\theHfigure     {\theHchapter.\arabic{figure}}%
6522 \newcommand\theHtable      {\theHchapter.\arabic{table}}%
6523 \newcommand\theHsection    {\theHchapter.\arabic{section}}%
6524 }
6525 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
6526 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6527 \newcommand\theHparagraph   {\theHsubsubsection.\arabic{paragraph}}
6528 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6529 \newcommand\theHtheorem     {\theHsection.\arabic{theorem}}
6530 \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.

```

6531 \let\H@item\item
6532 \newcounter{Item}
6533 \def\theHItem{\arabic{Item}}
6534 \def\item{%
6535   \@hyper@itemfalse
6536   \if@nmbrlist\@hyper@itemtrue\fi
6537   \H@item
6538 }
6539 \newcommand\theHenumi      {\theHItem}
6540 \newcommand\theHenumii     {\theHItem}
6541 \newcommand\theHenumiii    {\theHItem}
6542 \newcommand\theHenumiv     {\theHItem}
6543 \newcommand\theHHfootnote  {\arabic{Hfootnote}}
6544 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
6545 \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.

```

6546 \let\H@refstepcounter\refstepcounter
6547 \edef\name@of@eq{equation}%
6548 \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.

```

6549 \newif\if@hyper@item
6550 \newif\if@skiphyperref
6551 \@hyper@itemfalse
6552 \@skiphyperreffalse
6553 \def\refstepcounter#1{%
6554   \ifHy@pdfstring
6555   \else
6556     \H@refstepcounter{#1}%
6557     \edef\This@name{#1}%
6558     \ifx\This@name\name@of@slide
6559     \else
6560       \if@skiphyperref
6561       \else

```

```

6562 \if@hyper@item
6563 \stepcounter{Item}%
6564 \hyper@refstepcounter{Item}%
6565 \@hyper@itemfalse
6566 \else
6567 \hyper@refstepcounter{#1}%
6568 \fi
6569 \fi
6570 \fi
6571 \fi
6572 }
6573 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```

6574 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6575 \def\hyper@refstepcounter#1{%
6576 \edef\This@name{#1}%
6577 \ifx\This@name\name@of@eq
6578 \@ifundefined{theHequation}{%
6579 \make@stripped@name{\theequation}%
6580 \let\theHequation\newname
6581 }{}%
6582 \fi
6583 \@ifundefined{theH#1}{%
6584 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6585 }{}%
6586 \hyper@makecurrent{#1}%
6587 \ifmeasuring@
6588 \else
6589 \Hy@raisedlink{%
6590 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6591 }%
6592 \fi
6593 }

```

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`.

```

6594 \begingroup\expandafter\expandafter\expandafter\endgroup
6595 \expandafter\ifx\csname chapter\endcsname\relax
6596 \def\Hy@chapterstring{section}%
6597 \else
6598 \def\Hy@chapterstring{chapter}%
6599 \fi
6600 \def\Hy@appendixstring{appendix}
6601 \def\Hy@chapapp{\Hy@chapterstring}
6602 \ltx@ifundefined{appendix}{%
6603 }{%
6604 \let\HyOrg@appendix\appendix
6605 \def\appendix{%
6606 \ltx@ifundefined{chapter}%

```



```

6607     {\gdef\theHsection{\Alph{section}}}%
6608     {\gdef\theHchapter{\Alph{chapter}}}%
6609     \xdef\Hy@chapapp{\Hy@appendixstring}%
6610     \HyOrg@appendix
6611 }%
6612 }

```

\Hy@Test@alph

```

6613 \def\Hy@Test@alph#1{%
6614   \ifcase#1\or
6615     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6616     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6617     u\or v\or w\or x\or y\or z%
6618   \else
6619     \@ctrerr
6620   \fi
6621 }

```

\Hy@Test@Alph

```

6622 \def\Hy@Test@Alph#1{%
6623   \ifcase#1\or
6624     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6625     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6626     U\or V\or W\or X\or Y\or Z%
6627   \else
6628     \@ctrerr
6629   \fi
6630 }

```

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

```

6631 \def\hyper@makecurrent#1{%
6632   \begingroup
6633   \edef\Hy@param{#1}%
6634   \ifx\Hy@param\Hy@chapterstring
6635     \let\Hy@param\Hy@chapapp
6636   \fi
6637   \ifHy@hypertextnames
6638     \let\@number\@firstofone
6639     \def\@fnsymbol##1{\fnsymbol\number##1}%
6640     \def\@arabic##1{\number##1}%
6641     \ifx\@alph\Hy@Test@alph
6642       \else
6643         \def\@alph{alph\number}%
6644       \fi
6645     \ifx\@Alph\Hy@Test@Alph
6646       \else
6647         \def\@Alph{Alph\number}%
6648       \fi
6649     \ifHy@naturalnames
6650       \let\textlatin\@firstofone
6651       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6652     \else
6653       \xdef\HyperGlobalCurrentHref{%
6654         \csname
6655           the%
6656           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi

```

```

6657         #1%
6658         \endcsname
6659     }%
6660 \fi
6661 \xdef\HyperGlobalCurrentHref{%
6662     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6663 }%
6664 \else
6665     \Hy@GlobalStepCount\Hy@linkcounter
6666     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6667 \fi
6668 \endgroup
6669 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6670 \ifHy@localanchorname
6671     \let\@currentHref\HyperLocalCurrentHref
6672 \else
6673     \global\let\@currentHref\HyperGlobalCurrentHref
6674 \fi
6675 }

```

`\Hy@MakeCurrentHref`

```

6676 \def\Hy@MakeCurrentHref#1{%
6677     \edef\HyperLocalCurrentHref{#1}%
6678     \@onelevel@sanitize\HyperLocalCurrentHref
6679     \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6680     \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6681     \ifHy@localanchorname
6682         \let\@currentHref\HyperLocalCurrentHref
6683     \else
6684         \global\let\@currentHref\HyperGlobalCurrentHref
6685     \fi
6686 }

```

`\Hy@MakeCurrentHrefAuto`

```

6687 \def\Hy@MakeCurrentHrefAuto#1{%
6688     \Hy@GlobalStepCount\Hy@linkcounter
6689     \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6690 }

```

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

```

6691 \def\@currentHlabel{\@currentHref}

6692 \@ifpackageloaded{fancyvrb}{%
6693     \@ifpackagelater{fancyvrb}{1998/05/20}{%
6694         \def\FV@StepLineNo{%
6695             \FV@SetLineNo
6696             \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6697             \FV@StepLineNo
6698         }%
6699     }%
6700 }{}

```

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`

```

6701 \Hy@AtBeginDocument{%
6702   \ifclassloaded{revtex4}{%
6703     \@namedef{ver@lastpage.sty}{1994/06/25}%
6704   }{}%
6705   \ifpackageloaded{lastpage}{%
6706     \ifHy@pageanchor
6707     \else
6708       \Hy@WarningNoLine{%
6709         The \string\pageref{LastPage} link doesn't work\MessageBreak
6710         with disabled option 'pageanchor'%
6711       }%
6712     \fi
6713     \def\lastpage@putlabel{%
6714       \addtocounter{page}{-1}%
6715       \if@filesw
6716         \begingroup
6717           \let\@number\@firstofone
6718           \ifHy@pageanchor
6719             \ifHy@hypertextnames
6720               \ifHy@plainpages
6721                 \def\Hy@temp{\arabic{page}}%
6722               \else
6723                 \Hy@unicodefalse
6724                 \pdfstringdef\Hy@temp{\thepage}%
6725               \fi
6726             \else
6727               \def\Hy@temp{\the\Hy@pagecounter}%
6728             \fi
6729           \fi
6730           \immediate\write\@auxout{%
6731             \string\newlabel
6732             {LastPage}{{}{\thepage}}{ }{%
6733               \ifHy@pageanchor page.\Hy@temp\fi}{ }%
6734             }%
6735           \endgroup
6736         \fi
6737         \addtocounter{page}{1}%
6738       }%
6739     \@ifclassloaded{revtex4}{%
6740       \begingroup
6741         \toks@\expandafter{\lastpage@putlabel}%
6742         \edef\x{\endgroup
6743           \def\noexpand\lastpage@putlabel{%
6744             \noexpand\stepcounter{page}%
6745             \the\toks@
6746             \noexpand\addtocounter{page}\noexpand\m@ne
6747           }%
6748         }%
6749       \x
6750     }{}%

```

```

6751 }{}%
6752 }
6753 \</package>
6754 \<*check>
6755 \checkpackage{lastpage}[1994/06/25]
6756 \checkcommand\def\lastpage@putlabel{%
6757   \addtocounter{page}{-1}%
6758   \immediate\write\@auxout{%
6759     \string\newlabel{LastPage}{\the\thepage}}%
6760   }%
6761   \addtocounter{page}{1}%
6762 }
6763 \</check>
6764 \<*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.

```

6765 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
6766 \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:

```

6767 \@ifpackageloaded{titlesec}{%
6768   \def\ttl@Hy@steplink#1{%
6769     \Hy@MakeCurrentHrefAuto{#1*}%
6770     \edef\ttl@Hy@saveanchor{%
6771       \noexpand\Hy@raisedlink{%
6772         \noexpand\hyper@anchorstart{\@currentHref}%
6773         \noexpand\hyper@anchorend
6774         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6775         \noexpand\ttl@Hy@PatchSaveWrite
6776       }%
6777     }%
6778   }%
6779   \def\ttl@Hy@PatchSaveWrite{%
6780     \begingroup
6781     \toks@\expandafter{\ttl@savewrite}%
6782     \edef\x{\endgroup
6783       \def\noexpand\ttl@savewrite{%
6784         \let\noexpand\@currentHref
6785         \noexpand\ttl@Hy@SavedCurrentHref
6786         \the\toks@
6787       }%
6788     }%
6789     \x
6790   }%
6791   \def\ttl@Hy@refstepcounter#1{%
6792     \let\ttl@b\Hy@raisedlink
6793     \def\Hy@raisedlink##1{%

```

```

6794 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6795 }%
6796 \refstepcounter{#1}%
6797 \let\Hy@raisedlink\ttl@b
6798 }%
6799 }{}

```

Package titletoc support:

```

6800 \@ifpackageloaded{titletoc}{%
6801 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6802 }{}

```

32 Package varioref support

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

```

6803 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}
6804 \@ifpackageloaded{varioref}{%
6805 \def\vref@pagenum#1#2{%
6806 \ifundefined{r@#2}{%
6807 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6808 }{}%
6809 \edef#1{\getpagerefnumber{#2}}%
6810 }%
6811 }{}

```

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

```

6812 \def\Hy@varioref@refstepcounter#1{%
6813 \stepcounter{#1}%
6814 \protected@edef\@currentlabel{%
6815 \csname p@#1\expandafter\endcsname\csname the#1\endcsname
6816 }%
6817 }
6818 \AtBeginDocument{%
6819 \ifx\refstepcounter\Hy@varioref@refstepcounter
6820 \let\H@refstepcounter\refstepcounter
6821 \let\refstepcounter\Hy@saved@refstepcounter
6822 \fi
6823 }

```

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

```

6824 \@ifpackageloaded{longtable}{%
6825 \begingroup
6826 \def\y{\LT@array}%
6827 \@ifundefined{scr@LT@array}{%
6828 \ifundefined{adl@LT@array}{-}{\def\y{\adl@LT@array}}%
6829 }{\def\y{\scr@LT@array}}%
6830 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%

```

```

6831 \expandafter\endgroup
6832 \expandafter\def\y[##1]##2{%
6833 \H@refstepcounter{#1}%
6834 \hyper@makecurrent{table}%
6835 \let\Hy@LT@currentHref\@currentHref
6836 #2\@sharp####4%
6837 }%
6838 }%
6839 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6840 \begingroup
6841 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6842 \endgroup
6843 \def\LT@start{%
6844 #1%
6845 \ifvoid\LT@foot#2\fi
6846 \let\@currentHref\Hy@LT@currentHref
6847 \Hy@raisedlink{%
6848 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6849 }%
6850 #3%
6851 }%
6852 }%
6853 \expandafter\x\LT@start\@nil
6854 }{}

```

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.

```

6855 \let\new@refstepcounter\refstepcounter
6856 \let\H@equation\equation
6857 \let\H@endequation\endequation
6858 \@ifpackageloaded{amsmath}{%
6859 \long\def\Hy@temp{%
6860 \incr@eqnum
6861 \mathdisplay@push
6862 \st@rredfalse \global\@eqnswtrue
6863 \mathdisplay{equation}%
6864 }%
6865 \ifx\Hy@temp\equation
6866 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6867 \csname iftrue\endcsname
6868 \else
6869 \long\def\equation{%
6870 \mathdisplay@push
6871 \st@rredfalse \global\@eqnswtrue
6872 \mathdisplay{equation}%
6873 \incr@eqnum
6874 }%
6875 \fi
6876 \fi

```

```

6877 }{%
6878   \def\equation{%
6879     \let\refstepcounter\H@refstepcounter
6880     \H@equation
6881     \@ifundefined{theHequation}{%
6882       \make@stripped@name{\theequation}%
6883       \let\theHequation\newname
6884     }{%
6885       \hyper@makecurrent{equation}%
6886       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6887       \let\refstepcounter\new@refstepcounter
6888     }%
6889   \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6890 }

```

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.

```

6891 \newif\if@eqnstar
6892 \@eqnstarfalse
6893 \let\H@eqnarray\eqnarray
6894 \let\H@endeqnarray\endeqnarray
6895 \def\eqnarray{%
6896   \let\Hy@reserved@a\relax
6897   \def\@currentHref{}%
6898   \H@eqnarray
6899   \if@eqnstar
6900   \else
6901     \ifx\\\@currentHref\\%
6902     \else
6903       \@ifundefined{theHequation}{%
6904         \make@stripped@name{\theequation}%
6905         \let\theHequation\newname
6906       }{%
6907         \hyper@makecurrent{equation}%
6908         \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6909       }%
6910     \fi
6911   }
6912 \def\endeqnarray{%
6913   \H@endeqnarray
6914 }

```

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.

```

6915 \@namedef{eqnarray*}{%
6916   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6917 }
6918 \@namedef{endeqnarray*}{%
6919   \nonumber\endeqnarray\@eqnstarfalse
6920 }

```

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

```

6921 \ltx@ifundefined{subeqnarray}{%
6922   \let\H@subeqnarray\subeqnarray
6923   \let\H@endsubeqnarray\endsubeqnarray

```

```

6924 \def\subeqnarray{%
6925   \let\Hy@reserved@a\relax
6926   \H@subeqnarray
6927   \@ifundefined{theHequation}{%
6928     \make@stripped@name{\theequation}%
6929     \let\theHequation\newname
6930   }{}%
6931   \hyper@makecurrent{equation}%
6932   \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6933 }%
6934 \def\endsubeqnarray{%
6935   \H@endsubeqnarray
6936 }%
6937 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6938 }

```

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

```

6939 \def\make@stripped@name#1{%
6940   \begingroup
6941   \escapechar\m@ne
6942   \global\let\newname\@empty
6943   \protected@edef\Hy@tempa{#1}%
6944   \edef\@tempb{%
6945     \noexpand\@tfor\noexpand\Hy@tempa:=%
6946     \expandafter\strip@prefix\meaning\Hy@tempa
6947   }%
6948   \@tempb\do{%
6949     \if{\Hy@tempa\else
6950     \if}\Hy@tempa\else
6951     \xdef\newname{\newname\Hy@tempa}%
6952     \fi
6953   }%
6954 }%
6955 \endgroup
6956 }

```

Support for amsmath's subequations:

```

6957 \begingroup\expandafter\expandafter\expandafter\endgroup
6958 \expandafter\ifx\cename subequations\endcename\relax
6959 \else
6960   \let\HyOrg@subequations\subequations
6961   \def\subequations{%
6962     \stepcounter{equation}%
6963     \protected@edef\theHparentequation{%
6964       \@ifundefined{theHequation}\theequation\theHequation
6965     }%
6966     \addtocounter{equation}{-1}%
6967     \HyOrg@subequations
6968     \def\theHequation{\theHparentequation\alph{equation}}%
6969     \ignorespaces
6970   }%
6971 \fi

```

Support for package amsthm (Daniel Müllner):

```

6972 \@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

6973 \def\Hy@temp#1#2#3{%
6974   \ifhmode\unskip\unskip\par\fi
6975   \normalfont
6976   \trivlist
6977   \let\thmheadnl\relax
6978   \let\thm@swap\@gobble
6979   \let\thm@indent\indent % indent
6980   \thm@headfont{\scshape}% heading font small caps
6981   \thm@notefont{\fontseries\mddefault\upshape}%
6982   \thm@headpunct{.}% add period after heading
6983   \thm@headsep 5\p@ plus\p@ minus\p@\relax
6984   \thm@space@setup
6985   #1% style overrides
6986   \@topsep \thm@preskip          % used by thm head
6987   \@topsepadd \thm@postskip      % used by \endparenv
6988   \def\@tempa{#2}\ifx\@empty\@tempa
6989     \def\@tempa{\@oparg{\@begintheorem{#3}{}}{}}%
6990   \else
6991     \refstepcounter{#2}%
6992     \def\@tempa{\@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
6993   \fi
6994   \@tempa
6995 }%
6996 \ifx\Hy@temp\@thm
6997   \def\@thm#1#2#3{%
6998     \ifhmode
6999       \unskip\unskip\par
7000     \fi
7001     \normalfont
7002     \trivlist
7003     \let\thmheadnl\relax
7004     \let\thm@swap\@gobble
7005     \let\thm@indent\indent % indent
7006     \thm@headfont{\scshape}% heading font small caps
7007     \thm@notefont{\fontseries\mddefault\upshape}%
7008     \thm@headpunct{.}% add period after heading
7009     \thm@headsep 5\p@ plus\p@ minus\p@\relax
7010     \thm@space@setup
7011     #1% style overrides
7012     \@topsep \thm@preskip          % used by thm head
7013     \@topsepadd \thm@postskip      % used by \endparenv
7014     \def\@dth@counter{#2}%
7015     \ifx\@empty\@dth@counter
7016       \def\@tempa{%
7017         \@oparg{\@begintheorem{#3}{}}{}}%
7018       }%
7019     \else
7020       \H@refstepcounter{#2}%
7021       \hyper@makecurrent{#2}%
7022       \let\Hy@dth@currentHref\@currentHref
7023       \def\@tempa{%
7024         \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}}%
7025       }%
7026     \fi
7027     \@tempa

```

```

7028 }%
7029 \else
7030 \def\@thm#1#2#3{%
7031 \ifhmode
7032 \unskip\unskip\par
7033 \fi
7034 \normalfont
7035 \trivlist
7036 \let\thmheadnl\relax
7037 \let\thm@swap\@gobble
7038 \thm@notefont{\fontseries\mddefault\upshape}%
7039 \thm@headpunct{.}% add period after heading
7040 \thm@headsep 5\p@ plus\p@ minus\p@\relax
7041 \thm@space@setup
7042 #1% style overrides
7043 \@topsep \thm@preskip % used by thm head
7044 \@topsepadd \thm@postskip % used by \@endparenv
7045 \def\@dth@counter{#2}%
7046 \ifx\@empty\@dth@counter
7047 \def\@tempa{%
7048 \@oparg{\@begintheorem{#3}{}}{}%
7049 }%
7050 \else
7051 \H@refstepcounter{#2}%
7052 \hyper@makecurrent{#2}%
7053 \let\Hy@dth@currentHref\@currentHref
7054 \def\@tempa{%
7055 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
7056 }%
7057 \fi
7058 \@tempa
7059 }%
7060 \fi
7061 \dth@everypar={%
7062 \@minipagefalse
7063 \global\@newlistfalse
7064 \@noparitemfalse
7065 \if@inlabel
7066 \global\@inlabelfalse
7067 \begingroup
7068 \setbox\z@\lastbox
7069 \ifvoid\z@
7070 \kern-\itemindent
7071 \fi
7072 \endgroup
7073 \ifx\@empty\@dth@counter
7074 \else
7075 \Hy@raisedlink{%
7076 \hyper@anchorstart{%
7077 \ltx@ifundefined{Hy@dth@currentHref}%
7078 \@currentHref\Hy@dth@currentHref
7079 }\hyper@anchorend
7080 }%
7081 \fi
7082 \unhbox\@labels
7083 \fi
7084 \if@nobreak

```

```

7085 \clubpenalty\@M
7086 \else
7087 \clubpenalty\clubpenalty \everypar{}\%
7088 \fi
7089 }\%
7090 }\{}

```

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.

```

7091 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}\fi
7092 \ifHy@hyperfootnotes
7093 \newcounter{Hfootnote}%
7094 \let\H@@footnotetext\@footnotetext
7095 \let\H@@footnotemark\@footnotemark
7096 \def\@xfootnotenext[#1]{%
7097 \begingroup
7098 \csname c@\@mpfn\endcsname #1\relax
7099 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7100 \endgroup
7101 \ifx\@footnotetext\@mpfootnotetext
7102 \expandafter\H@@mpfootnotetext
7103 \else
7104 \expandafter\H@@footnotetext
7105 \fi
7106 }\%
7107 \def\@xfootnotemark[#1]{%
7108 \begingroup
7109 \c@footnote #1\relax
7110 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7111 \endgroup
7112 \H@@footnotemark
7113 }\%
7114 \let\H@@mpfootnotetext\@mpfootnotetext
7115 \long\def\@mpfootnotetext#1{%
7116 \H@@mpfootnotetext{%
7117 \ifHy@nesting
7118 \expandafter\hyper@@@anchor\expandafter{%
7119 \Hy@footnote@currentHref
7120 }{#1}%
7121 \else
7122 \Hy@raisedlink{%
7123 \expandafter\hyper@@@anchor\expandafter{%
7124 \Hy@footnote@currentHref
7125 }{\relax}%
7126 }#1%
7127 \fi
7128 }\%
7129 }\%
7130 \long\def\@footnotetext#1{%
7131 \H@@footnotetext{%
7132 \ifHy@nesting

```

```

7133 \expandafter\hyper@@anchor\expandafter{%
7134 \Hy@footnote@currentHref
7135 }{#1}%
7136 \else
7137 \Hy@raisedlink{%
7138 \expandafter\hyper@@anchor\expandafter{%
7139 \Hy@footnote@currentHref
7140 }{\relax}%
7141 }%
7142 \let\@currentHref\Hy@footnote@currentHref
7143 \let\@currentlabelname\@empty
7144 #1%
7145 \fi
7146 }%
7147 }%

```

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.

```

7148 \def\@footnotemark{%
7149 \leavevmode
7150 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7151 \stepcounter{Hfootnote}%
7152 \global\let\Hy@saved@currentHref\@currentHref
7153 \hyper@makecurrent{Hfootnote}%
7154 \global\let\Hy@footnote@currentHref\@currentHref
7155 \global\let\@currentHref\Hy@saved@currentHref
7156 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
7157 \@makefnmark
7158 \hyper@linkend
7159 \ifhmode\spacefactor\@x@sf\fi
7160 \relax
7161 }%

```

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

```

7162 \@ifpackageloaded{longtable}{%
7163 \CheckCommand*\LT@p@ftntext}[1]{%
7164 \edef\@tempa{%
7165 \the\LT@p@ftn
7166 \noexpand\footnotetext[\the\c@footnote]%
7167 }%
7168 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
7169 }%
7170 \long\def\LT@p@ftntext#1{%
7171 \edef\@tempa{%
7172 \the\LT@p@ftn
7173 \begingroup
7174 \noexpand\c@footnote=\the\c@footnote\relax
7175 \noexpand\protected@xdef\noexpand\@thefnmark{%
7176 \noexpand\thempfn
7177 }%
7178 \noexpand\Hy@LT@footnotetext{%
7179 \Hy@footnote@currentHref
7180 }%

```

```

7181 }%
7182 \global\LT@p@ftn\expandafter{%
7183   \@tempa{#1}%
7184   \endgroup
7185 }%
7186 }%
7187 \long\def\Hy@LT@footnotetext#1#2{%
7188   \H@@@footnotetext{%
7189     \ifHy@nesting
7190       \hyper@@anchor{#1}{#2}%
7191     \else
7192       \Hy@raisedlink{%
7193         \hyper@@anchor{#1}{\relax}%
7194       }%
7195       \def\@currentHref{#1}%
7196       \let\@currentlabelname\@empty
7197       #2%
7198     \fi
7199   }%
7200 }%
7201 }{}%

```

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

```

7202 \ifpackageloaded{fancyvrb}{%
7203   \def\V@@@footnotetext{%
7204     \insert\footins\bgroup
7205     \csname reset@font\endcsname
7206     \footnotesize
7207     \interlinepenalty\interfootnotelinepenalty
7208     \splittopskip\footnotesep
7209     \splitmaxdepth\dp\strutbox
7210     \floatingpenalty \@MM
7211     \hsize\columnwidth
7212     \@parboxrestore
7213     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7214     \@makefntext{}%
7215     \rule{\z@}{\footnotesep}%
7216     \bgroup
7217     \aftergroup\V@@@footnotetext
7218     \Hy@raisedlink{%
7219       \expandafter\hyper@@anchor\expandafter{%
7220         \Hy@footnote@currentHref
7221       }\relax}%
7222     }%
7223     \let\@currentHref\Hy@footnote@currentHref
7224     \let\@currentlabelname\@empty
7225     \ignorespaces
7226   }%
7227 }{}%

```

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

```

7228 \def\Hy@temp#1{%
7229   \begingroup
7230   \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
7231   \endgroup
7232   \@footnotemark
7233 }%

```

```

7234 \ifx\Hy@temp\footref
7235 \def\footref#1{%
7236 \begingroup
7237 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
7238 \endgroup
7239 \H@@@footnotemark
7240 }%
7241 \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.

```

7242 \let\HyOrg@maketitle\maketitle
7243 \def\maketitle{%
7244 \let\Hy@saved@footnotemark\@footnotemark
7245 \let\Hy@saved@footnotetext\@footnotetext
7246 \let\@footnotemark\H@@@footnotemark
7247 \let\@footnotetext\H@@@footnotetext
7248 \@ifnextchar[\Hy@maketitle@optarg{% ]
7249 \HyOrg@maketitle
7250 \Hy@maketitle@end
7251 }%
7252 }%
7253 \def\Hy@maketitle@optarg[#1]{%
7254 \HyOrg@maketitle[{#1}]%
7255 \Hy@maketitle@end
7256 }%
7257 \def\Hy@maketitle@end{%
7258 \ifx\@footnotemark\H@@@footnotemark
7259 \let\@footnotemark\Hy@saved@footnotemark
7260 \fi
7261 \ifx\@footnotetext\H@@@footnotetext
7262 \let\@footnotetext\Hy@saved@footnotetext
7263 \fi
7264 }%

```

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

```

7265 \def\realfootnote{%
7266 \@ifnextchar[\@xfootnote{%
7267 \stepcounter{\@mpfn}%
7268 \protected@xdef\@thefnmark{\thempfn}%
7269 \H@@@footnotemark\H@@@footnotetext
7270 }%
7271 }%
7272 \fi
7273 \Hy@DisableOption{hyperfootnotes}

7274 </package>
7275 <*check>
7276 \checklatex
7277 \checkcommand\def\@xfootnotenext[#1]{%
7278 \begingroup
7279 \csname c@\@mpfn\endcsname #1\relax
7280 \unrestored@protected@xdef\@thefnmark{\thempfn}%
7281 \endgroup
7282 \@footnotetext
7283 }
7284 \checkcommand\def\@xfootnotemark[#1]{%

```

```

7285 \begingroup
7286   \c@footnote #1\relax
7287   \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7288 \endgroup
7289 \@footnotemark
7290 }
7291 \checkcommand\def\@footnotemark{%
7292 \leavevmode
7293 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7294 \@makefnmark
7295 \ifhmode\spacefactor\@x@sf\fi
7296 \relax
7297 }
7298 \end{check}
7299 \end{package}

```

36 Float captions

Make the float caption the hypertext anchor; curiously enough, we can't just copy the definition of `\@caption`. Its all to do with expansion. It screws up. Sigh.

```

7300 \def\caption{%
7301   \ifx\@captive\@undefined
7302     \@latex@error{\noexpand\caption outside float}\@ehd
7303     \expandafter\@gobble
7304   \else
7305     \H@refstepcounter\@captive
7306     \let\Hy@tempa\@caption
7307     \@ifundefined{float@caption}{%
7308       {%
7309         \expandafter\ifx\csname @float@c@\@captive\endcsname
7310           \float@caption
7311           \let\Hy@tempa\Hy@float@caption
7312         \fi
7313       }%
7314     \expandafter\@firstofone
7315     \fi
7316     {\@dblarg{\Hy@tempa\@captive}}}%
7317 }
7318 \long\def\@caption#1[#2]#3{%
7319   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7320     \csname iftrue\endcsname
7321     \global\let\@currentHref\hc@currentHref
7322   \else
7323     \hyper@makecurrent{\@captive}%
7324   \fi
7325   \@ifundefined{NR@getttitle}{%
7326     \def\@currentlabelname{#2}%
7327   }{%
7328     \NR@getttitle{#2}%
7329   }%
7330   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7331     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7332   }%
7333 \begingroup
7334   \@parboxrestore
7335   \if@minipage

```

```

7336 \setminipage
7337 \fi
7338 \normalsize
7339 \expandafter\ifx\csname if@capstart\expandafter\endcsname
7340 \csname iftrue\endcsname
7341 \global\@capstartfalse
7342 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7343 \else
7344 \@makecaption{\csname fnum@#1\endcsname}{%
7345 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7346 \ifHy@nesting
7347 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7348 \else
7349 \Hy@raisedlink{%
7350 \expandafter\hyper@@anchor\expandafter{%
7351 \@currentHref
7352 }{\relax}%
7353 }%
7354 #3%
7355 \fi
7356 }%
7357 \fi
7358 \par
7359 \endgroup
7360 }

```

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.

```

7361 \let\Hy@float@caption\@caption
7362 \@ifpackageloaded{float}{%
7363 \def\Hy@float@caption{%
7364 \ifx\Hy@float@currentHref\@undefined
7365 \hyper@makecurrent{\@cuptype}%
7366 \global\let\Hy@float@currentHref\@currentHref
7367 \else
7368 \let\@currentHref\Hy@float@currentHref
7369 \fi
7370 \float@caption
7371 }%
7372 \let\HyOrg@float@makebox\float@makebox
7373 \renewcommand{\float@makebox}[1]{%
7374 \HyOrg@float@makebox{%
7375 #1\relax
7376 \ifx\Hy@float@currentHref\@undefined
7377 \else
7378 \expandafter\hyper@@anchor\expandafter{%
7379 \Hy@float@currentHref
7380 }{\relax}%
7381 \global\let\Hy@float@currentHref\@undefined
7382 \fi
7383 }%
7384 }%
7385 }{}
7386 \</package>
7387 \< *check>
7388 \checklatex[1999/06/01 - 2000/06/01]

```



```

7389 \checkcommand\def\caption{%
7390   \ifx\@capttype\@undefined
7391     \@latex@error{\noexpand\caption outside float}\@ehd
7392     \expandafter\@gobble
7393   \else
7394     \refstepcounter\@capttype
7395     \expandafter\@firstofone
7396   \fi
7397   {\@dblarg{\@caption\@capttype}}}%
7398 }
7399 \checkcommand\long\def\@caption#1[#2]#3{%
7400   \par
7401   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7402     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
7403   }%
7404   \begingroup
7405     \@parboxrestore
7406     \if@minipage
7407       \@setminipage
7408     \fi
7409     \normalsize
7410     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7411   \endgroup
7412 }
7413 \end{check}
7414 \end{package}

```

37 Bibliographic references

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

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

```

7415 \def\hyper@natlinkstart#1{%
7416   \Hy@backout{#1}%
7417   \hyper@linkstart{cite}{cite.#1}%
7418   \def\hyper@nat@current{#1}%
7419 }
7420 \def\hyper@natlinkend{%
7421   \hyper@linkend
7422 }
7423 \def\hyper@natlinkbreak#1#2{%
7424   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7425 }
7426 \def\hyper@natanchorstart#1{%
7427   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7428 }
7429 \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.

```

7430 \ltx@ifundefined{NAT@parse}{%
7431   \providecommand*{\@extra@binfo{}}{%
7432   \providecommand*{\@extra@b@citeb{}}{%
7433   \def\bibcite#1#2{%
7434     \@newl@bel{b}{#1\@extra@binfo}{%
7435       \hyper@link[cite]{#1\@extra@b@citeb}{#2}%
7436     }%
7437   }%
7438   \gdef\@extra@binfo{}}%

```

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

```

7439 \let\Hy@bibcite\bibcite
7440 \begingroup
7441   \ifundefined{bbl@cite@choice}{}{%
7442     \g@addto@macro\bbl@cite@choice{%
7443       \let\bibcite\Hy@bibcite
7444     }%
7445   }%
7446 \endgroup

```

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

```

7447 \providecommand*{\@BIBLABEL}{\@biblabel}%
7448 \def\@bibitem[#1]#2{%
7449   \@skiphyperreftrue
7450   \H@item[%
7451     \ifx\Hy@raisedlink\@empty
7452       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7453       \@BIBLABEL{#1}%
7454       \hyper@anchorend
7455     \else
7456       \Hy@raisedlink{%
7457         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7458       }%
7459       \@BIBLABEL{#1}%
7460     \fi
7461     \hfill
7462   ]%
7463   \@skiphyperreffalse
7464   \if@filesw
7465     \begingroup
7466       \let\protect\noexpand
7467       \immediate\write\@auxout{%
7468         \string\bibcite{#2}{#1}%
7469       }%
7470     \endgroup
7471   \fi
7472   \ignorespaces
7473 }%

```

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

```

7474 \def\@bibitem#1{%
7475   \@skiphyperreftrue\H@item\@skiphyperreffalse
7476   \Hy@raisedlink{%
7477     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7478   }%

```

```

7479 \if@filesw
7480 \begingroup
7481 \let\protect\noexpand
7482 \immediate\write\@auxout{%
7483 \string\bibcite{#1}{\the\value{\@listctr}}}%
7484 }%
7485 \endgroup
7486 \fi
7487 \ignorespaces
7488 }%
7489 }{}

7490 </package>
7491 <*check>
7492 \checklatex
7493 \checkcommand\def\@bibitem[#1]#2{%
7494 \item[\@biblabel{#1}\hfill]%
7495 \if@filesw
7496 {%
7497 \let\protect\noexpand
7498 \immediate\write\@auxout{%
7499 \string\bibcite{#2}{#1}%
7500 }%
7501 }%
7502 \fi
7503 \ignorespaces
7504 }
7505 \checkcommand\def\@bibitem#1{%
7506 \item
7507 \if@filesw
7508 \immediate\write\@auxout{%
7509 \string\bibcite{#1}{\the\value{\@listctr}}}%
7510 }%
7511 \fi
7512 \ignorespaces
7513 }
7514 </check>
7515 <*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.

```

7516 \ifclassloaded{revtex}{%
7517 \Hy@Info{*** compatibility with revtex **** }%
7518 \def\revtex@checking#1#2{%
7519 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
7520 \expandafter\def\csname b@#1\endcsname{#2}%
7521 \@SetMaxRnhefLabel{#1}%
7522 \expandafter\let\csname b@#1\endcsname\T@temp
7523 }%

```

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

```

7524 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
7525 \providecommand*\@extra@b@citeb{}%
7526 \def\CITEX[#1]#2{%
7527 \let\@citea\@empty
7528 \leavevmode

```

```

7529 \unskip
7530 $\sim$%
7531 \scriptstyle
7532 \@CITE{%
7533   \@for\@citeb:=#2\do{%
7534     \citea
7535     \def\@citea{,\penalty\@m\ }%
7536     \edef\@citeb{\expandafter\@firstofone\@citeb}%
7537     \if@filesw
7538       \immediate\write\@auxout{\string\citation{\@citeb}}%
7539     \fi
7540     \ifundefined{b@\@citeb\extra@b@citeb}{%
7541       \mbox{\reset@font\bfseries ?}%
7542       \G@refundefinedtrue
7543       \@latex@warning{%
7544         Citation '\@citeb' on page \thepage \space undefined%
7545       }%
7546     }{%
7547       {\csname b@\@citeb\extra@b@citeb\endcsname}%
7548     }%
7549   }%
7550 }{#1}%
7551 }$%
7552 }%

```

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.

```

7553 \def\@citex[#1]#2{%
7554   \let\@citea\@empty
7555   \@cite{%
7556     \@for\@citeb:=#2\do{%
7557       \citea
7558       \def\@citea{,\penalty\@m\ }%
7559       \edef\@citeb{\expandafter\@firstofone\@citeb}%
7560       \if@filesw
7561         \immediate\write\@auxout{\string\citation{\@citeb}}%
7562       \fi
7563       \ifundefined{b@\@citeb\extra@b@citeb}{%
7564         \mbox{\reset@font\bfseries ?}%
7565         \G@refundefinedtrue
7566         \@latex@warning{%
7567           Citation '\@citeb' on page \thepage \space undefined%
7568         }%
7569       }{%
7570         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
7571       }%
7572     }%
7573   }{#1}%
7574 }%
7575 }{}

```

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.

```

7576 \ifpackageloaded{harvard}{%
7577   \Hy@AtBeginDocument{%
7578     \Hy@Info{*** compatibility with harvard **** }%
7579     \Hy@raiselinksfalse
7580     \def\harvardcite#1#2#3#4{%
7581       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
7582       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
7583       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
7584       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7585     }%
7586     \def\HAR@citetoaux#1{%
7587       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7588       \ifHy@backref
7589         \ifx\@empty\@currentlabel
7590           \else
7591             \@bsphack
7592             \if@filesw
7593               \protected@write\@auxout{}{%
7594                 \string\@writefile{brf}{%
7595                   \string\backcite{#1}{%
7596                     {\thepage}{\@currentlabel}{\@currentHref}%
7597                   }%
7598                 }%
7599               }%
7600             \fi
7601             \@esphack
7602           \fi
7603         \fi
7604       }%
7605     \def\harvarditem{%
7606       \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7607     }%
7608     \def\@harvarditem[#1]#2#3#4#5\par{%
7609       \item[]%
7610       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7611       \if@filesw
7612         \begingroup
7613           \def\protect##1{\string ##1\space}%
7614           \ifthenelse{\equal{#1}{\null}}{%
7615             {\def\next{{#4}{#2}{#3}}}%
7616             {\def\next{{#4}{#2}{#1}{#3}}}%
7617           \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7618         \endgroup
7619       \fi
7620       \protect\hspace*{-\labelwidth}%
7621       \protect\hspace*{-\labelsep}%
7622       \ignorespaces
7623       #5%
7624       \ifHy@backref
7625         \newblock
7626         \backref{\csname br@#4\endcsname}%
7627       \fi
7628     \par
7629   }%

```

`\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`:

```

7630 \long\def\HAR@checkcitations#1#2#3#4{%
7631   \def\HAR@tempa{\hyper@@link[cite]{#1}{#2}}%
7632   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
7633     \def\HAR@tempa{\hyper@@link[cite]{#1}{#3}}%
7634     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7635       \def\HAR@tempa{\hyper@@link[cite]{#1}{#4}}%
7636       \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7637         \else
7638           \@tempswatrue
7639         \fi
7640       \else
7641         \@tempswatrue
7642       \fi
7643     \else
7644       \@tempswatrue
7645     \fi
7646   }%
7647 }%

7648 }{}

```

37.2 Package chicago

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

```

7649 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

7650 \def\citeN{%
7651   \def\@citesep{-1000}%
7652   \def\@cite##1##2{##1}%
7653   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7654   \@citedata@opt
7655 }%

```

`\shortciteN`

```

7656 \def\shortciteN{%
7657   \def\@citesep{-1000}%
7658   \def\@cite##1##2{##1}%
7659   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7660   \@citedata@opt
7661 }%

```

`\@citedata@opt`

```

7662 \def\@citedata@opt{%
7663   \let\@cite@opt\@empty
7664   \@ifnextchar {%
7665     \@tempswatrue
7666     \@citedatax@opt
7667   }{%
7668     \@tempswafalse
7669     \@citedatax[]%
7670   }%
7671 }%

```

\@citedatax@opt

```
7672 \def\@citedatax@opt[#1]{%  
7673   \def\@cite@opt{, #1}%  
7674   \@citedatax[#1]}%  
7675 }%  
  
7676 }{}
```

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.

```
7677 \ltx@ifclassloaded{slides}{%  
7678   \def\Hy@SlidesFormatOptionalPage#1{(#1)}%  
7679   \def\Hy@PageAnchorSlidesPlain{%  
7680     \advance\c@page\ltx@one  
7681     \edef\Hy@TempPageAnchor{%  
7682       \noexpand\hyper@@anchor{%  
7683         page.\the\c@slide.\the\c@overlay.\the\c@note%  
7684         \ifnum\c@page=\ltx@one  
7685         \else  
7686         .\the\c@page  
7687         \fi  
7688       }%  
7689     }%  
7690     \advance\c@page-\ltx@one  
7691   }%  
7692   \def\Hy@PageAnchorSlide{%  
7693     \advance\c@page\ltx@one  
7694     \ifnum\c@page>\ltx@one  
7695       \ltx@ifundefined{theHpage}{%  
7696         \protected@edef\Hy@TheSlideOptionalPage{%  
7697           \Hy@SlidesFormatOptionalPage{\thepage}%  
7698         }%  
7699       }{%  
7700         \protected@edef\Hy@TheSlideOptionalPage{%  
7701           \Hy@SlidesFormatOptionalPage{\theHpage}%  
7702         }%  
7703       }%  
7704     \else  
7705       \def\Hy@TheSlideOptionalPage{}%  
7706     \fi  
7707     \advance\c@page-\ltx@one  
7708     \pdfstringdef\@the@H@page{%  
7709       \csname  
7710         the%  
7711         \ltx@ifundefined{theH\Hy@SlidesPage}{-}{H}%  
7712         \Hy@SlidesPage  
7713       \endcsname  
7714     \Hy@TheSlideOptionalPage  
7715   }%  
7716   \ltx@gobblethree
```

```

7717 }%
7718 \def\Hy@SlidesPage{slide}%
7719 \g@addto@macro\slide{%
7720   \def\Hy@SlidesPage{slide}%
7721 }%
7722 \g@addto@macro\overlay{%
7723   \def\Hy@SlidesPage{overlay}%
7724 }%
7725 \g@addto@macro\note{%
7726   \def\Hy@SlidesPage{note}%
7727 }%
7728 }{%
7729   \def\Hy@PageAnchorSlidesPlain{}}%
7730   \def\Hy@PageAnchorSlide{}}%
7731 }
7732 \def\Hy@EveryPageAnchor{%
7733   \Hy@DistillerDestFix
7734   \ifHy@pageanchor
7735     \ifHy@hypertextnames
7736       \ifHy@plainpages
7737         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7738         \Hy@PageAnchorSlidesPlain
7739       \else
7740         \begingroup
7741           \let\@number\@firstofone
7742           \Hy@unicodedefalse
7743           \Hy@PageAnchorSlide
7744           \pdfstringdef\@the@H@page{\thepage}%
7745         \endgroup
7746         \EdefUnescapeString\@the@H@page{\@the@H@page}%
7747         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7748       \fi
7749     \else
7750       \Hy@GlobalStepCount\Hy@pagecounter
7751       \def\Hy@TempPageAnchor{%
7752         \hyper@@anchor{page.\the\Hy@pagecounter}%
7753       }%
7754     \fi
7755   \vbox to 0pt{%
7756     \kern\voffset
7757     \kern\topmargin
7758     \kern-1bp\relax
7759     \hbox to 0pt{%
7760       \kern\hoffset
7761       \kern\ifodd\value{page}%
7762         \oddsidemargin
7763       \else
7764         \evensidemargin
7765       \fi
7766       \kern-1bp\relax
7767       \Hy@TempPageAnchor\relax
7768     \hss
7769   }%
7770   \vss
7771 }%
7772 \fi
7773 }

```



```

7774 \g@addto@macro\Hy@EveryPageBoxHook{%
7775   \Hy@EveryPageAnchor
7776 }

```

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.

```

7777 \def\addcontentsline#1#2#3{% toc extension, type, tag
7778   \begingroup
7779   \let\label\@gobble
7780   \ifx\@currentHref\@empty
7781     \Hy@Warning{%
7782       No destination for bookmark of \string\addcontentsline,%
7783       \MessageBreak destination is added%
7784     }%
7785     \phantomsection
7786   \fi
7787   \expandafter\ifx\csname toplevel@#2\endcsname\relax
7788     \begingroup
7789     \def\Hy@tempa{#1}%
7790     \ifx\Hy@tempa\Hy@bookmarkstype
7791       \Hy@WarningNoLine{%
7792         bookmark level for unknown #2 defaults to 0%
7793       }%
7794     \else
7795       \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7796     \fi
7797   \endgroup
7798   \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7799 \fi
7800 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
7801 \Hy@writebookmark{\csname the#2\endcsname}%
7802   {#3}%
7803   {\@currentHref}%
7804   {\Hy@toplevel}%
7805   {#1}%
7806 \ifHy@verbose
7807   \begingroup
7808   \def\Hy@tempa{#3}%
7809   \@onelevel@sanitize\Hy@tempa
7810   \let\temp@online\on@line
7811   \let\on@line\@empty
7812   \Hy@Info{%
7813     bookmark\temp@online:\MessageBreak
7814     thecounter {\csname the#2\endcsname}\MessageBreak
7815     text {\Hy@tempa}\MessageBreak
7816     reference {\@currentHref}\MessageBreak
7817     toplevel {\Hy@toplevel}\MessageBreak
7818     type {#1}%
7819   }%
7820   \endgroup
7821 \fi
7822 \addtocontents{#1}{%
7823   \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%

```

```

7824 }%
7825 \endgroup
7826 }
7827 \def\contentsline#1#2#3#4{%
7828 \ifx\#4\%
7829 \csname l@#1\endcsname{#2}{#3}%
7830 \else
7831 \ifcase\Hy@linktoc % none
7832 \csname l@#1\endcsname{#2}{#3}%
7833 \or % section
7834 \csname l@#1\endcsname{%
7835 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7836 }{#3}%
7837 \or % page
7838 \csname l@#1\endcsname{#2}{#3}%
7839 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7840 }%
7841 \else % all
7842 \csname l@#1\endcsname{%
7843 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7844 }{#3}%
7845 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7846 }%
7847 \fi
7848 \fi
7849 }

7850 \</package>
7851 \<*check>
7852 \checklatex
7853 \checkcommand\def\addcontentsline#1#2#3{%
7854 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7855 }
7856 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7857 \</check>
7858 \<*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.

```

7859 \let\H@definecounter\@definecounter
7860 \def\@definecounter#1{%
7861 \H@definecounter{#1}%
7862 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7863 }

```

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.

```

7864 \let\H@newctr\@newctr
7865 \def\@newctr#1[#2]{%
7866 \H@newctr#1[{#2}]%
7867 \expandafter\def\csname theH#1\endcsname{%
7868 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7869 }%
7870 }

```

41 AMSL^AT_EX 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.

```

7871 \ifpackageloaded{amsmath}{%
7872   \def\Hy@make@anchor{%
7873     \Hy@MakeCurrentHrefAuto{AMS}%
7874     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7875   }%
7876   \def\Hy@make@df@tag@@#1{%
7877     \gdef\df@tag{%
7878       \maketag@@@{\Hy@make@anchor#1}%
7879       \def\@currentlabel{#1}%
7880     }%
7881   }%
7882   \def\Hy@make@df@tag@@@#1{%
7883     \gdef\df@tag{%
7884       \tagform@{\Hy@make@anchor#1}%
7885       \toks@{\exp{\p@equation{#1}}}%
7886       \edef\@currentlabel{\the\toks@}%
7887     }%
7888   }%
7889   \let\HyOrg@make@df@tag@@\make@df@tag@@
7890   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7891   \let\make@df@tag@@\Hy@make@df@tag@@
7892   \let\make@df@tag@@@\Hy@make@df@tag@@@
7893 }{}

```

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

```

7894 \ifpackagewith{hyperref}{pdftex}{%
7895   \let\H@seteqlabel\@seteqlabel
7896   \def\@seteqlabel#1{%
7897     \H@seteqlabel{#1}%
7898     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7899     \Hy@raisedlink{%
7900       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7901     }%
7902   }%
7903 }{}

```

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.

```

7904 \let\HyOrg@addtoreset\@addtoreset
7905 \def\@addtoreset#1#2{%
7906   \HyOrg@addtoreset{#1}{#2}%
7907   \expandafter\xdef\csname theH#1\endcsname{%
7908     \expandafter\noexpand
7909       \csname the\@ifundefined{theH#2}{H#2}\endcsname
7910     .\noexpand\the\noexpand\value{#1}%
7911   }%
7912 }
```

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

```

7913 </package>
7914 <*check>
7915 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7916 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7917   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7918     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7919       \@addtoreset{#2}{#3}%
7920       \@xp\xdef\csname the#2\endcsname{%
7921         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7922       }%
7923     }%
7924   }%
7925 }%
7926 </check>
7927 <*package>
7928 \@ifpackageloaded{amsmath}{%
7929   \@ifpackagelater{amsmath}{1999/12/14}{%
7930     \renewcommand*{\numberwithin}[3][\arabic]{%
7931       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7932         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7933           \HyOrg@addtoreset{#2}{#3}%
7934           \@xp\xdef\csname the#2\endcsname{%
7935             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7936           }%
7937           \@xp\xdef\csname theH#2\endcsname{%
7938             \@xp\@nx
7939             \csname the\@ifundefined{theH#3}{H#3}\endcsname
7940             .\@nx#1{#2}%
7941           }%
7942         }%
7943       }%
7944     }%
7945   }{%
7946     \Hy@WarningNoLine{%
7947       \string\numberwithin\space of package 'amsmath' %
7948       only fixed\MessageBreak
7949       for version 2000/06/06 v2.12 or newer%
7950     }%
7951   }%
7952 }
```

42 Included figures

Simply intercept the low level graphics package macro.

```
7953 \ifHy@figures
7954 \let\Hy@Gin@setfile\Gin@setfile
7955 \def\Gin@setfile#1#2#3{%
7956 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7957 }%
7958 \fi
7959 \Hy@DisableOption{hyperfigures}
```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

Hyper-indexing works crudely, by forcing code onto the end of the index entry with the | feature; this puts a hyperlink around the printed page numbers. It will not proceed if the author has already used the | specifier for something like boldening entries. That would make Makeindex fail (cannot have two | specifiers). The solution is for the author to use generic coding, and put in the requisite \hyperpage in his/her own macros along with the boldness.

This section is poor stuff; it's open to all sorts of abuse. Sensible large projects will design their own indexing macros any bypass this.

```
7960 \ifHy@hyperindex
7961 \def\HyInd@ParenLeft{(%
7962 \def\HyInd@ParenRight{)%
7963 \def\hyperindexformat#1#2{%
7964 \let\HyOrg@hyperpage\hyperpage
7965 \let\hyperpage\@firstofone
7966 #1{\HyOrg@hyperpage{#2}}%
7967 \let\hyperpage\HyOrg@hyperpage
7968 }%
7969 \Hy@nextfalse
7970 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7971 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7972 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7973 \begingroup
7974 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7975 \lccode'\|/\|=\relax
7976 \lowercase{\endgroup
7977 \ifHy@next
7978 \let\HyInd@org@wrindex\@wrindex
7979 \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2}||\}%
7980 \def\HyInd@@wrindex#1#2|#3|#4\{\%
7981 \ifx\|#3\%
7982 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7983 \else
7984 \HyInd@@@wrindex{#1}{#2}{#3}\%
7985 \fi
7986 }%
7987 \def\HyInd@@@wrindex#1#2#3#4\{\%
7988 \def\Hy@temp@A{#3}%
7989 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7990 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7991 \relax
7992 \HyInd@org@wrindex{#1}{%
```

```

7993         #2|hyperindexformat{/#3#4}%
7994     }%
7995 \else
7996     \ifx\\#4\\%
7997         \ifx\Hy@temp@A\HyInd@ParenRight
7998             \HyInd@org@wrindex{#1}{#2|#3}%
7999         \else
8000             \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
8001         \fi
8002     \else
8003         \HyInd@org@wrindex{#1}{%
8004             #2|#3hyperindexformat{/#4}%
8005         }%
8006     \fi
8007 \fi
8008 }%
8009 \else
8010 \def\@wrindex#1{\@@wrindex#1||\}%
8011 \def\@@wrindex#1|#2|#3\{\%
8012 \if@filesw
8013     \ifx\\#2\\%
8014         \protected@write\@indexfile{}\{%
8015             \string\indexentry{#1|hyperpage}\{thepage}%
8016         }%
8017     \else
8018         \HyInd@@@wrindex{#1}#2\%
8019     \fi
8020 \fi
8021 \endgroup
8022 \@esphack
8023 }%
8024 \def\HyInd@@@wrindex#1#2#3\{\%
8025 \def\Hy@temp@A{#2}%
8026 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
8027     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
8028     \relax
8029 \protected@write\@indexfile{}\{%
8030     \string\indexentry{%
8031         #1|hyperindexformat{/#2#3}%
8032     }\{thepage}%
8033 }%
8034 \else
8035     \ifx\\#3\\%
8036         \ifx\Hy@temp@A\HyInd@ParenRight
8037             \protected@write\@indexfile{}\{%
8038                 \string\indexentry{#1|#2}\{thepage}%
8039             }%
8040         \else
8041             \protected@write\@indexfile{}\{%
8042                 \string\indexentry{#1|#2hyperpage}\{thepage}%
8043             }%
8044         \fi
8045     \else
8046         \protected@write\@indexfile{}\{%
8047             \string\indexentry{%
8048                 #1|#2hyperindexformat{/#3}%
8049             }\{thepage}%

```

```

8050      }%
8051      \fi
8052      \fi
8053      }%
8054      \fi
8055      }%
8056      \fi
8057      \Hy@DisableOption{hyperindex}
8058      \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.

```

8059 \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.

```

8060 \def\hyperpage#1{%
8061   \HyInd@hyperpage#1\nohyperpage{}\@nil
8062 }
8063 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
8064   \HyInd@@hyperpage{#1}%
8065   #2%
8066   \def\Hy@temp{#3}%
8067   \ifx\Hy@temp\@empty
8068     \else
8069       \ltx@ReturnAfterFi{%
8070         \HyInd@hyperpage#3\@nil
8071       }%
8072     \fi
8073 }
8074 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
8075 \def\@hyperpage#1--#2--#3\\\{%
8076   \ifx\#2\\\%
8077     \@commahyperpage{#1}%
8078   \else
8079     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
8080   \fi
8081 }
8082 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
8083 \def\@commahyperpage#1, #2,#3\\\{%
8084   \ifx\#2\\\%
8085     \HyInd@pagelink{#1}%
8086   \else
8087     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
8088   \fi
8089 }

```

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

```

8090 \def\HyInd@pagelink#1{%
8091   \begingroup
8092   \toks@={}%
8093   \HyInd@removespaces#1 \@nil
8094   \endgroup
8095 }
8096 \def\HyInd@removespaces#1 #2\@nil{%
8097   \toks@=\expandafter{\the\toks@#1}%

```

```

8098 \ifx\#2\%
8099 \edef\x{\the\toks@}%
8100 \ifx\x\@empty
8101 \else
8102 \hyperlink{page.\the\toks@}{\the\toks@}%
8103 \fi
8104 \else
8105 \ltx@ReturnAfterFi{%
8106 \HyInd@removespaces#2\@nil
8107 }%
8108 \fi
8109 }

```

44 Compatibility with foiltex

```

8110 \@ifclassloaded{foils}{%
8111 \providecommand*\ext@table{lot}%
8112 \providecommand*\ext@figure{lof}%
8113 }{}

```

45 Compatibility with seminar slide package

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

```

8114 \@ifclassloaded{seminar}{%
8115 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
8116 }{%
8117 \Hy@seminarslidesfalse
8118 }
8119 \@ifpackageloaded{slidesec}{%
8120 \newcommand\theHslidesection {\arabic{slidesection}}}%
8121 \newcommand\theHslidesubsection{%
8122 \theHslidesection.\arabic{slidesubsection}}%
8123 }%
8124 \def\slide@heading[#1]#2{%
8125 \H@refstepcounter{slidesection}%
8126 \@addtoreset{slidesubsection}{slidesection}%
8127 \addtocontents{los}{%
8128 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
8129 {\@SCTR}{slideheading.\theslidesection}%
8130 }%
8131 \def\Hy@tempa{#2}%
8132 \ifx\Hy@tempa\@empty
8133 \else
8134 {%
8135 \edef\@currentlabel{%
8136 \csname p@slidesection\endcsname\theslidesection
8137 }%
8138 \makeslideheading{#2}%
8139 }%
8140 \fi
8141 \gdef\theslideheading{#1}%
8142 \gdef\theslidesubheading{}%
8143 \ifHy@bookmarksnumbered
8144 \def\Hy@slidetitle{\theslidesection\space #1}%
8145 \else

```



```

8146 \def\Hy@slidetitle{#1}%
8147 \fi
8148 \ifHy@hypertextnames
8149 \ifHy@naturalnames
8150 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
8151 \Hy@writebookmark
8152 {\theslidesection}%
8153 {\Hy@slidetitle}%
8154 {slideheading.\theslidesection}%
8155 {1}%
8156 {toc}%
8157 \else
8158 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
8159 \Hy@writebookmark
8160 {\theslidesection}%
8161 {\Hy@slidetitle}%
8162 {slideheading.\theHslidesection}%
8163 {1}%
8164 {toc}%
8165 \fi
8166 \else
8167 \Hy@GlobalStepCount\Hy@linkcounter
8168 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8169 \Hy@writebookmark
8170 {\theslidesection}%
8171 {\Hy@slidetitle}%
8172 {slideheading.\the\Hy@linkcounter}%
8173 {1}%
8174 {toc}%
8175 \fi
8176 }%
8177 \def\slide@subheading[#1]#2{%
8178 \H@refstepcounter{slidesubsection}%
8179 \addtocontents{los}{%
8180 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
8181 {\@SCTR}{slideheading.\theslidesubsection}%
8182 }%
8183 \def\Hy@tempa{#2}%
8184 \ifx\Hy@tempa\@empty
8185 \else
8186 {%
8187 \edef\@currentlabel{%
8188 \csname p@slidesubsection\endcsname\theslidesubsection
8189 }%
8190 \makeslidesubheading{#2}%
8191 }%
8192 \fi
8193 \gdef\theslidesubheading{#1}%
8194 \ifHy@bookmarksnumbered
8195 \def\Hy@slidetitle{\theslidesubsection\space #1}%
8196 \else
8197 \def\Hy@slidetitle{#1}%
8198 \fi
8199 \ifHy@hypertextnames
8200 \ifHy@naturalnames
8201 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
8202 \Hy@writebookmark

```

```

8203         {\theslidesubsection}%
8204         {\Hy@slidetitle}%
8205         {slideheading.\theslidesubsection}%
8206         {2}%
8207         {toc}%
8208     \else
8209     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
8210     \Hy@writebookmark
8211     {\theslidesubsection}%
8212     {\Hy@slidetitle}%
8213     {slideheading.\theHslidesubsection}%
8214     {2}%
8215     {toc}%
8216     \fi
8217 \else
8218     \Hy@GlobalStepCount\Hy@linkcounter
8219     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
8220     \Hy@writebookmark
8221     {\theslidesubsection}%
8222     {\Hy@slidetitle}%
8223     {slideheading.\the\Hy@linkcounter}%
8224     {1}%
8225     {toc}%
8226     \fi
8227 }%
8228 \providecommand*{\listslidenam}{List of Slides}%
8229 \def\listofslides{%
8230     \section*{%
8231         \listslidenam
8232         \@mkboth{%
8233             \expandafter\MakeUppercase\listslidenam
8234         }{%
8235             \expandafter\MakeUppercase\listslidenam
8236         }%
8237     }%
8238     \def\l@slide##1##2##3##4{%
8239         \slide@undottedcline{%
8240             \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8241         }{%
8242         }%
8243         \let\l@subslide\l@slide
8244         \@startlos
8245     }%
8246     \def\slide@contents{%
8247         \def\l@slide##1##2##3##4{%
8248             \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8249         }%
8250         \let\l@subslide\@gobblefour
8251         \@startlos
8252     }%
8253     \def\Slide@contents{%
8254         \def\l@slide##1##2##3##4{%
8255             \ifcase\lslide@flag
8256                 \message{##1 ** \the\c@slidesection}%
8257                 \ifnum##1>\c@slidesection
8258                     \def\lslide@flag{1}%
8259                 {%

```

```

8260         \large
8261         \slide@cline{%
8262             \slidenumberline{$\Rightarrow\bullet$}%
8263             {\hyperlink{##4}{##2}}}%
8264         }{##3}%
8265     }%
8266     \else
8267     {%
8268         \large
8269         \slide@cline{%
8270             \slidenumberline{$\surd\;\bullet$}%
8271             {\hyperlink{##4}{##2}}}%
8272         }{##3}%
8273     }%
8274     \fi
8275 \or
8276 \def\lslide@flag{2}%
8277 {%
8278     \large
8279     \slide@cline{%
8280         \slidenumberline{$\bullet$}%
8281         {\hyperlink{##4}{##2}}}%
8282     }{##3}%
8283 }%
8284 \or
8285 {%
8286     \large
8287     \slide@cline{%
8288         \slidenumberline{$\bullet$}%
8289         {\hyperlink{##4}{##2}}}%
8290     }{##3}%
8291 }%
8292 \fi
8293 }%
8294 \def\l@subslide##1##2##3##4{%
8295     \ifnum\lslide@flag=1 %
8296         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}}%
8297     \fi
8298 }%
8299 \def\lslide@flag{0}%
8300 \@startlos
8301 }%
8302 }{}

```

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.)

```

8303 \ifHy@texht
8304 \expandafter\endinput
8305 \fi
8306 \let\real@setref\@setref
8307 \def\@setref#1#2#3{% csname, extract group, refname
8308     \ifx#1\relax
8309         \protect\G@refundefinedtrue
8310         \nfss@text{\reset@font\bfseries ??}%
8311         \@latex@warning{%
8312             Reference ‘#3’ on page \thepage \space undefined%
8313         }%

```

```

8314 \else
8315   \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8316 \fi
8317 }

```

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

```

8318 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
8319   \begingroup
8320   \toks0={\hyper@@link{#5}{#4}}%
8321   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8322   \edef\x{\endgroup
8323     \the\toks0 \the\toks1 }%
8324   }%
8325 \x
8326 }
8327 \def\@pagesetref#1#2#3{% csnames, extract macro, ref
8328   \ifx#1\relax
8329     \protect\G@refundefinedtrue
8330     \nfss@text{\reset@font\bfseries ??}%
8331     \@latex@warning{%
8332       Reference '#3' on page \thepage \space undefined%
8333     }%
8334   \else
8335     \protect\hyper@@link
8336     {\expandafter\@fifthoffive#1}%
8337     {page.\expandafter\@secondoffive#1}%
8338     {\expandafter\@secondoffive#1}%
8339   \fi
8340 }
8341 \</package>
8342 \<*check>
8343 \checklatex
8344 \checkcommand\def\@setref#1#2#3{%
8345   \ifx#1\relax
8346     \protect\G@refundefinedtrue
8347     \nfss@text{\reset@font\bfseries ??}%
8348     \@latex@warning{%
8349       Reference '#3' on page \thepage\space undefined%
8350     }%
8351   \else
8352     \expandafter#2#1\null
8353   \fi
8354 }
8355 \</check>
8356 \<*package>

```

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

```

8357 \def\HyRef@StarSetRef#1{%
8358   \begingroup
8359   \Hy@safe@activetrue
8360   \edef\x{#1}%
8361   \@onelevel@sanitize\x
8362   \edef\x{\endgroup
8363     \noexpand\HyRef@@StarSetRef
8364     \expandafter\noexpand\csname r@\x\endcsname{\x}%
8365   }%

```

```

8366 \x
8367 }
8368 \def\HyRef@@StarSetRef#1#2#3{%
8369 \ifx#1\@undefined
8370 \let#1\relax
8371 \fi
8372 \real@setref#1#3{#2}%
8373 }
8374 \def\@refstar#1{%
8375 \HyRef@StarSetRef{#1}\@firstoffive
8376 }
8377 \def\@pagerefstar#1{%
8378 \HyRef@StarSetRef{#1}\@secondoffive
8379 }
8380 \def\@namerefstar#1{%
8381 \HyRef@StarSetRef{#1}\@thirdoffive
8382 }
8383 \Hy@AtBeginDocument{%
8384 \@ifpackageloaded{varioref}{%
8385 \def\@Refstar#1{%
8386 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8387 }%
8388 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8389 \MakeUppercase#1%
8390 }%
8391 \DeclareRobustCommand*\@Ref{#1}{%
8392 \@ifstar\@Refstar\HyRef@Ref
8393 }%
8394 \def\HyRef@Ref#1{%
8395 \hyperref[{#1}]{\Ref*{#1}}%
8396 }%
8397 \def\Vr@f#1{%
8398 \leavevmode\unskip\vref@space
8399 \hyperref[{#1}]{%
8400 \Ref*{#1}%
8401 \let\vref@space\nobreakspace
8402 \@vpageref\unskip}{#1}%
8403 }%
8404 }%
8405 \def\vr@f#1{%
8406 \leavevmode\unskip\vref@space
8407 \begingroup
8408 \let\T@pageref\@pagerefstar
8409 \hyperref[{#1}]{%
8410 \ref*{#1}%
8411 \vpageref\unskip}{#1}%
8412 }%
8413 \endgroup
8414 }%
8415 }{}%
8416 }
8417 \DeclareRobustCommand*\@autopageref{%
8418 \@ifstar{%
8419 \HyRef@autopagerefname\pageref*%
8420 }\HyRef@autopageref
8421 }
8422 \def\HyRef@autopageref#1{%

```

```

8423 \hyperref[#1]}{\HyRef@autopagerefname\pageref*{#1}}%
8424 }
8425 \def\HyRef@autopagerefname{%
8426 \ltx@ifundefined{pageautorefname}{%
8427 \ltx@ifundefined{pagename}{%
8428 \Hy@Warning{No autoref name for 'page'}%
8429 }{%
8430 \pagename\nobreakspace
8431 }%
8432 }{%
8433 \pageautorefname\nobreakspace
8434 }%
8435 }
8436 \DeclareRobustCommand*\autoref{%
8437 \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
8438 }
8439 \def\HyRef@autoref#1#2{%
8440 \begingroup
8441 \Hy@safe@activetrue
8442 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8443 \endgroup
8444 }
8445 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8446 \HyRef@ShowKeysRef{#2}%
8447 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8448 \edef\HyRef@thisref{%
8449 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8450 }%
8451 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8452 \Hy@safe@activesfalse
8453 #3{%
8454 \expandafter\@fifthoffive#1\@empty\@empty\@empty
8455 }{%
8456 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8457 }{%
8458 \HyRef@currentHtag
8459 \expandafter\@firstoffive#1\@empty\@empty\@empty
8460 \null
8461 }%
8462 \else
8463 \protect\G@refundefinedtrue
8464 \nfss@text{\reset@font\bfseries ??}%
8465 \@latex@warning{%
8466 Reference '#2' on page \thepage\space undefined%
8467 }%
8468 \fi
8469 }
8470 \def\HyRef@testreftype#1.#2\{%
8471 \ltx@ifundefined{#1autorefname}{%
8472 \ltx@ifundefined{#1name}{%
8473 \HyRef@StripStar#1\*\@nil{#1}%
8474 \ltx@ifundefined{\HyRef@name autorefname}{%
8475 \ltx@ifundefined{\HyRef@name name}{%
8476 \def\HyRef@currentHtag{}%
8477 \Hy@Warning{No autoref name for '#1'}%
8478 }{%
8479 \edef\HyRef@currentHtag{%

```

```

8480         \expandafter\noexpand\csname\HyRef@name name\endcsname
8481         \noexpand~%
8482     }%
8483 }%
8484 }{%
8485     \edef\HyRef@currentHtag{%
8486         \expandafter\noexpand
8487         \csname\HyRef@name autorefname\endcsname
8488         \noexpand~%
8489     }%
8490 }%
8491 }{%
8492     \edef\HyRef@currentHtag{%
8493         \expandafter\noexpand\csname#1name\endcsname
8494         \noexpand~%
8495     }%
8496 }%
8497 }{%
8498     \edef\HyRef@currentHtag{%
8499         \expandafter\noexpand\csname#1autorefname\endcsname
8500         \noexpand~%
8501     }%
8502 }%
8503 }
8504 \def\HyRef@StripStar#1*\#2\@nil#3{%
8505     \def\HyRef@name{#2}%
8506     \ifx\HyRef@name\HyRef@CaseStar
8507         \def\HyRef@name{#1}%
8508     \else
8509         \def\HyRef@name{#3}%
8510     \fi
8511 }
8512 \def\HyRef@CaseStar{*\\}
8513 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8514 \let\HyRef@ShowKeysRef\@gobble
8515 \def\HyRef@ShowKeysInit{%
8516     \begingroup\expandafter\expandafter\expandafter\endgroup
8517     \expandafter\ifx\csname SK@@label\endcsname\relax
8518     \else
8519         \ifx\SK@ref\@empty
8520         \else
8521             \def\HyRef@ShowKeysRef{%
8522                 \SK@\SK@@ref
8523             }%
8524         \fi
8525     \fi
8526 }
8527 \@ifpackageloaded{showkeys}{%
8528     \HyRef@ShowKeysInit
8529 }{%
8530     \Hy@AtBeginDocument{%
8531         \@ifpackageloaded{showkeys}{%
8532             \HyRef@ShowKeysInit
8533         }{}%

```

```

8534 }%
8535 }

```

Defaults for the names that `\autoref` uses.

```

8536 \providecommand*\AMSautorefname{\equationautorefname}
8537 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8538 \providecommand*\Itemautorefname{\itemautorefname}
8539 \providecommand*\itemautorefname{item}
8540 \providecommand*\equationautorefname{Equation}
8541 \providecommand*\footnoteautorefname{footnote}
8542 \providecommand*\itemautorefname{item}
8543 \providecommand*\figureautorefname{Figure}
8544 \providecommand*\tableautorefname{Table}
8545 \providecommand*\partautorefname{Part}
8546 \providecommand*\appendixautorefname{Appendix}
8547 \providecommand*\chapterautorefname{chapter}
8548 \providecommand*\sectionautorefname{section}
8549 \providecommand*\subsectionautorefname{subsection}
8550 \providecommand*\subsubsectionautorefname{subsubsection}
8551 \providecommand*\paragraphautorefname{paragraph}
8552 \providecommand*\subparagraphautorefname{subparagraph}
8553 \providecommand*\FancyVerbLineautorefname{line}
8554 \providecommand*\theoremautorefname{Theorem}
8555 \providecommand*\pageautorefname{page}
8556 </package>

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

8557 < *pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
8558 \begingroup\expandafter\expandafter\expandafter\endgroup
8559 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8560 \begingroup
8561 \catcode'\| =0 %
8562 \@makeother\| %
8563 \@firstofone{ \endgroup
8564 |def|Hy@pstringdef#1#2{%
8565 |begingroup
8566 |edef~{|string~}%
8567 |xdef|Hy@gtemp{#2}%
8568 |endgroup
8569 |let#1|Hy@gtemp
8570 |@onelevel@sanitize#1%
8571 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
8572 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8573 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8574 }%
8575 |def|Hy@ExchangeBackslash#1|#2|@nil{%

```



```

8576    #1%
8577    |ifx|\#2|\%%
8578    |else
8579        \\\%
8580        |ltx@ReturnAfterFi{%
8581            |Hy@ExchangeBackslash#2|@nil
8582        }%
8583    |fi
8584    }%
8585 }%
8586 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8587    #1%
8588    \ifx\#2\\%
8589    \else
8590        \@backslashchar(%
8591        \ltx@ReturnAfterFi{%
8592            \Hy@ExchangeLeftParenthesis#2\@nil
8593        }%
8594    \fi
8595 }%
8596 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8597    #1%
8598    \ifx\#2\\%
8599    \else
8600        \@backslashchar)%
8601        \ltx@ReturnAfterFi{%
8602            \Hy@ExchangeRightParenthesis#2\@nil
8603        }%
8604    \fi
8605 }%
8606 \else
8607 \def\Hy@pstringdef#1#2{%
8608     \begingroup
8609     \edef~{\string~}%
8610     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8611     \endgroup
8612     \let#1\Hy@gtemp
8613 }%
8614 \fi
8615 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

8616 <*pdfTeX>
8617 \providecommand*{\XR@ext}{pdf}
8618 \Hy@setbreaklinks{true}
8619 \def\HyPat@ObjRef{%
8620     [0-9]*[1-9][0-9]* 0 R%
8621 }

```

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`

```

8622 \let\Hy@pdfminorversion\relax
8623 \begingroup\expandafter\expandafter\expandafter\endgroup
8624 \expandafter\ifx\csname pdfminorversion\endcsname\relax
8625 \begingroup\expandafter\expandafter\expandafter\endgroup
8626 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
8627 \else
8628 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8629 \fi
8630 \else
8631 \def\Hy@pdfminorversion{\pdfminorversion}%
8632 \fi
8633 \ifundefined{Hy@pdfminorversion}{%
8634 \PackageInfo{hyperref}{%
8635 PDF version is not set, because pdfTeX is too old (<1.10a)%
8636 }%
8637 }{%
8638 \ifHy@ocgcolorlinks
8639 \ifnum\Hy@pdfminorversion<5 %
8640 \kvsetkeys{Hyp}{pdfversion=1.5}%
8641 \fi
8642 \fi
8643 \ifHy@setpdfversion
8644 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
8645 \else
8646 \Hy@pdfminorversion=\Hy@pdfversion\relax
8647 \fi
8648 \PackageInfo{hyperref}{%
8649 \expandafter\string\Hy@pdfminorversion
8650 :=\number\Hy@pdfversion\space
8651 }%
8652 \fi
8653 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
8654 }
8655 \Hy@DisableOption{pdfversion}%

8656 \ifHy@ocgcolorlinks
8657 \pdf@ifdraftmode{}{%
8658 \immediate\pdfobj{%
8659 <<%
8660 /Type/OCG%
8661 /Name(View)%
8662 /Usage<<%
8663 /Print<<%
8664 /PrintState/OFF%
8665 >>%
8666 /View<<%
8667 /ViewState/ON%
8668 >>%
8669 >>%
8670 >>%
8671 }%
8672 \edef\OBJ@OCG@view{\the\pdfobj\space 0 R}%
8673 \immediate\pdfobj{%
8674 <<%
8675 /Type/OCG%
8676 /Name(Print)%
8677 /Usage<<%
8678 /Print<<%

```

```

8679         /PrintState/ON%
8680     >>%
8681     /View<<%
8682         /ViewState/OFF%
8683     >>%
8684 >>%
8685 >>%
8686 }%
8687 \edef\OBJ@OCG@print{\the\pdfflastobj\space 0 R}%
8688 \immediate\pdfobj{%
8689     [%
8690         \OBJ@OCG@view\space\OBJ@OCG@print
8691     ]%
8692 }%
8693 \edef\OBJ@OCGs{\the\pdfflastobj\space 0 R}%
8694 \pdfcatalog{%
8695     /OCProperties<<%
8696         /OCGs \OBJ@OCGs
8697     /D<<%
8698         /OFF[\OBJ@OCG@print]%
8699         /AS[%
8700             <<%
8701                 /Event/View%
8702                 /OCGs \OBJ@OCGs
8703                 /Category[/View]%
8704             >>%
8705             <<%
8706                 /Event/Print%
8707                 /OCGs \OBJ@OCGs
8708                 /Category[/Print]%
8709             >>%
8710             <<%
8711                 /Event/Export%
8712                 /OCGs \OBJ@OCGs
8713                 /Category[/Print]%
8714             >>%
8715             ]%
8716         >>%
8717     >>%
8718 }%
8719 \begingroup
8720 \edef\x{\endgroup
8721     \pdfpageresources{%
8722         /Properties<<%
8723             /OCView \OBJ@OCG@view
8724             /OCPrint \OBJ@OCG@print
8725         >>%
8726     }%
8727 }%
8728 \x
8729 }%
8730 \Hy@AtBeginDocument{%
8731     \def\Hy@colorlink#1{%
8732         \begingroup
8733         \ifHy@ocgcolorlinks
8734             \def\Hy@ocgcolor{#1}%
8735             \setbox0=\hbox\bgroup\color@begingroup

```

```

8736 \else
8737 \HyColor@UseColor#1%
8738 \fi
8739 }%
8740 \def\Hy@endcolorlink{%
8741 \ifHy@ocgcolorlinks
8742 \color@endgroup\egroup
8743 \mbox{%
8744 \pdfliteral page{/OC/OCPrint BDC}%
8745 \rlap{\copy0}%
8746 \pdfliteral page{EMC/OC/OCView BDC}%
8747 \begingroup
8748 \expandafter\HyColor@UseColor\Hy@ocgcolor
8749 \box0 %
8750 \endgroup
8751 \pdfliteral page{EMC}%
8752 }%
8753 \fi
8754 \endgroup
8755 }%
8756 }%
8757 \else
8758 \Hy@DisableOption{ocgcolorlinks}%
8759 \fi

```

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

```

8760 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8761 \ifx\pdfstartlink\@undefined% less than version 14
8762 \let\pdfstartlink\pdfannotlink
8763 \let\pdfinkmargin\@tempdima
8764 \let\pdfxform\pdfform
8765 \let\pdfastxform\pdfastform
8766 \let\pdfrefxform\pdfrefform
8767 \else
8768 \pdfinkmargin1pt %
8769 \fi

```

First set up the default linking

```

8770 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

8771 \Hy@WrapperDef\new@pdfink#1{%
8772 \ifhmode
8773 \savesf\spacefactor
8774 \fi
8775 \Hy@SaveLastskip
8776 \Hy@VerboseAnchor{#1}%
8777 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8778 \Hy@DestName\Hy@pstringDest\@pdfview
8779 \Hy@RestoreLastskip
8780 \ifhmode
8781 \spacefactor\@savs
8782 \fi
8783 }
8784 \let\pdf@endanchor\@empty

```

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

```

8785 \def\Hy@DestName#1#2{%
8786   \pdfdest name{#1}#2\relax
8787 }

```

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.

```

8788 \providecommand*\@pdfborder{0 0 1}
8789 \providecommand*\@pdfborderstyle{}
8790 \def\Hy@undefinedname{UNDEFINED}
8791 \def\find@pdflink#1#2{%
8792   \leavevmode
8793   \protected@edef\Hy@testname{#2}%
8794   \ifx\Hy@testname\@empty
8795     \Hy@Warning{%
8796       Empty destination name,\MessageBreak
8797       using '\Hy@undefinedname'%
8798     }%
8799     \let\Hy@testname\Hy@undefinedname
8800   \else
8801     \Hy@pstringdef\Hy@testname{%
8802       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8803     }%
8804   \fi
8805   \Hy@StartlinkName{%
8806     \ifHy@pdfa /F 4\fi
8807     \Hy@setpdfborder
8808     \ifx\@pdfhighlight\@empty
8809       \else
8810         /H\@pdfhighlight
8811       \fi
8812       \ifx\CurrentBorderColor\relax
8813         \else
8814           /C[\CurrentBorderColor]%
8815         \fi
8816     }\Hy@testname
8817     \expandafter\Hy@colorlink\csname @#1color\endcsname
8818   }
8819 \def\Hy@StartlinkName#1#2{%
8820   \pdfstartlink attr{#1}goto name{#2}\relax
8821 }
8822 \def\close@pdflink{%
8823   \Hy@endcolorlink
8824   \Hy@VerboseLinkStop
8825   \pdfendlink
8826 }
8827 \def\hyper@anchor#1{%
8828   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8829 }
8830 \def\hyper@anchorstart#1{%
8831   \new@pdflink{#1}%
8832   \Hy@activeanchortrue
8833 }
8834 \def\hyper@anchorend{%
8835   \pdf@endanchor
8836   \Hy@activeanchorfalse

```

```

8837 }
8838 \def\hyper@linkstart#1#2{%
8839   \Hy@VerboseLinkStart{#1}{#2}%
8840   \ltx@ifundefined{@#1bordercolor}{%
8841     \let\CurrentBorderColor\relax
8842   }{%
8843     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8844   }%
8845   \find@pdfink{#1}{#2}%
8846 }
8847 \def\hyper@linkend{\close@pdfink}
8848 \def\hyper@link#1#2#3{%
8849   \Hy@VerboseLinkStart{#1}{#2}%
8850   \ltx@ifundefined{@#1bordercolor}{%
8851     \let\CurrentBorderColor\relax
8852   }{%
8853     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8854   }%
8855   \find@pdfink{#1}{#2}#3\Hy@xspace@end
8856   \close@pdfink
8857 }
8858 \let\CurrentBorderColor\@linkbordercolor
8859 \def\hyper@linkurl#1#2{%
8860   \begingroup
8861     \Hy@pstringdef\Hy@pstringURI{#2}%
8862     \hyper@chars
8863     \leavevmode
8864     \pdfstartlink
8865     attr{%
8866       \Hy@setpdfborder
8867       \ifx\@pdfhighlight\@empty
8868       \else
8869         /H\@pdfhighlight
8870       \fi
8871       \ifx\@urlbordercolor\relax
8872       \else
8873         /C[\@urlbordercolor]%
8874       \fi
8875     }%
8876     user{%
8877       /Subtype/Link%
8878       \ifHy@pdfa /F 4\fi
8879       /A<<%
8880       /Type/Action%
8881       /S/URI%
8882       /URI(\Hy@pstringURI)%
8883       \ifHy@href@ismap
8884         /IsMap true%
8885       \fi
8886       \Hy@href@nextactionraw
8887     >>%
8888   }%
8889   \relax
8890   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
8891   \close@pdfink
8892 \endgroup
8893 }

```

```

8894 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8895   \begingroup
8896     \def\Hy@pstringF{#2}%
8897     \Hy@CleanupFile\Hy@pstringF
8898     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
8899     \Hy@pstringdef\Hy@pstringD{#3}%
8900     \Hy@MakeRemoteAction
8901     \leavevmode
8902     \pdfstartlink
8903     attr{%
8904       \Hy@setpdfborder
8905       \ifx\@pdfhighlight\@empty
8906       \else
8907         /H\@pdfhighlight
8908       \fi
8909       \ifx\@filebordercolor\relax
8910       \else
8911         /C[\@filebordercolor]%
8912       \fi
8913     }%
8914     user {%
8915       /Subtype/Link%
8916       \ifHy@pdfa /F 4\fi
8917       /A<<%
8918       /F(\Hy@pstringF)%
8919       /S/GoToR%
8920       \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}

```

```

8921     \ifx\#3\%
8922       /D[\Hy@href@page\@pdfremotestartview]%
8923     \else
8924       /D(\Hy@pstringD)%
8925     \fi
8926     \Hy@href@nextactionraw
8927     >>%
8928   }%
8929   \relax
8930   \Hy@colorlink\@filecolor#1\Hy@xspace@end
8931   \close@pdfink
8932 \endgroup
8933 }
8934 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8935   \begingroup
8936     \Hy@pstringdef\Hy@pstringF{#1}%
8937     \Hy@pstringdef\Hy@pstringP{#3}%
8938     \leavevmode
8939     \pdfstartlink

```

```

8940 attr{%
8941   \Hy@setpdfborder
8942   \ifx\@pdfhighlight\@empty
8943   \else
8944     /H\@pdfhighlight
8945   \fi
8946   \ifx\@runbordercolor\relax
8947   \else
8948     /C[\@runbordercolor]%
8949   \fi
8950 }%
8951 user {%
8952   /Subtype/Link%
8953   \ifHy@pdfa /F 4\fi
8954   /A<<%
8955     /F(\Hy@pstringF)%
8956     /S/Launch%
8957     \Hy@SetNewWindow
8958     \ifx\#3\%
8959     \else
8960       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8961     \fi
8962     \Hy@href@nextactionraw
8963   >>%
8964 }%
8965 \relax
8966 \Hy@colorlink\@runcolor#2\Hy@xspace@end
8967 \close@pdflink
8968 \endgroup
8969 }

```

\@pdfproducer

```

8970 \ifx\@pdfproducer\relax
8971 \begingroup\expandafter\expandafter\expandafter\endgroup
8972 \expandafter\ifx\csname luatexversion\endcsname\relax
8973 \def\@pdfproducer{pdfTeX}%
8974 \ifx\eTeXversion\@undefined
8975 \else
8976 \ifx\eTeXversion\relax
8977 \else
8978 \ifnum\eTeXversion>0 %
8979 \def\@pdfproducer{pdfTeX}%
8980 \fi
8981 \fi
8982 \fi
8983 \ifx\pdfTeXversion\@undefined
8984 \else
8985 \ifnum\pdfTeXversion<100 %
8986 \edef\@pdfproducer{%
8987   \@pdfproducer
8988   \the\pdfTeXversion.\pdfTeXrevision
8989 }%
8990 \else
8991 \ifnum\pdfTeXversion<130 %
8992 \edef\@pdfproducer{%
8993   \@pdfproducer-%
8994   \expandafter\@car\the\pdfTeXversion\@empty\@nil.%

```



```

8995         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8996         \pdfTeXrevision
8997     }%
8998 \else
8999     \ifnum\pdfTeXversion<140 %
9000     \else
9001         \def\@pdfproducer{pdfTeX}%
9002     \fi
9003     \edef\@pdfproducer{%
9004         \@pdfproducer-%
9005         \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
9006         \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
9007         \pdfTeXrevision
9008     }%
9009 \fi
9010 \fi
9011 \fi
9012 \else
9013     \begingroup
9014         \count@=\luatexversion
9015         \divide\count@ by 100 %
9016         \edef\x{\the\count@}%
9017         \count@=-\x\relax
9018         \multiply\count@ by 100 %
9019         \advance\count@ by \luatexversion
9020         \edef\x{\endgroup
9021             \def\noexpand\@pdfproducer{%
9022                 LuaTeX-\x.\the\count@.\luatexrevision
9023             }%
9024         }%
9025     \x
9026 \fi
9027 \fi

```

\PDF@SetupDox

```

9028 \def\PDF@SetupDoc{%
9029     \ifx\@pdfpagescrop\@empty
9030     \else
9031         \edef\process@me{%
9032             \pdfpagesattr={%
9033                 /CropBox[\@pdfpagescrop]%
9034                 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
9035                 \else
9036                     ^^Jthe\pdfpagesattr
9037                 \fi
9038             }%
9039         }%
9040         \process@me
9041     \fi
9042     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9043     \pdfcatalog{%
9044         /PageMode/\@pdfpagemode
9045         \ifx\@baseurl\@empty
9046         \else
9047             /URI<</Base(\Hy@pstringB)>>%
9048         \fi
9049     }%

```

```

9050 \ifx\@pdfstartpage\@empty
9051 \else
9052 \ifx\@pdfstartview\@empty
9053 \else
9054   openaction goto page\@pdfstartpage{\@pdfstartview}%
9055 \fi
9056 \fi
9057 \edef\Hy@temp{%
9058   \ifHy@toolbar\else /HideToolbar true\fi
9059   \ifHy@menubar\else /HideMenubar true\fi
9060   \ifHy>windowui\else /HideWindowUI true\fi
9061   \ifHy@fitwindow /FitWindow true\fi
9062   \ifHy@centerwindow /CenterWindow true\fi
9063   \ifHy@displaydoctitle /DisplayDocTitle true\fi
9064   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9065   \Hy@UseNameKey{Direction}\@pdfdirection
9066   \Hy@UseNameKey{ViewArea}\@pdfviewarea
9067   \Hy@UseNameKey{ViewClip}\@pdfviewclip
9068   \Hy@UseNameKey{PrintArea}\@pdfprintarea
9069   \Hy@UseNameKey{PrintClip}\@pdfprintclip
9070   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9071   \Hy@UseNameKey{Duplex}\@pdfduplex
9072   \ifx\@pdfpicktraybypdfsize\@empty
9073   \else
9074     /PickTrayByPDFSize \@pdfpicktraybypdfsize
9075   \fi
9076   \ifx\@pdfprintpagerange\@empty
9077   \else
9078     /PrintPageRange\@pdfprintpagerange}%
9079   \fi
9080   \ifx\@pdfnumcopies\@empty
9081   \else
9082     /NumCopies \@pdfnumcopies
9083   \fi
9084 }%
9085 \pdfcatalog{%
9086   \ifx\Hy@temp\@empty
9087   \else
9088     /ViewerPreferences<<\Hy@temp>>%
9089   \fi
9090   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9091   \ifx\@pdflang\@empty
9092   \else
9093     /Lang(\@pdflang)%
9094   \fi
9095 }%
9096 }

```

\PDF@FinishDoc

```

9097 \def\PDF@FinishDoc{%
9098   \pdf@ifdraftmode{}\{%
9099     \Hy@UseMaketitleInfos
9100     \HyInfo@GenerateAddons
9101   \pdfinfo{%
9102     /Author(\@pdfauthor)%
9103     /Title(\@pdftitle)%
9104     /Subject(\@pdfsubject)%

```

```

9105 /Creator(\@pdfcreator)%
9106 \ifx\@pdfcreationdate\@empty
9107 \else
9108 /CreationDate(\@pdfcreationdate)%
9109 \fi
9110 \ifx\@pdfmoddate\@empty
9111 \else
9112 /ModDate(\@pdfmoddate)%
9113 \fi
9114 \ifx\@pdfproducer\relax
9115 \else
9116 /Producer(\@pdfproducer)%
9117 \fi
9118 /Keywords(\@pdfkeywords)%
9119 \ifx\@pdftrapped\@empty
9120 \else
9121 /Trapped/\@pdftrapped
9122 \fi
9123 \HyInfo@Addons
9124 }%
9125 }%
9126 \Hy@DisableOption{pdfauthor}%
9127 \Hy@DisableOption{pdftitle}%
9128 \Hy@DisableOption{pdfsubject}%
9129 \Hy@DisableOption{pdfcreator}%
9130 \Hy@DisableOption{pdfcreationdate}%
9131 \Hy@DisableOption{pdfmoddate}%
9132 \Hy@DisableOption{pdfproducer}%
9133 \Hy@DisableOption{pdfkeywords}%
9134 \Hy@DisableOption{pdftrapped}%
9135 \Hy@DisableOption{pdfinfo}%
9136 }

```

`\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`.

```

9137 \def\hyper@pagetransition{%
9138 \ifx\@pdfpagetransition\relax
9139 \else
9140 \expandafter\Hy@RemoveTransPageAttr
9141 \the\pdfpageattr^^J/Trans{ }>>\END
9142 \ifx\@pdfpagetransition\@empty
9143 \else
9144 \edef\@processme{%
9145 \global\pdfpageattr{%
9146 \the\pdfpageattr
9147 ^^J/Trans << /S /\@pdfpagetransition\space >>%
9148 }%
9149 }%
9150 \@processme
9151 \fi
9152 \fi
9153 }

```

`\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.

```

9154 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
9155   \ifx\#2\%
9156     \global\pdfpageattr{#1}%
9157   \else
9158     \Hy@RemoveTransPageAttr#1#4\END
9159   \fi
9160 }

```

`\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`.

```

9161 \def\hyper@pageduration{%
9162   \ifx\@pdfpageduration\relax
9163   \else
9164     \expandafter
9165     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
9166     \ifx\@pdfpageduration\@empty
9167     \else
9168       \edef\@processme{%
9169         \global\pdfpageattr{%
9170           \the\pdfpageattr
9171           ^^J/Dur \@pdfpageduration\space
9172         }%
9173       }%
9174       \@processme
9175     \fi
9176   \fi
9177 }

```

`\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.

```

9178 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
9179   \ifx\#2\%
9180     \global\pdfpageattr{#1}%
9181   \else
9182     \Hy@RemoveDurPageAttr#1#4\END
9183   \fi
9184 }

```

`\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).

```

9185 \def\hyper@pagehidden{%
9186   \ifHy@useHidKey
9187   \expandafter
9188   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
9189   \ifHy@pdfpagehidden
9190   \edef\@processme{%
9191     \global\pdfpageattr{%
9192       \the\pdfpageattr
9193       ^^J/Hid true % SPACE
9194     }%
9195   }%

```

```

9196 \@processme
9197 \fi
9198 \fi
9199 }

```

`\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.

```

9200 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
9201 \ifx\#2\%
9202 \global\pdfpageattr{#1}%
9203 \else
9204 \Hy@RemoveHidPageAttr#1#4\END
9205 \fi
9206 }

9207 \pdf@ifdraftmode{}{%
9208 \g@addto@macro\Hy@EveryPageHook{%
9209 \hyper@pagetransition
9210 \hyper@pageduration
9211 \hyper@pagehidden
9212 }%
9213 }

```

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

```

9214 </pdfTeX>
9215 <*pdfTeX | xetex>
9216 \Hy@AtBeginDocument{%
9217 \ifHy@setpagesize
9218 \expandafter\@firstofone
9219 \else
9220 \expandafter\@gobble
9221 \fi
9222 {%
9223 \@ifclassloaded{seminar}{%
9224 <*pdfTeX>
9225 \setlength{\pdfhorigin}{1truein}%
9226 \setlength{\pdfvorigin}{1truein}%
9227 </pdfTeX>
9228 \ifportrait
9229 \ifdim\paperwidth=\z@
9230 \else
9231 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
9232 \fi
9233 \ifdim\paperheight=\z@
9234 \else
9235 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9236 \fi
9237 \else
9238 \ifdim\paperheight=\z@
9239 \else
9240 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9241 \fi
9242 \ifdim\paperwidth=\z@
9243 \else
9244 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%

```

```

9245     \fi
9246     \fi
9247   }{%
9248     \ltx@ifundefined{stockwidth}{%
9249       \ifdim\paperwidth>\z@
9250         \setlength{\pdfpagewidth}{\paperwidth}%
9251       \fi
9252       \ifdim\paperheight>\z@
9253         \setlength{\pdfpageheight}{\paperheight}%
9254       \fi
9255     }{%
9256       \ifdim\stockwidth>\z@
9257         \setlength{\pdfpagewidth}{\stockwidth}%
9258       \fi
9259       \ifdim\stockheight>\z@
9260         \setlength{\pdfpageheight}{\stockheight}%
9261       \fi
9262     }%
9263   }%
9264 }%
9265 \Hy@DisableOption{setpagesize}%
9266 }
9267 </pdfTeX | xetex>
9268 <*pdfTeX>
9269 \def\Acrobatmenu#1#2{%
9270   \Hy@Acrobatmenu{#1}{#2}{%
9271     \pdfstartlink
9272     attr{%
9273       \Hy@setpdfborder
9274       \ifx\@pdfhighlight\@empty
9275       \else
9276         /H\@pdfhighlight
9277       \fi
9278       \ifx\@menubordercolor\relax
9279       \else
9280         /C[\@menubordercolor]%
9281       \fi
9282     }%
9283     user{%
9284       /Subtype/Link%
9285       \ifHy@pdfa /F 4\fi
9286       /A<<%
9287       /S/Named%
9288       /N/#1%
9289       \Hy@href@nextactionraw
9290     >>%
9291   }%
9292   \relax
9293   \Hy@colorlink\@menucolor#2%
9294   \close@pdflink
9295 }%
9296 }

```

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 pdf \TeX —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`.

```

9297 \def\Hy@FixNotFirstPage{%
9298   \gdef\Hy@FixNotFirstPage{%
9299     \setbox\AtBeginShipoutBox=\hbox{%
9300       \copy\AtBeginShipoutBox
9301     }%
9302   }%
9303 }
9304 \AtBeginShipout{\Hy@FixNotFirstPage}
9305 \end{pdfTeX}

```

46.3 hypertext

The Hyper \TeX 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.

```

9306 \begin{hypertext}
9307 \providecommand*\XR@ext{\dvi}
9308 \let\PDF@FinishDoc\ltx@empty
9309 \def\PDF@SetupDoc{%
9310   \ifx\@baseurl\@empty
9311   \else
9312     \special{html:<base href="\@baseurl">}%
9313   \fi

```

```

9314 }
9315 \Hy@WrapperDef\hyper@anchor#1{%
9316   \Hy@SaveLastskip
9317   \Hy@VerboseAnchor{#1}%
9318   \begingroup
9319     \let\protect=\string
9320     \hyper@chars
9321     \special{html:<a name=%
9322       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9323   \endgroup
9324   \Hy@activeanchortrue
9325   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9326   \special{html:</a>}%
9327   \Hy@activeanchorfalse
9328   \Hy@RestoreLastskip
9329 }
9330 \Hy@WrapperDef\hyper@anchorstart#1{%
9331   \Hy@SaveLastskip
9332   \Hy@VerboseAnchor{#1}%
9333   \begingroup
9334     \hyper@chars
9335     \special{html:<a name=%
9336       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9337   \endgroup
9338   \Hy@activeanchortrue
9339 }
9340 \def\hyper@anchorend{%
9341   \special{html:</a>}%
9342   \Hy@activeanchorfalse
9343   \Hy@RestoreLastskip
9344 }
9345 \def\@urlltype{url}
9346 \def\hyper@linkstart#1#2{%
9347   \Hy@VerboseLinkStart{#1}{#2}%
9348   \expandafter\Hy@colorlink\csname @#1color\endcsname
9349   \def\Hy@tempa{#1}%
9350   \ifx\Hy@tempa\@urlltype
9351     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9352   \else
9353     \begingroup
9354       \hyper@chars
9355       \special{html:<a href=%
9356         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9357     \endgroup
9358   \fi
9359 }
9360 \def\hyper@linkend{%
9361   \special{html:</a>}%
9362   \Hy@endcolorlink
9363 }
9364 \def\hyper@linkfile#1#2#3{%
9365   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9366 }
9367 \def\hyper@linkurl#1#2{%

```

If we want to raise up the final link `\special`, we need to get its height; ask me why \LaTeX constructs make this totally foul up, and make us revert to basic \TeX . I do not know.

```

9368   \leavevmode

```



```

9369 \ifHy@raiselinks
9370 \Hy@SaveSpaceFactor
9371 \Hy@SaveSavedSpaceFactor
9372 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9373 \Hy@RestoreSavedSpaceFactor
9374 \@linkdim\dp\@tempboxa
9375 \lower\@linkdim\hbox{%
9376   \hyper@chars
9377   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9378 }%
9379 \Hy@colorlink\@urlcolor
9380 \Hy@RestoreSpaceFactor
9381 #1%
9382 \Hy@SaveSpaceFactor
9383 \@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).

```

9384 \advance\@linkdim by -6.5\p@
9385 \raise\@linkdim\hbox{\special{html:</a>}}%
9386 \Hy@endcolorlink
9387 \Hy@RestoreSpaceFactor
9388 \else
9389 \begingroup
9390   \hyper@chars
9391   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9392   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
9393   \special{html:</a>}%
9394   \Hy@endcolorlink
9395 \endgroup
9396 \fi
9397 }

```

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

```

9398 \def\hyper@link#1#2#3{%
9399   \Hy@VerboseLinkStart{#1}{#2}%
9400   \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
9401 }

9402 \def\hyper@image#1#2{%
9403   \begingroup
9404     \hyper@chars
9405     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9406   \endgroup
9407 }
9408 </hypertex>
9409 <*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 hypertext cfg. For dviwindo, L^AT_EX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

9410 \providecommand*\XR@ext}{dvi}
9411 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9412 \Hy@WrapperDef\hyper@anchor#1{%
9413   \Hy@SaveLastskip
9414   \Hy@VerboseAnchor{#1}%
9415   \begingroup
9416     \let\protect=\string
9417     \special{mark: #1}%
9418   \endgroup
9419   \Hy@activeanchortrue
9420   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9421   \Hy@activeanchorfalse
9422   \Hy@RestoreLastskip
9423 }
9424 \Hy@WrapperDef\hyper@anchorstart#1{%
9425   \Hy@SaveLastskip
9426   \Hy@VerboseAnchor{#1}%
9427   \special{mark: #1}%
9428   \Hy@activeanchortrue
9429 }
9430 \def\hyper@anchorend{%
9431   \Hy@activeanchorfalse
9432   \Hy@RestoreLastskip
9433 }
9434 \def\hyper@linkstart#1#2{%
9435   \Hy@VerboseLinkStart{#1}{#2}%
9436   \expandafter\Hy@colorlink\csname @#1color\endcsname
9437   \special{button: %
9438     10000000 %
9439     \number\baselineskip\space
9440     #2%
9441   }%
9442 }
9443 \def\hyper@linkend{%
9444   \Hy@endcolorlink
9445 }
9446 \def\hyper@link#1#2#3{%
9447   \Hy@VerboseLinkStart{#1}{#2}%
9448   \leavevmode
9449   \ifHy@raiselinks
9450     \Hy@SaveSpaceFactor
9451     \Hy@SaveSavedSpaceFactor
9452     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9453     \Hy@RestoreSavedSpaceFactor
9454     \@linkdim\dp\@tempboxa
9455     \lower\@linkdim\hbox{%
9456       \special{button: %
9457         \number\wd\@tempboxa\space
9458         \number\ht\@tempboxa\space
9459         #2%
9460       }%
9461       \expandafter\Hy@colorlink\csname @#1color\endcsname
9462       \Hy@RestoreSpaceFactor

```

```

9463    #3\Hy@xspace@end
9464    \Hy@SaveSpaceFactor
9465    \Hy@endcolorlink
9466  }%
9467  \@linkdim\ht\@tempboxa
9468  \advance\@linkdim by -6.5\p@
9469  \raise\@linkdim\hbox{}%
9470  \Hy@RestoreSpaceFactor
9471  \else
9472  \special{button: %
9473    \number\wd\@tempboxa\space
9474    \number\ht\@tempboxa\space
9475    #2%
9476  }%
9477  \expandafter\Hy@colorlink\csname @#1color\endcsname
9478  #3\Hy@xspace@end
9479  \Hy@endcolorlink
9480  \fi
9481 }
9482 \def\hyper@linkurl#1#2{%
9483   \begingroup
9484   \hyper@chars
9485   \leavevmode
9486   \ifHy@raiselinks
9487     \Hy@SaveSpaceFactor
9488     \Hy@SaveSavedSpaceFactor
9489     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9490     \Hy@RestoreSavedSpaceFactor
9491     \@linkdim\dp\@tempboxa
9492     \lower\@linkdim\hbox{%
9493       \special{button: %
9494         \number\wd\@tempboxa\space
9495         \number\ht\@tempboxa\space
9496         launch: \wwwbrowser\space
9497         #2%
9498       }%
9499       \Hy@colorlink\@urlcolor
9500       \Hy@RestoreSpaceFactor
9501       #1\Hy@xspace@end
9502       \Hy@SaveSpaceFactor
9503       \Hy@endcolorlink
9504     }%
9505     \@linkdim\ht\@tempboxa
9506     \advance\@linkdim by -6.5\p@
9507     \raise\@linkdim\hbox{}%
9508     \Hy@RestoreSpaceFactor
9509   \else
9510     \special{button: %
9511       \number\wd\@tempboxa\space
9512       \number\ht\@tempboxa\space
9513       launch: \wwwbrowser\space
9514       #2%
9515     }%
9516     \Hy@colorlink\@urlcolor
9517     #1\Hy@xspace@end
9518     \Hy@endcolorlink
9519   \fi

```

```

9520 \endgroup
9521 }
9522 \def\hyper@linkfile#1#2#3{%
9523 \begingroup
9524 \hyper@chars
9525 \leavevmode
9526 \ifHy@raiselinks
9527 \Hy@SaveSpaceFactor
9528 \Hy@SaveSavedSpaceFactor
9529 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9530 \Hy@RestoreSavedSpaceFactor
9531 \@linkdim\dp\@tempboxa
9532 \lower\@linkdim\hbox{%
9533 \special{button: %
9534 \number\wd\@tempboxa\space
9535 \number\ht\@tempboxa\space
9536 #3,%
9537 file: #2%
9538 }%
9539 \Hy@colorlink\@filecolor
9540 \Hy@RestoreSpaceFactor
9541 #1\Hy@xspace@end
9542 \Hy@SaveSpaceFactor
9543 \Hy@endcolorlink
9544 }%
9545 \@linkdim\ht\@tempboxa
9546 \advance\@linkdim by -6.5\p@
9547 \raise\@linkdim\hbox{}%
9548 \Hy@RestoreSpaceFactor
9549 \else
9550 \special{button: %
9551 \number\wd\@tempboxa\space
9552 \number\ht\@tempboxa\space
9553 #3,%
9554 file: #2%
9555 }%
9556 \Hy@colorlink\@filecolor
9557 #1\Hy@xspace@end
9558 \Hy@endcolorlink
9559 \fi
9560 \endgroup
9561 }
9562 \ifx\@pdfproducer\relax
9563 \def\@pdfproducer{dviwindo + Distiller}%
9564 \fi
9565 \HyInfo@AddonUnsupportedtrue
9566 \def\PDF@FinishDoc{%
9567 \Hy@UseMaketitleInfos
9568 \HyInfo@TrappedUnsupported
9569 \special{PDF: Keywords \@pdfkeywords}%
9570 \special{PDF: Title \@pdftitle}%
9571 \special{PDF: Creator \@pdfcreator}%
9572 \ifx\@pdfcreationdate\@empty
9573 \else
9574 \special{PDF: CreationDate \@pdfcreationdate}%
9575 \fi
9576 \ifx\@pdfmoddate\@empty

```

```

9577 \else
9578 \special{PDF: ModDate \@pdfmoddate}%
9579 \fi
9580 \special{PDF: Author \@pdfauthor}%
9581 \ifx\@pdfproducer\relax
9582 \else
9583 \special{PDF: Producer \@pdfproducer}%
9584 \fi
9585 \special{PDF: Subject \@pdfsubject}%
9586 \Hy@DisableOption{pdfauthor}%
9587 \Hy@DisableOption{pdftitle}%
9588 \Hy@DisableOption{pdfsubject}%
9589 \Hy@DisableOption{pdfcreator}%
9590 \Hy@DisableOption{pdfcreationdate}%
9591 \Hy@DisableOption{pdfmoddate}%
9592 \Hy@DisableOption{pdfproducer}%
9593 \Hy@DisableOption{pdfkeywords}%
9594 \Hy@DisableOption{pdftrapped}%
9595 \Hy@DisableOption{pdfinfo}%
9596 }
9597 \def\PDF@SetupDoc{%
9598 \ifx\@baseurl\@empty
9599 \else
9600 \special{PDF: Base \@baseurl}%
9601 \fi
9602 \ifx\@pdfpagescrop\@empty\else
9603 \special{PDF: BBox \@pdfpagescrop}%
9604 \fi
9605 \def\Hy@temp{}%
9606 \ifx\@pdfstartpage\@empty
9607 \else
9608 \ifx\@pdfstartview\@empty
9609 \else
9610 \edef\Hy@temp{%
9611 ,Page=\@pdfstartpage
9612 ,View=\@pdfstartview
9613 }%
9614 \fi
9615 \fi
9616 \edef\Hy@temp{%
9617 \noexpand\pdfmark{%
9618 pdfmark=/DOCVIEW,%
9619 PageMode=/\@pdfpagemode
9620 \Hy@temp
9621 }%
9622 }%
9623 \Hy@temp
9624 \ifx\@pdfpagescrop\@empty
9625 \else
9626 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9627 \fi
9628 \edef\Hy@temp{%
9629 \ifHy@toolbar\else /HideToolbar true\fi
9630 \ifHy@menubar\else /HideMenubar true\fi
9631 \ifHy>windowui\else /HideWindowUI true\fi
9632 \ifHy@fitwindow /FitWindow true\fi
9633 \ifHy@centerwindow /CenterWindow true\fi

```

```

9634 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9635 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9636 \Hy@UseNameKey{Direction}\@pdfdirection
9637 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9638 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9639 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9640 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9641 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9642 \Hy@UseNameKey{Duplex}\@pdfduplex
9643 \ifx\@pdfpicktraybypdfsize\@empty
9644 \else
9645 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9646 \fi
9647 \ifx\@pdfprintpagerange\@empty
9648 \else
9649 /PrintPageRange[\@pdfprintpagerange]%
9650 \fi
9651 \ifx\@pdfnumcopies\@empty
9652 \else
9653 /NumCopies \@pdfnumcopies
9654 \fi
9655 }%
9656 \pdfmark{pdfmark=/PUT,%
9657 Raw={%
9658 \string{Catalog\string}<<%
9659 \ifx\Hy@temp\@empty
9660 \else
9661 /ViewerPreferences<<\Hy@temp>>%
9662 \fi
9663 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9664 \ifx\@pdflang\@empty
9665 \else
9666 /Lang(\@pdflang)%
9667 \fi
9668 >>%
9669 }%
9670 }%
9671 }
9672 </dviwindo>
9673 <*dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

9674 \providecommand*\XR@ext}{pdf}
9675 \Hy@setbreaklinks{true}
9676 \def\HyPat@ObjRef{%
9677 @[\~ ]+{%
9678 }
9679 \newsavebox{\pdfm@box}
9680 \def\@pdfm@mark#1{\special{pdf:#1}}
9681 \Hy@WrapperDef\@pdfm@dest#1{%
9682 \Hy@SaveLastskip
9683 \Hy@VerboseAnchor{#1}%
9684 \begingroup
9685 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9686 \def\x{XYZ}%

```

```

9687 \ifx\x\@pdfview
9688 \def\x{XYZ @xpos @ypos null}%
9689 \else
9690 \def\x{FitH}%
9691 \ifx\x\@pdfview
9692 \def\x{FitH @ypos}%
9693 \else
9694 \def\x{FitBH}%
9695 \ifx\x\@pdfview
9696 \def\x{FitBH @ypos}%
9697 \else
9698 \def\x{FitV}%
9699 \ifx\x\@pdfview
9700 \def\x{FitV @xpos}%
9701 \else
9702 \def\x{FitBV}%
9703 \ifx\x\@pdfview
9704 \def\x{FitBV @xpos}%
9705 \else
9706 \def\x{Fit}%
9707 \ifx\x\@pdfview
9708 \let\x\@pdfview
9709 \else
9710 \def\x{FitB}%
9711 \ifx\x\@pdfview
9712 \let\x\@pdfview
9713 \else
9714 \def\x{FitR}%
9715 \ifx\x\@pdfview
9716 \Hy@Warning{'pdfview=FitR' is not supported}%
9717 \def\x{XYZ @xpos @ypos null}%
9718 \else
9719 \@onelevel@sanitize\@pdfview
9720 \Hy@Warning{%
9721 Unknown value '\@pdfview' for pdfview%
9722 }%
9723 \def\x{XYZ @xpos @ypos null}%
9724 \fi
9725 \fi
9726 \fi
9727 \fi
9728 \fi
9729 \fi
9730 \fi
9731 \fi
9732 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9733 \endgroup
9734 \Hy@RestoreLastskip
9735 }
9736 \providecommand*\@pdfview{XYZ}
9737 \providecommand*\@pdfborder{0 0 1}
9738 \providecommand*\@pdfborderstyle{}
9739 \def\hyper@anchor#1{%
9740 \@pdfm@dest{#1}%
9741 }
9742 \def\hyper@anchorstart#1{%
9743 \Hy@activeanchortrue

```

```

9744 \pdfm@dest{#1}%
9745 }
9746 \def\hyper@anchorend{%
9747 \Hy@activeanchorfalse
9748 }

9749 \newcounter{Hy@AnnotLevel}

9750 \ifHy@ocgcolorlinks
9751 \def\OBJ@OCG@view{@OCG@view}%
9752 \@pdfm@mark{%
9753   obj \OBJ@OCG@view <<%
9754     /Type/OCG%
9755     /Name(View)%
9756     /Usage<<%
9757     /Print<<%
9758     /PrintState/OFF%
9759     >>%
9760     /View<<%
9761     /ViewState/ON%
9762     >>%
9763     >>%
9764     >>%
9765   }%
9766 \pdfm@mark{close \OBJ@OCG@view}%
9767 \def\OBJ@OCG@print{@OCG@print}%
9768 \@pdfm@mark{%
9769   obj \OBJ@OCG@print <<%
9770     /Type/OCG%
9771     /Name(Print)%
9772     /Usage<<%
9773     /Print<<%
9774     /PrintState/ON%
9775     >>%
9776     /View<<%
9777     /ViewState/OFF%
9778     >>%
9779     >>%
9780     >>%
9781   }%
9782 \pdfm@mark{close \OBJ@OCG@print}%
9783 \def\OBJ@OCGs{@OCGs}%
9784 \@pdfm@mark{%
9785   obj \OBJ@OCGs [%
9786     \OBJ@OCG@view\space\OBJ@OCG@print
9787   ]%
9788 }%
9789 \pdfm@mark{close \OBJ@OCGs}%
9790 \@pdfm@mark{%
9791   put @catalog <<%
9792     /OCProperties<<%
9793     /OCGs \OBJ@OCGs
9794     /D<<%
9795     /OFF[\OBJ@OCG@print]%
9796     /AS[%
9797       <<%
9798         /Event/View%
9799         /OCGs \OBJ@OCGs
9800         /Category[/View]%

```



```

9801         >>%
9802         <<%
9803         /Event/Print%
9804         /OCGs \OBJ@OCGs
9805         /Category[/Print]%
9806         >>%
9807         <<%
9808         /Event/Export%
9809         /OCGs \OBJ@OCGs
9810         /Category[/Print]%
9811         >>%
9812         ]%
9813         >>%
9814         >>%
9815         >>%
9816     }%
9817 \AtBeginShipout{%
9818 \setbox\AtBeginShipoutBox=\hbox{%
9819 \copy\AtBeginShipoutBox
9820 \@pdfm@mark{%
9821     put @resources <<%
9822     /Properties<<%
9823     /OCView \OBJ@OCG@view
9824     /OCPrint \OBJ@OCG@print
9825     >>%
9826     >>%
9827     }%
9828     }%
9829 }%
9830 \Hy@AtBeginDocument{%
9831 \def\Hy@colorlink#1{%
9832 \begingroup
9833 \ifHy@ocgcolorlinks
9834 \def\Hy@ocgcolor{#1}%
9835 \setbox0=\hbox\bgroup\color@begingroup
9836 \else
9837 \HyColor@UseColor#1%
9838 \fi
9839 }%
9840 \def\Hy@endcolorlink{%
9841 \ifHy@ocgcolorlinks
9842 \color@endgroup\egroup
9843 \mbox{%
9844 \@pdfm@mark{content /OC/OCPrint BDC}%
9845 \rlap{\copy0}%
9846 \@pdfm@mark{content EMC/OC/OCView BDC}%
9847 \begingroup
9848 \expandafter\HyColor@UseColor\Hy@ocgcolor
9849 \box0 %
9850 \endgroup
9851 \@pdfm@mark{content EMC}%
9852 }%
9853 \fi
9854 \endgroup
9855 }%
9856 }%
9857 \else

```

```

9858 \Hy@DisableOption{ocgcolorlinks}%
9859 \fi

9860 \def\Hy@BeginAnnot#1{%
9861 \stepcounter{Hy@AnnotLevel}%
9862 \ifnum\value{Hy@AnnotLevel}=\@ne
9863 #1%
9864 \fi
9865 }

9866 \def\Hy@endAnnot{%
9867 \ifnum\value{Hy@AnnotLevel}=\@ne
9868 \Hy@endcolorlink
9869 \@pdfm@mark{eann}%
9870 \fi
9871 \addtocounter{Hy@AnnotLevel}\m@ne
9872 }

9873 \def\Hy@undefinedname{UNDEFINED}
9874 \def\hyper@linkstart#1#2{%
9875 \Hy@VerboseLinkStart{#1}{#2}%
9876 \Hy@BeginAnnot{%
9877 \protected@edef\Hy@testname{#2}%
9878 \ifx\Hy@testname\@empty
9879 \Hy@Warning{%
9880 Empty destination name,\MessageBreak
9881 using '\Hy@undefinedname'%
9882 }%
9883 \let\Hy@testname\Hy@undefinedname
9884 \else
9885 \Hy@pstringdef\Hy@testname{%
9886 \expandafter\HyperDestNameFilter\expandafter{%
9887 \Hy@testname
9888 }%
9889 }%
9890 \fi
9891 \@pdfm@mark{%
9892 bann<<%
9893 /Type/Annot%
9894 /Subtype/Link%
9895 \ifHy@pdfa /F 4\fi
9896 \Hy@setpdfborder
9897 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9898 \else
9899 /C[\csname @#1bordercolor\endcsname]%
9900 \fi
9901 /A<<%
9902 /S/GoTo%
9903 /D(\Hy@testname)%
9904 \Hy@href@nextactionraw
9905 >>%
9906 >>%
9907 }%
9908 \expandafter\Hy@colorlink\csname @#1color\endcsname
9909 }%
9910 }

9911 \def\hyper@linkend{\Hy@endAnnot}%
9912 \def\hyper@link#1#2#3{%
9913 \hyper@linkstart{#1}{#2}#3\Hy@xspace@end\hyper@linkend
9914 }

```

```

9915 \def\hyper@linkfile#1#2#3{%
9916   \leavevmode
9917   \Hy@BeginAnnot{%
9918     \def\Hy@pstringF{#2}%
9919     \Hy@CleanupFile\Hy@pstringF
9920     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9921     \Hy@pstringdef\Hy@pstringD{#3}%
9922     \Hy@MakeRemoteAction
9923     \@pdfm@mark{%
9924       bann<<%
9925       /Type/Annot%
9926       /Subtype/Link%
9927       \ifHy@pdfa /F 4\fi
9928       \Hy@setpdfborder
9929       \ifx\@filebordercolor\relax
9930       \else
9931         /C[\@filebordercolor]%
9932       \fi
9933       /A<<%
9934       /S/GoToR%
9935       /F(\Hy@pstringF)%
9936       /D%
9937       \ifx\#3\%
9938         [\Hy@href@page\@pdfremotestartview]%
9939       \else
9940         (\Hy@pstringD)%
9941       \fi
9942       \Hy@SetNewWindow
9943       \Hy@href@nextactionraw
9944       >>%
9945     >>%
9946   }%
9947   \Hy@colorlink\@filecolor
9948 }%
9949 #1\Hy@xspace@end
9950 \Hy@EndAnnot
9951 }
9952 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
9953   \leavevmode
9954   \Hy@BeginAnnot{%
9955     \Hy@pstringdef\Hy@pstringF{#1}%
9956     \Hy@pstringdef\Hy@pstringP{#3}%
9957     \@pdfm@mark{%
9958       bann<<%
9959       /Type/Annot%
9960       /Subtype/Link%
9961       \ifHy@pdfa /F 4\fi
9962       \Hy@setpdfborder
9963       \ifx\@runbordercolor\relax
9964       \else
9965         /C[\@runbordercolor]%
9966       \fi
9967       /A<<%
9968       /F(\Hy@pstringF)%
9969       /S/Launch%
9970       \Hy@SetNewWindow
9971       \ifx\#3\%

```

```

9972         \else
9973         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9974         \fi
9975         \Hy@href@nextactionraw
9976         >>%
9977         >>%
9978     }%
9979     \Hy@colorlink\@runcolor
9980 }%
9981 #2\Hy@xspace@end
9982 \Hy@endAnnot
9983 }
9984 \def\hyper@linkurl#1#2{%
9985     \leavevmode
9986     \Hy@BeginAnnot{%
9987         \Hy@pstringdef\Hy@pstringURI{#2}%
9988         \@pdfm@mark{%
9989             bann<<%
9990             /Type/Annot%
9991             /Subtype/Link%
9992             \ifHy@pdfa /F 4\fi
9993             \Hy@setpdfborder
9994             \ifx\@urlbordercolor\relax
9995             \else
9996                 /C[\@urlbordercolor]%
9997             \fi
9998             /A<<%
9999             /S/URI%
10000             /URI(\Hy@pstringURI)%
10001             \ifHy@href@ismap
10002                 /IsMap true%
10003             \fi
10004             \Hy@href@nextactionraw
10005             >>%
10006             >>%
10007         }%
10008         \Hy@colorlink\@urlcolor
10009     }%
10010     #1\Hy@xspace@end
10011     \Hy@endAnnot
10012 }
10013 \def\Acrobatmenu#1#2{%
10014     \Hy@Acrobatmenu{#1}{#2}{%
10015         \Hy@BeginAnnot{%
10016             \@pdfm@mark{%
10017                 bann<<%
10018                 /Type/Annot%
10019                 /Subtype/Link%
10020                 \ifHy@pdfa /F 4\fi
10021                 /A<<%
10022                 /S/Named%
10023                 /N/#1%
10024                 \Hy@href@nextactionraw
10025                 >>%
10026                 \Hy@setpdfborder
10027                 \ifx\@menubordercolor\relax
10028                     \relax

```

```

10029         /C[\@menubordercolor]%
10030         \fi
10031     >>%
10032 }%
10033 \Hy@colorlink\@menucolor
10034 }%
10035 #2\Hy@xspace@end
10036 \Hy@EndAnnot
10037 }%
10038 }
10039 \ifx\@pdfproducer\relax
10040 \def\@pdfproducer{dvipdfm}%

```

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

```

10041 \begingroup\expandafter\expandafter\expandafter\endgroup
10042 \expandafter\ifx\csname XeTeXversion\endcsname\relax
10043 \else
10044 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
10045 \fi
10046 \fi
10047 \def\PDF@FinishDoc{%
10048 \Hy@UseMaketitleInfos
10049 \HyInfo@GenerateAddons
10050 \@pdfm@mark{%
10051 docinfo<<%
10052 /Title(\@pdftitle)%
10053 /Subject(\@pdfsubject)%
10054 /Creator(\@pdfcreator)%
10055 \ifx\@pdfcreationdate\@empty
10056 \else
10057 /CreationDate(\@pdfcreationdate)%
10058 \fi
10059 \ifx\@pdfmoddate\@empty
10060 \else
10061 /ModDate(\@pdfmoddate)%
10062 \fi
10063 /Author(\@pdfauthor)%
10064 \ifx\@pdfproducer\relax
10065 \else
10066 /Producer(\@pdfproducer)%
10067 \fi
10068 /Keywords(\@pdfkeywords)%
10069 \ifx\@pdftrapped\@empty
10070 \else
10071 /Trapped/\@pdftrapped
10072 \fi
10073 \HyInfo@Addons
10074 >>%
10075 }%
10076 \Hy@DisableOption{pdfauthor}%
10077 \Hy@DisableOption{pdftitle}%
10078 \Hy@DisableOption{pdfsubject}%
10079 \Hy@DisableOption{pdfcreator}%
10080 \Hy@DisableOption{pdfcreationdate}%
10081 \Hy@DisableOption{pdfmoddate}%
10082 \Hy@DisableOption{pdfproducer}%
10083 \Hy@DisableOption{pdfkeywords}%
10084 \Hy@DisableOption{pdftrapped}%

```

```

10085 \Hy@DisableOption{pdfinfo}%
10086 }

10087 \def\PDF@SetupDoc{%
10088 \edef\Hy@temp{%
10089 \ifHy@toolbar\else /HideToolbar true\fi
10090 \ifHy@menubar\else /HideMenubar true\fi
10091 \ifHy>windowui\else /HideWindowUI true\fi
10092 \ifHy@fitwindow /FitWindow true\fi
10093 \ifHy@centerwindow /CenterWindow true\fi
10094 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10095 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
10096 \Hy@UseNameKey{Direction}\@pdfdirection
10097 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10098 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10099 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10100 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10101 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10102 \Hy@UseNameKey{Duplex}\@pdfduplex
10103 \ifx\@pdfpicktraybypdfsize\@empty
10104 \else
10105 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10106 \fi
10107 \ifx\@pdfprintpagerange\@empty
10108 \else
10109 /PrintPageRange[\@pdfprintpagerange]%
10110 \fi
10111 \ifx\@pdfnumcopies\@empty
10112 \else
10113 /NumCopies \@pdfnumcopies
10114 \fi
10115 }%
10116 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10117 \@pdfm@mark{%
10118 docview<<%
10119 \ifx\@pdfstartpage\@empty
10120 \else
10121 \ifx\@pdfstartview\@empty
10122 \else
10123 /OpenAction[page\@pdfstartpage\@pdfstartview]%
10124 \fi
10125 \fi
10126 \ifx\@baseurl\@empty
10127 \else
10128 /URI<</Base(\Hy@pstringB)>>%
10129 \fi
10130 /PageMode/\@pdfpagemode
10131 \ifx\Hy@temp\@empty
10132 \else
10133 /ViewerPreferences<<\Hy@temp>>%
10134 \fi
10135 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10136 \ifx\@pdflang\@empty
10137 \else
10138 /Lang(\@pdflang)%
10139 \fi
10140 >>%
10141 }%

```

```

10142 \ifx\@pdfpagescrop\@empty
10143 \else
10144 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
10145 \fi
10146 }
10147 </dvipdfm | xetex>

```

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

```

10148 <*dvipdfm>
10149 \AtBeginShipoutFirst{%
10150 \ifHy@setpagesize
10151 \begingroup
10152 \@ifundefined{stockwidth}{%
10153 \ifdim\paperwidth>\z@
10154 \ifdim\paperheight>\z@
10155 \special{papersize=\the\paperwidth,\the\paperheight}%
10156 \fi
10157 \fi
10158 }{%
10159 \ifdim\stockwidth>\z@
10160 \ifdim\stockheight>\z@
10161 \special{papersize=\the\stockwidth,\the\stockheight}%
10162 \fi
10163 \fi
10164 }%
10165 \endgroup
10166 \fi
10167 \Hy@DisableOption{setpagesize}%
10168 }
10169 </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.

```

10170 <*vtexhtml>
10171 \providecommand*{\XR@ext}{.htm}
10172 \RequirePackage{vtexhtml}
10173 \newif\if@Localurl
10174 \let\PDF@FinishDoc\ltx@empty
10175 \def\PDF@SetupDoc{%
10176 \ifx\@baseurl\@empty
10177 \else
10178 \special{!direct <base href="\@baseurl">}%
10179 \fi
10180 }
10181 \def\@urltype{url}
10182 \def\hyper@link#1#2#3{%
10183 \Hy@VerboseLinkStart{#1}{#2}%
10184 \leavevmode
10185 \special{!direct <a href=%
10186 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
10187 #3\Hy@xspace@end
10188 \special{!direct </a>}%
10189 }
10190 \def\hyper@linkurl#1#2{%

```

```

10191 \begingroup
10192 \hyper@chars
10193 \leavevmode
10194 \MathBSuppress=1\relax
10195 \special{!direct <a href=%
10196   \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
10197   #1\Hy@xspace@end
10198 \MathBSuppress=0\relax
10199 \special{!direct </a>}%
10200 \endgroup
10201 }
10202 \def\hyper@linkfile#1#2#3{%
10203   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10204 }
10205 \def\hyper@linkstart#1#2{%
10206   \Hy@VerboseLinkStart{#1}{#2}%
10207   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
10208     \@Localurltrue
10209     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
10210   \else
10211     \@Localurlfalse
10212     \begingroup
10213       \hyper@chars
10214       \special{!aref \HyperDestNameFilter{#2}}%
10215     \endgroup
10216   \fi
10217 }
10218 \def\hyper@linkend{%
10219   \if@Localurl
10220     \special{!endaref}%
10221   \else
10222     \special{!direct </a>}%
10223   \fi
10224 }
10225 \Hy@WrapperDef\hyper@anchorstart#1{%
10226   \Hy@SaveLastskip
10227   \Hy@VerboseAnchor{#1}%
10228   \begingroup
10229     \hyper@chars
10230     \special{!aname #1}%
10231     \special{!direct <a name=%
10232       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10233   \endgroup
10234   \Hy@activeanchortrue
10235 }
10236 \def\hyper@anchorend{%
10237   \special{!direct </a>}%
10238   \Hy@activeanchorfalse
10239   \Hy@RestoreLastskip
10240 }
10241 \Hy@WrapperDef\hyper@anchor#1{%
10242   \Hy@SaveLastskip
10243   \Hy@VerboseAnchor{#1}%
10244   \begingroup
10245     \let\protect=\string
10246     \hyper@chars
10247     \leavevmode

```



```

10248 \special{!aname #1}%
10249 \special{!direct <a name=%
10250 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10251 \endgroup
10252 \Hy@activeanchortrue
10253 \bgroup\anchor@spot\egroup
10254 \special{!direct </a>}%
10255 \Hy@activeanchorfalse
10256 \Hy@RestoreLastskip
10257 }
10258 \def\@Form[#1]{%
10259 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10260 }
10261 \let\@endForm\ltx@empty
10262 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10263 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
10264 }
10265 \def\@TextField[#1]#2{% parameters, label
10266 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
10267 }
10268 \def\@CheckBox[#1]#2{% parameters, label
10269 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
10270 }
10271 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10272 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10273 }
10274 \def\@PushButton[#1]#2{% parameters, label
10275 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10276 }
10277 \def\@Reset[#1]#2{%
10278 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10279 }
10280 \def\@Submit[#1]#2{%
10281 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10282 }
10283 </vtexhtml>
10284 (*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.

```

10285 \ifx\mediaheight\@undefined
10286 \else
10287 \ifx\mediaheight\relax
10288 \else
10289 \ifHy@setpagesize
10290 \providecommand*\{VTeXInitMediaSize}{%
10291 \ltx@ifundefined{stockwidth}{%
10292 \ifdim\paperheight>0pt %
10293 \setlength\mediaheight\paperheight
10294 \fi
10295 \ifdim\paperheight>0pt %
10296 \setlength\mediawidth\paperwidth
10297 \fi
10298 }{%
10299 \ifdim\stockheight>0pt %
10300 \setlength\mediaheight\stockheight

```

```

10301      \fi
10302      \ifdim\stockwidth>0pt %
10303          \setlength\mediawidth\stockwidth
10304      \fi
10305  }%
10306  }%
10307  \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10308  \fi
10309  \Hy@DisableOption{setpagesize}%
10310  \fi
10311  \fi

```

Older versions of VTeX require xyz in lower case.

```

10312 \providecommand*\@pdfview{xyz}
10313 \providecommand*\@pdfborder{0 0 1}
10314 \providecommand*\@pdfborderstyle{}
10315 \let\CurrentBorderColor\@linkbordercolor
10316 \Hy@WrapperDef\hyper@anchor#1{%
10317   \Hy@SaveLastskip
10318   \Hy@VerboseAnchor{#1}%
10319   \begingroup
10320     \let\protect=\string
10321     \hyper@chars
10322     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10323   \endgroup
10324   \Hy@activeanchortrue
10325   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10326   \Hy@activeanchorfalse
10327   \Hy@RestoreLastskip
10328 }
10329 \Hy@WrapperDef\hyper@anchorstart#1{%
10330   \Hy@SaveLastskip
10331   \Hy@VerboseAnchor{#1}%
10332   \begingroup
10333     \hyper@chars
10334     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10335   \endgroup
10336   \Hy@activeanchortrue
10337 }
10338 \def\hyper@anchorend{%
10339   \Hy@activeanchorfalse
10340   \Hy@RestoreLastskip
10341 }
10342 \def\@urltype{url}
10343 \def\Hy@undefinedname{UNDEFINED}
10344 \def\hyper@linkstart#1#2{%
10345   \Hy@VerboseLinkStart{#1}{#2}%
10346   \Hy@pstringdef\Hy@pstringURI{#2}%
10347   \expandafter\Hy@colorlink\csname @#1color\endcsname
10348   \ltx@ifundefined{@#1bordercolor}{%
10349     \let\CurrentBorderColor\relax
10350   }{%
10351     \edef\CurrentBorderColor{%
10352       \csname @#1bordercolor\endcsname
10353     }%
10354   }%
10355   \def\Hy@tempa{#1}%
10356   \ifx\Hy@tempa\@urltype

```

```

10357 \special{!%
10358   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10359   \ifHy@href@ismap
10360     /IsMap true%
10361   \fi
10362   \Hy@href@nextactionraw
10363   >,%
10364   a=<%
10365     \ifHy@pdfa /F 4\fi
10366     \Hy@setpdfborder
10367     \ifx\CurrentBorderColor\relax
10368     \else
10369       /C [\CurrentBorderColor]%
10370     \fi
10371   >%
10372 }%
10373 \else
10374   \protected@edef\Hy@testname{#2}%
10375   \ifx\Hy@testname\@empty
10376     \Hy@Warning{%
10377       Empty destination name,\MessageBreak
10378       using '\Hy@undefinedname'%
10379     }%
10380     \let\Hy@testname\Hy@undefinedname
10381   \fi
10382   \special{!%
10383     aref \expandafter\HyperDestNameFilter
10384     \expandafter{\Hy@testname};%
10385     a=<%
10386       \ifHy@pdfa /F 4\fi
10387       \Hy@setpdfborder
10388       \ifx\CurrentBorderColor\relax
10389       \else
10390         /C [\CurrentBorderColor]%
10391       \fi
10392     >%
10393   }%
10394 \fi
10395 }
10396 \def\hyper@linkend{%
10397   \special{!endaref}%
10398   \Hy@endcolorlink
10399 }
10400 \def\hyper@linkfile#1#2#3{%
10401   \leavevmode
10402   \def\Hy@pstringF{#2}%
10403   \Hy@CleanupFile\Hy@pstringF
10404   \special{!%
10405     aref <%
10406     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
10407     f=\Hy@pstringF>#3;%
10408     a=<%
10409       \ifHy@pdfa /F 4\fi
10410       \Hy@setpdfborder
10411       \ifx\@filebordercolor\relax
10412       \else
10413         /C [\@filebordercolor]%

```

```

10414 \fi
10415 >%
10416 }%
10417 \Hy@colorlink\@filecolor
10418 #1\Hy@xspace@end
10419 \Hy@endcolorlink
10420 \special{!endaref}%
10421 }
10422 \def\hyper@linkurl#1#2{%
10423 \begingroup
10424 \Hy@pstringdef\Hy@pstringURI{#2}%
10425 \hyper@chars
10426 \leavevmode
10427 \special{!%
10428   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10429   \ifHy@href@ismap
10430     /IsMap true%
10431   \fi
10432   \Hy@href@nextactionraw
10433   >;%
10434   a=<%
10435   \ifHy@pdfa /F 4\fi
10436   \Hy@setpdfborder
10437   \ifx\@urlbordercolor\relax
10438     \else
10439     /C [\@urlbordercolor]%
10440   \fi
10441   >%
10442 }%
10443 \Hy@colorlink\@urlcolor
10444 #1\Hy@xspace@end
10445 \Hy@endcolorlink
10446 \special{!endaref}%
10447 \endgroup
10448 }
10449 \def\hyper@link#1#2#3{%
10450 \Hy@VerboseLinkStart{#1}{#2}%
10451 \ltx@ifundefined{@#1bordercolor}{%
10452 \let\CurrentBorderColor\relax
10453 }{%
10454 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
10455 }%
10456 \leavevmode
10457 \protected@edef\Hy@testname{#2}%
10458 \ifx\Hy@testname\@empty
10459 \Hy@Warning{%
10460   Empty destination name,\MessageBreak
10461   using '\Hy@undefinedname'%
10462 }%
10463 \let\Hy@testname\Hy@undefinedname
10464 \fi
10465 \special{!%
10466   aref \expandafter\HyperDestNameFilter
10467   \expandafter{\Hy@testname};%
10468   a=<%
10469   \ifHy@pdfa /F 4\fi
10470   \Hy@setpdfborder

```

```

10471 \ifx\CurrentBorderColor\relax
10472 \else
10473 /C [\CurrentBorderColor]%
10474 \fi
10475 >%
10476 }%
10477 \expandafter
10478 \Hy@colorlink\csname @#1color\endcsname
10479 #3\Hy@xspace@end
10480 \Hy@endcolorlink
10481 \special{!endaref}%
10482 }
10483 \def\hyper@image#1#2{%
10484 \hyper@linkurl{#2}{#1}%
10485 }
10486 \def\@hyper@launch run:#1\#2#3{%
10487 \Hy@pstringdef\Hy@pstringF{#1}%
10488 \Hy@pstringdef\Hy@pstringP{#3}%
10489 \leavevmode
10490 \special{!aref %
10491 <u=%
10492 /Type/Action%
10493 /S/Launch%
10494 /F(\Hy@pstringF)%
10495 \Hy@SetNewWindow
10496 \ifx\#3\%
10497 \else
10498 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10499 \fi
10500 \Hy@href@nextactionraw
10501 >;%
10502 a=<%
10503 \ifHy@pdfa /F 4\fi
10504 \Hy@setpdfborder
10505 \ifx\@runbordercolor\relax
10506 \else
10507 /C[\@runbordercolor]%
10508 \fi
10509 >%
10510 }%
10511 \Hy@colorlink\@runcolor
10512 #2\Hy@xspace@end
10513 \Hy@endcolorlink
10514 \special{!endaref}%
10515 }
10516 \def\Acrobatmenu#1#2{%
10517 \Hy@Acrobatmenu{#1}{#2}{%
10518 \special{!%
10519 aref <u=/S /Named /N /#1>;%
10520 a=<%
10521 \ifHy@pdfa /F 4\fi
10522 \Hy@setpdfborder
10523 \ifx\@menubordercolor\relax
10524 \else
10525 /C[\@menubordercolor]%
10526 \fi
10527 >%

```

```

10528 }%
10529 \Hy@colorlink\@menucolor
10530 #2\Hy@xspace@end
10531 \Hy@endcolorlink
10532 \special{!endaref}%
10533 }%
10534 }

```

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

The code below makes sense for V_T_EX 7.02 or later.

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

```

10535 \ifnum\Hy@VTeXversion<702 %
10536 \else
10537 \def\hyper@pagetransition{%
10538 \ifx\@pdfpagetransition\relax
10539 \else
10540 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

10541 \else
10542 \hvtex@parse@trans\@pdfpagetransition
10543 \fi
10544 \fi
10545 }%

```

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

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

```

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

```

Transition codes:

```

10546 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10547 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10548 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10549 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10550 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10551 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10552 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10553 \def\hvtex@par@dimension{/Dm}%
10554 \def\hvtex@par@direction{/Di}%
10555 \def\hvtex@par@duration{/D}%
10556 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```
10557 \def\hvtex@gettoken{%
10558   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10559 }%
```

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

```
10560 \def\hvtex@gettoken@#1 #2\@nil{%
10561   \edef\hvtex@token{#1}%
10562   \edef\hvtex@buffer{#2}%
10563 }%
10564 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
10565   \let\hvtex@trans@code\@empty
10566   \let\hvtex@param@dimension\@empty
10567   \let\hvtex@param@direction\@empty
10568   \let\hvtex@param@duration\@empty
10569   \let\hvtex@param@motion\@empty
10570   \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
10571   \hvtex@gettoken
10572   \ifx\hvtex@token\@empty
```

Leading space(s)?

```
10573     \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
10574     \else
10575       \hvtex@gettoken
10576     \fi
10577   \fi
10578   \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
10579   \hvtex@trans@params
10580 }%
```

Reentrant macro to parse optional parameters.

```
10581 \def\hvtex@trans@params{%
10582   \ifx\hvtex@buffer\@empty
10583   \else
10584     \hvtex@gettoken
10585     \let\hvtex@trans@par\hvtex@token
10586     \ifx\hvtex@buffer\@empty
10587     \else
10588       \hvtex@gettoken
10589       \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V_{TEX} special takes it in milliseconds.

```
10590       \let\hvtex@param@duration\hvtex@token
10591     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
10592       \expandafter\edef\expandafter\hvtex@param@motion
10593       \expandafter{\expandafter\@gobble\hvtex@token}%
10594     \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
10595       \expandafter\edef\expandafter\hvtex@param@dimension
10596       \expandafter{\expandafter\@gobble\hvtex@token}%
10597     \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).

```

10598     \let\hvtex@param@direction\hvtex@token
10599     \fi\fi\fi\fi
10600     \fi
10601     \fi
10602     \ifx\hvtex@buffer\@empty
10603       \let\next\hvtex@produce@trans
10604     \else
10605       \let\next\hvtex@trans@params
10606     \fi
10607     \next
10608   }%

```

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

```

10609 \def\hvtex@produce@trans{%
10610   \let\vtex@trans@special\@empty
10611   \if S\hvtex@trans@code
10612     \edef\vtex@trans@special{\hvtex@trans@code
10613       \hvtex@param@dimension\hvtex@param@motion}%
10614   \else\if B\hvtex@trans@code
10615     \edef\vtex@trans@special{%
10616       \hvtex@trans@code\hvtex@param@dimension
10617     }%
10618   \else\if X\hvtex@trans@code
10619     \edef\vtex@trans@special{%
10620       \hvtex@trans@code\hvtex@param@motion
10621     }%
10622   \else\if W\hvtex@trans@code
10623     \edef\vtex@trans@special{%
10624       \hvtex@trans@code\hvtex@param@direction
10625     }%
10626   \else\if D\hvtex@trans@code
10627     \let\vtex@trans@special\hvtex@trans@code
10628   \else\if R\hvtex@trans@code
10629     \let\vtex@trans@special\hvtex@trans@code
10630   \else\if G\hvtex@trans@code
10631     \edef\vtex@trans@special{%
10632       \hvtex@trans@code\hvtex@param@direction
10633     }%
10634   \fi\fi\fi\fi\fi\fi
10635   \ifx\vtex@trans@special\@empty
10636   \else
10637     \ifx\hvtex@param@duration\@empty
10638     \else
10639       \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10640     \multiply\dimen@\@m
10641     \edef\vtex@trans@special{%
10642       \vtex@trans@special,\strip@pt\dimen@
10643     }%
10644     \fi

```

And all the mess is just for this.

```

10645     \special{!trans \vtex@trans@special}%
10646     \fi

```



```

10647 }%
10648 \def\hyper@pageduration{%
10649 \ifx\@pdfpageduration\relax
10650 \else
10651 \ifx\@pdfpageduration\@empty
10652 \special{!duration-}%
10653 \else
10654 \special{!duration \@pdfpageduration}%
10655 \fi
10656 \fi
10657 }%
10658 \def\hyper@pagehidden{%
10659 \ifHy@useHidKey
10660 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
10661 \fi
10662 }%
10663 \g@addto@macro\Hy@EveryPageBoxHook{%
10664 \hyper@pagetransition
10665 \hyper@pageduration
10666 \hyper@pagehidden
10667 }%
10668 \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

```

10669 \ifx\@pdfproducer\relax
10670 \def\@pdfproducer{VTeX}%
10671 \ifnum\Hy@VTeXversion>\z@
10672 \count@\VTeXversion
10673 \divide\count@ 100 %
10674 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10675 \multiply\count@ -100 %
10676 \advance\count@\VTeXversion
10677 \edef\@pdfproducer{%
10678 \@pdfproducer
10679 .\ifnum\count@<10 0\fi\the\count@
10680 \ifx\VTeXOS\@undefined\else
10681 \ifnum\VTeXOS>0 %
10682 \ifnum\VTeXOS<6 %
10683 \space(
10684 \ifcase\VTeXOS
10685 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10686 \fi
10687 )%
10688 \fi
10689 \fi
10690 \fi
10691 ,\space
10692 \ifnum\OpMode=\@one PDF\else PS\fi
10693 \space backend%

```

```

10694 \ifx\gexmode\@undefined\else
10695 \ifnum\gexmode>\z@\space with GeX\fi
10696 \fi
10697 }%
10698 \fi
10699 \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).

```

10700 \def\PDF@SetupDoc{%
10701 \ifx\@pdfpagescrop\@empty
10702 \else
10703 \special{!pdfinfo b=<\@pdfpagescrop>}%
10704 \fi
10705 \ifx\@pdfstartpage\@empty
10706 \else
10707 \ifx\@pdfstartview\@empty
10708 \else
10709 \special{!onopen Page\@pdfstartpage}%
10710 \fi
10711 \fi
10712 \special{!pdfinfo p=</\@pdfpagemode>}%
10713 \ifx\@baseurl\@empty
10714 \else
10715 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10716 \fi
10717 \special{!pdfinfo v=<<<%
10718 \ifHy@toolbar\else /HideToolbar true\fi
10719 \ifHy@menubar\else /HideMenubar true\fi
10720 \ifHy>windowui\else /HideWindowUI true\fi
10721 \ifHy@fitwindow /FitWindow true\fi
10722 \ifHy@centerwindow /CenterWindow true\fi
10723 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10724 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10725 \Hy@UseNameKey{Direction}\@pdfdirection
10726 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10727 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10728 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10729 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10730 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10731 \Hy@UseNameKey{Duplex}\@pdfduplex
10732 \ifx\@pdfpicktraybypdfsize\@empty
10733 \else
10734 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10735 \fi

```

```

10736 \ifx\@pdfprintpagerange\@empty
10737 \else
10738 /PrintPageRange[\@pdfprintpagerange]%
10739 \fi
10740 \ifx\@pdfnumcopies\@empty
10741 \else
10742 /NumCopies \@pdfnumcopies
10743 \fi
10744 >>>}%
10745 \ifx\@pdfpagelayout\@empty
10746 \else
10747 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10748 \fi
10749 }%
10750 \HyInfo@AddonUnsupportedtrue
10751 \def\PDF@FinishDoc{%
10752 \Hy@UseMaketitleInfos
10753 \HyInfo@TrappedUnsupported
10754 \special{!pdfinfo a=<\@pdfauthor>}%
10755 \special{!pdfinfo t=<\@pdftitle>}%
10756 \special{!pdfinfo s=<\@pdfsubject>}%
10757 \special{!pdfinfo c=<\@pdfcreator>}%
10758 \ifx\@pdfproducer\relax
10759 \else
10760 \special{!pdfinfo r=<\@pdfproducer>}%
10761 \fi
10762 \special{!pdfinfo k=<\@pdfkeywords>}%
10763 \Hy@DisableOption{pdfauthor}%
10764 \Hy@DisableOption{pdftitle}%
10765 \Hy@DisableOption{pdfsubject}%
10766 \Hy@DisableOption{pdfcreator}%
10767 \Hy@DisableOption{pdfcreationdate}%
10768 \Hy@DisableOption{pdfmoddate}%
10769 \Hy@DisableOption{pdfproducer}%
10770 \Hy@DisableOption{pdfkeywords}%
10771 \Hy@DisableOption{pdftrapped}%
10772 \Hy@DisableOption{pdfinfo}%
10773 }
10774 </vtx>

```

46.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

10775 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10776 <package>\providecommand*{\Hy@DistillerDestFix}{ }
10777 <*pdfmark | dviwindo>
10778 \def\Hy@DistillerDestFix{%
10779 \begingroup
10780 \let\x\literalps@out

```

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

```

10781 \ifnum \@ifundefined{OpMode}{0}{%
10782     \@ifundefined{gexmode}{0}{%
10783     \ifnum\gexmode>0 \OpMode\else 0\fi
10784     }>1 %
10785     \def\x###1{%
10786     \immediate\special{!=##1}%
10787     }%
10788 \fi
10789 \x{%
10790 /product where{%
10791     pop %
10792     product(Distiller)search{%
10793     pop pop pop %
10794     version(.)search{%
10795     exch pop exch pop%
10796     (3011)eq{%
10797         gsave %
10798         newpath 0 0 moveto closepath clip%
10799         /Courier findfont 10 scalefont setfont %
10800         72 72 moveto(.).show %
10801         grestore%
10802     }if%
10803     }{pop}ifelse%
10804     }{pop}ifelse%
10805     }if%
10806     }%
10807 \endgroup
10808 }
10809 </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

```

10810 <*pdfmark>
10811 \Hy@breaklinks@unsupported
10812 \def\HyPat@ObjRef{%
10813     \[~{}]+~}%
10814 }
10815 \Hy@WrapperDef\hyper@anchor#1{%
10816     \Hy@SaveLastskip
10817     \Hy@VerboseAnchor{#1}%
10818     \begingroup

```

```

10819 \pdfmark[\anchor@spot]{%
10820 pdfmark=/DEST,%
10821 linktype=anchor,%
10822 View=/\@pdfview \@pdfviewparams,%
10823 DestAnchor={#1}%
10824 }%
10825 \endgroup
10826 \Hy@RestoreLastskip
10827 }
10828 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
10829 \Hy@WrapperDef\hyper@anchorstart#1{%
10830 \Hy@SaveLastskip
10831 \Hy@VerboseAnchor{#1}%
10832 \literalps@out{H.S}%
10833 \Hy@AllowHyphens
10834 \xdef\hyper@currentanchor{#1}%
10835 \Hy@activeanchortrue
10836 }
10837 \def\hyper@anchorend{%
10838 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10839 \pdfmark{%
10840 pdfmark=/DEST,%
10841 linktype=anchor,%
10842 View=/\@pdfview \@pdfviewparams,%
10843 DestAnchor=\hyper@currentanchor,%
10844 }%
10845 \Hy@activeanchorfalse
10846 \Hy@RestoreLastskip
10847 }
10848 \def\hyper@linkstart#1#2{%
10849 \Hy@VerboseLinkStart{#1}{#2}%
10850 \ifHy@breaklinks
10851 \else
10852 \leavevmode
10853 \ifmmode
10854 \def\Hy@LinkMath{$}%
10855 \else
10856 \let\Hy@LinkMath\ltx@empty
10857 \fi
10858 \Hy@SaveSpaceFactor
10859 \hbox\bgroup
10860 \Hy@RestoreSpaceFactor
10861 \Hy@LinkMath
10862 \fi
10863 \expandafter\Hy@colorlink\csname @#1color\endcsname
10864 \literalps@out{H.S}%
10865 \Hy@AllowHyphens
10866 \xdef\hyper@currentanchor{#2}%
10867 \gdef\hyper@currentlinktype{#1}%
10868 }
10869 \def\hyper@linkend{%
10870 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10871 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10872 \let\Hy@tempcolor\relax
10873 }{%
10874 \edef\Hy@tempcolor{%
10875 \csname @\hyper@currentlinktype bordercolor\endcsname

```

```

10876 }%
10877 }%
10878 \pdfmark{%
10879 pdfmark=/ANN,%
10880 linktype=link,%
10881 Subtype=/Link,%
10882 PDFAMark=4,%
10883 Dest=\hyper@currentanchor,%
10884 AcroHighlight=\@pdfhighlight,%
10885 Border=\@pdfborder,%
10886 BorderStyle=\@pdfborderstyle,%
10887 Color=\Hy@tempcolor,%
10888 Raw=H.B%
10889 }%
10890 \Hy@endcolorlink
10891 \ifHy@breaklinks
10892 \else
10893 \Hy@LinkMath
10894 \Hy@SaveSpaceFactor
10895 \egroup
10896 \Hy@RestoreSpaceFactor
10897 \fi
10898 }

```

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.

```

10899 \begingroup
10900 \catcode'P=12 %
10901 \catcode'T=12 %
10902 \lowercase{\endgroup
10903 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10904 }
10905 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10906 \def\hyper@pagetransition{%
10907 \ifx\@pdfpagetransition\relax
10908 \else
10909 \ifx\@pdfpagetransition\@empty
10910 % 1. Does an old entry have to be deleted?
10911 % 2. If 1=yes, how to delete?
10912 \else
10913 \pdfmark{%
10914 pdfmark=/PUT,%
10915 Raw={%
10916 \string{ThisPage\string}%
10917 <</Trans << /S /\@pdfpagetransition\space >> >>%
10918 }%
10919 }%
10920 \fi
10921 \fi
10922 }

```

\hyper@pageduration

```

10923 \def\hyper@pageduration{%
10924 \ifx\@pdfpageduration\relax

```

```

10925 \else
10926 \ifx\@pdfpageduration\@empty
10927 % 1. Does an old entry have to be deleted?
10928 % 2. If 1=yes, how to delete?
10929 \else
10930 \pdfmark{%
10931 pdfmark=/PUT,%
10932 Raw={%
10933 \string{ThisPage\string}%
10934 <</Dur \@pdfpageduration>>%
10935 }%
10936 }%
10937 \fi
10938 \fi
10939 }

```

\hyper@pagehidden

```

10940 \def\hyper@pagehidden{%
10941 \ifHy@useHidKey
10942 \pdfmark{%
10943 pdfmark=/PUT,%
10944 Raw={%
10945 \string{ThisPage\string}%
10946 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10947 }%
10948 }%
10949 \fi
10950 }

10951 \g@addto@macro\Hy@EveryPageBoxHook{%
10952 \hyper@pagetransition
10953 \hyper@pageduration
10954 \hyper@pagehidden
10955 }

10956 \def\hyper@image#1#2{%
10957 \hyper@linkurl{#2}{#1}%
10958 }

10959 \def\Hy@undefinedname{UNDEFINED}
10960 \def\hyper@link#1#2#3{%
10961 \Hy@VerboseLinkStart{#1}{#2}%
10962 \ltx@ifundefined{@#1bordercolor}{%
10963 \let\Hy@tempcolor\relax
10964 }{%
10965 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10966 }%
10967 \begingroup
10968 \protected@edef\Hy@testname{#2}%
10969 \ifx\Hy@testname\@empty
10970 \Hy@Warning{%
10971 Empty destination name,\MessageBreak
10972 using '\Hy@undefinedname'%
10973 }%
10974 \let\Hy@testname\Hy@undefinedname
10975 \fi
10976 \pdfmark[{#3}]{%
10977 Color=\Hy@tempcolor,%
10978 linktype={#1},%

```

```

10979     AcroHighlight=\@pdfhighlight,%
10980     Border=\@pdfborder,%
10981     BorderStyle=\@pdfborderstyle,%
10982     pdfmark=/ANN,%
10983     Subtype=/Link,%
10984     PDFAFlags=4,%
10985     Dest=\Hy@testname
10986   }%
10987 \endgroup
10988 }
10989 \newtoks\pdf@docset
10990 \def\PDF@FinishDoc{%
10991   \Hy@UseMaketitleInfos
10992   \HyInfo@GenerateAddons
10993   \let\Hy@temp\@empty
10994   \ifx\@pdfcreationdate\@empty
10995   \else
10996     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10997   \fi
10998   \ifx\@pdfmoddate\@empty
10999   \else
11000     \expandafter\def\expandafter\Hy@temp\expandafter{%
11001       \Hy@temp
11002       ModDate=\@pdfmoddate,%
11003     }%
11004   \fi
11005   \ifx\@pdfproducer\relax
11006   \else
11007     \expandafter\def\expandafter\Hy@temp\expandafter{%
11008       \Hy@temp
11009       Producer=\@pdfproducer,%
11010     }%
11011   \fi
11012   \expandafter
11013   \pdfmark\expandafter{%
11014     \Hy@temp
11015     pdfmark=/DOCINFO,%
11016     Title=\@pdftitle,%
11017     Subject=\@pdfsubject,%
11018     Creator=\@pdfcreator,%
11019     Author=\@pdfauthor,%
11020     Keywords=\@pdfkeywords,%
11021     Trapped=\@pdftrapped
11022   }%
11023   \ifx\HyInfo@Addons\@empty
11024   \else
11025     \pdfmark{%
11026       pdfmark=/DOCINFO,%
11027       Raw={\HyInfo@Addons}%
11028     }%
11029   \fi
11030   \Hy@DisableOption{pdfauthor}%
11031   \Hy@DisableOption{pdftitle}%
11032   \Hy@DisableOption{pdfsubject}%
11033   \Hy@DisableOption{pdfcreator}%
11034   \Hy@DisableOption{pdfcreationdate}%
11035   \Hy@DisableOption{pdfmoddate}%

```



```

11036 \Hy@DisableOption{pdfproducer}%
11037 \Hy@DisableOption{pdfkeywords}%
11038 \Hy@DisableOption{pdftrapped}%
11039 \Hy@DisableOption{pdfinfo}%
11040 }
11041 \def\PDF@SetupDoc{%
11042 \def\Hy@temp{%
11043 \ifx\@pdfstartpage\@empty
11044 \else
11045 \ifx\@pdfstartview\@empty
11046 \else
11047 \edef\Hy@temp{%
11048 ,Page=\@pdfstartpage
11049 ,View=\@pdfstartview
11050 }%
11051 \fi
11052 \fi
11053 \edef\Hy@temp{%
11054 \noexpand\pdfmark{%
11055 pdfmark=/DOCVIEW,%
11056 PageMode=/\@pdfpagemode
11057 \Hy@temp
11058 }%
11059 }%
11060 \Hy@temp
11061 \ifx\@pdfpagescrop\@empty
11062 \else
11063 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11064 \fi
11065 \edef\Hy@temp{%
11066 \ifHy@toolbar\else /HideToolbar true\fi
11067 \ifHy@menubar\else /HideMenubar true\fi
11068 \ifHy>windowui\else /HideWindowUI true\fi
11069 \ifHy@fitwindow /FitWindow true\fi
11070 \ifHy@centerwindow /CenterWindow true\fi
11071 \ifHy@displaydoctitle /DisplayDocTitle true\fi
11072 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11073 \Hy@UseNameKey{Direction}\@pdfdirection
11074 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11075 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11076 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11077 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11078 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11079 \Hy@UseNameKey{Duplex}\@pdfduplex
11080 \ifx\@pdfpicktraybypdfsize\@empty
11081 \else
11082 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11083 \fi
11084 \ifx\@pdfprintpagerange\@empty
11085 \else
11086 /PrintPageRange[\@pdfprintpagerange]%
11087 \fi
11088 \ifx\@pdfnumcopies\@empty
11089 \else
11090 /NumCopies \@pdfnumcopies
11091 \fi
11092 }%

```

```

11093 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11094 \pdfmark{%
11095   pdfmark=/PUT,%
11096   Raw={%
11097     \string{Catalog\string}<<%
11098     \ifx\Hy@temp\@empty
11099     \else
11100       /ViewerPreferences<<\Hy@temp>>%
11101     \fi
11102     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11103     \ifx\@pdflang\@empty
11104     \else
11105       /Lang(\@pdflang)%
11106     \fi
11107     \ifx\@baseurl\@empty
11108     \else
11109       /URI<</Base(\Hy@pstringB)>>%
11110     \fi
11111     >>%
11112   }%
11113 }%
11114 }
11115 </pdfmark>
11116 <*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.

```

11117 \newif\ifHy@pdfmarkerror
11118 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
11119 \def\pdfmark@[#1]#2{%
11120   \Hy@pdfmarkerrorfalse
11121   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
11122   \@processme
11123   \let\pdf@type\relax
11124   \kvsetkeys{PDF}{#2}%
11125   \ifHy@pdfmarkerror
11126   \else
11127     \ifx\pdf@type\relax
11128       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
11129       \ifx\#1\%
11130       \else
11131         \pdf@rect{#1}%
11132       \fi
11133     \else
11134       \ifx\#1\%
11135         \literalps@out{%
11136           [\the\pdf@toks\space\pdf@type\space pdfmark%
11137         ]}%
11138       \else
11139         \ltx@ifundefined{@\pdf@linktype color}{%
11140           \Hy@colorlink\@linkcolor
11141         }{%
11142           \expandafter\Hy@colorlink
11143           \csname @\pdf@linktype color\endcsname

```

```

11144     }%
11145     \pdf@rect{#1}%
11146     \literalps@out{%
11147         [\the\pdf@toks\space\pdf@type\space pdfmark%
11148     }%
11149     \Hy@endcolorlink
11150     \fi
11151     \fi
11152     \fi
11153 }

```

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}

```

```

11154 \newsavebox{\pdf@box}
11155 \providecommand*{\Hy@setouterhbox}{\sbox}
11156 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
11157 \def\Hy@DEST{/DEST}
11158 \def\pdf@rect#1{%
11159     \begingroup
11160     \chardef\x=1 %
11161     \def\Hy@temp{#1}%
11162     \ifx\Hy@temp\ltx@empty
11163         \chardef\x=0 %
11164     \else
11165         \def\y{\anchor@spot}%
11166         \ifx\Hy@temp\y
11167             \def\y{\relax}%
11168             \ifx\anchor@spot\y
11169                 \chardef\x=0 %
11170             \fi
11171         \fi
11172     \fi
11173     \expandafter\endgroup
11174     \ifcase\x
11175         \literalps@out{H.S}%
11176         \literalps@out{H.R}%
11177     \else
11178         \leavevmode
11179         \Hy@SaveSpaceFactor
11180         \ifmmode
11181             \def\Hy@LinkMath{$}%
11182         \else
11183             \let\Hy@LinkMath\ltx@empty
11184         \fi
11185         \ifHy@breaklinks
11186             \Hy@setouterhbox\pdf@box{%
11187                 \Hy@RestoreSpaceFactor
11188                 \Hy@LinkMath
11189                 \Hy@AllowHyphens#1\Hy@xspace@end

```

```

11190 \Hy@LinkMath
11191 \Hy@SaveSpaceFactor
11192 }%
11193 \else
11194 \sbox\pdf@box{%
11195 \Hy@RestoreSpaceFactor
11196 \Hy@LinkMath
11197 #1\Hy@xspace@end
11198 \Hy@LinkMath
11199 \Hy@SaveSpaceFactor
11200 }%
11201 \fi
11202 \dimen@\ht\pdf@box
11203 \ifdim\dp\pdf@box=>z@
11204 \literalps@out{H.S}%
11205 \else
11206 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
11207 \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...).

```

11208 \ifHy@breaklinks
11209 \ifhmode
11210 \Hy@breaklinksunhbox\pdf@box
11211 \else
11212 \box\pdf@box
11213 \fi
11214 \else
11215 \expandafter\box\pdf@box
11216 \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

11217 \ifdim\dimen@=>z@
11218 \literalps@out{H.R}%
11219 \else
11220 \raise\dimen@\hbox{\literalps@out{H.R}}%
11221 \fi
11222 \Hy@RestoreSpaceFactor
11223 \fi
11224 \ifx\pdf@type\Hy@DEST
11225 \else
11226 \pdf@addtoksx{H.B}%
11227 \fi
11228 }

```

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.

```

11229 \newtoks\pdf@toks
11230 \newtoks\pdf@defaulttoks
11231 \pdf@defaulttoks={}%
11232 \def\pdf@addtoks#1#2{%
11233 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
11234 \@processme
11235 }

```

```

11236 \def\pdf@addtoksx#1{%
11237   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
11238   \@processme
11239 }
11240 \def\PDFdefaults#1{%
11241   \pdf@defaulttoks={#1}%
11242 }

```

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

```

11243 % what is the type of pdfmark?
11244 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
11245 % what is the link type?
11246 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
11247 \def\pdf@linktype{link}
11248 % parameter is a stream of PDF
11249 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
11250 % parameter is a name
11251 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
11252 % parameter is a array
11253 \define@key{PDF}{Border}{%
11254   \edef\Hy@temp{#1}%
11255   \ifx\Hy@temp\@empty
11256     \else
11257       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
11258     \fi
11259 }
11260 \let\Hy@BorderArrayPatch\@empty
11261 % parameter is a dictionary
11262 \define@key{PDF}{BorderStyle}{%
11263   \edef\Hy@temp{#1}%
11264   \ifx\Hy@temp\@empty
11265     \else
11266       \pdf@addtoks{<<#1>>}{BS}%
11267     \fi
11268 }
11269 % parameter is a array
11270 \define@key{PDF}{Color}{%
11271   \ifx\relax#1\relax
11272     \else
11273       \pdf@addtoks{[#1]}{Color}% hash-ok
11274     \fi
11275 }
11276 % parameter is a string
11277 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
11278 % parameter is a integer
11279 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
11280 % parameter is a array
11281 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
11282 % parameter is a string
11283 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
11284 % parameter is a string or file
11285 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
11286 % parameter is a destination
11287 \define@key{PDF}{Dest}{%
11288   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11289   \ifx\Hy@pstringDest\@empty
11290     \Hy@pdfmarkerrortrue
11291     \Hy@Warning{Destination with empty name ignored}%

```

```

11292 \else
11293 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11294 \fi
11295 }
11296 \define@key{PDF}{DestAnchor}{%
11297 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
11298 \ifx\Hy@pstringDest\@empty
11299 \Hy@pdfmarkerrortrue
11300 \Hy@Warning{Destination with empty name ignored}%
11301 \else
11302 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11303 \fi
11304 }
11305 % parameter is a string
11306 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11307 % parameter is a string
11308 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11309 % parameter is a int
11310 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11311 \define@key{PDF}{PDFAFlags}{%
11312 \ifHy@pdfa
11313 \pdf@addtoks{#1}{F}%
11314 \fi
11315 }
11316 % parameter is a name
11317 \define@key{PDF}{AcroHighlight}{%
11318 \begingroup
11319 \edef\x{#1}%
11320 \expandafter\endgroup\ifx\x\@empty
11321 \else
11322 \pdf@addtoks{#1}{H}%
11323 \fi
11324 }
11325 % parameter is a string
11326 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
11327 % parameter is a string
11328 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
11329 % parameter is a string
11330 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11331 % parameter is a string
11332 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
11333 % parameter is a Boolean
11334 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11335 % parameter is a integer or name
11336 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11337 % parameter is a name
11338 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11339 % parameter is a string
11340 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
11341 % parameter is a array
11342 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
11343 % parameter is a integer
11344 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11345 % parameter is a name
11346 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11347 % parameter is a string
11348 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}

```

```

11349 % parameter is a string
11350 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
11351 % parameter is a string
11352 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
11353 % parameter is an array
11354 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
11355 % parameter is a string
11356 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11357 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
11358 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
11359 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
11360 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11361 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
11362 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
11363 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
11364 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
11365 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
11366 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11367 \define@key{PDF}{Trapped}{%
11368   \edef\Hy@temp{#1}%
11369   \ifx\Hy@temp\@empty
11370     \else
11371       \pdf@addtoks{/#1}{Trapped}%
11372     \fi
11373 }
11374
11375 </pdfmarkbase>
11376 <*pdfmark>
11377 \def\Acrobatmenu#1#2{%
11378   \Hy@Acrobatmenu{#1}{#2}{%
11379     \pdfmark[{#2}]{%
11380       linktype=menu,%
11381       pdfmark=/ANN,%
11382       AcroHighlight=\@pdfhighlight,%
11383       Border=\@pdfborder,%
11384       BorderStyle=\@pdfborderstyle,%
11385       Action={<< /Subtype /Named /N /#1 >>},%
11386       Subtype=/Link,%
11387       PDFAFlags=4%
11388     }%
11389   }%
11390 }

```

And now for some useful examples:

```

11391 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
11392 \def\PDFNextPage@[#1]#2{%
11393   \pdfmark[{#2}]{%
11394     #1,%
11395     Border=\@pdfborder,%
11396     BorderStyle=\@pdfborderstyle,%
11397     Color=.2 .1 .5,%
11398     pdfmark=/ANN,%
11399     Subtype=/Link,%
11400     PDFAFlags=4,%
11401     Page=/Next%
11402   }%

```

```

11403 }
11404 \def\PDFPreviousPage{%
11405   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11406 }
11407 \def\PDFPreviousPage@[#1]#2{%
11408   \pdfmark[{#2}]{%
11409     #1,%
11410     Border=\@pdfborder,%
11411     BorderStyle=\@pdfborderstyle,%
11412     Color=.4 .4 .1,%
11413     pdfmark=/ANN,%
11414     Subtype=/Link,%
11415     PDFAFlags=4,%
11416     Page=/Prev%
11417   }%
11418 }
11419 \def\PDFOpen#1{%
11420   \pdfmark{#1,pdfmark=/DOCVIEW}%
11421 }

```

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

```

11422 \def\hyper@linkurl#1#2{%
11423   \begingroup
11424     \Hy@pstringdef\Hy@pstringURI{#2}%
11425     \hyper@chars
11426     \leavevmode
11427     \pdfmark[{#1}]{%
11428       pdfmark=/ANN,%
11429       linktype=url,%
11430       AcroHighlight=\@pdfhighlight,%
11431       Border=\@pdfborder,%
11432       BorderStyle=\@pdfborderstyle,%
11433       Color=\@urlbordercolor,%
11434       Action={<<%
11435         /Subtype/URI%
11436         /URI(\Hy@pstringURI)%
11437         \ifHy@href@ismap
11438           /IsMap true%
11439         \fi
11440       >>},%
11441       Subtype=/Link,%
11442       PDFAFlags=4%
11443     }%
11444   \endgroup
11445 }
11446 \def\hyper@linkfile#1#2#3{%
11447   \begingroup
11448     \def\Hy@pstringF{#2}%
11449     \Hy@CleanupFile\Hy@pstringF
11450     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11451     \Hy@pstringdef\Hy@pstringD{#3}%
11452     \Hy@MakeRemoteAction
11453     \leavevmode
11454     \pdfmark[{#1}]{%
11455       pdfmark=/ANN,%
11456       Subtype=/Link,%
11457       PDFAFlags=4,%
11458       AcroHighlight=\@pdfhighlight,%

```



```

11459   Border=\@pdfborder,%
11460   BorderStyle=\@pdfborderstyle,%
11461   linktype=file,%
11462   Color=\@filebordercolor,%
11463   Action={%
11464     <<%
11465       /S/GoToR%
11466       \Hy@SetNewWindow
11467       /F(\Hy@pstringF)%
11468       /D%
11469       \ifx\#3\%
11470       [\Hy@href@page\@pdfremotestartview]%
11471       \else
11472       (\Hy@pstringD)cvn%
11473       \fi
11474       \Hy@href@nextactionraw
11475     >>%
11476   }%
11477 }%
11478 \endgroup
11479 }
11480 \def\@hyper@launch run:#1\#2#3{%
11481   \begingroup
11482   \Hy@pstringdef\Hy@pstringF{#1}%
11483   \Hy@pstringdef\Hy@pstringP{#3}%
11484   \leavevmode
11485   \pdfmark[{#2}]{%
11486     pdfmark=/ANN,%
11487     Subtype=/Link,%
11488     PDFAFlags=4,%
11489     AcroHighlight=\@pdfhighlight,%
11490     Border=\@pdfborder,%
11491     BorderStyle=\@pdfborderstyle,%
11492     linktype=run,%
11493     Color=\@runbordercolor,%
11494     Action={%
11495       <<%
11496         /S/Launch%
11497         \Hy@SetNewWindow
11498         /F(\Hy@pstringF)%
11499         \ifx\#3\%
11500         \else
11501         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11502         \fi
11503         \Hy@href@nextactionraw
11504       >>%
11505     }%
11506   }%
11507 \endgroup
11508 }
11509 </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.

```
11510 < *dvips>
11511 \providecommand*\XR@ext}{pdf}
11512 \let\Hy@raisedlink\ltx@empty
11513 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11514 \def\headerps@out#1{\special{! #1}}%
11515 \input{pdfmark.def}%
11516 \ifx\@pdfproducer\relax
11517 \def\@pdfproducer{dvips + Distiller}%
11518 \fi
11519 \providecommand*\@pdfborder{0 0 1}
11520 \providecommand*\@pdfborderstyle{}
11521 \providecommand*\@pdfview{XYZ}
11522 \providecommand*\@pdfviewparams{ H.V}
11523 \def\Hy@BorderArrayPatch{BorderArrayPatch}
11524 \g@addto@macro\Hy@FirstPageHook{%
11525 \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.

```
11526 /DvipsToPDF{72.27 mul Resolution div} def%
11527 /PDFToDvips{72.27 div Resolution mul} def%
11528 /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.

```
11529 /BorderArrayPatch{%
11530 [exch{%
11531 dup dup type/integertype eq exch type/realtype eq or%
11532 {BPToDvips}if%
11533 }forall]%
11534 }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.

```
11535 /HyperBorder {1 PDFToDvips} def%
11536 /H.V {pdf@hoff pdf@voff null} def%
11537 /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

```
11538 /H.S {%
```

```

11539    currentpoint %
11540    HyperBorder add /pdf@lly exch def %
11541    dup DvipsToPDF 72 add /pdf@hoff exch def %
11542    HyperBorder sub /pdf@llx exch def%
11543  } def%

```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current $\backslash\text{baselineskip}$ to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```

11544  /H.L {%
11545    2 sub dup%
11546    /HyperBasePt exch def %
11547    PDFToDvips /HyperBaseDvips exch def %
11548    currentpoint %
11549    HyperBaseDvips sub /pdf@ury exch def%
11550    /pdf@urx exch def%
11551  } def%
11552  /H.A {%
11553    H.L %
11554    % | /pdf@voff| = the distance from the top of the page to a point
11555    % | \baselineskip| above the current point in PDF coordinates
11556    currentpoint exch pop %
11557    vsize 72 sub exch DvipsToPDF %
11558    HyperBasePt sub % baseline skip
11559    sub /pdf@voff exch def%
11560  } def%
11561  /H.R {%
11562    currentpoint %
11563    HyperBorder sub /pdf@ury exch def %
11564    HyperBorder add /pdf@urx exch def %
11565    % | /pdf@voff| = the distance from the top of the page to the current point, in
11566    % PDF coordinates
11567    currentpoint exch pop vsize 72 sub %
11568    exch DvipsToPDF sub /pdf@voff exch def%
11569  } def%
11570  }%
11571 }
11572 \AtBeginShipoutFirst{%
11573   \ifHy@setpagesize
11574     \begingroup
11575       \@ifundefined{stockwidth}{%
11576         \ifdim\paperwidth>\z@
11577           \ifdim\paperheight>\z@
11578             \special{papersize=\the\paperwidth,\the\paperheight}%
11579           \fi
11580         \fi
11581       }{%
11582         \ifdim\stockwidth>\z@
11583           \ifdim\stockheight>\z@
11584             \special{papersize=\the\stockwidth,\the\stockheight}%
11585           \fi
11586         \fi
11587       }%

```

```

11588 \endgroup
11589 \fi
11590 \Hy@DisableOption{setpagesize}%
11591 }
11592 </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.

```

11593 <*vtexpdfmark>
11594 \providecommand*\XR@ext{-pdf}
11595 \let\Hy@raisedlink\ltx@empty
11596 \def\literals@out#1{\special{pS:#1}}%
11597 \def\headerps@out#1{\immediate\special{pS:#1}}%
11598 \input{pdfmark.def}%
11599 \ifx\@pdfproducer\relax
11600 \ifnum\OpMode=\@ne
11601 \def\@pdfproducer{VTeX}%
11602 \else
11603 \def\@pdfproducer{VTeX + Distiller}%
11604 \fi
11605 \fi
11606 \providecommand*\@pdfborder{0 0 1}
11607 \providecommand*\@pdfborderstyle{}
11608 \providecommand*\@pdfview{XYZ}
11609 \providecommand*\@pdfviewparams{ H.V}
11610 \g@addto@macro\Hy@FirstPageHook{%
11611 \headerps@out{%
11612 /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.

```

11613 /HyperBorder {1} def%
11614 /H.V {pdf@hoff pdf@voff null} def%
11615 /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: pdf@lly = $Y_c - \text{HyperBorder}$, pdf@hoff = $X_c + 72$, pdf@llx = $X_c - \text{HyperBorder}$

```

11616 /H.S {%
11617 currentpoint %
11618 HyperBorder sub%
11619 /pdf@lly exch def %
11620 dup 72 add /pdf@hoff exch def %
11621 HyperBorder sub%
11622 /pdf@llx exch def%
11623 } def%

```

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

```

11624 /H.L {%
11625 2 sub%
11626 /HyperBasePt exch def %
11627 currentpoint %

```

```

11628   HyperBasePt add HyperBorder add%
11629   /pdf@ury exch def %
11630   HyperBorder add%
11631   /pdf@urx exch def%
11632 } def%
11633 /H.A {%
11634   H.L %
11635   currentpoint exch pop %
11636   vsize 72 sub exch %
11637   HyperBasePt add add%
11638   /pdf@voff exch def%
11639 } def%

pdf@ury =  $Y_c$  + HyperBorder, pdf@urx =  $X_c$  + HyperBorder

11640 /H.R {%
11641   currentpoint %
11642   HyperBorder add%
11643   /pdf@ury exch def %
11644   HyperBorder add%
11645   /pdf@urx exch def %
11646   currentpoint exch pop vsize 72 sub add%
11647   /pdf@voff exch def%
11648 } def%
11649 }%
11650 }
11651 </vtxpdfmark>

```

46.11 Textures

```

11652 <*textures>
11653 \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.

```

11654 \begingroup
11655   \obeylines %
11656   \gdef\Hy@ps@CR{\noexpand
11657   }%
11658 \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`.

```

11659 \def\literalps@out#1{%

```

```

11660 \special{postscript 0 0 transform}%
11661 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11662 }%
11663 %

```

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.

```

11664 \def\headerps@out#1{%
11665   \special{%
11666     prepostscript TeXdict begin\Hy@ps@CR
11667       #1\Hy@ps@CR
11668     end%
11669   }%
11670 }%
11671 %

```

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.

```

11672 \g@addto@macro\Hy@FirstPageHook{%
11673   \headerps@out{%
11674     /betterpdfmark {%
11675       systemdict begin %
11676         dup /BP eq%
11677         {cleartomark gsave nulldevice []%
11678         {dup /EP eq%
11679           {cleartomark cleartomark grestore}%
11680           {cleartomark}%
11681           ifelse%
11682         }ifelse %
11683       end%
11684     }def\Hy@ps@CR
11685     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
11686   }% end of \headerps@out
11687 }% end of \AtBeginShipoutFirst
11688 %
11689 \input{pdfmark.def}%
11690 %
11691 \ifx\@pdfproducer\relax
11692   \def\@pdfproducer{Textures + Distiller}%
11693 \fi
11694 \providecommand*\@pdfborder{0 0 1}
11695 \providecommand*\@pdfborderstyle{}
11696 \providecommand*\@pdfview{XYZ}
11697 \providecommand*\@pdfviewparams{ H.V}
11698 %

```

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.

```

11699 \Hy@AtBeginDocument{%
11700   \headerps@out{%

```

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

```

11701     /vsize {\Hy@pageheight} def%

```

```

11702 /DvipsToPDF {} def%
11703 /PDFToDvips {} def%
11704 /BPToDvips {} def%
11705 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11706 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11707 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11708 /H.S {%
11709   currentpoint %
11710   HyperBorder add /pdf@lly exch def %
11711   dup DvipsToPDF 72 add /pdf@hoff exch def %
11712   HyperBorder sub /pdf@llx exch def%
11713 } def\Hy@ps@CR
11714 /H.L {%
11715   2 sub %
11716   PDFToDvips /HyperBase exch def %
11717   currentpoint %
11718   HyperBase sub /pdf@ury exch def%
11719   /pdf@urx exch def%
11720 } def\Hy@ps@CR
11721 /H.A {%
11722   H.L %
11723   currentpoint exch pop %
11724   vsize 72 sub exch DvipsToPDF %
11725   HyperBase sub % baseline skip
11726   sub /pdf@voff exch def%
11727 } def\Hy@ps@CR
11728 /H.R {%
11729   currentpoint %
11730   HyperBorder sub /pdf@ury exch def %
11731   HyperBorder add /pdf@urx exch def %
11732   currentpoint exch pop vsize 72 sub %
11733   exch DvipsToPDF sub /pdf@voff exch def%
11734 } def\Hy@ps@CR
11735 }%
11736 }

11737 \Hy@AtBeginDocument{%
11738   \ifHy@colorlinks
11739     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11740   \fi
11741 }

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.

11742 \expandafter\let\expandafter\keepPDF@SetupDoc
11743   \csname PDF@SetupDoc\endcsname
11744 \def\PDF@SetupDoc{%
11745   \ifx\@baseurl\@empty
11746   \else
11747     \special{html:<base href="\@baseurl">}%
11748   \fi
11749   \keepPDF@SetupDoc
11750 }

11751 \Hy@WrapperDef\hyper@anchor#1{%
11752   \Hy@SaveLastskip
11753   \Hy@VerboseAnchor{#1}%
11754   \begingroup
11755     \let\protect=\string

```

```

11756 \special{html:<a name=%
11757 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11758 \endgroup
11759 \Hy@activeanchortrue
11760 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11761 \special{html:</a>}%
11762 \Hy@activeanchorfalse
11763 \Hy@RestoreLastskip
11764 }
11765 \Hy@WrapperDef\hyper@anchorstart#1{%
11766 \Hy@SaveLastskip
11767 \Hy@VerboseAnchor{#1}%
11768 \begingroup
11769 \hyper@chars
11770 \special{html:<a name=%
11771 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11772 \endgroup
11773 \Hy@activeanchortrue
11774 }
11775 \def\hyper@anchorend{%
11776 \special{html:</a>}%
11777 \Hy@activeanchorfalse
11778 \Hy@RestoreLastskip
11779 }
11780 \def\@urlltype{url}
11781 \def\hyper@linkstart#1#2{%
11782 \Hy@VerboseLinkStart{#1}{#2}%
11783 \expandafter\Hy@colorlink\csname @#1color\endcsname
11784 \def\Hy@tempa{#1}%
11785 \ifx\Hy@tempa\@urlltype
11786 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11787 \else
11788 \begingroup
11789 \hyper@chars
11790 \special{%
11791 html:<a href=%
11792 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>%
11793 }%
11794 \endgroup
11795 \fi
11796 }
11797 \def\hyper@linkend{%
11798 \special{html:</a>}%
11799 \Hy@endcolorlink
11800 }
11801 \def\hyper@linkfile#1#2#3{%
11802 \hyper@linkurl{#1}{%
11803 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
11804 }%
11805 }
11806 \def\hyper@linkurl#1#2{%
11807 \leavevmode
11808 \ifHy@raiselinks
11809 \Hy@SaveSpaceFactor
11810 \Hy@SaveSavedSpaceFactor
11811 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11812 \Hy@RestoreSavedSpaceFactor

```



```

11813 \@linkdim\dp\@tempboxa
11814 \lower\@linkdim\hbox{%
11815   \hyper@chars
11816   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11817 }%
11818 \Hy@colorlink\@urlcolor
11819 \Hy@RestoreSpaceFactor
11820 #1\Hy@xspace@end
11821 \Hy@SaveSpaceFactor
11822 \@linkdim\ht\@tempboxa
11823 \advance\@linkdim by -6.5\p@
11824 \raise\@linkdim\hbox{\special{html:</a>}}%
11825 \Hy@endcolorlink
11826 \Hy@RestoreSpaceFactor
11827 \else
11828 \begingroup
11829   \hyper@chars
11830   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11831   \Hy@colorlink\@urlcolor#1\Hy@xspace@end
11832   \special{html:</a>}%
11833   \Hy@endcolorlink
11834 \endgroup
11835 \fi
11836 }

```

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

```

11837 \def\hyper@link#1#2#3{%
11838   \Hy@VerboseLinkStart{#1}{#2}%
11839   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
11840 }
11841 \def\hyper@image#1#2{%
11842   \begingroup
11843   \hyper@chars
11844   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
11845 \endgroup
11846 }
11847 </textures>

```

46.12 dvipsone

```

11848 % \subsection{dvipsone driver}
11849 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
11850 % |\special| commands.
11851 <*dvipsone>
11852 \providecommand*{\XR@ext}{pdf}
11853 \let\Hy@raisedlink\ltx@empty
11854 \providecommand*\@pdfborder{0 0 1}
11855 \providecommand*\@pdfborderstyle{}
11856 \def\literalps@out#1{\special{ps:#1}}%
11857 \def\headerps@out#1{\special{headertext=#1}}%
11858 \input{pdfmark.def}%
11859 \ifx\@pdfproducer\relax
11860   \def\@pdfproducer{dvipsone + Distiller}%
11861 \fi
11862 \HyInfo@AddonUnsupportedtrue
11863 \def\PDF@FinishDoc{%
11864   \Hy@UseMaketitleInfos
11865   \HyInfo@TrappedUnsupported

```

```

11866 \special{PDF: Keywords \@pdfkeywords}%
11867 \special{PDF: Title \@pdftitle}%
11868 \special{PDF: Creator \@pdfcreator}%
11869 \ifx\@pdfcreationdate\@empty
11870 \else
11871 \special{PDF: CreationDate \@pdfcreationdate}%
11872 \fi
11873 \ifx\@pdfmoddate\@empty
11874 \else
11875 \special{PDF: ModDate \@pdfmoddate}%
11876 \fi
11877 \special{PDF: Author \@pdfauthor}%
11878 \ifx\@pdfproducer\relax
11879 \else
11880 \special{PDF: Producer \@pdfproducer}%
11881 \fi
11882 \special{PDF: Subject \@pdfsubject}%
11883 \Hy@DisableOption{pdfauthor}%
11884 \Hy@DisableOption{pdftitle}%
11885 \Hy@DisableOption{pdfsubject}%
11886 \Hy@DisableOption{pdfcreator}%
11887 \Hy@DisableOption{pdfcreationdate}%
11888 \Hy@DisableOption{pdfmoddate}%
11889 \Hy@DisableOption{pdfproducer}%
11890 \Hy@DisableOption{pdfkeywords}%
11891 \Hy@DisableOption{pdftrapped}%
11892 \Hy@DisableOption{pdfinfo}%
11893 }
11894 \def\PDF@SetupDoc{%
11895 \def\Hy@temp{}%
11896 \ifx\@pdfstartpage\@empty
11897 \else
11898 \ifx\@pdfstartview\@empty
11899 \else
11900 \edef\Hy@temp{%
11901 ,Page=\@pdfstartpage
11902 ,View=\@pdfstartview
11903 }%
11904 \fi
11905 \fi
11906 \edef\Hy@temp{%
11907 \noexpand\pdfmark{%
11908 pdfmark=/DOCVIEW,%
11909 PageMode=/\@pdfpagemode
11910 \Hy@temp
11911 }%
11912 }%
11913 \Hy@temp
11914 \ifx\@pdfpagescrop\@empty
11915 \else
11916 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11917 \fi
11918 \edef\Hy@temp{%
11919 \ifHy@toolbar\else /HideToolbar true\fi
11920 \ifHy@menubar\else /HideMenubar true\fi
11921 \ifHy>windowui\else /HideWindowUI true\fi
11922 \ifHy@fitwindow /FitWindow true\fi

```

```

11923 \ifHy@centerwindow /CenterWindow true\fi
11924 \ifHy@displaydoctitle /DisplayDocTitle true\fi
11925 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11926 \Hy@UseNameKey{Direction}\@pdfdirection
11927 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11928 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11929 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11930 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11931 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11932 \Hy@UseNameKey{Duplex}\@pdfduplex
11933 \ifx\@pdfpicktraybypdfsize\@empty
11934 \else
11935 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11936 \fi
11937 \ifx\@pdfprintpagerange\@empty
11938 \else
11939 /PrintPageRange[\@pdfprintpagerange]%
11940 \fi
11941 \ifx\@pdfnumcopies\@empty
11942 \else
11943 /NumCopies \@pdfnumcopies
11944 \fi
11945 }%
11946 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11947 \pdfmark{%
11948 pdfmark=/PUT,%
11949 Raw={%
11950 \string{Catalog\string}<<%
11951 \ifx\Hy@temp\@empty
11952 \else
11953 /ViewerPreferences<<\Hy@temp>>%
11954 \fi
11955 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11956 \ifx\@pdflang\@empty
11957 \else
11958 /Lang(\@pdflang)%
11959 \fi
11960 \ifx\@baseurl\@empty
11961 \else
11962 /URI<</Base(\Hy@pstringB)>>%
11963 \fi
11964 >>%
11965 }%
11966 }%
11967 }
11968 \providecommand*\@pdfview{XYZ}
11969 \providecommand*\@pdfviewparams{ %
11970 gsave revscl currentpoint grestore %
11971 72 add exch pop null exch null%
11972 }
11973 \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 .

```

11974 \g@addto@macro\Hy@FirstPageHook{%

```

```

11975 \headerps@out{%
dvipsone lives in scaled points; does this mean 65536 or 65781?
11976 /DvipsToPDF { 65781 div } def%
11977 /PDFToDvips { 65781 mul } def%
11978 /BPToDvips{65781 mul}def%
11979 /HyperBorder { 1 PDFToDvips } def%
11980 /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.

```

11981 /BorderArrayPatch{%
11982   [exch{%
11983     dup dup type/integertype eq exch type/realtype eq or%
11984     {BPToDvips}if%
11985   }forall]%
11986 }def%

11987 /H.S {%
11988   currentpoint %
11989   HyperBorder add /pdf@lly exch def %
11990   dup DvipsToPDF 72 add /pdf@hoff exch def %
11991   HyperBorder sub /pdf@llx exch def%
11992 } def%

11993 /H.L {%
11994   2 sub %
11995   PDFToDvips /HyperBase exch def %
11996   currentpoint %
11997   HyperBase sub /pdf@ury exch def%
11998   /pdf@urx exch def%
11999 } def%

12000 /H.A {%
12001   H.L %
12002   currentpoint exch pop %
12003   HyperBase sub % baseline skip
12004   DvipsToPDF /pdf@voff exch def%
12005 } def%

12006 /H.R {%
12007   currentpoint %
12008   HyperBorder sub /pdf@ury exch def %
12009   HyperBorder add /pdf@urx exch def %
12010   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
12011 } def%
12012 }%
12013 }
12014 \</dvipsone>

```

46.13 TeX4ht

```

12015 \<*tex4ht>
12016 \providecommand*\XR@ext>{html}
12017 \let\Hy@raisedlink\ltx@empty
12018 \@ifpackageloaded{tex4ht}{%
12019   \Hy@InfoNoLine{tex4ht is already loaded}%
12020 }{%
12021   \RequirePackage[hx4ht]{tex4ht}%
12022 }
12023 \hyperlinkfileprefix{}
12024 \let\PDF@FinishDoc\ltx@empty

```

```

12025 \def\PDF@SetupDoc{%
12026   \ifx\@baseurl\@empty
12027   \else
12028     \special{t4ht=<base href="\@baseurl">}%
12029   \fi
12030 }
12031 \Hy@WrapperDef\hyper@anchor#1{%
12032   \Hy@SaveLastskip
12033   \Hy@VerboseAnchor{#1}%
12034   \begingroup
12035     \let\protect=\string
12036     \special{t4ht=<a name=%
12037       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12038   \endgroup
12039   \Hy@activeanchortrue
12040   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
12041   \special{t4ht=</a>}%
12042   \Hy@activeanchorfalse
12043   \Hy@RestoreLastskip
12044 }
12045 \Hy@WrapperDef\hyper@anchorstart#1{%
12046   \Hy@SaveLastskip
12047   \Hy@VerboseAnchor{#1}%
12048   \begingroup
12049     \hyper@chars\special{t4ht=<a name=%
12050       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
12051   \endgroup
12052   \Hy@activeanchortrue
12053 }
12054 \def\hyper@anchorend{%
12055   \special{t4ht=</a>}%
12056   \Hy@activeanchorfalse
12057   \Hy@RestoreLastskip
12058 }
12059 \def\@urlltype{url}
12060 \def\hyper@linkstart#1#2{%
12061   \Hy@VerboseLinkStart{#1}{#2}%
12062   \expandafter\Hy@colorlink\csname @#1color\endcsname
12063   \def\Hy@tempa{#1}%
12064   \ifx\Hy@tempa\@urlltype
12065     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12066   \else
12067     \begingroup
12068       \hyper@chars
12069       \special{t4ht=<a href=%
12070         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
12071     \endgroup
12072   \fi
12073 }
12074 \def\hyper@linkend{%
12075   \special{t4ht=</a>}%
12076   \Hy@endcolorlink
12077 }
12078 \def\hyper@linkfile#1#2#3{%
12079   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
12080 }
12081 \def\hyper@linkurl#1#2{%

```

```

12082 \leavevmode
12083 \ifHy@raiselinks
12084 \Hy@SaveSpaceFactor
12085 \Hy@SaveSavedSpaceFactor
12086 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
12087 \Hy@RestoreSavedSpaceFactor
12088 \@linkdim\dp\@tempboxa
12089 \lower\@linkdim\hbox{%
12090 \begingroup
12091 \hyper@chars
12092 \special{%
12093 t4ht=<a href=\hyper@quote#2\hyper@quote>%
12094 }%
12095 \endgroup
12096 }%
12097 \Hy@colorlink\@urlcolor
12098 \Hy@RestoreSpaceFactor
12099 #1\Hy@xspace@end
12100 \Hy@SaveSpaceFactor
12101 \Hy@endcolorlink
12102 \@linkdim\ht\@tempboxa
12103 \advance\@linkdim by -6.5\p@
12104 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
12105 \Hy@RestoreSpaceFactor
12106 \else
12107 \begingroup
12108 \hyper@chars
12109 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
12110 \Hy@colorlink\@urlcolor
12111 #1\Hy@xspace@end
12112 \Hy@endcolorlink
12113 \special{t4ht=</a>}%
12114 \endgroup
12115 \fi
12116 }

```

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

```

12117 \def\hyper@link#1#2#3{%
12118 \Hy@VerboseLinkStart{#1}{#2}%
12119 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
12120 }
12121 \def\hyper@image#1#2{%
12122 \begingroup
12123 \hyper@chars
12124 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
12125 \endgroup
12126 }
12127 \let\autoref\ref
12128 \ifx \rEfLiNK \UnDef
12129 \def\rEfLiNK #1#2{#2}%
12130 \fi
12131 \let\backref\ltx@gobble

```

Fix for tex4ht.

```

12132 \AtBeginDocument{%
12133 \expandafter\let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
12134 \expandafter\def\csname Make:Label\endcsname#1#2{%
12135 \ifhmode
12136 \Hy@SaveSpaceFactor

```

```

12137 \else
12138 \global\Hy@SavedSpaceFactor=1000 %
12139 \fi
12140 \Hy@OrgMakeLabel{#1}{%
12141 \Hy@RestoreSpaceFactor
12142 #2\Hy@xspace@end%
12143 \Hy@SaveSpaceFactor
12144 }%
12145 \Hy@RestoreSpaceFactor
12146 }%
12147 }
12148 </tex4ht>
12149 <*tex4htcfg>
12150 \IfFileExists{\jobname.cfg}{\endinput}{}
12151 \Preamble{html}
12152 \begin{document}%
12153 \EndPreamble
12154 \def\TeX{\TeX}
12155 \def\OMEGA{\Omega}
12156 \def\LaTeX{\LaTeX}
12157 \def\LaTeXe{\LaTeXe}
12158 \def\TeX{e-TeX}
12159 \def\MF{Metafont}
12160 \def\MP{MetaPost}
12161 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

12162 <*pdfmark>
12163 \long\def\@Form[#1]{%
12164 \g@addto@macro\Hy@FirstPageHook{%
12165 \headerps@out{%
12166 [%
12167 /__objdef{pdfDocEncoding}%
12168 /type/dict%
12169 /OBJ pdfmark%
12170 [%
12171 {pdfDocEncoding}%
12172 <<%
12173 /Type/Encoding%
12174 /Differences[%
12175 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
12176 /tilde %
12177 39/quotesingle %
12178 96/grave %
12179 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12180 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12181 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12182 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
12183 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12184 164/currency %
12185 166/brokenbar %
12186 168/dieresis/copyright/ordfeminine %
12187 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12188 /twosuperior/threesuperior/acute/mu %
12189 183/periodcentered/cedilla/onesuperior/ordmasculine %

```

12190 188/onequarter/onehalf/threequarters %
12191 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12192 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12193 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12194 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12195 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12196 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12197 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12198 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12199 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
12200 /ucircumflex/udieresis/yacute/thorn/ydieresis%
12201]%
12202 >>%
12203 /PUT pdfmark%
12204 [%
12205 /_objdef{ZaDb}%
12206 /type/dict%
12207 /OBJ pdfmark%
12208 [%
12209 {ZaDb}%
12210 <<%
12211 /Type/Font%
12212 /Subtype/Type1%
12213 /Name/ZaDb%
12214 /BaseFont/ZapfDingbats%
12215 >>%
12216 /PUT pdfmark%
12217 [%
12218 /_objdef{Helv}%
12219 /type/dict%
12220 /OBJ pdfmark%
12221 [%
12222 {Helv}%
12223 <<%
12224 /Type/Font%
12225 /Subtype/Type1%
12226 /Name/Helv%
12227 /BaseFont/Helvetica%
12228 /Encoding{pdfDocEncoding}%
12229 >>%
12230 /PUT pdfmark%
12231 [%
12232 /_objdef{aform}%
12233 /type/dict%
12234 /OBJ pdfmark%
12235 [%
12236 /_objdef{afields}%
12237 /type/array%
12238 /OBJ pdfmark%
12239 {%
12240 [%
12241 /BBox[0 0 100 100]%
12242 /_objdef{Check}%
12243 /BP pdfmark %
12244 1 0 0 setrgbcolor%
12245 /ZapfDingbats 80 selectfont %
12246 20 20 moveto%


```

12247 (4)show%
12248 [/EP pdfmark%
12249 [%
12250 /BBox[0 0 100 100]%
12251 /_objdef{Cross}%
12252 /BP pdfmark %
12253 1 0 0 setrgbcolor%
12254 /ZapfDingbats 80 selectfont %
12255 20 20 moveto%
12256 (8)show%
12257 [/EP pdfmark%
12258 [%
12259 /BBox[0 0 250 100]%
12260 /_objdef{Submit}%
12261 /BP pdfmark %
12262 0.6 setgray %
12263 0 0 250 100 rectfill %
12264 1 setgray %
12265 2 2 moveto %
12266 2 98 lineto %
12267 248 98 lineto %
12268 246 96 lineto %
12269 4 96 lineto %
12270 4 4 lineto %
12271 fill %
12272 0.34 setgray %
12273 248 98 moveto %
12274 248 2 lineto %
12275 2 2 lineto %
12276 4 4 lineto %
12277 246 4 lineto %
12278 246 96 lineto %
12279 fill%
12280 /Helvetica 76 selectfont %
12281 0 setgray %
12282 8 22.5 moveto%
12283 (Submit)show%
12284 [/EP pdfmark%
12285 [%
12286 /BBox[0 0 250 100]%
12287 /_objdef{SubmitP}%
12288 /BP pdfmark %
12289 0.6 setgray %
12290 0 0 250 100 rectfill %
12291 0.34 setgray %
12292 2 2 moveto %
12293 2 98 lineto %
12294 248 98 lineto %
12295 246 96 lineto %
12296 4 96 lineto %
12297 4 4 lineto %
12298 fill %
12299 1 setgray %
12300 248 98 moveto %
12301 248 2 lineto %
12302 2 2 lineto %
12303 4 4 lineto %

```

```

12304 246 4 lineto %
12305 246 96 lineto %
12306 fill%
12307 /Helvetica 76 selectfont %
12308 0 setgray %
12309 10 20.5 moveto%
12310 (Submit)show%
12311 [/EP pdfmark%
12312 } ?pdfmark%
12313 [%
12314 {aform}%
12315 <<%
12316 /Fields{afields}%
12317 /DR<<%
12318 /Font<<%
12319 /ZaDb{ZaDb}%
12320 /Helv{Helv}%
12321 >>%
12322 >>%
12323 /DA(/Helv 10 Tf 0 g)%
12324 /CO{corder}%
12325 \ifHy@pdfa
12326 \else
12327 \ifHyField@NeedAppearances
12328 /NeedAppearances true%
12329 \fi
12330 \fi
12331 >>%
12332 /PUT pdfmark%
12333 [%
12334 {Catalog}%
12335 <<%
12336 /AcroForm{aform}%
12337 >>%
12338 /PUT pdfmark%
12339 [%
12340 /__objdef{corder}%
12341 /type/array%
12342 /OBJ pdfmark% dps
12343 }}%
12344 \kvsetkeys{Form}{#1}%
12345 }
12346 \let\@endForm\ltx@empty
12347 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12348 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12349 }
12350 \def\@TextField[#1]#2{% parameters, label
12351 \def\Fld@name{#2}%
12352 \let\Fld@default\ltx@empty
12353 \let\Fld@value\@empty
12354 \def\Fld@width{\DefaultWidthofText}%
12355 \def\Fld@height{%
12356 \ifFld@multiline
12357 \DefaultHeightofTextMultiline
12358 \else
12359 \DefaultHeightofText
12360 \fi

```

```

12361 }%
12362 \begingroup
12363 \expandafter\HyField@SetKeys\expandafter{%
12364   \DefaultOptionsofText,#1%
12365 }%
12366 \HyField@FlagsText
12367 \ifFld@hidden\def\Fld@width{1sp}\fi
12368 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12369 \LayoutTextField{#2}{%
12370   \Hy@escapeform\PDFForm@Text
12371   \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12372     pdfmark=/ANN,Raw={\PDFForm@Text}%
12373   }%
12374 }%
12375 \endgroup
12376 }
12377 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12378   \def\Fld@name{#2}%
12379   \let\Fld@default\relax
12380   \let\Fld@value\relax
12381   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12382   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12383   \begingroup
12384     \Fld@menulength=0 %
12385     \@tempdima\z@
12386     \@for\@curropt:=#3\do{%
12387       \expandafter\Fld@checkequals\@curropt==\%
12388       \Hy@StepCount\Fld@menulength
12389       \settowidth{\@tempdimb}{\@currDisplay}%
12390       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12391     }%
12392     \advance\@tempdima by 15\p@
12393     \begingroup
12394       \HyField@SetKeys{#1}%
12395     \edef\x{\endgroup
12396       \noexpand\expandafter
12397       \noexpand\HyField@SetKeys
12398       \noexpand\expandafter{%
12399         \expandafter\noexpand\csname DefaultOptionsof%
12400           \ifFld@radio
12401             Radio%
12402           \else
12403             \ifFld@combo
12404               \ifFld@popdown
12405                 PopdownBox%
12406               \else
12407                 ComboBox%
12408               \fi
12409             \else
12410               ListBox%
12411             \fi
12412           \fi
12413         \endcsname
12414       }%
12415     }\x
12416     \HyField@SetKeys{#1}%
12417     \ifFld@hidden\def\Fld@width{1sp}\fi

```

```

12418 \ifx\Fld@value\relax
12419 \let\Fld@value\Fld@default
12420 \fi
12421 \LayoutChoiceField{#2}{%
12422 \ifFld@radio
12423 \HyField@FlagsRadioButton
12424 \@@Radio{#3}%
12425 \else
12426 \beginngroup
12427 \HyField@FlagsChoice
12428 \ifdim\Fld@width<\@tempdima
12429 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12430 \edef\Fld@width{\the\@tempdima}%
12431 \fi
12432 \ifFld@combo
12433 \else
12434 \@tempdima=\the\Fld@menulength\Fld@charsize
12435 \advance\@tempdima by \Fld@borderwidth bp %
12436 \advance\@tempdima by \Fld@borderwidth bp %
12437 \edef\Fld@height{\the\@tempdima}%
12438 \fi
12439 \@@ListBox{#3}%
12440 \endgroup
12441 \fi
12442 }%
12443 \endgroup
12444 }
12445 \def\@@Radio#1{%
12446 \Fld@listcount=0 %
12447 \EdefEscapeName\Fld@default{\Fld@default}%
12448 \@for\@curropt:=#1\do{%
12449 \expandafter\Fld@checkequals\@curropt==\%
12450 \EdefEscapeName\@currValue{\@currValue}%
12451 \Hy@StepCount\Fld@listcount
12452 \@currDisplay\space
12453 \Hy@escapeform\PDFForm@Radio
12454 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12455 pdfmark=/ANN,%
12456 Raw={%
12457 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12458 }%
12459 } % deliberate space between radio buttons
12460 }%
12461 }
12462 \newcount\Fld@listcount
12463 \def\@@ListBox#1{%
12464 \HyField@PDFChoices{#1}%
12465 \Hy@escapeform\PDFForm@List
12466 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12467 pdfmark=/ANN,Raw={\PDFForm@List}%
12468 }%
12469 }
12470 \def\@PushButton[#1]#2{% parameters, label
12471 \def\Fld@name{#2}%
12472 \beginngroup
12473 \expandafter\HyField@SetKeys\expandafter{%
12474 \DefaultOptionsofPushButton,#1%

```

```

12475 }%
12476 \ifHy@pdfa
12477   \Hy@Error{%
12478     PDF/A: Push button with JavaScript is prohibited%
12479   }\@ehc
12480   \LayoutPushButtonField{%
12481     \leavevmode
12482     \MakeButtonField{#2}%
12483   }%
12484 \else
12485   \HyField@FlagsPushButton
12486   \ifFld@hidden\def\Fld@width{1sp}\fi
12487   \LayoutPushButtonField{%
12488     \leavevmode
12489     \Hy@escapeform\PDFForm@Push
12490     \pdfmark[\MakeButtonField{#2}]{%
12491       pdfmark=/ANN,Raw={\PDFForm@Push}%
12492     }%
12493   }%
12494 \fi
12495 \endgroup
12496 }
12497 \def\@Submit[#1]#2{%
12498   \def\Fld@width{\DefaultWidthofSubmit}%
12499   \def\Fld@height{\DefaultHeightofSubmit}%
12500   \begingroup
12501     \expandafter\HyField@SetKeys\expandafter{%
12502       \DefaultOptionsofSubmit,#1%
12503     }%
12504     \HyField@FlagsPushButton
12505     \HyField@FlagsSubmit
12506     \ifFld@hidden\def\Fld@width{1sp}\fi
12507     \Hy@escapeform\PDFForm@Submit
12508     \pdfmark[\MakeButtonField{#2}]{%
12509       pdfmark=/ANN,%
12510       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
12511     }%
12512   \endgroup
12513 }
12514 \def\@Reset[#1]#2{%
12515   \def\Fld@width{\DefaultWidthofReset}%
12516   \def\Fld@height{\DefaultHeightofReset}%
12517   \begingroup
12518     \expandafter\HyField@SetKeys\expandafter{%
12519       \DefaultOptionsofReset,#1%
12520     }%
12521     \leavevmode
12522     \ifHy@pdfa
12523       \Hy@Error{%
12524         PDF/A: Reset action is prohibited%
12525       }\@ehc
12526       \MakeButtonField{#2}%
12527     \else
12528       \HyField@FlagsPushButton
12529       \ifFld@hidden\def\Fld@width{1sp}\fi
12530       \Hy@escapeform\PDFForm@Reset
12531       \pdfmark[\MakeButtonField{#2}]{%

```

```

12532 pdfmark=/ANN,Raw={\PDFForm@Reset}%
12533 }%
12534 \fi
12535 \endgroup
12536 }%
12537 \def\@CheckBox[#1]#2{% parameters, label
12538 \def\Fld@name{#2}%
12539 \def\Fld@default{0}%
12540 \begingroup
12541 \def\Fld@width{\DefaultWidthofCheckBox}%
12542 \def\Fld@height{\DefaultHeightofCheckBox}%
12543 \expandafter\HyField@SetKeys\expandafter{%
12544 \DefaultOptionsofCheckBox,#1%
12545 }%
12546 \HyField@FlagsCheckBox
12547 \ifFld@hidden\def\Fld@width{1sp}\fi
12548 \LayoutCheckField{#2}{%
12549 \Hy@escapeform\PDFForm@Check
12550 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
12551 pdfmark=/ANN,Raw={\PDFForm@Check}%
12552 }%
12553 }%
12554 \endgroup
12555 }
12556 \pdfmark>

```

47.2 HyperTeX

```

12557 <*hypertex>
12558 \def\@Form[#1]{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12559 \let\@endForm\ltx@empty
12560 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12561 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12562 }
12563 \def\@TextField[#1]#2{% parameters, label
12564 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12565 }
12566 \def\@CheckBox[#1]#2{% parameters, label
12567 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12568 }
12569 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12570 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12571 }
12572 \def\@PushButton[#1]#2{% parameters, label
12573 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12574 }
12575 \def\@Reset[#1]#2{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12576 \def\@Submit[#1]#2{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12577 </hypertex>

```

47.3 TeX4ht

```

12578 <*tex4ht>
12579 \def\@Form[#1]{%
12580 \kvsetkeys{Form}{#1}%
12581 \HCode{<form action="\Form@action" method="\Form@method">}%
12582 }
12583 \def\@endForm{\HCode{</form>}}
12584 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum

```

```

12585 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12586 }
12587 \def\@TextField[#1]#2{% parameters, label
12588 \let\Hy@reserved@a\@empty
12589 \def\Fld@name{#2}%
12590 \let\Fld@default\ltx@empty
12591 \bgroup
12592 \Field@toks={ }%
12593 \kvsetkeys{Field}{#1}%
12594 \HCode{<label for="\Fld@name">#2</label>}%
12595 \ifFld@password
12596 \@@PasswordField
12597 \else
12598 \@@TextField
12599 \fi
12600 \egroup
12601 }
12602 \def\@@PasswordField{%
12603 \HCode{%
12604 <input type="password" %
12605 id="\Fld@name" %
12606 name="\Fld@name" %
12607 \ifFld@hidden type="hidden" \fi
12608 value="\Fld@default" %
12609 \the\Field@toks
12610 >%
12611 }%
12612 }
12613 \def\@@TextField{%
12614 \ifFld@multiline
12615 \HCode{<textarea %
12616 \ifFld@readonly readonly \fi
12617 id="\Fld@name" %
12618 name="\Fld@name" %
12619 \ifFld@hidden type="hidden" \fi
12620 \the\Field@toks>%
12621 }%
12622 \Fld@default
12623 \HCode{</textarea>}%
12624 \else
12625 \HCode{<input type="text" %
12626 \ifFld@readonly readonly \fi
12627 id="\Fld@name" %
12628 name="\Fld@name" %
12629 \ifFld@hidden type="hidden" \fi
12630 value="\Fld@default" %
12631 \the\Field@toks>%
12632 }%
12633 \fi
12634 }
12635 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12636 \def\Fld@name{#2}%
12637 \let\Fld@default\ltx@empty
12638 \let\Hy@reserved@a\relax
12639 \begingroup
12640 \expandafter\Fld@findlength#3\\%
12641 \Field@toks={ }%

```

```

12642 \kvsetkeys{Field}{#1}%
12643 #2%
12644 \ifFld@radio
12645 \expandafter\@@Radio#3\\%
12646 \else
12647 \expandafter\@@Menu#3\\%
12648 \fi
12649 \endgroup
12650 }
12651 \def\Fld@findlength#1\\{%
12652 \Fld@menulength=0 %
12653 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12654 }
12655 \def\@@Menu#1\\{%
12656 \HCode{<select size="\the\Fld@menulength" %
12657 name="\Fld@name" %
12658 \the\Field@toks>%
12659 }%
12660 \@for\@curropt:=#1\do{%
12661 \expandafter\Fld@checkequals\@curropt==\\%
12662 \HCode{<option %
12663 \ifx\@curropt\Fld@default selected \fi
12664 value="\@currValue">\@currDisplay</option>%
12665 }%
12666 }%
12667 \HCode{</select>}%
12668 }
12669 \def\@@Radio#1\\{%
12670 \@for\@curropt:=#1\do{%
12671 \expandafter\Fld@checkequals\@curropt==\\%
12672 \HCode{<input type="radio" %
12673 \ifx\@curropt\Fld@default checked \fi
12674 name="\Fld@name" %
12675 value="\@currValue" %
12676 \the\Field@toks>%
12677 }%
12678 \@currDisplay
12679 }%
12680 }
12681 \def\@PushButton[#1]#2{% parameters, label
12682 \def\Fld@name{#2}%
12683 \bgroup
12684 \Field@toks={ }%
12685 \kvsetkeys{Field}{#1}%
12686 \HCode{<input type="button" %
12687 name="\Fld@name" %
12688 value="#2" %
12689 \the\Field@toks>%
12690 }%
12691 \HCode{</button>}%
12692 \egroup
12693 }
12694 \def\@Submit[#1]#2{%
12695 \HCode{<button type="submit">#2</button>}%
12696 }
12697 \def\@Reset[#1]#2{%
12698 \HCode{<button type="reset">#2</button>}%

```



```

12699 }
12700 \def\@CheckBox[#1]#2{% parameters, label
12701   \let\Hy@reserved@a\@empty
12702   \def\Fld@name{#2}%
12703   \def\Fld@default{0}%
12704   \bgroup
12705     \Field@toks={ }%
12706     \kvsetkeys{Field}{#1}%
12707     \HCode{<input type="checkbox" %
12708       \ifFld@checked checked \fi
12709       \ifFld@disabled disabled \fi
12710       \ifFld@readonly readonly \fi
12711       name="\Fld@name" %
12712       \ifFld@hidden type="hidden" \fi
12713       value="\Fld@default" %
12714       \the\Field@toks>%
12715     #2%
12716   }%
12717   \egroup
12718 }
12719 </tex4ht>

```

47.4 pdfTeX

```

12720 <*pdfTeX>
12721 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12722   \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12723 }
12724 \def\MakeFieldObject#1#2{\sbox0{#1}%
12725   \immediate\pdfxform0 %
12726   \expandafter\edef\csname #2Object\endcsname{%
12727     \the\pdfastxform\space 0 R}%
12728   }%
12729   \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
12730 }%
12731 \let\HyField@afields\ltx@empty
12732 \begingroup\expandafter\expandafter\expandafter\endgroup
12733 \expandafter\ifx\csname pdfastlink\endcsname\relax
12734   \let\HyField@AddToFields\relax
12735   \PackageInfo{hyperref}{%
12736     You need pdfTeX 1.40.0 for setting the /Fields entry.%
12737     \MessageBreak
12738     Adobe Reader/Acrobat accepts an empty /Field array,%
12739     \MessageBreak
12740     but other PDF viewers might complain%
12741   }%
12742 \else
12743   \let\HyField@AuxAddToFields\ltx@gobble
12744   \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
12745   \Hy@AtBeginDocument{%
12746     \if@files
12747       \immediate\write\@mainaux{%
12748         \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12749       }%
12750     \fi
12751     \let\HyField@AfterAuxOpen\@firstofone
12752     \def\HyField@AuxAddToFields#1{%
12753       \xdef\HyField@afields{%

```

```

12754 \ifx\HyField@afields\@empty
12755 \else
12756 \HyField@afields
12757 \space
12758 \fi
12759 #1 0 R%
12760 }%
12761 }%
12762 }%
12763 \def\HyField@AddToFields{%
12764 \expandafter\HyField@@AddToFields\expandafter{%
12765 \the\pdfastlink
12766 }%
12767 }%
12768 \def\HyField@@AddToFields#1{%
12769 \HyField@AfterAuxOpen{%
12770 \if@filesw
12771 \write\@mainaux{%
12772 \string\HyField@AuxAddToFields{#1}%
12773 }%
12774 \fi
12775 }%
12776 }%
12777 \fi
12778 \def\@Form[#1]{%
12779 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12780 \kvsetkeys{Form}{#1}%
12781 \pdf@ifdraftmode{}{%
12782 \Hy@FormObjects
12783 \ifnum\pdfTeXversion>13 %
12784 \pdfrefobj\OBJ@pdfdocencoding
12785 \pdfrefobj\OBJ@ZaDb
12786 \pdfrefobj\OBJ@Helv
12787 \fi
12788 \AtVeryEndDocument{%
12789 \immediate\pdfobj{%
12790 <<%
12791 /Fields[\HyField@afields]%
12792 /DR<<%
12793 /Font<<%
12794 /ZaDb \OBJ@ZaDb\space 0 R%
12795 /Helv \OBJ@Helv\space 0 R%
12796 >>%
12797 >>%
12798 /DA(/Helv 10 Tf 0 g)%
12799 \ifHy@pdfa
12800 \else
12801 \ifHyField@NeedAppearances
12802 /NeedAppearances true%
12803 \fi
12804 \fi
12805 >>%
12806 }%
12807 \edef\OBJ@acroform{\the\pdfastobj}%
12808 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
12809 }%
12810 }%

```

```

12811 \MakeFieldObject{%
Same as \ding{123} of package pifont.
12812 \begingroup
12813 \fontfamily{pzd}%
12814 \fontencoding{U}%
12815 \fontseries{m}%
12816 \fontshape{n}%
12817 \selectfont
12818 \char123 %
12819 \endgroup
12820 }{Ding}%
12821 \MakeFieldObject{%
12822 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
12823 }{Submit}%
12824 \MakeFieldObject{%
12825 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
12826 }{SubmitP}%
12827 }
12828 \let\@endForm\ltx@empty
12829 \def\@TextField[#1]#2{% parameters, label
12830 \def\Fld@name{#2}%
12831 \let\Fld@default\ltx@empty
12832 \let\Fld@value\@empty
12833 \def\Fld@width{\DefaultWidthofText}%
12834 \def\Fld@height{%
12835 \ifFld@multiline
12836 \DefaultHeightofTextMultiline
12837 \else
12838 \DefaultHeightofText
12839 \fi
12840 }%
12841 \begingroup
12842 \expandafter\HyField@SetKeys\expandafter{%
12843 \DefaultOptionsofText,#1%
12844 }%
12845 \PDFForm@Name
12846 \HyField@FlagsText
12847 \ifFld@hidden\def\Fld@width{1sp}\fi
12848 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12849 \LayoutTextField{#2}{%
12850 \Hy@escapeform\PDFForm@Text
12851 \pdfstartlink user {\PDFForm@Text}\relax
12852 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
12853 \HyField@AddToFields
12854 }%
12855 \endgroup
12856 }
12857 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12858 \def\Fld@name{#2}%
12859 \let\Fld@default\relax
12860 \let\Fld@value\relax
12861 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12862 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12863 \begingroup
12864 \Fld@menulength=0 %
12865 \@tempdima\z@
12866 \@for\@curropt:=#3\do{%

```

```

12867 \expandafter\Fld@checkequals\@curropt==\\%
12868 \Hy@StepCount\Fld@menulength
12869 \settowidth{\@tempdimb}{\@currDisplay}%
12870 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12871 }%
12872 \advance\@tempdima by 15\p@
12873 \begingroup
12874 \HyField@SetKeys{#1}%
12875 \edef\x{\endgroup
12876 \noexpand\expandafter
12877 \noexpand\HyField@SetKeys
12878 \noexpand\expandafter{%
12879 \expandafter\noexpand\csname DefaultOptionsof%
12880 \ifFld@radio
12881 Radio%
12882 \else
12883 \ifFld@combo
12884 \ifFld@popdown
12885 PopdownBox%
12886 \else
12887 ComboBox%
12888 \fi
12889 \else
12890 ListBox%
12891 \fi
12892 \fi
12893 \endcsname
12894 }%
12895 }\x
12896 \HyField@SetKeys{#1}%
12897 \PDFForm@Name
12898 \ifFld@hidden\def\Fld@width{1sp}\fi
12899 \ifx\Fld@value\relax
12900 \let\Fld@value\Fld@default
12901 \fi
12902 \LayoutChoiceField{#2}{%
12903 \ifFld@radio
12904 \HyField@FlagsRadioButton
12905 \@@Radio{#3}%
12906 \else
12907 \begingroup
12908 \HyField@FlagsChoice
12909 \ifdim\Fld@width<\@tempdima
12910 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12911 \edef\Fld@width{\the\@tempdima}%
12912 \fi
12913 \ifFld@combo
12914 \else
12915 \@tempdima=\the\Fld@menulength\Fld@charsize
12916 \advance\@tempdima by \Fld@borderwidth bp %
12917 \advance\@tempdima by \Fld@borderwidth bp %
12918 \edef\Fld@height{\the\@tempdima}%
12919 \fi
12920 \@@ListBox{#3}%
12921 \endgroup
12922 \fi
12923 }%

```

```

12924 \endgroup
12925 }
12926 \def\@@Radio#1{%
12927   \Fld@listcount=0 %
12928   \EdefEscapeName\Fld@default{\Fld@default}%
12929   \@for\@curropt:=#1\do{%
12930     \expandafter\Fld@checkequals\@curropt==\%
12931     \EdefEscapeName\@currValue{\@currValue}%
12932     \Hy@StepCount\Fld@listcount
12933     \@currDisplay\space
12934     \leavevmode
12935     \Hy@escapeform\PDFForm@Radio
12936     \pdfstartlink user {%
12937       \PDFForm@Radio
12938       /AP<<%
12939       /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.

```

12940     /\@currValue\space \DingObject
12941     >>%
12942     >>%
12943   }%
12944   \relax
12945   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
12946   \ifnum\Fld@listcount=1 %
12947     \HyField@AddToFields
12948     \fi
12949     \space % deliberate space between radio buttons
12950   }%
12951 }
12952 \newcount\Fld@listcount
12953 \def\@@ListBox#1{%
12954   \HyField@PDFChoices{#1}%
12955   \leavevmode
12956   \Hy@escapeform\PDFForm@List
12957   \pdfstartlink user {\PDFForm@List}\relax
12958   \MakeChoiceField{\Fld@width}{\Fld@height}%
12959   \pdfendlink
12960   \HyField@AddToFields
12961 }
12962 \def\@PushButton[#1]#2{% parameters, label
12963   \def\Fld@name{#2}%
12964   \begingroup
12965     \expandafter\HyField@SetKeys\expandafter{%
12966       \DefaultOptionsofPushButton,#1%
12967     }%
12968     \PDFForm@Name
12969     \ifHy@pdfa
12970       \Hy@Error{%
12971         PDF/A: Push button with JavaScript is prohibited%
12972       }\@ehc
12973       \LayoutPushButtonField{%
12974         \leavevmode
12975         \MakeButtonField{#2}%
12976       }%
12977     \else

```

```

12978 \HyField@FlagsPushButton
12979 \ifFld@hidden\def\Fld@width{1sp}\fi
12980 \LayoutPushButtonField{%
12981 \leavevmode
12982 \Hy@escapeform\PDFForm@Push
12983 \pdfstartlink user {\PDFForm@Push}\relax
12984 \MakeButtonField{#2}%
12985 \pdfendlink
12986 \HyField@AddToFields
12987 }%
12988 \fi
12989 \endgroup
12990 }
12991 \def\@Submit[#1]#2{%
12992 \def\Fld@width{\DefaultWidthofSubmit}%
12993 \def\Fld@height{\DefaultHeightofSubmit}%
12994 \begingroup
12995 \expandafter\HyField@SetKeys\expandafter{%
12996 \DefaultOptionsofSubmit,#1%
12997 }%
12998 \HyField@FlagsPushButton
12999 \HyField@FlagsSubmit
13000 \ifFld@hidden\def\Fld@width{1sp}\fi
13001 \leavevmode
13002 \Hy@escapeform\PDFForm@Submit
13003 \pdfstartlink user {%
13004 \PDFForm@Submit
13005 /AP<</N \SubmitObject/D \SubmitPObject>>%
13006 }%
13007 \relax
13008 \MakeButtonField{#2}%
13009 \pdfendlink
13010 \HyField@AddToFields
13011 \endgroup
13012 }
13013 \def\@Reset[#1]#2{%
13014 \def\Fld@width{\DefaultWidthofReset}%
13015 \def\Fld@height{\DefaultHeightofReset}%
13016 \begingroup
13017 \expandafter\HyField@SetKeys\expandafter{%
13018 \DefaultOptionsofReset,#1%
13019 }%
13020 \leavevmode
13021 \ifHy@pdfa
13022 \Hy@Error{%
13023 PDF/A: Reset action is prohibited%
13024 }\@ehc
13025 \MakeButtonField{#2}%
13026 \else
13027 \HyField@FlagsPushButton
13028 \ifFld@hidden\def\Fld@width{1sp}\fi
13029 \Hy@escapeform\PDFForm@Reset
13030 \pdfstartlink user {\PDFForm@Reset}\relax
13031 \MakeButtonField{#2}%
13032 \pdfendlink
13033 \HyField@AddToFields
13034 \fi

```

```

13035 \endgroup
13036 }
13037 \def\@CheckBox[#1]#2{% parameters, label
13038 \def\Fld@name{#2}%
13039 \def\Fld@default{0}%
13040 \begingroup
13041 \def\Fld@width{\DefaultWidthofCheckBox}%
13042 \def\Fld@height{\DefaultHeightofCheckBox}%
13043 \expandafter\HyField@SetKeys\expandafter{%
13044 \DefaultOptionsofCheckBox,#1%
13045 }%
13046 \PDFForm@Name
13047 \HyField@FlagsCheckBox
13048 \ifFld@hidden\def\Fld@width{1sp}\fi
13049 \LayoutCheckField{#2}{%
13050 \Hy@escapeform\PDFForm@Check
13051 \pdfstartlink user {\PDFForm@Check}\relax
13052 \MakeCheckField{\Fld@width}{\Fld@height}%
13053 \pdfendlink
13054 \HyField@AddToFields
13055 }%
13056 \endgroup
13057 }
13058 \def\Hy@FormObjects{%
13059 \pdfobj {%
13060 <<%
13061 /Type/Encoding%
13062 /Differences[%
13063 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
13064 /ring/tilde %
13065 39/quotesingle %
13066 96/grave %
13067 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13068 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13069 /quotedblbase/quotedblleft/quotedblright/quoteleft%
13070 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
13071 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13072 164/currency %
13073 166/brokenbar %
13074 168/dieresis/copyright/ordfeminine %
13075 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13076 /twosuperior/threesuperior/acute/mu %
13077 183/periodcentered/cedilla/onesuperior/ordmasculine %
13078 188/onequarter/onehalf/threequarters %
13079 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13080 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
13081 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
13082 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
13083 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
13084 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
13085 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
13086 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
13087 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
13088 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
13089 ]%
13090 >>%
13091 }%

```

```

13092 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
13093 \pdfobj{%
13094 <<%
13095   /Type/Font%
13096   /Subtype/Type1%
13097   /Name/ZaDb%
13098   /BaseFont/ZapfDingbats%
13099 >>%
13100 }%
13101 \xdef\OBJ@ZaDb{\the\pdflastobj}%
13102 \pdfobj{%
13103 <<%
13104   /Type/Font%
13105   /Subtype/Type1%
13106   /Name/Helv%
13107   /BaseFont/Helvetica%
13108   /Encoding \OBJ@pdfdocencoding\space 0 R%
13109 >>%
13110 }%
13111 \xdef\OBJ@Helv{\the\pdflastobj}%
13112 \global\let\Hy@FormObjects\relax
13113 }
13114 </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.

```

13115 < *dvipdfm | xetex>

```

\@Gauge

```

13116 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
13117 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
13118 }

```

\@Form

```

13119 \def\@Form[#1]{%
13120 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
13121 \kvsetkeys{Form}{#1}%
13122 \Hy@FormObjects
13123 \@pdfm@mark{obj @afields []}%
13124 \@pdfm@mark{obj @corder []}%
13125 \@pdfm@mark{%
13126   obj @aform <<%
13127     /Fields @afields%
13128     /DR<<%
13129     /Font<<%
13130     /ZaDb @OBJZaDb%
13131     /Helv @OBJHelv%
13132     >>%
13133   >>%
13134   /DA(/Helv 10 Tf 0 g)%
13135   /CO @corder%
13136   \ifHy@pdfa
13137   \else
13138     \ifHyField@NeedAppearances
13139     /NeedAppearances true%

```



```

13140     \fi
13141     \fi
13142     >>%
13143 }%
13144 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
13145 }

\@endForm

13146 \let\@endForm\ltx@empty

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
13147 \def\dvipdfm@setdim{%
13148   height \the\ht\pdfm@box\space
13149   width \the\wd\pdfm@box\space
13150   depth \the\dp\pdfm@box\space
13151 }

\HyField@AnnotCount
13152 \newcount\HyField@AnnotCount
13153 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
13154 \def\HyField@AdvanceAnnotCount{%
13155   \global\advance\HyField@AnnotCount\@ne
13156 }

\HyField@TheAnnotCount
13157 \def\HyField@TheAnnotCount{%
13158   \the\HyField@AnnotCount
13159 }

\@TextField
13160 \def\@TextField[#1]#2{% parameters, label
13161   \def\Fld@name{#2}%
13162   \let\Fld@default\ltx@empty
13163   \let\Fld@value\@empty
13164   \def\Fld@width{\DefaultWidthofText}%
13165   \def\Fld@height{%
13166     \ifFld@multiline
13167       \DefaultHeightofTextMultiline
13168     \else
13169       \DefaultHeightofText
13170     \fi
13171   }%
13172   \begingroup
13173   \expandafter\HyField@SetKeys\expandafter{%
13174     \DefaultOptionsofText,#1%
13175   }%
13176   \PDFForm@Name
13177   \HyField@FlagsText
13178   \ifFld@hidden\def\Fld@width{1sp}\fi
13179   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
13180   \setbox\pdfm@box=\hbox{%
13181     \MakeTextField{\Fld@width}{\Fld@height}%
13182   }%
13183   \HyField@AdvanceAnnotCount

```

```

13184 \LayoutTextField{#2}{%
13185   \Hy@escapeform\PDFForm@Text
13186   \@pdfm@mark{%
13187     ann @text\HyField@TheAnnotCount\space
13188     \dvipdfm@setdim << \PDFForm@Text >>%
13189   }%
13190 }%
13191 \unhbox\pdfm@box
13192 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
13193 % record in @afields array
13194 \endgroup
13195 }

```

\@ChoiceMenu

```

13196 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
13197   \def\Fld@name{#2}%
13198   \let\Fld@default\relax
13199   \let\Fld@value\relax
13200   \def\Fld@width{\DefaultWidthofChoiceMenu}%
13201   \def\Fld@height{\DefaultHeightofChoiceMenu}%
13202   \begingroup
13203     \Fld@menulength=0 %
13204     \@tempdima\z@
13205     \@for\@curropt:=#3\do{%
13206       \expandafter\Fld@checkequals\@curropt==\%
13207       \Hy@StepCount\Fld@menulength
13208       \settowidth{\@tempdimb}{\@currDisplay}%
13209       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
13210     }%
13211     \advance\@tempdima by 15\p@
13212     \begingroup
13213       \HyField@SetKeys{#1}%
13214     \edef\x{\endgroup
13215       \noexpand\expandafter
13216       \noexpand\HyField@SetKeys
13217       \noexpand\expandafter{%
13218         \expandafter\noexpand\csname DefaultOptionsof%
13219           \ifFld@radio
13220             Radio%
13221           \else
13222             \ifFld@combo
13223               \ifFld@popdown
13224                 PopdownBox%
13225               \else
13226                 ComboBox%
13227             \fi
13228           \else
13229             ListBox%
13230           \fi
13231         \fi
13232       \endcsname
13233     }%
13234   }\x
13235   \HyField@SetKeys{#1}%
13236   \PDFForm@Name
13237   \ifFld@hidden\def\Fld@width{1sp}\fi
13238   \ifx\Fld@value\relax

```

```

13239 \let\Fld@value\Fld@default
13240 \fi
13241 \LayoutChoiceField{#2}{%
13242 \ifFld@radio
13243 \HyField@FlagsRadioButton
13244 \@@Radio{#3}%
13245 \else
13246 \beginngroup
13247 \HyField@FlagsChoice
13248 \ifdim\Fld@width<\@tempdima
13249 \ifdim\@tempdima<1cm\@tempdima1cm\fi
13250 \edef\Fld@width{\the\@tempdima}%
13251 \fi
13252 \ifFld@combo
13253 \else
13254 \@tempdima=\the\Fld@menulength\Fld@charsize
13255 \advance\@tempdima by \Fld@borderwidth bp %
13256 \advance\@tempdima by \Fld@borderwidth bp %
13257 \edef\Fld@height{\the\@tempdima}%
13258 \fi
13259 \@@ListBox{#3}%
13260 \endgroup
13261 \fi
13262 }%
13263 \endgroup
13264 }

```

\@@Radio

```

13265 \def\@@Radio#1{%
13266 \Fld@listcount=0 %
13267 \EdefEscapeName\Fld@default{\Fld@default}%
13268 \setbox\pdfm@box=\hbox{%
13269 \MakeRadioField{\Fld@width}{\Fld@height}%
13270 }%
13271 \@for\@curropt:=#1\do{%
13272 \expandafter\Fld@checkequals\@curropt==\%
13273 \EdefEscapeName\@currValue{\@currValue}%
13274 \Hy@StepCount\Fld@listcount
13275 \@currDisplay\space
13276 \leavevmode
13277 \Hy@escapeform\PDFForm@Radio
13278 \ifnum\Fld@listcount=1 %
13279 \HyField@AdvanceAnnotCount
13280 \fi
13281 \@pdfm@mark{%
13282 ann %
13283 \ifnum\Fld@listcount=1 %
13284 @radio\HyField@TheAnnotCount%
13285 \space
13286 \fi
13287 \dvi pdfm@setdim
13288 <<%
13289 \PDFForm@Radio
13290 /AP<</N<</\@currValue /null>>>>%
13291 >>%
13292 }%
13293 \unhcopy\pdfm@box\space% deliberate space between radio buttons

```

```

13294 \ifnum\Fld@listcount=1 %
13295 \@pdfm@mark{%
13296 put @afields @radio\HyField@TheAnnotCount
13297 }%
13298 \fi
13299 }%
13300 }

```

\Fld@listcount

```

13301 \newcount\Fld@listcount

```

\@@Listbox

```

13302 \def\@@Listbox#1{%
13303 \HyField@PDFChoices{#1}%
13304 \setbox\pdfm@box=\hbox{%
13305 \MakeChoiceField{\Fld@width}{\Fld@height}%
13306 }%
13307 \leavevmode
13308 \Hy@escapeform\PDFForm@List
13309 \HyField@AdvanceAnnotCount
13310 \@pdfm@mark{%
13311 ann @list\HyField@TheAnnotCount\space
13312 \dvipdfm@setdim
13313 <<\PDFForm@List>>%
13314 }%
13315 \unhbox\pdfm@box
13316 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
13317 }

```

\@PushButton

```

13318 \def\@PushButton[#1]#2{% parameters, label
13319 \def\Fld@name{#2}%
13320 \begingroup
13321 \expandafter\HyField@SetKeys\expandafter{%
13322 \DefaultOptionsofPushButton,#1%
13323 }%
13324 \PDFForm@Name
13325 \ifHy@pdfa
13326 \Hy@Error{%
13327 PDF/A: Push button with JavaScript is prohibited%
13328 }\@ehc
13329 \LayoutPushButtonField{%
13330 \leavevmode
13331 \MakeButtonField{#2}%
13332 }%
13333 \else
13334 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13335 \HyField@FlagsPushButton
13336 \ifFld@hidden\def\Fld@width{1sp}\fi
13337 \HyField@AdvanceAnnotCount
13338 \LayoutPushButtonField{%
13339 \leavevmode
13340 \Hy@escapeform\PDFForm@Push
13341 \@pdfm@mark{%
13342 ann @push\HyField@TheAnnotCount\space
13343 \dvipdfm@setdim
13344 <<\PDFForm@Push>>%

```

```

13345     }%
13346     }%
13347     \unhbox\pdfm@box
13348     \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
13349     \fi
13350 \endgroup
13351 }

\@Submit
13352 \def\@Submit[#1]#2{%
13353   \def\Fld@width{\DefaultWidthofSubmit}%
13354   \def\Fld@height{\DefaultHeightofSubmit}%
13355   \begingroup
13356     \expandafter\HyField@SetKeys\expandafter{%
13357       \DefaultOptionsofSubmit,#1%
13358     }%
13359     \HyField@FlagsPushButton
13360     \HyField@FlagsSubmit
13361     \ifFld@hidden\def\Fld@width{1sp}\fi
13362     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13363     \leavevmode
13364     \Hy@escapeform\PDFForm@Submit
13365     \HyField@AdvanceAnnotCount
13366     \@pdfm@mark{%
13367       ann @submit\HyField@TheAnnotCount\space
13368       \dvipdfm@setdim
13369       <<\PDFForm@Submit>>%
13370     }%
13371     \unhbox\pdfm@box%
13372     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
13373 \endgroup
13374 }

\@Reset
13375 \def\@Reset[#1]#2{%
13376   \def\Fld@width{\DefaultWidthofReset}%
13377   \def\Fld@height{\DefaultHeightofReset}%
13378   \begingroup
13379     \expandafter\HyField@SetKeys\expandafter{%
13380       \DefaultOptionsofReset,#1%
13381     }%
13382     \leavevmode
13383     \ifHy@pdfa
13384       \Hy@Error{%
13385         PDF/A: Reset action is prohibited%
13386       }\@ehc
13387       \MakeButtonField{#2}%
13388     \else
13389       \HyField@FlagsPushButton
13390       \ifFld@hidden\def\Fld@width{1sp}\fi
13391       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13392       \Hy@escapeform\PDFForm@Reset
13393       \HyField@AdvanceAnnotCount
13394       \@pdfm@mark{%
13395         ann @reset\HyField@TheAnnotCount\space
13396         \dvipdfm@setdim
13397         <<\PDFForm@Reset>>%

```

```

13398 }%
13399 \unhbox\pdfm@box
13400 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
13401 \fi
13402 \endgroup
13403 }

```

\@CheckBox

```

13404 \def\@CheckBox[#1]#2{% parameters, label
13405 \def\Fld@name{#2}%
13406 \def\Fld@default{0}%
13407 \begingroup
13408 \def\Fld@width{\DefaultWidthofCheckBox}%
13409 \def\Fld@height{\DefaultHeightofCheckBox}%
13410 \expandafter\HyField@SetKeys\expandafter{%
13411 \DefaultOptionsofCheckBox,#1%
13412 }%
13413 \PDFForm@Name
13414 \HyField@FlagsCheckBox
13415 \ifFld@hidden\def\Fld@width{1sp}\fi
13416 \setbox\pdfm@box=\hbox{%
13417 \MakeCheckField{\Fld@width}{\Fld@height}%
13418 }%
13419 \HyField@AdvanceAnnotCount
13420 \LayoutCheckField{#2}{%
13421 \Hy@escapeform\PDFForm@Check
13422 \@pdfm@mark{%
13423 ann @check\HyField@TheAnnotCount\space
13424 \dvipdfm@setdim
13425 <<\PDFForm@Check>>%
13426 }%
13427 \unhbox\pdfm@box
13428 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
13429 }%
13430 \endgroup
13431 }

13432 \def\Hy@FormObjects{%
13433 \@pdfm@mark{obj @OBJpdfdocencoding%
13434 <<%
13435 /Type/Encoding%
13436 /Differences[%
13437 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13438 39/quotesingle %
13439 96/grave %
13440 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13441 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13442 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13443 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13444 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13445 164/currency %
13446 166/brokenbar %
13447 168/dieresis/copyright/ordfeminine %
13448 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13449 /twosuperior/threesuperior/acute/mu %
13450 183/periodcentered/cedilla/onesuperior/ordmasculine %
13451 188/onequarter/onehalf/threequarters %
13452 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%

```

```

13453      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13454      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13455      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13456      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13457      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13458      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
13459      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
13460      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13461      /thorn/ydieresis%
13462      ]%
13463      >>%
13464      }%
13465      \@pdfm@mark{obj @OBJZaDb%
13466      <<%
13467      /Type/Font%
13468      /Subtype/Type1%
13469      /Name/ZaDb%
13470      /BaseFont/ZapfDingbats%
13471      >>%
13472      }%
13473      \@pdfm@mark{obj @OBJHelv%
13474      <<%
13475      /Type/Font%
13476      /Subtype/Type1%
13477      /Name/Helv%
13478      /BaseFont/Helvetica%
13479      /Encoding @OBJpdfdocencoding%
13480      >>%
13481      }%
13482      \global\let\Hy@FormObjects\relax
13483      }
13484      </dvipdfm | xetex>

```

47.6 Common forms part

```

13485 <*pdfform>

```

\Hy@escapestring

```

13486 \begingroup\expandafter\expandafter\expandafter\endgroup
13487 \expandafter\ifx\csname pdfescapestring\endcsname\relax
13488   \let\Hy@escapestring\@firstofone
13489   \def\Hy@escapeform#1{%
13490     \ifHy@escapeform
13491       \def\Hy@escapestring##1{%
13492         \noexpand\Hy@escapestring{\noexpand##1}%
13493       }%
13494     \edef\Hy@temp{#1}%
13495     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13496     \def\Hy@escapestring##1{%
13497       \@ifundefined{Hy@esc@string##1}{%
13498         ##1%
13499         \ThisShouldNotHappen
13500       }{%
13501         \csname Hy@esc@string##1\endcsname
13502       }%
13503     }%
13504   \else

```

```

13505   \let\Hy@escapestring\@firstofone
13506   \fi
13507 }%
13508 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
13509   \ifx\|#3\|
13510   \else
13511     \expandafter
13512     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13513     \tx@ReturnAfterFi{%
13514       \Hy@@escapeform#3\@nil
13515     }%
13516   \fi
13517 }%
13518 \else
13519 \def\Hy@escapeform#1{%
13520   \ifHy@escapeform
13521     \let\Hy@escapestring\pdfescapestring
13522   \else
13523     \let\Hy@escapestring\@firstofone
13524   \fi
13525 }%
13526 \Hy@escapeform{}%
13527 \fi

```

\PDFForm@Name

```

13528 \def\PDFForm@Name{%
13529   \PDFForm@@Name\Fld@name
13530   \ifx\Fld@altname\relax
13531   \else
13532     \PDFForm@@Name\Fld@altname
13533   \fi
13534   \ifx\Fld@mappingname\relax
13535   \else
13536     \PDFForm@@Name\Fld@mappingname
13537   \fi
13538 }

```

\PDFForm@@Name

```

13539 \def\PDFForm@@Name#1{%
13540   \begingroup
13541     \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
13542       \ifHy@unicode
13543         \Hy@unicodedefalse
13544       \fi
13545     \fi
13546     \HyPsd@XeTeXBigCharstrue
13547     \pdfstringdef\Hy@gtemp#1%
13548   \endgroup
13549   \let#1\Hy@gtemp
13550 }

```

\Fld@additionalactions

```

13551 \def\Fld@@additionalactions{%
K input (keystroke) format
13552   \ifx\Fld@keystroke@code\@empty
13553   \else

```



```

13554 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13555 \fi

```

F display format

```

13556 \ifx\Fld@format@code\@empty
13557 \else
13558 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13559 \fi

```

V validation

```

13560 \ifx\Fld@validate@code\@empty
13561 \else
13562 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13563 \fi

```

C calculation

```

13564 \ifx\Fld@calculate@code\@empty
13565 \else
13566 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13567 \fi

```

Fo receiving the input focus

```

13568 \ifx\Fld@onfocus@code\@empty
13569 \else
13570 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13571 \fi

```

Bl loosing the input focus (blurred)

```

13572 \ifx\Fld@onblur@code\@empty
13573 \else
13574 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13575 \fi

```

D pressing the mouse button (down)

```

13576 \ifx\Fld@onmousedown@code\@empty
13577 \else
13578 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13579 \fi

```

U releasing the mouse button (up)

```

13580 \ifx\Fld@onmouseup@code\@empty
13581 \else
13582 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13583 \fi

```

E cursor enters the annotation's active area.

```

13584 \ifx\Fld@onenter@code\@empty
13585 \else
13586 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13587 \fi

```

X cursor exits the annotation's active area.

```

13588 \ifx\Fld@onexit@code\@empty
13589 \else
13590 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13591 \fi

```

```

13592 }

```

```

13593 \def\Fld@additionalactions{%
13594 \if\Fld@@additionalactions-%
13595 \else
13596 \ifHy@pdfa

```

```

13597     \else
13598         /AA<<\Fld@additionalactions>>%
13599     \fi
13600 \fi
13601 }

```

\Fld@annotnames

```

13602 \def\Fld@annotnames{%
13603   /T(\Fld@name)%
13604   \ifx\Fld@altname\relax
13605   \else
13606     /TU(\Fld@altname)%
13607   \fi
13608   \ifx\Fld@mappingname\relax
13609   \else
13610     /TM(\Fld@mappingname)%
13611   \fi
13612 }

```

\PDFForm@Check

```

13613 \def\PDFForm@Check{%
13614   /Subtype/Widget%
13615   \Fld@annotflags
13616   \Fld@annotnames
13617   /FT/Btn%
13618   \Fld@flags
13619   /Q \Fld@align
13620   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13621   /MK<<%
13622     \ifnum\Fld@rotation=\z@
13623     \else
13624       /R \Fld@rotation
13625     \fi
13626     \ifx\Fld@bordercolor\relax
13627     \else
13628       /BC[\Fld@bordercolor]%
13629     \fi
13630     \ifx\Fld@bcolor\relax
13631     \else
13632       /BG[\Fld@bcolor]%
13633     \fi
13634     /CA(\Hy@escapestring{\Fld@cbsymbol})%
13635   >>%
13636   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13637     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13638   /H/P%
13639   \ifFld@checked /V/Yes\else /V/Off\fi
13640   \Fld@additionalactions
13641 }

```

\PDFForm@Push

```

13642 \ifHy@pdfa
13643 \else
13644   \def\PDFForm@Push{%
13645     /Subtype/Widget%
13646     \Fld@annotflags
13647     \Fld@annotnames

```

```

13648 /FT/Btn%
13649 \Fld@flags
13650 /H/P%
13651 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13652 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13653 \ifx\Fld@bordercolor\relax\else 1\fi
13654 \space
13655 \else
13656 /MK<<%
13657 \ifnum\Fld@rotation=\z@
13658 \else
13659 /R \Fld@rotation
13660 \fi
13661 \ifx\Fld@bordercolor\relax
13662 \else
13663 /BC[\Fld@bordercolor]%
13664 \fi
13665 >>%
13666 \fi
13667 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13668 \Fld@additionalactions
13669 }%
13670 \fi

```

\PDFForm@List

```

13671 \def\PDFForm@List{%
13672 /Subtype/Widget%
13673 \Fld@annotflags
13674 \Fld@annotnames
13675 /FT/Ch%
13676 \Fld@flags
13677 /Q \Fld@align
13678 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13679 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13680 \ifx\Fld@bordercolor\relax\else 1\fi
13681 \ifx\Fld@bcolor\relax \else 1\fi
13682 \space
13683 \else
13684 /MK<<%
13685 \ifnum\Fld@rotation=\z@
13686 \else
13687 /R \Fld@rotation
13688 \fi
13689 \ifx\Fld@bordercolor\relax
13690 \else
13691 /BC[\Fld@bordercolor]%
13692 \fi
13693 \ifx\Fld@bcolor\relax
13694 \else
13695 /BG[\Fld@bcolor]%
13696 \fi
13697 >>%
13698 \fi
13699 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13700 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13701 \Fld@choices
13702 \Fld@additionalactions

```

13703 }

\PDFForm@Radio

```
13704 \def\PDFForm@Radio{%
13705   /Subtype/Widget%
13706   \Fld@annotflags
13707   \Fld@annotnames
13708   /FT/Btn%
13709   \Fld@flags
13710   /H/P%
13711   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13712   /MK<<%
13713     \ifnum\Fld@rotation=\z@
13714     \else
13715       /R \Fld@rotation
13716     \fi
13717     \ifx\Fld@bordercolor\relax
13718     \else
13719       /BC[\Fld@bordercolor]%
13720     \fi
13721     \ifx\Fld@bcolor\relax
13722     \else
13723       /BG[\Fld@bcolor]%
13724     \fi
13725     /CA(\Fld@radiosymbol)%
13726   >>%
13727   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13728     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13729   \ifx\@currValue\Fld@default
13730     /V/\Fld@default
13731     /DV/\Fld@default
13732   \else
13733     /V/Off%
13734     /DV/Off%
13735   \fi
13736   \Fld@additionalactions
13737 }
```

\PDFForm@Text

```
13738 \def\PDFForm@Text{%
13739   /Subtype/Widget%
13740   \Fld@annotflags
13741   \Fld@annotnames
13742   /FT/Tx%
13743   \Fld@flags
13744   /Q \Fld@align
13745   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
13746   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13747     \ifx\Fld@bordercolor\relax\else 1\fi
13748     \ifx\Fld@bcolor\relax \else 1\fi
13749     \space
13750   \else
13751     /MK<<%
13752     \ifnum\Fld@rotation=\z@
13753     \else
13754       /R \Fld@rotation
13755     \fi
```

```

13756     \ifx\Fld@bordercolor\relax
13757     \else
13758         /BC[\Fld@bordercolor]%
13759     \fi
13760     \ifx\Fld@bcolor\relax
13761     \else
13762         /BG[\Fld@bcolor]%
13763     \fi
13764     >>%
13765 \fi
13766 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13767     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13768 /DV(\Hy@escapestring{\Fld@default})%
13769 /V(\Hy@escapestring{\Fld@value})%
13770 \Fld@additionalactions
13771 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
13772 }

```

\PDFForm@Submit

```

13773 \def\PDFForm@Submit{%
13774 /Subtype/Widget%
13775 \Fld@annotflags
13776 \Fld@annotnames
13777 /FT/Btn%
13778 \Fld@flags
13779 /H/P%
13780 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13781 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13782     \ifx\Fld@bordercolor\relax\else 1\fi
13783     \space
13784 \else
13785 /MK<<%
13786     \ifnum\Fld@rotation=\z@
13787     \else
13788         /R \Fld@rotation
13789     \fi
13790     \ifx\Fld@bordercolor\relax
13791     \else
13792         /BC[\Fld@bordercolor]%
13793     \fi
13794     >>%
13795 \fi
13796 /A<<%
13797 /S/SubmitForm%
13798 /F<<%
13799     /FS/URL%
13800     /F(\Hy@escapestring{\Form@action})%
13801     >>%
13802 \Fld@submitflags
13803 >>%
13804 \Fld@additionalactions
13805 }

```

\PDFForm@Reset

```

13806 \ifHy@pdfa
13807 \else
13808 \def\PDFForm@Reset{%

```

```

13809 /Subtype/Widget%
13810 \Fld@annotflags
13811 \Fld@annotnames
13812 /FT/Btn%
13813 \Fld@flags
13814 /H/P%
13815 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
13816 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13817 \ifx\Fld@bordercolor\relax\else 1\fi
13818 \space
13819 \else
13820 /MK<<%
13821 \ifnum\Fld@rotation=\z@
13822 \else
13823 /R \Fld@rotation
13824 \fi
13825 \ifx\Fld@bordercolor\relax
13826 \else
13827 /BC[\Fld@bordercolor]%
13828 \fi
13829 % /CA (Clear)
13830 % /AC (Done)
13831 >>%
13832 \fi
13833 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13834 /A<</S/ResetForm>>%
13835 \Fld@additionalactions
13836 }%
13837 \fi

13838 </pdfform>
13839 <*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 L^AT_EX 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`

```

13840 \def\phantomsection{%
13841 \Hy@MakeCurrentHrefAuto{section*}%
13842 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
13843 }
13844 </package>

```

48.1 Bookmarks

```
13845 <*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.

```

13846 \def\Hy@writebookmark#1#2#3#4#5{%
13847   % section number, text, label, level, file
13848   \ifx\WriteBookmarks\relax%
13849   \else
13850     \ifnum#4>\Hy@bookmarksdepth\relax
13851     \else
13852       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
13853     \fi
13854   \fi
13855 }
13856 \def\Hy@currentbookmarklevel{0}
13857 \def\Hy@numberline#1{#1 }
13858 \def\@@writetorep#1#2#3#4#5{%
13859   \begingroup
13860   \edef\Hy@tempa{#5}%
13861   \ifx\Hy@tempa\Hy@bookmarkstype
13862     \edef\Hy@level{#4}%
13863     \ifx\Hy@levelcheck Y%
13864       \@tempcnta\Hy@level\relax
13865       \advance\@tempcnta by -1 %
13866       \ifnum\Hy@currentbookmarklevel<\@tempcnta
13867         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
13868         \advance\@tempcnta by 1 %
13869       \Hy@Warning{%
13870         Difference (\the\@tempcnta) between bookmark levels is %
13871         greater \MessageBreak than one, level fixed%
13872       }%
13873       \@tempcnta\Hy@currentbookmarklevel
13874       \advance\@tempcnta by 1 %
13875       \edef\Hy@level{\the\@tempcnta}%
13876     \fi
13877   \else
13878     \global\let\Hy@levelcheck Y%
13879   \fi
13880   \global\let\Hy@currentbookmarklevel\Hy@level
13881   \@tempcnta\Hy@level\relax
13882   \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
13883   \advance\@tempcnta by -1 %
13884   \edef\Hy@tempa{#3}%
13885   \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
13886   \ifx\Hy@tempa\Hy@tempb
13887     \Hy@Warning{%
13888       The anchor of a bookmark and its parent's must not%
13889       \MessageBreak be the same. Added a new anchor%

```

```

13890     }%
13891     \phantomsection
13892   \fi
13893   \ifHy@bookmarksnumbered
13894     \let\numberline\Hy@numberline
13895     \let\booknumberline\Hy@numberline
13896     \let\partnumberline\Hy@numberline
13897     \let\chapternumberline\Hy@numberline
13898   \else
13899     \let\numberline\@gobble
13900     \let\booknumberline\@gobble
13901     \let\partnumberline\@gobble
13902     \let\chapternumberline\@gobble
13903   \fi
13904   \HyPsd@XeTeXBigCharstrue
13905   \pdfstringdef\Hy@tempa{#2}%
13906   \HyPsd@SanitizeForOutFile\Hy@tempa
13907   \if@filesw
13908     \stepcounter{bookmark@seq@number}%
13909     \@ifundefined{@outlinefile}{%
13910       }{%
13911         \protected@write{@outlinefile}{%
13912           \protect\BOOKMARK
13913             [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
13914             {\Hy@tempa}{\Hy@tempb}%
13915             \@percentchar\space\thebookmark@seq@number
13916           }%
13917         }%
13918       \fi
13919     \fi
13920   \endgroup
13921 }
13922 \newcounter{bookmark@seq@number}
13923 \begingroup
13924   \lccode'('= '{%
13925   \lccode'('= '}%
13926   \lccode'1=\z@
13927   \lccode'2=\z@
13928   \lccode'3=\z@
13929   \lccode'5=\z@
13930   \lccode'7=\z@
13931   \lccode'#= \z@
13932   \lccode'\ '= \z@
13933   \lccode'\{= \z@
13934   \lccode'\}= \z@
13935 \lowercase{%
13936 \endgroup
13937 \def\HyPsd@SanitizeForOutFile#1{%
13938   \@onelevel@sanitize\Hy@tempa
13939   \escapechar'\%
13940   \edef\Hy@tempa{%
13941     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa\@nil
13942   }%
13943   \edef\Hy@tempa{%
13944     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa\@nil
13945   }%
13946 }%

```



```

13947 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
13948   #1%
13949   \ifx\#2\%
13950     \expandafter\ltx@gobble
13951   \else
13952     \expandafter\ltx@firstofone
13953   \fi
13954   {%
13955     \string\173%
13956     \HyPsd@SanitizeOut@BraceLeft#2\@nil
13957   }%
13958 }%
13959 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
13960   #1%
13961   \ifx\#2\%
13962     \expandafter\ltx@gobble
13963   \else
13964     \expandafter\ltx@firstofone
13965   \fi
13966   {%
13967     \string\175%
13968     \HyPsd@SanitizeOut@BraceRight#2\@nil
13969   }%
13970 }%
13971 }

```

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

```

13972 \newcommand{\currentpdfbookmark}{%
13973   \pdfbookmark[\Hy@currentbookmarklevel]%
13974 }
13975 \newcommand{\subpdfbookmark}{%
13976   \@tempcnta\Hy@currentbookmarklevel
13977   \Hy@StepCount\@tempcnta
13978   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
13979 }
13980 \newcommand{\belowpdfbookmark}[2]{%
13981   \@tempcnta\Hy@currentbookmarklevel
13982   \Hy@StepCount\@tempcnta
13983   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
13984   \advance\@tempcnta by -1 %
13985   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
13986 }

```

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.

```

13987 \renewcommand\pdfbookmark[3][0]{%
13988   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
13989   \hyper@anchorstart{#3.#1}\hyper@anchorend
13990 }
13991 \def\BOOKMARK{%
13992   \ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}%
13993 }
13994 \def\@BOOKMARK[#1]{%
13995   \ifnextchar[\@@BOOKMARK[{#1}]{\@@BOOKMARK[{#1}][-]}%
13996 }

```

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`

```
13997 \RequirePackage{rerunfilecheck}[2009/12/10]
13998 \def\Hy@OutlineRerunCheck{%
13999   \RerunFileCheck{\jobname.out}{}%
14000   \immediate\closeout\@outlinefile
14001 }{%
14002   Rerun to get outlines right\MessageBreak
14003   or use package 'bookmark'%
14004 }%
14005 }
```

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.

```
14006 <*vtex>
14007 \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.

```
14008 \begingroup
14009 \catcode'\'=12 %
14010 \ifnum\Hy@VTeXversion<650 %
14011 \catcode'\ "=12 %
14012 \gdef\hv@pdf@char#1#2#3{%
14013   \char
14014   \ifcase'#1#2#3 %
14015     "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
14016     \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
14017     \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
14018     \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
14019     \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
14020     \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
14021     \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
14022     \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
14023     \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
14024     \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
14025     \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
14026     \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
14027     \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
14028     \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
14029     \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
14030     \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
14031     \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
14032     \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
14033     \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
14034     \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
14035     \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
14036     \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
14037     \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
```

```

14038 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
14039 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
14040 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
14041 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
14042 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
14043 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
14044 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
14045 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
14046 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
14047 \fi
14048 }%
14049 \else
14050 \gdef\hv@pdf@char{\char'}%
14051 \fi
14052 \endgroup

```

\@@BOOKMARK

```

14053 \def\@@BOOKMARK[#1][#2]#3#4#5{%
14054 \expandafter\edef\csname @count@#3\endcsname{%
14055 \the\@serial@counter
14056 }%
14057 \edef\@mycount{\the\@serial@counter}%
14058 \Hy@StepCount\@serial@counter
14059 \edef\@parcount{%
14060 \expandafter\ifx\csname @count@#5\endcsname\relax
14061 0%
14062 \else
14063 \csname @count@#5\endcsname
14064 \fi
14065 }%
14066 \immediate\special{%
14067 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
14068 s=\ifx#2-c\else o\fi,t=#4%
14069 }%
14070 }%

```

\ReadBookmarks

```

14071 \def\ReadBookmarks{%
14072 \begingroup
14073 \def\0{\hv@pdf@char 0}%
14074 \def\1{\hv@pdf@char 1}%
14075 \def\2{\hv@pdf@char 2}%
14076 \def\3{\hv@pdf@char 3}%
14077 \def\({}%
14078 \def\)}%
14079 \def\do##1{%
14080 \ifnum\catcode'##1=\active
14081 \@makeother##1%
14082 \else
14083 \ifnum\catcode'##1=6 %
14084 \@makeother##1%
14085 \fi
14086 \fi
14087 }%
14088 \dospecials
14089 \Hy@safe@activetrue
14090 \InputIfFileExists{\jobname.out}{-}{-}%

```

```

14091 \endgroup
14092 \ifx\WriteBookmarks\relax
14093 \else
14094 \if@filesw
14095 \newwrite\@outlinefile
14096 \Hy@OutlineRerunCheck
14097 \immediate\openout\@outlinefile=\jobname.out\relax
14098 \ifHy@typexml
14099 \immediate\write\@outlinefile{<relaxxml>\relax}%
14100 \fi
14101 \fi
14102 \fi
14103 }

14104 </vtex>
14105 <*\vtex>
14106 \def\ReadBookmarks{%
14107 \pdf@ifdraftmode{ }{%
14108 \begingroup
14109 \def\do##1{%
14110 \ifnum\catcode'##1=\active
14111 \@makeother##1%
14112 \else
14113 \ifnum\catcode'##1=6 %
14114 \@makeother##1%
14115 \fi
14116 \fi
14117 }%
14118 \dospecials
14119 \Hy@safe@activestrue
14120 \escapechar='\%
14121 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14122 \calc@bm@number{##5}%
14123 }%
14124 \InputIfFileExists{\jobname.out}{ }{%
14125 \ifx\WriteBookmarks\relax
14126 \global\let\WriteBookmarks\relax
14127 \fi
14128 \def\@@BOOKMARK[##1][##2]##3##4##5{%
14129 \def\Hy@temp{##4}%
14130 <*pdftex>
14131 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
14132 \Hy@OutlineName{ }\Hy@pstringName{%
14133 ##2\check@bm@number{##3}%
14134 }{%
14135 \expandafter\strip@prefix\meaning\Hy@temp
14136 }%
14137 </pdftex>
14138 <*pdfmark>
14139 \pdfmark{%
14140 pdfmark=/OUT,%
14141 Count={##2\check@bm@number{##3}},%
14142 Dest={##3},%
14143 Title=\expandafter\strip@prefix\meaning\Hy@temp
14144 }%
14145 </pdfmark>
14146 <*dviptfm | xetex>
14147 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%

```

```

14148 \pdfmark{%
14149   outline \ifHy@DvipdfmxOutlineOpen
14150     [%
14151       \ifnum##21>\z@
14152       \else
14153       -%
14154       \fi
14155     ] %
14156   \fi
14157   ##1<<%
14158   /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
14159   /A<<%
14160   /S/GoTo%
14161   /D(\Hy@pstringName)%
14162   >>%
14163   >>%
14164   }%
14165 \</dvipdfm | xetex>
14166 }%
14167 \begingroup
14168   \def\WriteBookmarks{0}%
14169   \InputIfFileExists{\jobname.out}{-}{-}%
14170 \endgroup
14171   %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
14172 \endgroup
14173 }%
14174 \ifx\WriteBookmarks\relax
14175 \else
14176   \if@filesw
14177     \newwrite\@outlinefile
14178     \Hy@OutlineRerunCheck
14179     \immediate\openout\@outlinefile=\jobname.out\relax
14180     \ifHy@typexml
14181       \immediate\write\@outlinefile{<relaxxml>\relax}%
14182     \fi
14183   \fi
14184 \fi
14185 }
14186 \<*/pdftex>
14187 \def\Hy@OutlineName#1#2#3#4{%
14188   \pdfoutline goto name{#2}count#3{#4}%
14189 }
14190 \</pdftex>
14191 \def\check@bm@number#1{%
14192   \expandafter\ifx\csname B_#1\endcsname\relax
14193     0%
14194   \else
14195     \csname B_#1\endcsname
14196   \fi
14197 }
14198 \def\calc@bm@number#1{%
14199   \@tempcnta=\check@bm@number{#1}\relax
14200   \advance\@tempcnta by 1 %
14201   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
14202 }
14203 \</!vtex>
14204 \ifHy@implicit

```

```

14205 \else
14206   \expandafter\endinput
14207 \fi

14208 </outlines>
14209 <*outlines | hypertex>

14210 \newlength\Hy@SectionHShift
14211 \def\Hy@SectionAnchorHref#1{%
14212   \ifx\protect\@typeset@protect
14213     \Hy@@SectionAnchor{#1}%
14214   \fi
14215 }
14216 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
14217   \leavevmode
14218   \hbox to 0pt{%
14219     \kern-\Hy@SectionHShift
14220     \Hy@raisedlink{%
14221       \hyper@anchorstart{#1}\hyper@anchorend
14222     }%
14223     \hss
14224   }%
14225 }
14226 \let\H@old@ssect\@ssect
14227 \def\@ssect#1#2#3#4#5{%
14228   \Hy@MakeCurrentHrefAuto{section*}%
14229   \setlength\Hy@SectionHShift{#1}%
14230   \begingroup
14231     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
14232     \toks\tw@\expandafter{%
14233       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14234       #5%
14235     }%
14236   \edef\x{\endgroup
14237     \the\toks@{\the\toks\tw@}%
14238   }\x
14239 }
14240 \let\H@old@schapter\@schapter
14241 \def\@schapter#1{%
14242   \begingroup
14243     \let\@mkboth\@gobbletwo
14244     \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14245     \Hy@raisedlink{%
14246       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14247     }%
14248   \endgroup
14249   \H@old@schapter{#1}%
14250 }

```

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:

```

14251 \ltx@ifundefined{@chapter}{-}{%
14252   \let\Hy@org@chapter\@chapter
14253   \def\@chapter{%
14254     \def\Hy@next{%
14255       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14256       \Hy@raisedlink{%
14257         \hyper@anchorstart{\@currentHref}\hyper@anchorend

```

```

14258 }%
14259 }%
14260 \ifnum\c@secnumdepth>\m@ne
14261 \ltx@ifundefined{if@mainmatter}%
14262 \iftrue{\csname if@mainmatter\endcsname}%
14263 \let\Hy@next\relax
14264 \fi
14265 \fi
14266 \Hy@next
14267 \Hy@org@chapter
14268 }%
14269 }

14270 \let\H@old@part\@part
14271 \begingroup\expandafter\expandafter\expandafter\endgroup
14272 \expandafter\ifx\csname chapter\endcsname\relax
14273 \let\Hy@secnum@part\z@
14274 \else
14275 \let\Hy@secnum@part\m@ne
14276 \fi
14277 \def\@part{%
14278 \ifnum\Hy@secnum@part>\c@secnumdepth
14279 \phantomsection
14280 \fi
14281 \H@old@part
14282 }

14283 \let\H@old@spart\@spart
14284 \def\@spart#1{%
14285 \Hy@MakeCurrentHrefAuto{part*}%
14286 \Hy@raisedlink{%
14287 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14288 }%
14289 \H@old@spart{#1}%
14290 }

14291 \let\H@old@sect\@sect
14292 \def\@sect#1#2#3#4#5#6[#7]#8{%
14293 \ifnum #2>\c@secnumdepth
14294 \expandafter\@firstoftwo
14295 \else
14296 \expandafter\@secondoftwo
14297 \fi
14298 {%
14299 \Hy@MakeCurrentHrefAuto{section*}%
14300 \setlength{\Hy@SectionHShift}{#3}%
14301 \begingroup
14302 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
14303 \toks\tw@\expandafter{%
14304 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
14305 #8%
14306 }%
14307 \edef\x{\endgroup
14308 \the\toks@\the\toks\tw@}%
14309 }\x
14310 }{%
14311 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
14312 }%
14313 }

```

```

14314 </outlines | hypertex>
14315 <*outlines>

14316 \expandafter\def\csname Parent-4\endcsname{}
14317 \expandafter\def\csname Parent-3\endcsname{}
14318 \expandafter\def\csname Parent-2\endcsname{}
14319 \expandafter\def\csname Parent-1\endcsname{}
14320 \expandafter\def\csname Parent0\endcsname{}
14321 \expandafter\def\csname Parent1\endcsname{}
14322 \expandafter\def\csname Parent2\endcsname{}
14323 \expandafter\def\csname Parent3\endcsname{}
14324 \expandafter\def\csname Parent4\endcsname{}

14325 </outlines>

```

49 Compatibility with koma-script classes

```

14326 <*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.

```

14327 \def\Hy@tempa{%
14328   \def\@addchap{##1}##2{%
14329     \typeout{##2}%
14330     \if@twoside
14331       \@mkboth{##1}{}%
14332     \else
14333       \@mkboth{}{##1}%
14334     \fi
14335     \addtocontents{lof}{\protect\addvspace{10\p@}}%
14336     \addtocontents{lot}{\protect\addvspace{10\p@}}%
14337     \Hy@MakeCurrentHrefAuto{\Hy@chapapp}%
14338     \Hy@raisedlink{%
14339       \hyper@anchorstart{\@currentHref}\hyper@anchorend
14340     }%
14341     \if@twocolumn
14342       \@topnewpage[\@makeschapterhead{##2}]%
14343     \else
14344       \@makeschapterhead{##2}%
14345       \@afterheading
14346     \fi
14347     \addcontentsline{toc}{chapter}{##1}%
14348   }%
14349 }
14350 \ifclassloaded{scrbook}{%
14351   \ifclasslater{scrbook}{2001/01/01}{%
14352     \let\Hy@tempa\@empty
14353   }{}%
14354 }{%
14355   \ifclassloaded{scrreprt}{%
14356     \ifclasslater{scrreprt}{2001/01/01}{%
14357       \let\Hy@tempa\@empty
14358     }{}%
14359   }{}%
14360   \let\Hy@tempa\@empty
14361 }%

```



```

14362 }%
14363 \Hy@tempa
14364 \</outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

14365 <*pd1enc>
14366 \DeclareFontEncoding{PD1}{-}{-}

Accents
14367 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14368 \DeclareTextAccent{\'}{PD1}{\textacute}
14369 \DeclareTextAccent{\`}{PD1}{\textasciicircum}
14370 \DeclareTextAccent{\~}{PD1}{\texttilde}
14371 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14372 \DeclareTextAccent{\r}{PD1}{\textring}
14373 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14374 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14375 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14376 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14377 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14378 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14379 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14380 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14381 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciicircum}
14382 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14383 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14384 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14385 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14386 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14387 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14388 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
14389 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14390 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14391 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
14392 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
14393 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciicircum}
14394 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14395 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14396 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14397 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14398 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14399 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14400 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14401 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14402 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14403 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14404 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14405 \DeclareTextCommand{\newtie}{PD1}[1]{%
14406 \TextSymbolUnavailable{\newtie{#1}}#1%
14407 }

```

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

```

14408 % U+0009 (CHARACTER TABULATION)

```

14409 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
 14410 % U+000A (LINE FEED)
 14411 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
 14412 % U+000D (CARRIAGE RETURN)
 14413 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
 Accent glyph names
 14414 % U+02D8 BREVE; breve
 14415 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
 14416 % U+02C7 CARON; caron
 14417 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 14418 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 14419 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
 14420 % U+02D9 DOT ABOVE; dotaccent
 14421 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 14422 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14423 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 14424 % U+02DB OGONEK; ogonek
 14425 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 14426 % U+02DA RING ABOVE; ring
 14427 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 14428 % U+02DC SMALL TILDE; ilde, *tilde
 14429 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 14430 % U+0022 QUOTATION MARK; quotedbl
 14431 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 14432 % U+0023 NUMBER SIGN; numbersign
 14433 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 14434 % U+0024 DOLLAR SIGN; dollar
 14435 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 14436 % U+0025 PERCENT SIGN; percent
 14437 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 14438 % U+0026 AMPERSAND; ampersand
 14439 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle
 14440 % U+0028 LEFT PARENTHESIS; parenleft
 14441 \DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 14442 % U+0029 RIGHT PARENTHESIS; parenright
 14443 \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
 14444 % U+002E FULL STOP; period
 14445 \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
 14446 % U+003C LESS-THAN SIGN; less
 14447 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

\075: U+003D EQUALS SIGN; equal
 14448 % U+003E GREATER-THAN SIGN; greater
 14449 \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
 14450 % U+005C REVERSE SOLIDUS; backslash
 14451 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 14452 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14453 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 14454 % U+005F LOW LINE; underscore
 14455 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 14456 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 14457 % U+0060 GRAVE ACCENT; grave
 14458 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 14459 % U+0069 LATIN SMALL LETTER I; i
 14460 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 14461 % U+007B LEFT CURLY BRACKET; braceleft
 14462 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 14463 % U+007C VERTICAL LINE; *bar, verticalbar
 14464 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 14465 % U+007D RIGHT CURLY BRACKET; braceright
 14466 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 14467 % U+007E TILDE; asciitilde
 14468 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 14469 % U+2022 BULLET; bullet
 14470 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 14471 % U+2020 DAGGER; dagger
 14472 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 14473 % U+2021 DOUBLE DAGGER; daggerdbl
 14474 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 14475 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14476 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 14477 % U+2014 EM DASH; emdash
 14478 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 14479 % U+2013 EN DASH; endash
 14480 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 14481 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14482 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 14483 % U+2044 FRACTION SLASH; fraction
 14484 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 14485 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 14486 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039

14487 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guiltingright
14488 \DeclareTextCommand{\guiltingright}{PD1}{\211}% U+203A
14489 % U+2212 MINUS SIGN; minus
14490 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
14491 % U+2030 PER MILLE SIGN; perthousand
14492 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
14493 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14494 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14495 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14496 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14497 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14498 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14499 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14500 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14501 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14502 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14503 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14504 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14505 % U+2122 TRADE MARK SIGN; trademark
14506 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14507 % U+FB01 LATIN SMALL LIGATURE FI; fi
14508 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14509 % U+FB02 LATIN SMALL LIGATURE FL; fl
14510 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14511 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14512 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
14513 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14514 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14515 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14516 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14517 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14518 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
14519 \DeclareTextCommand{\IJ}{PD1}{\230}
14520 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
14521 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
14522 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14523 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
14524 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14525 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
14526 % U+0153 LATIN SMALL LIGATURE OE; oe
14527 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
14528 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14529 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
14530 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
14531 \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.
14532 % U+20AC EURO SIGN; *Euro, euro
14533 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
14534 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
14535 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
14536 % U+00A2 CENT SIGN; cent
14537 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
14538 % U+00A3 POUND SIGN; sterling
14539 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
14540 % U+00A4 CURRENCY SIGN; currency

14541 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
14542 % U+00A5 YEN SIGN; yen
14543 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
14544 % U+00A6 BROKEN BAR; brokenbar
14545 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
14546 % U+00A7 SECTION SIGN; section
14547 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
14548 % U+00A8 DIAERESIS; dieresis
14549 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
14550 % U+00A9 COPYRIGHT SIGN; copyright
14551 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
14552 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14553 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
14554 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
14555 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
14556 % U+00AC NOT SIGN; logicalnot
14557 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
14558 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
No glyph \255 in PDFDocEncoding.
14559 % U+00AE REGISTERED SIGN; registered
14560 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
14561 % U+00AF MACRON; *macron, overscore
14562 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
14563 % U+00B0 DEGREE SIGN; degree
14564 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
14565 % U+00B1 PLUS-MINUS SIGN; plusminus
14566 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
14567 % U+00B2 SUPERSCRIFT TWO; twosuperior
14568 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
14569 % U+00B3 SUPERSCRIFT THREE; threesuperior
14570 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
14571 % U+00B4 ACUTE ACCENT; acute
14572 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
14573 % U+00B5 MICRO SIGN; mu, mul
14574 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
14575 % U+00B6 PILCROW SIGN; paragraph
14576 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
14577 % U+00B7 MIDDLE DOT; middot, *periodcentered
14578 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
14579 % U+00B8 CEDILLA; cedilla
14580 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
14581 % U+00B9 SUPERSCRIFT ONE; onesuperior
14582 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
14583 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14584 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
14585 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
14586 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
14587 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14588 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
14589 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14590 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
14591 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14592 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
14593 % U+00BF INVERTED QUESTION MARK; questiondown
14594 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF

14595 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14596 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
14597 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14598 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
14599 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14600 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
14601 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14602 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
14603 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14604 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
14605 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14606 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
14607 % U+00C6 LATIN CAPITAL LETTER AE; AE
14608 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
14609 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14610 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
14611 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14612 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
14613 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14614 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
14615 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14616 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
14617 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14618 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
14619 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14620 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
14621 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14622 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
14623 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14624 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
14625 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14626 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
14627 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14628 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
14629 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14630 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14631 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14632 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14633 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14634 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14635 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14636 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14637 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14638 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14639 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14640 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14641 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14642 % U+00D7 MULTIPLICATION SIGN; multiply
14643 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14644 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14645 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14646 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14647 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14648 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14649 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14650 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14651 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB

14652 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14653 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
14654 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14655 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
14656 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14657 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14658 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14659 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14660 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14661 \DeclareTextCompositeCommand{'}{PD1}{a}{\340}% U+00E0
14662 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; acute
14663 \DeclareTextCompositeCommand{'}{PD1}{a}{\341}% U+00E1
14664 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14665 \DeclareTextCompositeCommand{'}{PD1}{a}{\342}% U+00E2
14666 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14667 \DeclareTextCompositeCommand{'}{PD1}{a}{\343}% U+00E3
14668 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14669 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
14670 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14671 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
14672 % U+00E6 LATIN SMALL LETTER AE; ae
14673 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
14674 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14675 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
14676 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14677 \DeclareTextCompositeCommand{'}{PD1}{e}{\350}% U+00E8
14678 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14679 \DeclareTextCompositeCommand{'}{PD1}{e}{\351}% U+00E9
14680 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14681 \DeclareTextCompositeCommand{'}{PD1}{e}{\352}% U+00EA
14682 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14683 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
14684 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14685 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
14686 \DeclareTextCompositeCommand{'}{PD1}{i}{\354}% U+00EC
14687 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14688 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
14689 \DeclareTextCompositeCommand{'}{PD1}{i}{\355}% U+00ED
14690 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14691 \DeclareTextCompositeCommand{'}{PD1}{i}{\356}% U+00EE
14692 \DeclareTextCompositeCommand{'}{PD1}{i}{\356}% U+00EE
14693 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14694 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
14695 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
14696 % U+00F0 LATIN SMALL LETTER ETH; eth
14697 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
14698 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14699 \DeclareTextCompositeCommand{'}{PD1}{n}{\361}% U+00F1
14700 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14701 \DeclareTextCompositeCommand{'}{PD1}{o}{\362}% U+00F2
14702 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14703 \DeclareTextCompositeCommand{'}{PD1}{o}{\363}% U+00F3
14704 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14705 \DeclareTextCompositeCommand{'}{PD1}{o}{\364}% U+00F4
14706 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14707 \DeclareTextCompositeCommand{'}{PD1}{o}{\365}% U+00F5
14708 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis

14709 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 14710 % U+00F7 DIVISION SIGN; divide
 14711 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 14712 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 14713 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 14714 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 14715 \DeclareTextCompositeCommand{'}{PD1}{u}{\371}% U+00F9
 14716 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 14717 \DeclareTextCompositeCommand{'}{PD1}{u}{\372}% U+00FA
 14718 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 14719 \DeclareTextCompositeCommand{^}{PD1}{u}{\373}% U+00FB
 14720 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 14721 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 14722 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14723 \DeclareTextCompositeCommand{'}{PD1}{y}{\375}% U+00FD
 14724 % U+00FE LATIN SMALL LETTER THORN; thorn
 14725 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 14726 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14727 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 14728 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

14729 \DeclareTextCommand{\SS}{PD1}{SS}
 14730 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

14731 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 14732 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 14733 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 14734 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 14735 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 14736 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 14737 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 14738 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

14739 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 14740 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 14741 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 14742 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 14743 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 14744 \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).

14745 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 14746 \DeclareTextCompositeCommand{'}{PD1}{c}{c}% cacute
 14747 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 14748 \DeclareTextCompositeCommand{'}{PD1}{n}{n}% nacute
 14749 \DeclareTextCompositeCommand{'}{PD1}{s}{s}% sacute
 14750 \DeclareTextCompositeCommand{'}{PD1}{z}{z}% zacute
 14751 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
 14752 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
 14753 \DeclareTextCompositeCommand{'}{PD1}{C}{C}% Cacute
 14754 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
 14755 \DeclareTextCompositeCommand{'}{PD1}{N}{N}% Nacute
 14756 \DeclareTextCompositeCommand{'}{PD1}{S}{S}% Sacute
 14757 \DeclareTextCompositeCommand{'}{PD1}{Z}{Z}% Zacute
 14758 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

14759 \langle /pdlenc)

50.2 PU encoding

14760 \langle *puenc)

14761 \DeclareFontEncoding{PU}{-}{-}

50.2.1 NFSS2 accents

14762 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecmb
14763 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
14764 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
14765 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
14766 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
14767 \DeclareTextCommand{\~}{PU}[1]{#1\83\002}% U+0302
14768 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
14769 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
14770 % U+0304 COMBINING MACRON; macroncmb
14771 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
14772 % U+0306 COMBINING BREVE; brevecmb
14773 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
14774 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
14775 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
14776 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
14777 % U+0308 COMBINING DIAERESIS; dieresiscmb
14778 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
14779 % U+030A COMBINING RING ABOVE; ringcmb
14780 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
14781 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
14782 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
14783 % U+030C COMBINING CARON; caroncmb
14784 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
14785 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
14786 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
14787 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
14788 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
14789 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
14790 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
14791 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
14792 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
14793 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
14794 % U+0327 COMBINING CEDILLA; cedillacmb
14795 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
14796 % U+0328 COMBINING OGONEK; ogonekcmb
14797 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
14798 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
14799 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
14800 % U+20DD COMBINING ENCLOSING CIRCLE
14801 \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.

14802 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
14803 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
14804 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
14805 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
14806 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
14807 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
14808 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
14809 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}

```

14810 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
14811 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
14812 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
14813 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
14814 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
14815 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
14816 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
14817 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
14818 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
14819 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
14820 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

14821 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
14822 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
14823 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
14824 \DeclareTextCompositeCommand{\-}{PU}{\ }{\texttilde}
14825 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
14826 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
14827 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
14828 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
14829 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
14830 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
14831 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
14832 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
14833 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
14834 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
14835 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
14836 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
14837 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
14838 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
14839 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

14840 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
14841 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
14842 \DeclareTextCommand{\capitalgrave}{PU}[1]{\{'{#1}}
14843 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{#1}}
14844 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
14845 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
14846 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\{"{#1}}
14847 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
14848 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
14849 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
14850 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
14851 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
14852 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
14853 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
14854 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

14855 % U+0009 (CHARACTER TABULATION)
14856 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
14857 % U+000A (LINE FEED)
14858 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
14859 % U+000D (CARRIAGE RETURN)
14860 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```

\80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 14861 % U+0022 QUOTATION MARK; quotedbl
 14862 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
 14863 % U+0023 NUMBER SIGN; numbersign
 14864 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 14865 % U+0024 DOLLAR SIGN; dollar
 14866 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 14867 % U+0025 PERCENT SIGN; percent
 14868 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 14869 % U+0026 AMPERSAND; ampersand
 14870 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 14871 % U+0027 APOSTROPHE; quotesingle
 14872 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 14873 % U+0028 LEFT PARENTHESIS; parenleft
 14874 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 14875 % U+0029 RIGHT PARENTHESIS; parenright
 14876 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 14877 % U+002A ASTERISK; asterisk
 14878 \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
 14879 % U+003C LESS-THAN SIGN; less
 14880 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 14881 % U+003E GREATER-THAN SIGN; greater
 14882 \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
 14883 % U+005C REVERSE SOLIDUS; backslash
 14884 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 14885 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14886 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 14887 % U+005F LOW LINE; underscore
 14888 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 14889 % U+0060 GRAVE ACCENT; grave
 14890 \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

14891 % U+0069 LATIN SMALL LETTER I; i
 14892 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 14893 \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
 14894 % U+007B LEFT CURLY BRACKET; braceleft
 14895 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 14896 % U+007C VERTICAL LINE; *bar, verticalbar
 14897 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 14898 % U+007D RIGHT CURLY BRACKET; braceright
 14899 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 14900 % U+007E TILDE; asciitilde
 14901 \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
 14902 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14903 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 14904 % U+00A2 CENT SIGN; cent
 14905 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 14906 % U+00A3 POUND SIGN; sterling
 14907 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 14908 % U+00A4 CURRENCY SIGN; currency
 14909 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 14910 % U+00A5 YEN SIGN; yen
 14911 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 14912 % U+00A6 BROKEN BAR; brokenbar
 14913 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 14914 % U+00A7 SECTION SIGN; section
 14915 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 14916 % U+00A8 DIAERESIS; diaeresis
 14917 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 14918 % U+00A9 COPYRIGHT SIGN; copyright
 14919 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 14920 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14921 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 14922 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 14923 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 14924 % U+00AC NOT SIGN; logicalnot
 14925 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 14926 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 14927 % U+00AE REGISTERED SIGN; registered
 14928 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 14929 % U+00AF MACRON; *macron, overscore
 14930 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 14931 % U+00B0 DEGREE SIGN; degree
 14932 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 14933 % U+00B1 PLUS-MINUS SIGN; plusminus
 14934 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 14935 % U+00B2 SUPERScript TWO; twosuperior
 14936 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 14937 % U+00B3 SUPERScript THREE; threesuperior

14938 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
14939 % U+00B4 ACUTE ACCENT; acute
14940 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
14941 \DeclareTextCommand{\textasciicute}{PU}{\80\264}% U+00B4
14942 % U+00B5 MICRO SIGN; mu, mu1
14943 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
14944 % U+00B6 PILCROW SIGN; paragraph
14945 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
14946 % U+00B7 MIDDLE DOT; middot, *periodcentered
14947 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
14948 % U+00B8 CEDILLA; cedilla
14949 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
14950 % U+00B9 SUPERScript ONE; onesuperior
14951 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
14952 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14953 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
14954 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
14955 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
14956 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14957 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
14958 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14959 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
14960 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14961 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
14962 % U+00BF INVERTED QUESTION MARK; questiondown
14963 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
14964 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14965 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
14966 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14967 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
14968 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14969 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
14970 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
14971 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
14972 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14973 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
14974 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14975 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
14976 % U+00C6 LATIN CAPITAL LETTER AE; AE
14977 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
14978 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14979 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
14980 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14981 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
14982 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14983 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
14984 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14985 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
14986 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14987 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
14988 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14989 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
14990 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14991 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
14992 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14993 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

14994 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14995 \DeclareTextCompositeCommand{"}{PU}{i}{\80\317}% U+00CF
14996 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14997 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
14998 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14999 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
15000 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
15001 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
15002 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
15003 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
15004 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
15005 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
15006 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
15007 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
15008 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
15009 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
15010 % U+00D7 MULTIPLICATION SIGN; multiply
15011 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
15012 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
15013 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
15014 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
15015 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
15016 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
15017 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
15018 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
15019 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
15020 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
15021 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
15022 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
15023 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
15024 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
15025 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
15026 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
15027 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
15028 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
15029 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
15030 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
15031 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
15032 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
15033 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
15034 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
15035 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
15036 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
15037 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
15038 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
15039 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
15040 % U+00E6 LATIN SMALL LETTER AE; ae
15041 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
15042 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
15043 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
15044 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
15045 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
15046 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
15047 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
15048 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
15049 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
15050 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis

15051 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
 15052 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
 15053 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
 15054 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
 15055 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
 15056 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
 15057 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
 15058 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
 15059 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE
 15060 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE
 15061 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
 15062 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 15063 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 15064 % U+00F0 LATIN SMALL LETTER ETH; eth
 15065 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
 15066 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 15067 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
 15068 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 15069 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
 15070 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 15071 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
 15072 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 15073 \DeclareTextCompositeCommand{~}{PU}{o}{\80\364}% U+00F4
 15074 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otild
 15075 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
 15076 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 15077 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
 15078 % U+00F7 DIVISION SIGN; divide
 15079 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 15080 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 15081 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 15082 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 15083 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
 15084 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 15085 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
 15086 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 15087 \DeclareTextCompositeCommand{~}{PU}{u}{\80\373}% U+00FB
 15088 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 15089 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
 15090 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 15091 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
 15092 % U+00FE LATIN SMALL LETTER THORN; thorn
 15093 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 15094 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 15095 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

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

15096 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 15097 \DeclareTextCompositeCommand{=}{PU}{A}{\81\000}% U+0100
 15098 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 15099 \DeclareTextCompositeCommand{=}{PU}{a}{\81\001}% U+0101
 15100 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 15101 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 15102 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 15103 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 15104 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek

15105 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
15106 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
15107 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
15108 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
15109 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
15110 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
15111 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
15112 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
15113 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
15114 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
15115 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
15116 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
15117 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
15118 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
15119 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
15120 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
15121 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
15122 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
15123 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
15124 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
15125 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
15126 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
15127 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
15128 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
15129 \DeclareTextCompositeCommand{\DJ}{PU}{\81\020}% U+0110
15130 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
15131 \DeclareTextCompositeCommand{\dj}{PU}{\81\021}% U+0111
15132 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
15133 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
15134 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
15135 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
15136 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
15137 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
15138 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
15139 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
15140 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
15141 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
15142 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
15143 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
15144 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
15145 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
15146 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
15147 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
15148 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
15149 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
15150 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
15151 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
15152 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
15153 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
15154 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
15155 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
15156 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
15157 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
15158 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
15159 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
15160 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
15161 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120

15162 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
15163 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
15164 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
15165 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
15166 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
15167 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
15168 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
15169 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
15170 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
15171 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
15172 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
15173 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
15174 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
15175 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
15176 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
15177 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
15178 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
15179 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15180 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
15181 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
15182 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
15183 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
15184 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15185 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
15186 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
15187 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
15188 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
15189 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15190 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
15191 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
15192 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
15193 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
15194 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15195 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
15196 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
15197 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
15198 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
15199 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
15200 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
15201 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
15202 % U+0133 LATIN SMALL LIGATURE IJ; ij
15203 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
15204 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
15205 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
15206 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
15207 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15208 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
15209 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
15210 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
15211 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
15212 \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`.

15213 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic

15214 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
15215 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
15216 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
15217 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
15218 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
15219 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
cent
15220 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
15221 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
15222 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
15223 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
15224 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
15225 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
15226 \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.
15227 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
15228 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
15229 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
15230 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
15231 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
15232 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
15233 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
15234 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
15235 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
15236 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
15237 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
15238 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
15239 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
cent
15240 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
15241 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
15242 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
15243 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
15244 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
15245 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
15246 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
15247 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
trophe, quoterightn
15248 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
15249 % U+014A LATIN CAPITAL LETTER ENG; Eng
15250 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
15251 % U+014B LATIN SMALL LETTER ENG; eng
15252 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
15253 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
15254 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
15255 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
15256 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
15257 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
15258 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
15259 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
15260 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
15261 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-
cute, Ohungarumlaut
15262 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
15263 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohun-
garumlaut

15264 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 15265 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 15266 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 15267 % U+0153 LATIN SMALL LIGATURE OE; oe
 15268 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 15269 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 15270 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 15271 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 15272 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 15273 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 15274 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 15275 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 15276 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 15277 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 15278 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 15279 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 15280 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 15281 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 15282 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 15283 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 15284 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 15285 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 15286 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 15287 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 15288 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 15289 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 15290 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 15291 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 15292 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 15293 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 15294 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 15295 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 15296 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 15297 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 15298 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 15299 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 15300 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 15301 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 15302 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 15303 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 15304 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 15305 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 15306 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 15307 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 15308 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 15309 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 15310 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 15311 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 15312 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 15313 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 15314 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 15315 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 15316 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 15317 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 15318 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C

15319 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 15320 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 15321 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 15322 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 15323 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 15324 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 15325 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 15326 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 15327 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 15328 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 15329 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 15330 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 15331 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 15332 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 15333 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 15334 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 15335 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 15336 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 15337 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 15338 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 15339 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 15340 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 15341 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 15342 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 15343 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 15344 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 15345 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 15346 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 15347 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 15348 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 15349 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 15350 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 15351 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15352 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15353 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15354 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15355 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15356 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

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

15357 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15358 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 15359 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 15360 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 15361 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 15362 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 15363 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 15364 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 15365 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 15366 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15367 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15368 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 15369 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 15370 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 15371 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2

15372 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 15373 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 15374 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 15375 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 15376 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 15377 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 15378 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 15379 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 15380 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 15381 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 15382 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 15383 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 15384 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 15385 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 15386 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 15387 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 15388 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 15389 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 15390 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 15391 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 15392 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 15393 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15394 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15395 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 15396 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 15397 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 15398 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 15399 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 15400 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
 15401 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 15402 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
 15403 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 15404 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 15405 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
 15406 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
 15407 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslasha-
 cute, Ostrokeacut
 15408 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
 15409 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
 cute, ostrokeacute
 15410 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 15411 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 15412 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 15413 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 15414 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 15415 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 15416 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 15417 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 15418 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 15419 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 15420 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 15421 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 15422 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 15423 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 15424 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 15425 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 15426 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave

15427 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 15428 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 15429 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 15430 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 15431 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 15432 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 15433 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 15434 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 15435 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 15436 % U+021E LATIN CAPITAL LETTER H WITH CARON
 15437 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 15438 % U+021F LATIN SMALL LETTER H WITH CARON
 15439 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 15440 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 15441 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 15442 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 15443 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 15444 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 15445 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 15446 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 15447 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 15448 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 15449 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 15450 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 15451 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 15452 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 15453 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 15454 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 15455 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 15456 % U+0237 LATIN SMALL LETTER DOTLESS J
 15457 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

15458 % U+02C7 CARON; caron
 15459 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 15460 % U+02D8 BREVE; breve
 15461 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 15462 % U+02D9 DOT ABOVE; dotaccent
 15463 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 15464 % U+02DA RING ABOVE; ring
 15465 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 15466 % U+02DB OGONEK; ogonek
 15467 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 15468 % U+02DC SMALL TILDE; ilde, *tilde
 15469 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 15470 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 15471 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 15472 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 15473 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 15474 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 15475 % U+02F7 MODIFIER LETTER LOW TILDE
 15476 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

15477 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15478 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 15479 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb

15480 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 15481 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 15482 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 15483 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 15484 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 15485 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 15486 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

15487 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 15488 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 15489 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 15490 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 15491 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 15492 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 15493 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 15494 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 15495 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 15496 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 15497 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 15498 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 15499 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 15500 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 15501 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 15502 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 15503 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 15504 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 15505 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
 15506 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 15507 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 15508 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 15509 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 15510 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 15511 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 15512 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 15513 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 15514 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 15515 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 15516 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 15517 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 15518 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 15519 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 15520 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 15521 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 15522 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 15523 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 15524 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 15525 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 15526 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 15527 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
 15528 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 15529 % U+039C GREEK CAPITAL LETTER MU; Mu
 15530 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 15531 % U+039D GREEK CAPITAL LETTER NU; Nu
 15532 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D

15533 % U+039E GREEK CAPITAL LETTER XI; Xi
 15534 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
 15535 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 15536 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 15537 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 15538 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
 15539 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 15540 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 15541 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 15542 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 15543 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 15544 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 15545 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 15546 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 15547 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 15548 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 15549 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 15550 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 15551 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 15552 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 15553 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
 15554 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
 15555 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
 15556 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
 15557 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
 15558 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
 silondieresis
 15559 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 15560 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos
 15561 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
 15562 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon
 15563 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 15564 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
 15565 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 15566 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
 15567 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 15568 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
 silondieresis
 15569 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
 15570 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 15571 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
 15572 % U+03B2 GREEK SMALL LETTER BETA; beta
 15573 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 15574 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 15575 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 15576 % U+03B4 GREEK SMALL LETTER DELTA; delta
 15577 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 15578 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 15579 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 15580 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 15581 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 15582 % U+03B7 GREEK SMALL LETTER ETA; eta
 15583 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 15584 % U+03B8 GREEK SMALL LETTER THETA; theta
 15585 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 15586 % U+03B9 GREEK SMALL LETTER IOTA; iota
 15587 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9

15588 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 15589 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 15590 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 15591 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 15592 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 15593 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 15594 % U+03BD GREEK SMALL LETTER NU; nu
 15595 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
 15596 % U+03BE GREEK SMALL LETTER XI; xi
 15597 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 15598 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 15599 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 15600 % U+03C0 GREEK SMALL LETTER PI; pi
 15601 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 15602 % U+03C1 GREEK SMALL LETTER RHO; rho
 15603 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 15604 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 15605 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 15606 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 15607 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 15608 % U+03C4 GREEK SMALL LETTER TAU; tau
 15609 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 15610 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 15611 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 15612 % U+03C6 GREEK SMALL LETTER PHI; phi
 15613 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 15614 % U+03C7 GREEK SMALL LETTER CHI; chi
 15615 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 15616 % U+03C8 GREEK SMALL LETTER PSI; psi
 15617 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 15618 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 15619 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 15620 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 15621 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 15622 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 15623 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 15624 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 15625 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 15626 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 15627 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 15628 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 15629 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 15630 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 15631 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 15632 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 15633 % U+03DB GREEK SMALL LETTER STIGMA
 15634 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 15635 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 15636 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 15637 % U+03DD GREEK SMALL LETTER DIGAMMA
 15638 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 15639 % U+03DE GREEK LETTER KOPPA; Koppagreek
 15640 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 15641 % U+03DF GREEK SMALL LETTER KOPPA
 15642 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 15643 % U+03E0 GREEK LETTER SAMPI; Sampigreek

```

15644 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
15645 % U+03E1 GREEK SMALL LETTER SAMPI
15646 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

```

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

```

15647 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
15648 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
15649 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
15650 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
15651 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
15652 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
15653 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
15654 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
15655 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
15656 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
15657 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
15658 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
15659 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
15660 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrril-
      lic, *afii10055
15661 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
15662 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
15663 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
15664 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
15665 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
15666 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
15667 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
15668 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
15669 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
15670 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
15671 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
15672 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
15673 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
15674 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
15675 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
15676 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
15677 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
15678 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
15679 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
15680 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
15681 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
15682 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
15683 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
15684 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
15685 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
15686 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
15687 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
15688 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
15689 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
15690 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
15691 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
15692 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
15693 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
15694 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
15695 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416

```

15696 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
 15697 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
 15698 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
 15699 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
 15700 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
 15701 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
 15702 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
 15703 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
 15704 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
 15705 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
 15706 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
 15707 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
 15708 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
 15709 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
 15710 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
 15711 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
 15712 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
 15713 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
 15714 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
 15715 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
 15716 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
 15717 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
 15718 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
 15719 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
 15720 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
 15721 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
 15722 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
 15723 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
 15724 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
 15725 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
 15726 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
 15727 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
 15728 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
 15729 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
 15730 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
 15731 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
 15732 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
 15733 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
 15734 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
 15735 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
 15736 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
 15737 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
 15738 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
 15739 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
 15740 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
 15741 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
 15742 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
 15743 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
 15744 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
 15745 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
 15746 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
 15747 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
 15748 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
 15749 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
 15750 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
 15751 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
 15752 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432

15753 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
15754 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
15755 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
15756 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
15757 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
15758 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
15759 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
15760 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
15761 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
15762 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
15763 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
15764 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
15765 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
15766 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
15767 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
15768 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
15769 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
15770 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
15771 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
15772 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
15773 \DeclareTextCommand{\cyr}{PU}{\84\074}% U+043C
15774 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
15775 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
15776 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
15777 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
15778 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
15779 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
15780 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
15781 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
15782 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
15783 \DeclareTextCommand{\cyr}{PU}{\84\101}% U+0441
15784 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
15785 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
15786 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
15787 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
15788 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
15789 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
15790 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
15791 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
15792 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
15793 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
15794 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
15795 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
15796 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
15797 \DeclareTextCommand{\cyrrsh}{PU}{\84\110}% U+0448
15798 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
15799 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
15800 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
15801 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
15802 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
15803 \DeclareTextCommand{\cyrrery}{PU}{\84\113}% U+044B
15804 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
15805 \DeclareTextCommand{\cyr}{PU}{\84\114}% U+044C
15806 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
15807 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
15808 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
15809 \DeclareTextCommand{\cyr}{PU}{\84\116}% U+044E

15810 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
 15811 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
 15812 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
 15813 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
 15814 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
 15815 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
 15816 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
 15817 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
 15818 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
 15819 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
 15820 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
 15821 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
 15822 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
 15823 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
 15824 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
 15825 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
 15826 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
 15827 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
 15828 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
 15829 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
 15830 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
 15831 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
 15832 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
 15833 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
 15834 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
 15835 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
 15836 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
 15837 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
 15838 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
 15839 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
 15840 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
 15841 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
 15842 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 15843 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 15844 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
 15845 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 15846 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 15847 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 15848 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 15849 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 15850 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 15851 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 15852 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 15853 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 15854 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 15855 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 15856 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 15857 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 15858 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 15859 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 15860 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 15861 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 15862 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 15863 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
 15864 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468

15865 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
 15866 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 15867 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 15868 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 15869 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 15870 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 15871 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
 15872 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 15873 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
 15874 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 15875 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 15876 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 15877 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 15878 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 15879 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 15880 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 15881 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 15882 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 15883 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 15884 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 15885 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 15886 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 15887 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 15888 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 15889 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 15890 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 15891 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
 15892 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 15893 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
 15894 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 15895 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 15896 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 15897 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 15898 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 15899 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 15900 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 15901 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 15902 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 15903 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 15904 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 15905 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 15906 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 15907 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 15908 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 15909 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 15910 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 15911 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 15912 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 15913 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic

15914 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 15915 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 15916 \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
 15917 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 15918 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 15919 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 15920 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 15921 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 15922 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 15923 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 15924 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 15925 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 15926 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 15927 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 15928 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 15929 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 15930 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 15931 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 15932 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 15933 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 15934 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 15935 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 15936 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 15937 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 15938 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 15939 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 15940 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 15941 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 15942 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 15943 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 15944 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 15945 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 15946 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 15947 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 15948 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 15949 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 15950 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

15951 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 15952 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 15953 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
 15954 \DeclareTextCommand{\cyrkdesc}{PU}{\84\233}% U+049B
 15955 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic
 15956 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 15957 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic
 15958 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 15959 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 15960 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 15961 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 15962 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 15963 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 15964 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 15965 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 15966 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 15967 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 15968 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 15969 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 15970 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 15971 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 15972 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 15973 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 15974 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 15975 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 15976 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 15977 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 15978 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 15979 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 15980 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 15981 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 15982 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 15983 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 15984 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 15985 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 15986 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 15987 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 15988 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 15989 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 15990 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 15991 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 15992 \DeclareTextCommand{\cyrtasc}{PU}{\84\255}% U+04AD
 15993 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 15994 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

15995 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
 15996 \DeclareTextCommand{\cyrj}{PU}{\84\257}% U+04AF
 15997 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraighstrokecyrillic
 15998 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 15999 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraighstrokecyrillic
 16000 \DeclareTextCommand{\cyrjhcrs}{PU}{\84\261}% U+04B1
 16001 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
 16002 \DeclareTextCommand{\CYRHDS}{PU}{\84\262}% U+04B2
 16003 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 16004 \DeclareTextCommand{\cyrhds}{PU}{\84\263}% U+04B3
 16005 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 16006 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 16007 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 16008 \DeclareTextCommand{\cyrttetse}{PU}{\84\265}% U+04B5
 16009 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
 16010 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 16011 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 16012 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
 16013 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 16014 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 16015 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 16016 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 16017 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 16018 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 16019 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 16020 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 16021 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
 16022 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 16023 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 16024 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 16025 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 16026 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 16027 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 16028 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 16029 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 16030 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 16031 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 16032 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 16033 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 16034 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 16035 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 16036 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 16037 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 16038 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 16039 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic

16040 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 16041 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 16042 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 16043 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 16044 \DeclareTextCommand{\cyrljsc}{PU}{\84\306}% U+04C6
 16045 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 16046 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 16047 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 16048 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 16049 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 16050 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 16051 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 16052 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 16053 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 16054 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 16055 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 16056 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 16057 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 16058 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 16059 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 16060 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 16061 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 16062 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 16063 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 16064 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 16065 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 16066 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 16067 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 16068 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 16069 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
 16070 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 16071 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
 16072 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 16073 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 16074 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 16075 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
 16076 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
 16077 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
 16078 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
 16079 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
 16080 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
 16081 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
 16082 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
 16083 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
 16084 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
 16085 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
 16086 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
 16087 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

16088 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
16089 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
16090 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
16091 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
16092 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
16093 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
16094 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
16095 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
16096 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
16097 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
16098 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
16099 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
16100 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\345}% U+04E5
16101 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
16102 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
16103 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
16104 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
16105 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
16106 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
16107 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
16108 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
16109 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
16110 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
16111 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
16112 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
16113 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
16114 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
16115 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
16116 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
16117 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
16118 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
16119 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
16120 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
16121 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
16122 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
16123 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
16124 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
16125 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
16126 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
16127 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
16128 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
16129 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
16130 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
16131 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
16132 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
16133 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
16134 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
16135 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
16136 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

16137 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
16138 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
16139 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
16140 \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
16141 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
16142 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
16143 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
16144 \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

16145 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
16146 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

16147 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
16148 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
16149 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
16150 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
16151 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
16152 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
16153 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
16154 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
16155 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
16156 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
16157 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
16158 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
16159 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
16160 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
16161 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
16162 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
16163 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
16164 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
16165 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
16166 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
16167 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
16168 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
16169 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
16170 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
16171 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
16172 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20
16173 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
16174 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21
16175 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
16176 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
16177 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
16178 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
16179 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
16180 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
16181 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis

16182 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
16183 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
16184 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
16185 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
16186 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
16187 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
16188 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30
16189 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
16190 \DeclareTextCompositeCommand{'}{PU}{k}{\9036\061}% U+1E31
16191 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
16192 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
16193 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
16194 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
16195 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
16196 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
16197 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
16198 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
16199 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
16200 \DeclareTextCompositeCommand{'}{PU}{M}{\9036\076}% U+1E3E
16201 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
16202 \DeclareTextCompositeCommand{'}{PU}{m}{\9036\077}% U+1E3F
16203 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
16204 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
16205 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
16206 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
16207 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
16208 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
16209 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
16210 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
16211 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
16212 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
16213 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
16214 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
16215 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
16216 \DeclareTextCompositeCommand{'}{PU}{P}{\9036\124}% U+1E54
16217 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
16218 \DeclareTextCompositeCommand{'}{PU}{p}{\9036\125}% U+1E55
16219 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
16220 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
16221 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
16222 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
16223 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
16224 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
16225 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
16226 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
16227 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
16228 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
16229 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
16230 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
16231 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
16232 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
16233 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
16234 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
16235 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
16236 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
16237 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
16238 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F

16239 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
16240 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
16241 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
16242 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
16243 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
16244 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
16245 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
16246 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
16247 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
16248 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82
16249 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
16250 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83
16251 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
16252 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
16253 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
16254 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
16255 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
16256 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
16257 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
16258 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
16259 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
16260 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
16261 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
16262 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
16263 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
16264 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
16265 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
16266 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
16267 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
16268 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
16269 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
16270 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
16271 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
16272 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
16273 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
16274 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
16275 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
16276 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
16277 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
16278 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
16279 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
16280 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
16281 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
16282 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
16283 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
16284 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
16285 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
16286 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
16287 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
cent
16288 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
16289 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
16290 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
16291 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
16292 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
16293 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
16294 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2

16295 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 16296 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 16297 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 16298 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 16299 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 16300 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

16301 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 16302 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 16303 % U+2013 EN DASH; endash
 16304 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 16305 % U+2014 EM DASH; emdash
 16306 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 16307 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 16308 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 16309 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 16310 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 16311 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 16312 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 16313 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 16314 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 16315 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 16316 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 16317 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 16318 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 16319 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 16320 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 16321 % U+2020 DAGGER; dagger
 16322 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 16323 % U+2021 DOUBLE DAGGER; daggerdbl
 16324 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 16325 % U+2022 BULLET; bullet
 16326 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 16327 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 16328 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 16329 % U+2030 PER MILLE SIGN; perthousand
 16330 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 16331 % U+2031 PER TEN THOUSAND SIGN
 16332 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 16333 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 16334 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 16335 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 ingright
 16336 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 16337 % U+203B REFERENCE MARK; referencemark
 16338 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 16339 % U+203D INTERROBANG
 16340 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 16341 % U+2044 FRACTION SLASH; fraction
 16342 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 16343 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 16344 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 16345 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 16346 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 16347 % U+2052 COMMERCIAL MINUS SIGN

16348 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

16349 % U+2070 SUPERSCRIPT ZERO; zerosuperior
16350 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
16351 % U+2074 SUPERSCRIPT FOUR; foursuperior
16352 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
16353 % U+2075 SUPERSCRIPT FIVE; fivesuperior
16354 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
16355 % U+2076 SUPERSCRIPT SIX; sixsuperior
16356 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
16357 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
16358 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
16359 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
16360 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
16361 % U+2079 SUPERSCRIPT NINE; ninesuperior
16362 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
16363 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
16364 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
16365 % U+207B SUPERSCRIPT MINUS
16366 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
16367 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
16368 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
16369 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
16370 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
16371 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
16372 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
16373 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
16374 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
16375 % U+2080 SUBSCRIPT ZERO; zeroinferior
16376 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
16377 % U+2081 SUBSCRIPT ONE; oneinferior
16378 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
16379 % U+2082 SUBSCRIPT TWO; twoinferior
16380 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
16381 % U+2083 SUBSCRIPT THREE; threeinferior
16382 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
16383 % U+2084 SUBSCRIPT FOUR; fourinferior
16384 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
16385 % U+2085 SUBSCRIPT FIVE; fiveinferior
16386 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
16387 % U+2086 SUBSCRIPT SIX; sixinferior
16388 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
16389 % U+2087 SUBSCRIPT SEVEN; seveninferior
16390 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
16391 % U+2088 SUBSCRIPT EIGHT; eightinferior
16392 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
16393 % U+2089 SUBSCRIPT NINE; nineinferior
16394 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
16395 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
16396 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
16397 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
16398 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

16399 % U+20A1 COLON SIGN; *colonmonetary, colonsign
16400 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1

16401 % U+20A4 LIRA SIGN; afii08941, *lira
16402 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
16403 % U+20A6 NAIRA SIGN
16404 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
16405 % U+20A7 PESETA SIGN; peseta
16406 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
16407 % U+20A9 WON SIGN; won
16408 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
16409 % U+20AB DONG SIGN; dong
16410 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
16411 % U+20AC EURO SIGN; *Euro, euro
16412 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
16413 % U+20B1 PESO SIGN
16414 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
16415 % U+20B2 GUARANI SIGN
16416 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

16417 % U+2103 DEGREE CELSIUS; centigrade
16418 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
16419 % U+2116 NUMERO SIGN; *afii61352, numero
16420 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
16421 % U+2117 SOUND RECORDING COPYRIGHT
16422 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
16423 % U+211E PRESCRIPTION TAKE; prescription
16424 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
16425 % U+2120 SERVICE MARK
16426 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
16427 % U+2122 TRADE MARK SIGN; trademark
16428 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
16429 % U+2126 OHM SIGN; Ohm, Omega
16430 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
16431 % U+2127 INVERTED OHM SIGN
16432 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
16433 % U+212B ANGSTROM SIGN; angstrom
16434 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
16435 % U+212E ESTIMATED SYMBOL; estimated
16436 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
16437 % U+2135 ALEF SYMBOL; aleph
16438 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

16439 % U+2190 LEFTWARDS ARROW; arrowleft
16440 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
16441 % U+2191 UPWARDS ARROW; arrowup
16442 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
16443 % U+2192 RIGHTWARDS ARROW; arrowright
16444 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
16445 % U+2193 DOWNWARDS ARROW; arrowdown
16446 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

16447 % U+2212 MINUS SIGN; minus
16448 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
16449 % U+221A SQUARE ROOT; radical
16450 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

16451 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
16452 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
16453 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
16454 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

16455 % U+2422 BLANK SYMBOL
16456 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
16457 % U+2423 OPEN BOX; blank
16458 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

16459 % U+2460 CIRCLED DIGIT ONE; onecircle
16460 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
16461 % U+2461 CIRCLED DIGIT TWO; twocircle
16462 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
16463 % U+2462 CIRCLED DIGIT THREE; threecircle
16464 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
16465 % U+2463 CIRCLED DIGIT FOUR; fourcircle
16466 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
16467 % U+2464 CIRCLED DIGIT FIVE; fivecircle
16468 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
16469 % U+2465 CIRCLED DIGIT SIX; sixcircle
16470 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
16471 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
16472 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
16473 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
16474 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
16475 % U+2468 CIRCLED DIGIT NINE; ninecircle
16476 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
16477 % U+2469 CIRCLED NUMBER TEN; tencircle
16478 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
16479 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
16480 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
16481 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
16482 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
16483 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
16484 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
16485 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
16486 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
16487 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
16488 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
16489 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
16490 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
16491 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
16492 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
16493 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
16494 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
16495 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
16496 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
16497 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
16498 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
16499 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
16500 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
16501 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
16502 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7

16503 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 16504 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 16505 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 16506 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 16507 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 16508 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 16509 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 16510 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 16511 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 16512 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 16513 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 16514 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 16515 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 16516 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 16517 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 16518 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 16519 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 16520 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 16521 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 16522 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 16523 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 16524 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 16525 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 16526 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 16527 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 16528 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 16529 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 16530 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 16531 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 16532 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 16533 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 16534 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 16535 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 16536 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 16537 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 16538 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 16539 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 16540 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 16541 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 16542 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 16543 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 16544 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 16545 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 16546 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 16547 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 16548 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 16549 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 16550 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 16551 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 16552 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 16553 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 16554 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 16555 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 16556 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 16557 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 16558 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 16559 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle

16560 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 16561 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 16562 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 16563 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 16564 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 16565 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 16566 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 16567 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 16568 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 16569 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 16570 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 16571 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 16572 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 16573 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 16574 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 16575 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 16576 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 16577 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 16578 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 16579 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 16580 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 16581 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 16582 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 16583 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 16584 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 16585 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 16586 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 16587 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 16588 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 16589 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 16590 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 16591 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 16592 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 16593 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 16594 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 16595 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 16596 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 16597 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 16598 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 16599 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 16600 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 16601 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 16602 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 16603 % U+24EA CIRCLED DIGIT ZERO
 16604 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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

16605 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 16606 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 16607 % U+25EF LARGE CIRCLE; largecircle
 16608 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

16609 % U+266A EIGHTH NOTE; musicalnote
 16610 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 16611 % U+26AD MARRIAGE SYMBOL
 16612 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD

16613 % U+26AE DIVORCE SYMBOL
 16614 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

16615 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 16616 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 16617 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 16618 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

16619 % U+FB01 LATIN SMALL LIGATURE FI; fi
 16620 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 16621 % U+FB02 LATIN SMALL LIGATURE FL; fl
 16622 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

16623 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

16624 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 16625 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 16626 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 16627 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 16628 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 16629 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 16630 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 16631 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

16632 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 16633 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 16634 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 16635 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 16636 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 16637 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

16638 <*puvnenc>
 16639 \DeclareTextCommand{\abreve}{PU}{\81\003}
 16640 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
 16641 \DeclareTextCommand{\dj}{PU}{\81\021}
 16642 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
 16643 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
 16644 \DeclareTextCommand{\ohorn}{PU}{\81\241}
 16645 \DeclareTextCommand{\uhorn}{PU}{\81\260}
 16646 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
 16647 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
 16648 \DeclareTextCommand{\DJ}{PU}{\81\020}
 16649 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
 16650 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
 16651 \DeclareTextCommand{\OHORN}{PU}{\81\240}
 16652 \DeclareTextCommand{\UHORN}{PU}{\81\257}

16653 \DeclareTextCompositeCommand{'}{PU}{a}{\80\341}
16654 \DeclareTextCompositeCommand{d}{PU}{a}{\9036\241}
16655 \DeclareTextCompositeCommand{'}{PU}{a}{\80\340}
16656 \DeclareTextCompositeCommand{h}{PU}{a}{\9036\243}
16657 \DeclareTextCompositeCommand{~}{PU}{a}{\80\343}
16658 \DeclareTextCompositeCommand{'}{PU}{\abreve}{\9036\257}
16659 \DeclareTextCompositeCommand{d}{PU}{\abreve}{\9036\267}
16660 \DeclareTextCompositeCommand{'}{PU}{\abreve}{\9036\261}
16661 \DeclareTextCompositeCommand{h}{PU}{\abreve}{\9036\263}
16662 \DeclareTextCompositeCommand{~}{PU}{\abreve}{\9036\265}
16663 \DeclareTextCompositeCommand{'}{PU}{\acircumflex}{\9036\245}
16664 \DeclareTextCompositeCommand{d}{PU}{\acircumflex}{\9036\255}
16665 \DeclareTextCompositeCommand{'}{PU}{\acircumflex}{\9036\247}
16666 \DeclareTextCompositeCommand{h}{PU}{\acircumflex}{\9036\251}
16667 \DeclareTextCompositeCommand{~}{PU}{\acircumflex}{\9036\253}
16668 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}
16669 \DeclareTextCompositeCommand{d}{PU}{e}{\9036\271}
16670 \DeclareTextCompositeCommand{'}{PU}{e}{\80\350}
16671 \DeclareTextCompositeCommand{h}{PU}{e}{\9036\273}
16672 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}
16673 \DeclareTextCompositeCommand{'}{PU}{\ecircumflex}{\9036\277}
16674 \DeclareTextCompositeCommand{d}{PU}{\ecircumflex}{\9036\307}
16675 \DeclareTextCompositeCommand{'}{PU}{\ecircumflex}{\9036\301}
16676 \DeclareTextCompositeCommand{h}{PU}{\ecircumflex}{\9036\303}
16677 \DeclareTextCompositeCommand{~}{PU}{\ecircumflex}{\9036\305}
16678 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}
16679 \DeclareTextCompositeCommand{d}{PU}{i}{\9036\313}
16680 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}
16681 \DeclareTextCompositeCommand{h}{PU}{i}{\9036\311}
16682 \DeclareTextCompositeCommand{~}{PU}{i}{\81\051}
16683 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}
16684 \DeclareTextCompositeCommand{d}{PU}{o}{\9036\315}
16685 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}
16686 \DeclareTextCompositeCommand{h}{PU}{o}{\9036\317}
16687 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}
16688 \DeclareTextCompositeCommand{'}{PU}{\ocircumflex}{\9036\321}
16689 \DeclareTextCompositeCommand{d}{PU}{\ocircumflex}{\9036\331}
16690 \DeclareTextCompositeCommand{'}{PU}{\ocircumflex}{\9036\323}
16691 \DeclareTextCompositeCommand{h}{PU}{\ocircumflex}{\9036\325}
16692 \DeclareTextCompositeCommand{~}{PU}{\ocircumflex}{\9036\327}
16693 \DeclareTextCompositeCommand{'}{PU}{\ohorn}{\9036\333}
16694 \DeclareTextCompositeCommand{d}{PU}{\ohorn}{\9036\343}
16695 \DeclareTextCompositeCommand{'}{PU}{\ohorn}{\9036\335}
16696 \DeclareTextCompositeCommand{h}{PU}{\ohorn}{\9036\337}
16697 \DeclareTextCompositeCommand{~}{PU}{\ohorn}{\9036\341}
16698 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}
16699 \DeclareTextCompositeCommand{d}{PU}{u}{\9036\345}
16700 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}
16701 \DeclareTextCompositeCommand{h}{PU}{u}{\9036\347}
16702 \DeclareTextCompositeCommand{~}{PU}{u}{\81\151}
16703 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\351}
16704 \DeclareTextCompositeCommand{d}{PU}{\uhorn}{\9036\361}
16705 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\353}
16706 \DeclareTextCompositeCommand{h}{PU}{\uhorn}{\9036\355}
16707 \DeclareTextCompositeCommand{~}{PU}{\uhorn}{\9036\357}
16708 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}
16709 \DeclareTextCompositeCommand{d}{PU}{y}{\9036\365}

16710 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}
16711 \DeclareTextCompositeCommand{h}{PU}{y}{\9036\367}
16712 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}
16713 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}
16714 \DeclareTextCompositeCommand{d}{PU}{A}{\9036\240}
16715 \DeclareTextCompositeCommand{'}{PU}{A}{\80\300}
16716 \DeclareTextCompositeCommand{h}{PU}{A}{\9036\242}
16717 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}
16718 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\256}
16719 \DeclareTextCompositeCommand{d}{PU}{\ABREVE}{\9036\266}
16720 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\260}
16721 \DeclareTextCompositeCommand{h}{PU}{\ABREVE}{\9036\262}
16722 \DeclareTextCompositeCommand{~}{PU}{\ABREVE}{\9036\264}
16723 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\244}
16724 \DeclareTextCompositeCommand{d}{PU}{\ACIRCUMFLEX}{\9036\254}
16725 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\246}
16726 \DeclareTextCompositeCommand{h}{PU}{\ACIRCUMFLEX}{\9036\250}
16727 \DeclareTextCompositeCommand{~}{PU}{\ACIRCUMFLEX}{\9036\252}
16728 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}
16729 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}
16730 \DeclareTextCompositeCommand{'}{PU}{E}{\80\310}
16731 \DeclareTextCompositeCommand{h}{PU}{E}{\9036\272}
16732 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}
16733 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\276}
16734 \DeclareTextCompositeCommand{d}{PU}{\ECIRCUMFLEX}{\9036\306}
16735 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\300}
16736 \DeclareTextCompositeCommand{h}{PU}{\ECIRCUMFLEX}{\9036\302}
16737 \DeclareTextCompositeCommand{~}{PU}{\ECIRCUMFLEX}{\9036\304}
16738 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}
16739 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}
16740 \DeclareTextCompositeCommand{'}{PU}{I}{\80\314}
16741 \DeclareTextCompositeCommand{h}{PU}{I}{\9036\310}
16742 \DeclareTextCompositeCommand{~}{PU}{I}{\81\050}
16743 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}
16744 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}
16745 \DeclareTextCompositeCommand{'}{PU}{O}{\80\322}
16746 \DeclareTextCompositeCommand{h}{PU}{O}{\9036\316}
16747 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}
16748 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\320}
16749 \DeclareTextCompositeCommand{d}{PU}{\OCIRCUMFLEX}{\9036\330}
16750 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\322}
16751 \DeclareTextCompositeCommand{h}{PU}{\OCIRCUMFLEX}{\9036\324}
16752 \DeclareTextCompositeCommand{~}{PU}{\OCIRCUMFLEX}{\9036\326}
16753 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\332}
16754 \DeclareTextCompositeCommand{d}{PU}{\OHORN}{\9036\342}
16755 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\334}
16756 \DeclareTextCompositeCommand{h}{PU}{\OHORN}{\9036\336}
16757 \DeclareTextCompositeCommand{~}{PU}{\OHORN}{\9036\340}
16758 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}
16759 \DeclareTextCompositeCommand{d}{PU}{U}{\9036\344}
16760 \DeclareTextCompositeCommand{'}{PU}{U}{\80\331}
16761 \DeclareTextCompositeCommand{h}{PU}{U}{\9036\346}
16762 \DeclareTextCompositeCommand{~}{PU}{U}{\81\150}
16763 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\350}
16764 \DeclareTextCompositeCommand{d}{PU}{\UHORN}{\9036\360}
16765 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\352}
16766 \DeclareTextCompositeCommand{h}{PU}{\UHORN}{\9036\354}

```

16767 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
16768 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
16769 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
16770 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
16771 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
16772 \DeclareTextCompositeCommand{\-}{PU}{Y}{\9036\370}

16773 </puvnc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

16774 <*puarenc>

16775 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
16776 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
16777 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
16778 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
16779 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
16780 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
16781 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
16782 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
16783 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
16784 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
16785 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
16786 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
16787 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
16788 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
16789 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
16790 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
16791 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
16792 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN
16793 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
16794 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
16795 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD
16796 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
16797 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
16798 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
16799 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
16800 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
16801 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
16802 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
16803 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
16804 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
16805 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
16806 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
TER MEEM
16807 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON

```



```

16808 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
16809 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
16810 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
16811 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
16812 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
16813 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
16814 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
16815 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
16816 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
16817 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
16818 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
16819 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi
16820 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
16821 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
TER TCHEH
16822 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
16823 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
16824 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
16825 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

16826 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
16827 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
16828 \puarenc

```

51 End of file hyccheck.tex

```

16829 \check
16830 \typeout{}
16831 \begin{document}
16832 \end{document}
16833 \check

```

52 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

Symbols				
\!	195, 220, 2074	15492, 15494, 15496, 15498, 15500, 15502, 15504, 15506, 15561, 15563, 15565, 15567, 15625, 15628, 15630, 15655, 15674, 15820, 15839, 16188, 16190, 16200, 16202, 16216, 16218, 16248, 16250, 16653, 16658, 16663, 16668, 16673, 16678, 16683, 16688, 16693, 16698, 16703, 16708, 16713, 16718, 16723, 16728, 16733, 16738, 16743, 16748, 16753, 16758, 16763, 16768	\@@ListBox . 12439, 12463, 12920, 12953, 13259, <u>13302</u>	
\"	202, 227, 3172, 14011, 14371, 14383, 14395, 14518, 14604, 14618, 14626, 14641, 14653, 14669, 14683, 14694, 14695, 14709, 14721, 14727, 14778, 14806, 14825, 14846, 14973, 14987, 14995, 15009, 15021, 15037, 15051, 15062, 15063, 15077, 15089, 15095, 15342, 15557, 15559, 15569, 15621, 15623, 15651, 15664, 15816, 15829, 16062, 16064, 16078, 16080, 16082, 16084, 16086, 16088, 16098, 16100, 16102, 16104, 16110, 16112, 16114, 16116, 16122, 16124, 16130, 16132, 16138, 16140, 16180, 16182, 16252, 16254, 16264, 16266, 16282	\(190, 215, 336, 767, 770, 772, 2076, 14077, 14441 \) 191, 216, 337, 739, 745, 748, 2077, 14078, 14443 * 339 \+ 200, 225, 340 \- 201, 226 \. . 198, 223, 333, 1235, 3514, 3925, 14374, 14386, 14398, 14460, 14751, 14758, 14776, 14809, 14828, 14852, 14892, 14893, 15117, 15119, 15141, 15143, 15161, 15163, 15197, 15228, 15230, 15348, 15350, 15441, 15443, 15449, 15451, 16148, 16150, 16156, 16158, 16168, 16170, 16176, 16178, 16204, 16206, 16208, 16210, 16220, 16222, 16224, 16226, 16232, 16234, 16256, 16258, 16260, 16262, 16268, 16270, 16288	\@@Menu 12647, 12655 \@@PasswordField . 12596, 12602 \@@Radio . . 12424, 12445, 12645, 12669, 12905, 12926, 13244, <u>13265</u> \@@TextField 12598, 12613 \@@commahyperpage . 8082, 8083 \@@hyper@creadexternallink 4906, 4908 \@@hyperref 4819, 4820 \@@latextohtmlX 2991, 5054 \@@wrindex 8010, 8011 \@@writetorep 13852, 13858 \@Alph 6645, 6647 \@BIBLABEL . . 7447, 7453, 7459 \@BOOKMARK . . 13992, 13994 \@CITE 7524, 7532 \@CITEX 7526 \@CheckBox . 5817, 10268, 12537, 12566, 12700, 13037, <u>13404</u> \@ChoiceMenu 5814, 10271, 12377, 12569, 12635, 12857, <u>13196</u> \@Form 5512, 10258, 12163, 12558, 12579, 12778, <u>13119</u> \@Gauge 5823, 10262, 12347, 12560, 12584, 12721, <u>13116</u> \@Localurifalse 10211 \@Localuritrue 10208 \@M 1141, 2447, 4703, 7085 \@MM 7210 \@PackageError 277 \@PackageInfo 280 \@PackageInfoNoLine 281 \@PackageWarning 278 \@PackageWarningNoLine . . 279 \@PushButton 5820, 10274, 12470, 12572, 12681, 12962, <u>13318</u> \@Refstar 8385, 8392 \@Reset 5829, 10277, 12514, 12575, 12697, 13013, <u>13375</u> \@Roman 643 \@SCTR 8129, 8181 \@SetMaxRnhefLabel 7521 \@Submit 5826, 10280, 12497, 12576, 12694, 12991, <u>13352</u> \@TextField . . 5811, 10265, 12350, 12563, 12587, 12829, <u>13160</u> \@addchap 14328 \@addtoreset . . 7904, 7905, 7919, 8126	
\#	558, 2159, 2160, 4596, 4607, 4609, 4625, 4657, 4717, 8575, 8577, 9356, 9365, 9400, 10203, 11792, 11803, 11839, 12070, 12079, 12119, 13931	\ / 194, 219, 681, 682, 683, 750, 1859, 7975 \: 189, 214 \; 199, 224, 8270 \< 196, 221 \= 167, 173, 180, 183, 14376, 14388, 14400, 14771, 14813, 14832, 14851, 15097, 15099, 15133, 15135, 15182, 15184, 15185, 15254, 15256, 15314, 15316, 15453, 15455, 16094, 16096, 16118, 16120, 16172, 16174 \> 197, 222 \? 341 \@ 3163 \@@@ 2390 \@@@BOOKMARK . 13992, 13995, 14053, 14121, 14128		
\\$	184, 209, 335, 559, 4598, 4716			
\%	560, 2074, 2134, 2135, 4595, 4604, 4606, 4658, 8577			
\&	185, 210, 561, 4599, 4610, 4612, 11849			
\'	203, 228, 3112, 3126, 3167, 3169, 3170, 3171, 3172, 3177, 3178, 3180, 3185, 3191, 3195, 3196, 3199, 3242, 3243, 3248, 3249, 3250, 3251, 3252, 3253, 3254, 3255, 3257, 3261, 3274, 14009, 14368, 14380, 14392, 14598, 14614, 14622, 14635, 14649, 14655, 14663, 14679, 14688, 14689, 14703, 14717, 14723, 14746, 14748, 14749, 14750, 14753, 14755, 14756, 14757, 14765, 14803, 14822, 14843, 14967, 14983, 14991, 15003, 15017, 15023, 15031, 15047, 15056, 15057, 15071, 15085, 15091, 15109, 15111, 15216, 15218, 15236, 15238, 15270, 15272, 15282, 15284, 15344, 15346, 15396, 15398, 15404, 15406, 15408, 15410,			

<code>\@afterheading</code>	14345	<code>\@currDisplay</code> 5600, 12389, 12452, 12664, 12678, 12869, 12933, 13208, 13275	<code>\@firstofone</code>	589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 632, 823, 977, 988, 1221, 1225, 1229, 1567, 3903, 4422, 5478, 5484, 5716, 6505, 6638, 6650, 6717, 7314, 7395, 7536, 7559, 7741, 7965, 9218, 12751, 13488, 13505, 13523					
<code>\@alph</code>	6641, 6643	<code>\@currValue</code>	5602, 5604, 12450, 12457, 12664, 12675, 12931, 12940, 13273, 13290, 13729	<code>\@firstoftwo</code>	652, 933, 1103, 1775, 6007, 14294				
<code>\@anchorcolor</code>	3493, 9325, 9420, 10325, 11760, 12040	<code>\@currentHlabel</code>	6691	<code>\@fnsymbol</code>	6639				
<code>\@arabic</code>	1111, 1116, 1120, 6640	<code>\@currentHref</code>	2392, 5919, 6590, 6671, 6673, 6682, 6684, 6691, 6772, 6774, 6784, 6835, 6846, 6848, 6886, 6897, 6901, 6908, 6932, 7022, 7053, 7078, 7142, 7152, 7154, 7155, 7195, 7223, 7321, 7347, 7351, 7366, 7368, 7596, 7780, 7803, 7816, 7823, 7874, 7898, 7900, 13842, 14233, 14246, 14257, 14287, 14304, 14339	<code>\@footnotemark</code> 7095, 7148, 7232, 7244, 7246, 7258, 7259, 7289, 7291	<code>\@footnotetext</code>	7094, 7101, 7130, 7245, 7247, 7261, 7262, 7282			
<code>\@backslashchar</code>	863, 866, 869, 1365, 2036, 2040, 2043, 2181, 2198, 2204, 2208, 2216, 4620, 8590, 8600	<code>\@currentlabel</code>	6814, 7213, 7589, 7596, 7879, 7886, 8135, 8187	<code>\@for</code> 3533, 5120, 7533, 7556, 12386, 12448, 12653, 12660, 12670, 12866, 12929, 13205, 13271	<code>\@fourthoffive</code>	4534, 4852, 8449, 8456			
<code>\@baseurl</code>	3500, 3502, 4964, 9042, 9045, 9310, 9312, 9598, 9600, 10116, 10126, 10176, 10178, 10713, 10715, 11093, 11107, 11745, 11747, 11946, 11960, 12026, 12028	<code>\@currentlabelname</code>	2382, 7143, 7196, 7224, 7326	<code>\@gobble</code>	49, 56, 117, 582, 583, 584, 585, 622, 623, 624, 625, 655, 656, 657, 666, 668, 827, 940, 975, 986, 1127, 1131, 1134, 1504, 1565, 1584, 1597, 1601, 1664, 1727, 1728, 1735, 1740, 1754, 1759, 2362, 2419, 2678, 2690, 3891, 4093, 4147, 4586, 5463, 5706, 5972, 5976, 5993, 5995, 6011, 6012, 6015, 6016, 6018, 6484, 6499, 6503, 6978, 7004, 7037, 7303, 7392, 7779, 8514, 9220, 10593, 10596, 12779, 13120, 13899, 13900, 13901, 13902	<code>\@gobblefour</code> 588, 691, 1261, 1262, 1263, 3710, 8250	<code>\@gobbleopt</code>	6018, 6020	
<code>\@begintheorem</code> 6989, 6992, 7017, 7024, 7048, 7055		<code>\@curropt</code>	12386, 12387, 12448, 12449, 12653, 12660, 12661, 12663, 12670, 12671, 12673, 12866, 12867, 12929, 12930, 13205, 13206, 13271, 13272	<code>\@gobbletwo</code>	586, 659, 684, 692, 693, 840, 1260, 1682, 1759, 1763, 2563, 3708, 3709, 4097, 5409, 5997, 6006, 6014, 6018, 8437, 14243	<code>\@harvarditem</code>	7606, 7608		
<code>\@bibitem</code>	7474, 7505	<code>\@dblarg</code>	2509, 7316, 7397	<code>\@hyper@C@anchor</code>	5014, 5015	<code>\@hyper@itemfalse</code>	6535, 6551, 6565		
<code>\@biblabel</code>	7447, 7494	<code>\@definecounter</code>	7859, 7860	<code>\@hyper@itemtrue</code>	6536	<code>\@hyper@launch</code> 4934, 4943, 8934, 9952, 10486, 11480	<code>\@hyper@linkfile</code> 4915, 4918, 4922, 4954	<code>\@hyper@readexternallink</code>	4909, 4913
<code>\@bookmarkopenstatus</code>	4420, 4437, 13913	<code>\@ehc</code>	2738, 2849, 2874, 2907, 2945, 2952, 2963, 2969, 4145, 4765, 4928, 5224, 5348, 5544, 5577, 5753, 5802, 12479, 12525, 12972, 13024, 13328, 13386	<code>\@hyperdef</code>	4827, 4828	<code>\@hyperpage</code>	8074, 8075		
<code>\@bookmarksopenlevel</code> 3454, 3456, 4423		<code>\@ehead</code> 63, 296, 302, 317, 7302, 7391							
<code>\@bsphack</code>	2377, 4857, 7591	<code>\@endForm</code>	5513, 10261, 12346, 12559, 12583, 12828, 13146						
<code>\@capstartfalse</code>	7341	<code>\@endpary</code>	6987, 7013, 7044						
<code>\@caption</code> 7306, 7318, 7361, 7397, 7399		<code>\@eqnqr</code>	6916						
<code>\@capytype</code> 2386, 7301, 7305, 7309, 7316, 7323, 7365, 7390, 7394, 7397		<code>\@eqnstarfalse</code>	6892, 6919						
<code>\@car</code> 1647, 1663, 1681, 1701, 3433, 5130, 8994, 9005		<code>\@eqnstartrue</code>	6916						
<code>\@cdr</code>	8995, 9006	<code>\@eqnswtrue</code>	6862, 6871						
<code>\@chapter</code>	14252, 14253	<code>\@esphack</code>	2398, 4868, 7601, 8022						
<code>\@cite</code>	7524, 7555, 7652, 7658	<code>\@extra@b@citeb</code> 7432, 7435, 7452, 7457, 7477, 7525, 7547, 7563, 7570							
<code>\@cite@opt</code>	7653, 7659, 7663, 7673	<code>\@extra@binfo</code>	7431, 7434, 7438						
<code>\@citea</code>	7527, 7534, 7535, 7554, 7557, 7558	<code>\@fifthoffive</code> 4105, 4535, 4851, 8336, 8454							
<code>\@citeb</code>	7533, 7536, 7538, 7540, 7544, 7547, 7556, 7559, 7561, 7563, 7567, 7570	<code>\@filebordercolor</code>	3557, 4014, 8909, 8911, 9929, 9931, 10411, 10413, 11462						
<code>\@citebordercolor</code>	3556, 4016	<code>\@filecolor</code> 3483, 3495, 8930, 9539, 9556, 9947, 10417							
<code>\@citecolor</code>	3494	<code>\@firstoffive</code> 4531, 4540, 8375, 8459							
<code>\@citedata@opt</code>	7654, 7660, 7662								
<code>\@citedatax</code>	7669, 7674								
<code>\@citedatax@opt</code>	7666, 7672								
<code>\@citeseppen</code>	7651, 7657								
<code>\@citex</code>	7553								
<code>\@clubpenalty</code>	7087								
<code>\@commahyperpage</code>	8077, 8082								
<code>\@ctrerr</code>	6619, 6628								

\@hyperref	4808, 4819	11813, 11814, 11822, 11823,	9006, 10558, 10560, 13495,		
\@ifclasslater	14351, 14356	11824, 12088, 12089, 12102,	13508, 13514, 13941, 13944,		
\@ifclassloaded	2369, 4562, 6702,	12103, 12104	13947, 13956, 13959, 13968		
6739, 7516, 8110, 8114, 9223,		\@listctr	7483, 7509		
14350, 14355		\@m	1124, 7535, 7558, 10640		
\@ifnextchar	12, 88, 103, 123,	\@mainaux 6035, 6036, 6467, 6475,	\@nbreakfalse	6081, 7085	
685, 4710, 4808, 4827, 4876,		12747, 12771	\@nocnterr	7918, 7932	
5512, 5811, 5814, 5817, 5820,		\@makecaption	7342, 7344, 7410	\@nocounterr	7917, 7931
5823, 5826, 5829, 6018, 6090,		\@makefnmark	7157, 7294	\@noparitemfalse	7064
6099, 7248, 7266, 7606, 7664,		\@makefntext	7214	\@number	6638, 6717, 7741
11118, 11391, 11405, 13992,		\@makeother	166, 167,	\@nx	7921, 7935, 7938, 7940
13995		179, 180, 182, 183, 188, 189,		\@onelevel@sanitize	2556, 2560,
\@ifpackagelater	233, 252, 997,	190, 191, 192, 193, 194, 195,		2772, 3432, 4122, 4152, 4173,	
2400, 6693, 7929		196, 197, 198, 199, 200, 201,		4676, 4976, 4979, 4992, 5006,	
\@ifpackageloaded	511, 893, 996,	202, 203, 4610, 8562, 14081,		5220, 5456, 5540, 6328, 6330,	
2372, 2790, 3410, 3414, 4067,		14084, 14111, 14114		6678, 7809, 8361, 9719, 13938	
4250, 6574, 6692, 6705, 6767,		\@makeschapterhead 14342, 14344		\@oparg	6989, 6992, 7017, 7024,
6800, 6804, 6824, 6858, 6972,		\@mem@titleref	4569	7048, 7055	
7091, 7162, 7202, 7362, 7576,		\@mem@titleref@nolink	4569	\@outlinefile	13911, 14000, 14095,
7649, 7871, 7928, 7970, 7971,		\@menubordercolor		14097, 14099, 14177, 14179,	
7972, 8119, 8384, 8527, 8531,		3559, 4013, 9278, 9280,		14181	
12018		10027, 10029, 10523, 10525		\@pagerefstar	4560, 8377, 8408
\@ifpackagewith	3292, 4068, 7894	\@menucolor	3497, 9293, 10033,	\@pagesetref	8327
\@ifstar 66, 4557, 4560, 4569, 4573,		10529		\@parboxrestore	7212, 7334, 7405
5954, 5958, 6024, 6028, 8392,		\@minipagefalse	7062	\@parcount	14059, 14067
8418, 8437		\@mkboth 659, 8232, 14243, 14331,		\@part	14270, 14277
\@ifundefined	34,	14333		\@pdfauthor 3726, 4019, 9102, 9580,	
375, 912, 920, 936, 939, 2540,		\@mpfn	7098, 7267, 7279	10063, 10754, 11019, 11877	
2652, 2720, 2804, 3310, 3346,		\@mpfootnotetext 7101, 7114, 7115		\@pdfborder	3375,
3354, 3361, 3383, 3431, 4040,		\@mymcount	14057, 14067	3571, 3572, 3573, 3580, 3584,	
5219, 5539, 6437, 6578, 6583,		\@namedef 1241, 2814, 2815, 2816,		3607, 3609, 4503, 8788, 9737,	
6806, 6827, 6828, 6881, 6903,		2817, 2818, 2819, 2820, 2821,		10313, 10885, 10980, 11383,	
6927, 6964, 7307, 7325, 7441,		3301, 3313, 5230, 5231, 5232,		11395, 11410, 11431, 11459,	
7524, 7540, 7563, 7868, 7909,		5233, 5555, 5556, 6703, 6915,		11490, 11519, 11606, 11694,	
7917, 7918, 7931, 7932, 7939,		6918, 7581, 7582, 7583, 7584		11854	
8633, 10152, 10781, 10782,		\@namerefstar	4573, 8380	\@pdfborderstyle	3376, 3588,
11575, 12779, 13120, 13497,		\@nameuse	2386, 2811, 5236, 5547	3589, 3590, 3599, 3603, 3611,	
13909		\@ne	1110, 2757,	3613, 4504, 5668, 8789, 9738,	
\@indexfile 8014, 8029, 8037, 8041,		2895, 4408, 4735, 9862, 9867,		10314, 10886, 10981, 11384,	
8046		10692, 11600, 13155		11396, 11411, 11432, 11460,	
\@inlabelfalse	7066	\@newctr	7864, 7865	11491, 11520, 11607, 11695,	
\@inmathwarn	552, 553	\@newl@bel	6084, 7434	11855	
\@inpencc@undefined@	2236	\@newlistfalse	7063	\@pdfcreation	

12872, 12909, 12910, 12911,
 12915, 12916, 12917, 12918,
 13204, 13209, 13211, 13248,
 13249, 13250, 13254, 13255,
 13256, 13257
 \@tempdimb 12389, 12390, 12869,
 12870, 13208, 13209
 \@tempswafalse 7668
 \@tempswatrue 7638, 7641, 7644,
 7665
 \@temptokena . 3279, 3284, 3287,
 3289
 \@tfor 6945
 \@the@H@page . 7708, 7744, 7746,
 7747
 \@thefnmark . . 7099, 7110, 7175,
 7213, 7230, 7237, 7268, 7280,
 7287
 \@thirdoffive 4533, 8381
 \@thm 6996, 6997, 7030
 \@topnewpage 14342
 \@topsep 6986, 7012, 7043
 \@topsepadd . . . 6987, 7013, 7044
 \@typeset@protect 14212
 \@undefined . . 388, 391, 694, 3283,
 6008, 6043, 6056, 6068, 6290,
 6308, 6353, 7301, 7364, 7376,
 7381, 7390, 8369, 8761, 8974,
 8983, 10285, 10680, 10694
 \@undottedtocline 8296
 \@unprocessedoptions 4383
 \@urlbordercolor 3561,
 4012, 8871, 8873, 9994, 9996,
 10437, 10439, 11433
 \@urlcolor 3496,
 8890, 9379, 9392, 9499, 9516,
 10008, 10443, 11818, 11831,
 12097, 12110
 \@urltype 9345, 9350, 10181, 10207,
 10342, 10356, 11780, 11785,
 12059, 12064
 \@vpageref 8402
 \@whilenum 1277
 \@wrindex 7978, 7979, 8010
 \@writefile 7594
 \@x@sf 7150, 7159, 7293, 7295
 \@xfootnote 7266
 \@xfootnotemark 7107, 7284
 \@xfootnotenext 7096, 7277
 \@xp 7885, 7920, 7921, 7934, 7935,
 7937, 7938
 \[. . . 192, 217, 334, 3577, 3595, 4777
 \{ 342, 364, 555, 2076, 10813, 13933
 \} 343, 369, 556, 2077, 10813, 13934
 \] 193, 218
 \^ 186, 211, 332, 2174,
 2175, 3190, 4593, 4594, 4602,

14369, 14381, 14393, 14600,
 14616, 14624, 14637, 14651,
 14665, 14681, 14691, 14692,
 14705, 14719, 14767, 14804,
 14823, 14844, 14969, 14985,
 14993, 15005, 15019, 15033,
 15049, 15059, 15060, 15073,
 15087, 15113, 15115, 15153,
 15155, 15169, 15171, 15205,
 15207, 15208, 15286, 15288,
 15334, 15336, 15338, 15340,
 16272, 16274
 _ . 187, 212, 563, 4597, 4614, 4615
 \' 166, 172, 179, 182,
 3126, 3260, 3263, 3265, 3273,
 13932, 14367, 14379, 14391,
 14596, 14612, 14620, 14633,
 14647, 14661, 14677, 14685,
 14686, 14701, 14715, 14763,
 14802, 14821, 14842, 14965,
 14981, 14989, 15001, 15015,
 15029, 15045, 15053, 15054,
 15069, 15083, 15400, 15402,
 15648, 15676, 15813, 15841,
 16244, 16246, 16294, 16296,
 16655, 16660, 16665, 16670,
 16675, 16680, 16685, 16690,
 16695, 16700, 16705, 16710,
 16715, 16720, 16725, 16730,
 16735, 16740, 16745, 16750,
 16755, 16760, 16765, 16770
 \l 188, 213, 338, 1982, 2075, 2116,
 3072, 4055, 7974, 8561, 8571
 \~ 562, 1279, 2224, 3184,
 3192, 3193, 3194, 4166, 4618,
 14370, 14382, 14394, 14602,
 14631, 14639, 14667, 14699,
 14707, 14769, 14805, 14824,
 14845, 14971, 14999, 15007,
 15035, 15067, 15075, 15177,
 15179, 15180, 15310, 15312,
 16240, 16242, 16290, 16292,
 16298, 16300, 16657, 16662,
 16667, 16672, 16677, 16682,
 16687, 16692, 16697, 16702,
 16707, 16712, 16717, 16722,
 16727, 16732, 16737, 16742,
 16747, 16752, 16757, 16762,
 16767, 16772

Numbers

\3 539, 1323, 1324,
 1325, 1326, 1327, 1328, 1329,
 1330, 1439, 1440, 1441, 1442,
 1443, 1444, 1445, 1446, 2338,
 14076, 14596, 14598, 14600,
 14602, 14604, 14606, 14608,
 14610, 14612, 14614, 14616,

14618, 14620, 14622, 14624,
 14626, 14628, 14629, 14631,
 14633, 14635, 14637, 14639,
 14641, 14643, 14645, 14647,
 14649, 14651, 14653, 14655,
 14657, 14659, 14661, 14663,
 14665, 14667, 14669, 14671,
 14673, 14675, 14677, 14679,
 14681, 14683, 14685, 14686,
 14688, 14689, 14691, 14692,
 14694, 14695, 14697, 14699,
 14701, 14703, 14705, 14707,
 14709, 14711, 14713, 14715,
 14717, 14719, 14721, 14723,
 14725, 14727, 14728, 14801,
 14965, 14967, 14969, 14971,
 14973, 14975, 14977, 14979,
 14981, 14983, 14985, 14987,
 14989, 14991, 14993, 14995,
 14997, 14999, 15001, 15003,
 15005, 15007, 15009, 15011,
 15013, 15015, 15017, 15019,
 15021, 15023, 15025, 15027,
 15029, 15031, 15033, 15035,
 15037, 15039, 15041, 15043,
 15045, 15047, 15049, 15051,
 15053, 15054, 15056, 15057,
 15059, 15060, 15062, 15063,
 15065, 15067, 15069, 15071,
 15073, 15075, 15077, 15079,
 15081, 15083, 15085, 15087,
 15089, 15091, 15093, 15095,
 15360, 15362, 15364, 15366,
 15367, 15369, 15371, 15373,
 15375, 15377, 15379, 15381,
 15383, 15385, 15387, 15389,
 15391, 15393, 15394, 15396,
 15398, 15400, 15402, 15404,
 15406, 15408, 15410, 15459,
 15461, 15463, 15465, 15467,
 15469, 15471, 15474, 15476,
 15601, 15603, 15605, 15607,
 15609, 15611, 15613, 15615,
 15617, 15619, 15621, 15623,
 15625, 15627, 15628, 15630,
 15632, 15634, 15636, 15638,
 15640, 15642, 15644, 15646,
 16032, 16034, 16036, 16038,
 16040, 16042, 16044, 16046,
 16048, 16050, 16052, 16054,
 16056, 16058, 16060, 16062,
 16064, 16066, 16068, 16070,
 16072, 16074, 16076, 16078,
 16080, 16082, 16084, 16086,
 16088, 16090, 16092, 16094,
 16096, 16098, 16100, 16102,
 16104, 16106, 16108, 16110,

16112, 16114, 16116, 16118,
16120, 16122, 16124, 16126,
16128, 16130, 16132, 16134,
16136, 16138, 16140, 16142,
16144, 16294, 16296, 16298,
16300, 16520, 16522, 16524,
16526, 16528, 16530, 16532,
16534, 16536, 16538, 16540,
16542, 16544, 16546, 16548,
16550, 16552, 16554, 16556,
16558, 16560, 16562, 16564,
16566, 16568, 16570, 16572,
16574, 16576, 16578, 16580,
16582, 16584, 16586, 16588,
16590, 16592, 16594, 16596,
16598, 16600, 16602, 16604,
16606, 16608, 16616, 16618,
16640, 16642, 16643, 16647,
16649, 16650, 16653, 16655,
16657, 16668, 16670, 16674,
16675, 16676, 16677, 16678,
16679, 16680, 16681, 16683,
16684, 16685, 16686, 16687,
16688, 16689, 16690, 16691,
16692, 16693, 16694, 16695,
16696, 16697, 16698, 16699,
16700, 16701, 16703, 16704,
16705, 16706, 16707, 16708,
16709, 16710, 16711, 16712,
16713, 16715, 16717, 16728,
16730, 16734, 16735, 16736,
16737, 16738, 16739, 16740,
16741, 16743, 16744, 16745,
16746, 16747, 16748, 16749,
16750, 16751, 16752, 16753,
16754, 16755, 16756, 16757,
16758, 16759, 16760, 16761,
16763, 16764, 16765, 16766,
16767, 16768, 16769, 16770,
16771, 16772, 16825, 16827

\9 542, 1343, 1346, 1377,
2266, 2281, 2290, 2318, 2338,
14801, 16146, 16148, 16150,
16152, 16154, 16156, 16158,
16160, 16162, 16164, 16166,
16168, 16170, 16172, 16174,
16176, 16178, 16180, 16182,
16184, 16186, 16188, 16190,
16192, 16194, 16196, 16198,
16200, 16202, 16204, 16206,
16208, 16210, 16212, 16214,
16216, 16218, 16220, 16222,
16224, 16226, 16228, 16230,
16232, 16234, 16236, 16238,
16240, 16242, 16244, 16246,
16248, 16250, 16252, 16254,
16256, 16258, 16260, 16262,

16264, 16266, 16268, 16270,
16272, 16274, 16276, 16278,
16280, 16282, 16284, 16286,
16288, 16290, 16292, 16294,
16296, 16298, 16300, 16302,
16304, 16306, 16308, 16310,
16312, 16314, 16316, 16318,
16320, 16322, 16324, 16326,
16328, 16330, 16332, 16334,
16336, 16338, 16340, 16342,
16344, 16346, 16348, 16350,
16352, 16354, 16356, 16358,
16360, 16362, 16364, 16366,
16368, 16370, 16372, 16374,
16376, 16378, 16380, 16382,
16384, 16386, 16388, 16390,
16392, 16394, 16396, 16398,
16400, 16402, 16404, 16406,
16408, 16410, 16412, 16414,
16416, 16418, 16420, 16422,
16424, 16426, 16428, 16430,
16432, 16434, 16436, 16438,
16440, 16442, 16444, 16446,
16448, 16450, 16452, 16454,
16456, 16458, 16460, 16462,
16464, 16466, 16468, 16470,
16472, 16474, 16476, 16478,
16480, 16482, 16484, 16486,
16488, 16490, 16492, 16494,
16496, 16498, 16500, 16502,
16504, 16506, 16508, 16510,
16512, 16514, 16516, 16518,
16520, 16522, 16524, 16526,
16528, 16530, 16532, 16534,
16536, 16538, 16540, 16542,
16544, 16546, 16548, 16550,
16552, 16554, 16556, 16558,
16560, 16562, 16564, 16566,
16568, 16570, 16572, 16574,
16576, 16578, 16580, 16582,
16584, 16586, 16588, 16590,
16592, 16594, 16596, 16598,
16600, 16602, 16604, 16606,
16608, 16610, 16612, 16614,
16616, 16618, 16620, 16622,
16654, 16656, 16658, 16659,
16660, 16661, 16662, 16663,
16664, 16665, 16666, 16667,
16669, 16671, 16672, 16673,
16674, 16675, 16676, 16677,
16679, 16681, 16684, 16686,
16688, 16689, 16690, 16691,
16692, 16693, 16694, 16695,
16696, 16697, 16699, 16701,
16703, 16704, 16705, 16706,
16707, 16709, 16710, 16711,
16712, 16714, 16716, 16718,

16719, 16720, 16721, 16722,
16723, 16724, 16725, 16726,
16727, 16729, 16731, 16732,
16733, 16734, 16735, 16736,
16737, 16739, 16741, 16744,
16746, 16748, 16749, 16750,
16751, 16752, 16753, 16754,
16755, 16756, 16757, 16759,
16761, 16763, 16764, 16765,
16766, 16767, 16769, 16770,
16771, 16772, 16826

_ 345, 673,
3207, 3210, 3925, 7535, 7558,
14391, 14392, 14393, 14394,
14395, 14396, 14397, 14398,
14399, 14400, 14401, 14402,
14821, 14822, 14823, 14824,
14825, 14826, 14827, 14828,
14829, 14830, 14831, 14832,
14833, 14834, 14835, 14836,
14837, 14838, 14839

A
\ABREVE . . 16646, 16718, 16719,
16720, 16721, 16722
\abreve 16639, 16658, 16659, 16660,
16661, 16662
\AccFancyVerbLineautorefname .
. 3234
\Accfootnoteautorefname . . 3214
\Acctheoremautorefname . . 3238
\ACIRCUMFLEX . 16647, 16723,
16724, 16725, 16726, 16727
\acircumflex . . 3265, 16640, 16663,
16664, 16665, 16666, 16667
\Acrobatmenu . 2421, 4102, 6005,
9269, 10013, 10516, 11377
\active 1257, 1264,
4594, 4595, 4596, 4597, 4598,
4599, 4602, 4604, 4607, 4615,
14080, 14110
\add@accent 554
\addcontentsline 7330, 7401, 7777,
7782, 7853, 14347
\addtocontents 7822, 7854, 8127,
8179, 14335, 14336
\addtocounter . 6714, 6737, 6746,
6757, 6761, 6966, 9871
\addvspace 14335, 14336
\adl@LT@array 6828
\advance 478, 479, 1278,
4743, 5080, 5408, 5454, 5852,
5853, 5856, 5857, 6200, 6208,
6245, 7680, 7690, 7693, 7707,
9019, 9384, 9468, 9506, 9546,
10676, 11823, 12103, 12392,

12435, 12436, 12872, 12916, 12917, 13155, 13211, 13255, 13256, 13865, 13867, 13868, 13874, 13883, 13984, 14200	\back@section . . . 3018, 3024, 3030, 3036	\c@secnumdepth . . . 14260, 14278, 14293
\AE 14608, 14977, 15404	\back@slide 3020, 3029	\c@slide 7683
\ae 14673, 15041, 15406	\backcite 7595	\c@slidesection . . . 8128, 8256, 8257
\afterassignment 1871, 1877, 1883	\backref 7626, 12131	\c@slidesubsection 8180
\AfterBeginDocument . . . 375, 389	\baselineskip . . . 2424, 5865, 5866, 5867, 5868, 5869, 5870, 9439, 10838, 10870, 11555	\c@tocdepth 3424, 3429
\aftergroup 7217	\bbl@cite@choice 7442	\calc@bm@number . . . 14122, 14198
\alef 16781	\BeforeTeXIVht 2856	\calculate@pdfview . . . 3889, 3892
\alefhamza 16777	\begin 626, 12152, 16831	\capitalacute 14843
\aleflowerhamza 16779	\belowpdfbookmark 13980	\capitalbreve 14850
\alefmadda 16776	\bfseries 604, 7541, 7564, 8310, 8330, 8347, 8464	\capitalcaron 14849
\alefmaqsura 16810	\bgroup 682, 4710, 7204, 7216, 8735, 9835, 10253, 10859, 12591, 12683, 12704	\capitalcedilla 14840
\Alph 6294, 6607, 6608	\bibcite . . . 7433, 7439, 7443, 7468, 7483, 7499, 7509	\capitalcircumflex 14844
\alph 6295, 6937, 6968	\bitsetGetDec . . . 5132, 5265, 5283, 5297, 5310, 5326, 5358, 5383	\capitaldieresis 14846
\AMSautorefname 8536	\bitsetGetHex 5133	\capitaldotaccent 14852
\anchor@spot . . . 5019, 5032, 5039, 5045, 5047, 8828, 9325, 9420, 10253, 10325, 10819, 11165, 11168, 11760, 12040	\bitsetGetSetBitList 5121	\capitalgrave 14842
\appendix 6604, 6605	\bitsetIsEmpty 5262, 5280, 5294, 5307, 5323, 5355, 5380	\capitalhungarumlaut 14847
\appendixautorefname 3082, 3100, 3118, 3136, 3154, 3172, 3190, 3222, 3223, 3248, 3266, 8546	\bitsetReset 5235, 5269, 5288, 5302, 5315, 5331, 5363	\capitalmacron 14851
\arabic 6291, 6510, 6513, 6516, 6517, 6518, 6520, 6521, 6522, 6523, 6525, 6526, 6527, 6528, 6529, 6530, 6533, 6543, 6544, 6584, 6721, 7862, 7868, 7916, 7930, 8115, 8120, 8122	\bitsetSetValue 5101, 5111	\capitalnewtie 14854
\AtBeginDocument . . . 376, 6041, 6818, 12132	\BOOKMARK 13912, 13991	\capitalonek 14841
\AtBeginShipout 6153, 9304, 9817	\booknumberline . . . 13895, 13900	\capitalring 14848
\AtBeginShipoutBox . . 6157, 6160, 9299, 9300, 9818, 9819	\box 5859, 6160, 8749, 9849, 11212, 11215	\capitaltie 14853
\AtBeginShipoutFirst 6164, 10149, 11572, 11687	\bullet 8262, 8270, 8280, 8288	\capitaltilde 14845
\AtEndDocument 6055		\caption . . . 7300, 7302, 7389, 7391
\AtEndOfPackage 386	C	\catcode . . . 172, 173, 184, 185, 186, 187, 206, 820, 821, 957, 1257, 1264, 1982, 1983, 2116, 2117, 2173, 2174, 2175, 4453, 4455, 4593, 4594, 4595, 4596, 4597, 4598, 4599, 4602, 4604, 4607, 4615, 4625, 4716, 4717, 8561, 10900, 10901, 14009, 14011, 14080, 14083, 14110, 14113
\AtVeryEndDocument 6393, 12788	\C 14787, 15892, 15894	\cf@encoding 1582
\author 6089, 6099	\c 895, 899, 905, 3184, 3192, 3193, 3194, 6112, 6119, 14375, 14387, 14399, 14610, 14675, 14795, 14810, 14829, 14840, 14979, 15043, 15165, 15167, 15210, 15212, 15220, 15222, 15240, 15242, 15274, 15276, 15290, 15292, 15298, 15300, 15445, 15447, 15947, 15950, 16164, 16166, 16184, 16186	\chapterautorefname . . 3083, 3101, 3119, 3137, 3155, 3173, 3191, 3220, 3249, 3267, 8547
\autopageref 4237, 8417	\c@footnote 7109, 7166, 7174, 7286	\chapternumberline 13897, 13902
\autoref 663, 4236, 8436, 12127	\c@Hy@tempcnt 4728, 4729, 4735, 4743	\char 12818, 14013, 14050
\ayn 16799	\c@note 7683	\chardef 289, 322, 2642, 2643, 2644, 2645, 2895, 2897, 4378, 4408, 11160, 11163, 11169
B	\c@overlay 7683	\check@bm@number 14133, 14141, 14191, 14199
\b 894, 898, 904, 14377, 14389, 14401, 14793, 14816, 14835, 16152, 16154, 16160, 16162, 16192, 16194, 16196, 16198, 16212, 16214, 16228, 16230, 16236, 16238, 16276, 16278, 16280	\c@page . . . 6200, 6208, 6225, 6245, 6246, 6250, 6262, 6264, 6269, 6276, 6278, 6280, 6309, 7680, 7684, 7686, 7690, 7693, 7694, 7707, 7737	\CheckBox 5816
\baa 16782		\CheckCommand 7163
\back@none 3017, 3027, 3040		\checkcommand . . . 42, 6756, 7277, 7284, 7291, 7389, 7399, 7493, 7505, 7853, 7856, 7916, 8344
\back@page 3019, 3032		\checklatex . . . 4, 7276, 7388, 7492, 7852, 8343

\CJK@char	1260	\curu	15844	\cyrfit	15886
\CJK@charx	1261	\cyr ..	642, 3202, 3204, 3207, 3210, 3213, 3214, 3215, 3216, 3217, 3218, 3219, 3220, 3221, 3222, 3224, 3226, 3227, 3228, 3229, 3230, 3231, 3232, 3233, 3234, 3235, 3236, 3237, 3238, 3239	\CYRG	15655, 15689
\CJK@CJK	1249	\CYRA	15683, 16058, 16062	\cyr	3220, 15754, 15820
\CJK@eight	1460, 1463, 1577	\cyra	3204, 3211, 3213, 3218, 3221, 3226, 3227, 3233, 3237, 15748, 16060, 16064	\CYRGDSC	16134
\CJK@five	1460, 1462, 1577	\CYRABHCH	16022, 16027	\cyr	16136
\CJK@four	1459, 1462, 1576	\cyrabhch	16024, 16030	\CYRGHCRS	15934
\CJK@hundred	1526	\CYRABHCHDSC	16026	\cyrghcrs	15936
\CJK@hundredmillion	1489	\cyrabhchdsc	16029	\CYRGHK	15938
\CJK@ignorespaces	1259	\CYRABHDZE	16090	\cyrghk	15940
\CJK@kern	1247	\cyrabhdze	16092	\CYRGUP	15930
\CJK@minus	1451	\CYRABHHA	15980	\cyr	15932
\CJK@nine	1460, 1464, 1577	\cyrabhha	15982	\CYRH	15726
\CJK@null	1553	\CYRAE	16066	\cyrh	15791
\CJK@one	1459, 1461, 1576	\cyrae	16068	\CYRHDSC	16002
\CJK@punctchar	1262	\CYRB	15685	\cyrhdsc	16004
\CJK@punctcharx	1263	\cyrb	3218, 15750	\CYRHHK	16142
\CJK@seven	1460, 1463, 1577	\CYRBYUS	15868	\cyrhkh	16144
\CJK@six	1460, 1463, 1577	\cyrbyus	15870	\CYRHRDSN	15736
\CJK@ten	1461, 1462, 1463, 1464, 1541	\CYRC	15728	\cyrhrdsn	15801
\CJK@tenthousand	1474, 1495	\cyr	15793	\CYRI	15676, 15699, 15702, 16094, 16098
\CJK@thousand	1511	\CYRCH	15730, 16130	\cyr	3204, 3207, 3211, 3217, 3222, 3224, 15764, 15767, 15841, 16096, 16100
\CJK@three	1459, 1462, 1576	\cyrch ..	3210, 3211, 3219, 15795, 16132	\CYRIE	15657
\CJK@two	1459, 1461, 1576	\CYRCHLDSC	16050	\cyr	15822
\CJK@zero	1459, 1477, 1494, 1498, 1514, 1529, 1551	\cyrchldsc	16052	\CYRII	15661, 15664
\CJKdigits	1336	\CYRCHRDSC	16010	\cyr	15826, 15829
\CJKkern	1248	\cyrchrdsc	16012	\CYRIOTBYUS	15872
\CJKnumber	1335	\CYRCHVCRS	16014	\cyr	15874
\close@pdfink	8822, 8847, 8856, 8891, 8931, 8967, 9294	\cyrchvcrs	16016	\CYRIOTE	15856
\closeout	6035, 14000	\CYRD	15691	\cyr	15858
\clubpenalty	7085, 7087	\cyrd	3207, 3210, 3221, 3226, 3227, 15756	\CYRIOTLYUS	15864
\codeof	7617	\CYRDJE	15653	\cyr	15866
\color@begingroup	8735, 9835	\cyrdje	15818	\CYRISHRT	15701
\color@endgroup	8742, 9842	\CYRDZE	15659	\cyrishrt	15766
\columnwidth	7211	\cyrdze	15824	\CYRISHRTDSC	15918
\comma@entry	5449, 5456, 5458	\CYRDZHE	15681	\cyrishrtdsc	15920
\comma@parse	5448	\cyrdzhe	15846	\CYRIZH	15888, 15892
\contentsline	6044, 6045, 6057, 7823, 7827, 7854, 7856	\CYRE	15648, 15651, 15693, 16070	\cyr	15890, 15894
\copy	8745, 9300, 9819, 9845	\cyre	3204, 3210, 3211, 3224, 3236, 3237, 3238, 15758, 15813, 15816, 16072	\CYRJE	15666
\count@	859, 861, 862, 865, 868, 871, 874, 1276, 1277, 1278, 1279, 1872, 3440, 3441, 3446, 3447, 5079, 5080, 5095, 5391, 5406, 5408, 5432, 5454, 5470, 9014, 9015, 9016, 9017, 9018, 9019, 9022, 10672, 10673, 10674, 10675, 10676, 10679	\cyreref	16116	\cyr	15831
\CurrentBorderColor	8812, 8814, 8841, 8843, 8851, 8853, 8858, 10315, 10349, 10351, 10367, 10369, 10388, 10390, 10452, 10454, 10471, 10473	\CYREREV	15742, 16114	\CYRK	15674, 15704
\currentpdfbookmark	13972	\cyrerev	15807	\cyr	3213, 3214, 3216, 3230, 3231, 3233, 3234, 3235, 15769, 15839
		\CYRERY	15738, 16138	\CYRKBEAK	15964
		\cyrery	3202, 3204, 15803, 16140	\cyr	15966
		\CYRF	15724	\CYRKDSC	15952
		\cyr	15789	\cyr	15954
		\CYRFITA	15884	\CYRKHCRS	15960
				\cyr	15962
				\CYRKHK	16038
				\cyr	16040
				\CYRKOPPA	15912
				\cyr	15914

\CYRКСI	15876	\CYRS	15718, 15985	\CYRZDSC	15946
\cyrksi	15878	\cyrс 3207, 3210, 3213, 3214, 3217,		\cyrzсdsc	15949
\CYRKVCRS	15956	3232, 3233, 3234, 3235, 3239,		\CYRZH ... 15695, 16034, 16082	
\cyrkvcrs	15958	15783, 15988		\cyrzh ... 3204, 3224, 15760, 16036,	
\CYRL	15706	\CYRSCHWA 16074, 16078		16084	
\cyrл 3218, 3220, 3222, 3224, 15771		\cyrсhwa	16076, 16080	\CYRZHDSC	15942
\CYRLDSC	16042	\CYRSDSC	15984, 15985	\cyrzhdс	15944
\cyrldс	16044	\cyrсdс	15987		
\CYRLJE	15668	\CYRSEMISFTSN	15922		
\cyrлje	15833	\cyrsemisftsn	15924		
\CYRLYUS	15860	\CYRSFTSN	15740		
\cyrlyus	15862	\cyrсftsn	15805		
\CYRM	15708	\CYRSH	15732		
\cyrм 3207, 3211, 3237, 3238, 15773		\cyrsh	15797		
\CYRMDSC	16054	\CYRSHCH	15734		
\cyrmdс	16056	\cyrshch	15799		
\CYRN	15710	\CYRSHHA	16018		
\cyrн 3204, 3210, 3211, 3213, 3214,		\cyrshha	16020		
3216, 3224, 3230, 3231, 15775		\CYRT	15720		
\CYRNDSC	15968	\cyrт 3207, 3210, 3216, 3218, 3230,			
\cyrndс	15970	3231, 3232, 3233, 3234, 3235,			
\CYRNG	15972	3236, 3237, 3238, 15785			
\cyrng	15974	\CYRTDSC	15990		
\CYRNHK	16046	\cyrtdс	15992		
\cyrnhk	16048	\CYRTETSE	16006		
\CYRNJE	15670	\cyrтетse	16008		
\cyrnje	15835	\cyrthousands	15916		
\CYRO	15712, 16102	\CYRTSHE	15672		
\cyrо 3207, 3210, 3213, 3214, 3224,		\cyrtshe	15837		
3233, 3234, 3236, 3237, 3238,		\CYRU 15679, 15722, 16118, 16122,			
15777, 16104		16126			
\CYROMEGA	15848	\cyrу	3214,		
\cyromega	15850	3216, 3230, 3231, 3234, 3238,			
\CYROMEGARND	15900	15787, 16120, 16124, 16128			
\cyromegarnd	15902	\CYRUK	15896		
\CYROMEGATITLO ... 15904		\cyruk	15898		
\cyromegatitlo	15906	\CYRUSHRT	15678		
\CYROT	15908	\cyrushrt	15843		
\cyrot	15910	\CYRV	15687		
\CYROTLD 16106, 16110		\cyrv	3202, 3204, 15752		
\cyrotld	16108, 16112	\CYRY	15994		
\CYRP	15714	\cyrу	15996		
\cyrр 3207, 3210, 3211, 3215, 3216,		\CYRYA	15746		
3222, 3224, 3228, 3229, 3230,		\cyrуa	15811		
3231, 15779		\CYRYAT	15852		
\CYRpalochka	16032	\cyrуat	15854		
\CYRPHK	15976	\CYRYHCRS	15998		
\cyrphk	15978	\cyrуhcrs	16000		
\CYRPSI	15880	\CYRYI	15663		
\cyrpsi	15882	\cyrуi	15828		
\CYRR	15716	\CYRYO	15650		
\cyrр 3202, 3204, 3207, 3210, 3211,		\cyrуo	15815		
3217, 3221, 3222, 3224, 3226,		\CYRYU	15744		
3227, 3232, 3233, 3234, 3235,		\cyrу	15809		
3236, 3237, 3238, 15781		\CYRZ ... 15697, 15947, 16086			
\CYRRTICK	15926	\cyrz ... 3221, 3226, 3227, 15762,			
\cyrrtick	15928	15950, 16088			

D

\d 896, 900, 906, 3262, 3266, 3268,	
3269, 3270, 3271, 3272, 3274,	
14378, 14390, 14402, 14791,	
14817, 14836, 16654, 16659,	
16664, 16669, 16674, 16679,	
16684, 16689, 16694, 16699,	
16704, 16709, 16714, 16719,	
16724, 16729, 16734, 16739,	
16744, 16749, 16754, 16759,	
16764, 16769	
\dad	16796
\dal	16789
\damma	16816
\declare@shorthand ... 1011, 1012,	
1017, 1018, 1023, 1033, 1034,	
1035, 1040, 1041, 1046, 1047,	
1052, 1057, 1058, 1063, 1068,	
1069, 1070, 1071, 1072, 1073,	
1078, 1079, 1084, 1085, 1090,	
1091	
\DeclareFontEncoding ... 14366,	
14761	
\DeclareFontFamily 916, 924, 2724	
\DeclareFontShape 917, 925, 2725	
\DeclareFontSubstitution ... 918,	
926, 2726	
\DeclareLocalOptions 4064	
\DeclareRobustCommand . 4556,	
4559, 4568, 4572, 4707, 4794,	
4796, 4798, 4807, 5810, 5813,	
5816, 5819, 5822, 5825, 5828,	
5953, 5957, 6023, 6027, 8391,	
8417, 8436, 14216	
\DeclareTextAccent 14367, 14368,	
14369, 14370, 14371, 14372,	
14373, 14374, 14375, 14376,	
14377, 14378	
\DeclareVoidOption ... 2853, 2867,	
2877, 2882, 2887, 2900, 2910,	
2915, 2920, 2926, 2955, 2972,	
2979, 2984, 2989, 2994, 3343,	
3351, 3359, 3369	
\DefaultHeightofCheckBox . 5865,	
12542, 13042, 13409	
\DefaultHeightofChoiceMenu ...	
. 5867, 12382, 12862, 13201	
\DefaultHeightofReset 5863,	
12516, 13015, 13377	

<code>\DefaultHeightofSubmit</code> . . .	5861, 12499, 12993, 13354	5731, 5750, 5756, 5771, 5777, 5794, 5799, 5805, 6406, 6417, 11244, 11246, 11249, 11251, 11253, 11262, 11270, 11277, 11279, 11281, 11283, 11285, 11287, 11296, 11306, 11308, 11310, 11311, 11317, 11326, 11328, 11330, 11332, 11334, 11336, 11338, 11340, 11342, 11344, 11346, 11348, 11350, 11352, 11354, 11356, 11357, 11358, 11359, 11360, 11361, 11362, 11363, 11364, 11365, 11366, 11367	11203, 11206, 11813, 12088, 13150		
<code>\DefaultHeightofText</code>	5869, 12359, 12838, 13169		<code>\dth@counter</code> . .	7014, 7015, 7045, 7046, 7073	
<code>\DefaultHeightofTextMultiline</code> . .	5870, 12357, 12836, 13167		<code>\dth@everypar</code>	7061	
<code>\DefaultOptionsofCheckBox</code>	5875, 12544, 13044, 13411		<code>\dvipdfm@setdim</code> . .	13147, 13188, 13287, 13312, 13343, 13368, 13396, 13424	
<code>\DefaultOptionsofComboBox</code>	5878			E	
<code>\DefaultOptionsofListBox</code> .	5877		<code>\ECIRCUMFLEX</code> .	16649, 16733, 16734, 16735, 16736, 16737	
<code>\DefaultOptionsofPopdownBox</code> .	5879		<code>\ecircumflex</code> .	16642, 16673, 16674, 16675, 16676, 16677	
<code>\DefaultOptionsofPushButton</code> . .	5874, 12474, 12966, 13322		<code>\EdefEscapeHex</code>	839	
<code>\DefaultOptionsofRadio</code> . . .	5880	<code>\df@tag</code>	7877, 7883	<code>\EdefEscapeName</code> . . .	3828, 3872, 12447, 12450, 12928, 12931, 13267, 13273
<code>\DefaultOptionsofReset</code> . . .	5873, 12519, 13018, 13380	<code>\DH</code>	14628, 14997	<code>\EdefEscapeString</code>	793, 803
<code>\DefaultOptionsofSubmit</code> . .	5872, 12502, 12996, 13357	<code>\dh</code>	14697, 15065	<code>\EdefUnescapeName</code>	3829
<code>\DefaultOptionsofText</code>	5876, 12364, 12843, 13174	<code>\dhal</code>	16790	<code>\EdefUnescapeString</code> . .	788, 7746
<code>\DefaultWidthofCheckBox</code> .	5866, 12541, 13041, 13408	<code>\dimen@</code>	517, 518, 522, 1878, 1946, 1947, 1950, 1952, 4041, 4042, 4044, 4051, 4052, 10639, 10640, 10642, 11202, 11217, 11220	<code>\egroup</code> . .	683, 8742, 9842, 10253, 10895, 12600, 12692, 12717
<code>\DefaultWidthofChoiceMenu</code> . . .	5868, 12381, 12861, 13200	<code>\dimexpr</code> . .	529, 2242, 2244, 2252, 2257, 2260, 2262, 2276, 2278, 2281, 2282, 2289, 2292, 2295, 2296, 2297, 2298, 2308, 2313, 2321, 2325, 2330, 2340, 2343, 2348, 2351, 2356, 2357	<code>\em</code>	610
<code>\DefaultWidthofReset</code>	5864, 12515, 13014, 13376	<code>\ding</code>	5697, 5700	<code>\emph</code>	589
<code>\DefaultWidthofSubmit</code> . . .	5862, 12498, 12992, 13353	<code>\DingObject</code>	12940	<code>\empty</code>	1259, 3428
<code>\DefaultWidthofText</code>	5871, 12354, 12833, 13164	<code>\discretionary</code>	684	<code>\enc@html</code>	5523, 5526
<code>\define@key</code>	2541, 2543, 2586, 2601, 2604, 2607, 2615, 2618, 2628, 2631, 2634, 2651, 2663, 2665, 2668, 2671, 2688, 2692, 2695, 2698, 2701, 2704, 2707, 2710, 2745, 2803, 2892, 3000, 3011, 3014, 3021, 3050, 3069, 3072, 3309, 3366, 3378, 3393, 3418, 3421, 3425, 3453, 3458, 3462, 3465, 3472, 3484, 3491, 3501, 3504, 3507, 3511, 3526, 3535, 3545, 3552, 3563, 3570, 3587, 3677, 3686, 3716, 3722, 3728, 3734, 3740, 3746, 3752, 3758, 3764, 3797, 3804, 3838, 3889, 3890, 3910, 3917, 3927, 3957, 3958, 3961, 3964, 3967, 3970, 3973, 3976, 3979, 4002, 4005, 4008, 4724, 4753, 4759, 4771, 5073, 5161, 5217, 5519, 5524, 5537, 5565, 5607, 5610, 5613, 5617, 5620, 5624, 5627, 5631, 5635, 5639, 5642, 5646, 5649, 5652, 5655, 5658, 5661, 5677, 5680, 5683, 5686, 5689, 5692, 5722, 5725, 5728,	<code>\divide</code>	9015, 10673	<code>\enc@update</code>	551
		<code>\do</code>	1277, 2558, 2563, 2568, 3533, 3565, 3566, 3567, 3568, 3617, 3618, 3619, 3620, 3621, 3622, 3625, 3626, 3627, 3628, 3629, 3630, 3633, 3634, 3637, 3638, 3639, 3640, 3641, 3644, 3645, 3646, 3647, 3648, 3651, 3652, 3653, 3654, 3655, 3658, 3659, 3660, 3661, 3662, 3665, 3666, 3669, 3670, 3671, 3674, 3675, 3681, 3682, 3683, 3684, 3995, 3996, 3997, 3998, 3999, 4000, 5121, 6948, 7533, 7556, 12386, 12448, 12653, 12660, 12670, 12866, 12929, 13205, 13271, 14079, 14109	<code>\END</code>	1607, 1608, 1634, 1635, 1650, 1651, 1668, 1669, 1686, 1687, 2055, 2061, 2066, 2168, 2170, 9141, 9154, 9158, 9165, 9178, 9182, 9188, 9200, 9204
		<code>\documentclass</code>	2	<code>\end</code>	627, 16832
		<code>\dospecials</code>	14088, 14118	<code>\endeqnarray</code> . . .	6894, 6912, 6919
		<code>\dots</code>	566	<code>\endequation</code>	6857, 6889
		<code>\dp</code>	5855, 5858, 7209, 9374, 9454, 9491, 9531,	<code>\endForm</code>	5513
				<code>\endinput</code>	64, 2864, 2939, 4233, 4338, 8304, 10828, 12150, 14206
				<code>\endlinechar</code>	4592
				<code>\endNoHyper</code>	5987
				<code>\EndPreamble</code>	12153
				<code>\endsubeqnarray</code>	6923, 6934
				<code>\eqnarray</code>	6893, 6895, 6916
				<code>\equal</code>	7614
				<code>\equation</code> . .	6856, 6865, 6869, 6878
				<code>\equationautorefname</code>	3076, 3094, 3112, 3130, 3148, 3166, 3184, 3202, 3203, 3242, 3260, 8536, 8540
				<code>\errmessage</code>	3306
				<code>\es@roman</code>	643
				<code>\es@save@dot</code>	1235
				<code>\escapechar</code> .	535, 844, 4180, 6941, 13939, 14120, 14171
				<code>\eTeX</code>	575, 12158

`\etex@unexpanded` . . . 1810, 1817
`\eTeXversion` . . . 8974, 8976, 8978
`\evensidemargin` 7764
`\everypar` 7087
`\ExecuteOptions` 4056, 4057, 4061
`\ext@figure` 8112
`\ext@table` 8111
`\extra@b@citeb` 7540
`\extrasvietnam` 3352
`\extrasvietnamese` 3344

F

`\fa` 16802
`\FancyVerbLineautorefname` 3089,
 3107, 3125, 3143, 3161, 3179,
 3197, 3232, 3235, 3255, 3273,
 8553
`\farsikaf` 16823
`\farsiya` 16825
`\fatha` 16815
`\fbox` 12822, 12825
`\Field@addtoks` 5587, 5618, 5621,
 5772, 5795
`\Field@boolkey` 5074, 5162, 5581,
 5611, 5614
`\Field@toks` . . . 5585, 5586, 5588,
 12592, 12609, 12620, 12631,
 12641, 12658, 12676, 12684,
 12689, 12705, 12714
`\Field@Width` 5498, 5644
`\figureautorefname` . . . 3079, 3097,
 3115, 3133, 3151, 3169, 3187,
 3217, 3245, 3263, 8543
`\filename@area` 4960
`\filename@base` 4960
`\filename@ext` . . . 4957, 4958, 4960,
 4961
`\filename@parse` 4956
`\find@pdfink` . . . 8791, 8845, 8855
`\Fld@@@additionalactions` . 13551,
 13594, 13598
`\Fld@@@DingDef` . 5697, 5700, 5719
`\Fld@additionalactions` . . 13551,
 13640, 13668, 13702, 13736,
 13770, 13804, 13835
`\Fld@align` 5502, 5684, 13619,
 13677, 13744
`\Fld@altname` . 5634, 5636, 13530,
 13532, 13604, 13606
`\Fld@annotflags` 5281, 5283, 13615,
 13646, 13673, 13706, 13740,
 13775, 13810
`\Fld@annotnames` . 13602, 13616,
 13647, 13674, 13707, 13741,
 13776, 13811
`\Fld@bcolor` . . . 5504, 5726, 13630,
 13632, 13693, 13695, 13721,
 13723, 13748, 13760, 13762

`\fld@bcolor` 13681
`\Fld@bordercolor` 5505, 5729,
 13626, 13628, 13653, 13661,
 13663, 13680, 13689, 13691,
 13717, 13719, 13747, 13756,
 13758, 13782, 13790, 13792,
 13817, 13825, 13827
`\Fld@bordersep` 5506, 5678
`\Fld@borderstyle`
 5508, 5662, 5663, 5664, 5674,
 13620, 13651, 13678, 13711,
 13745, 13780, 13833
`\Fld@borderwidth` . . . 5507, 5659,
 5849, 5852, 5853, 5856, 5857,
 12435, 12436, 12916, 12917,
 13255, 13256, 13620, 13651,
 13678, 13711, 13745, 13780,
 13833
`\Fld@calculate@code` 5737, 13564,
 13566
`\Fld@cbsymbol` 5509, 5690, 13634
`\Fld@charsize` . . . 5499, 5500, 5656,
 12434, 12915, 13254, 13636,
 13699, 13727, 13766, 13815
`\Fld@checkedfalse` 5495
`\Fld@checkequal` . . . 5599, 12387,
 12449, 12661, 12671, 12867,
 12930, 13206, 13272
`\Fld@choices` . . . 5388, 5396, 5398,
 5402, 5411, 5419, 5424, 5472,
 5474, 5482, 5483, 13701
`\Fld@color` 5503, 5732, 13637,
 13700, 13728, 13767
`\Fld@default`
 5413, 5416, 5418, 5681,
 12352, 12368, 12379, 12419,
 12447, 12539, 12590, 12608,
 12622, 12630, 12637, 12663,
 12673, 12703, 12713, 12831,
 12848, 12859, 12900, 12928,
 13039, 13162, 13179, 13198,
 13239, 13267, 13406, 13729,
 13730, 13731, 13768
`\Fld@DingDef` . . . 5690, 5693, 5695
`\Fld@disabledfalse` 5496
`\Fld@export` 5226, 5229, 5236, 5528
`\Fld@findlength` . . . 12640, 12651
`\Fld@flags`
 5295, 5297, 5308, 5310, 5324,
 5326, 5356, 5358, 5381, 5383,
 13618, 13649, 13676, 13709,
 13743, 13778, 13813
`\Fld@format@code` . . 5735, 13556,
 13558
`\Fld@getmethodfalse` 5548
`\Fld@getmethodtrue` 5550

`\Fld@height` . . . 5653, 12355, 12371,
 12382, 12437, 12454, 12466,
 12499, 12516, 12542, 12550,
 12834, 12852, 12862, 12918,
 12945, 12958, 12993, 13015,
 13042, 13052, 13165, 13181,
 13201, 13257, 13269, 13305,
 13354, 13377, 13409, 13417
`\Fld@hiddenfalse` 5184
`\Fld@hiddentrue` 5185
`\Fld@invisiblefalse` 5180
`\Fld@invisibletrue` 5181
`\Fld@keystroke@code` 5738, 13552,
 13554
`\Fld@listcount` 12446, 12451,
 12462, 12927, 12932, 12946,
 12952, 13266, 13274, 13278,
 13283, 13294, 13301
`\Fld@loc` 5608
`\Fld@mappingname` . . . 5638, 5640,
 13534, 13536, 13608, 13610
`\Fld@maxlen` . . . 5501, 5647, 13771
`\Fld@menulength` 5497, 5650,
 12384, 12388, 12434, 12652,
 12653, 12656, 12864, 12868,
 12915, 13203, 13207, 13254
`\Fld@name` . . . 5632, 12351, 12378,
 12471, 12538, 12589, 12594,
 12605, 12606, 12617, 12618,
 12627, 12628, 12636, 12657,
 12674, 12682, 12687, 12702,
 12711, 12830, 12858, 12963,
 13038, 13161, 13197, 13319,
 13405, 13529, 13603
`\Fld@norotatefalse` 5197
`\Fld@norotatetrue` 5196
`\Fld@noviewfalse` 5200
`\Fld@noviewtrue` 5201
`\Fld@nozoomfalse` 5193
`\Fld@nozoomtrue` 5192
`\Fld@onblur@code` . . . 5740, 13572,
 13574
`\Fld@onclick@code` . . . 5734, 5806,
 13667
`\Fld@onenter@code` . . . 5743, 13584,
 13586
`\Fld@onexit@code` . . . 5744, 13588,
 13590
`\Fld@onfocus@code` . . . 5739, 13568,
 13570
`\Fld@onmousedown@code` . . 5741,
 13576, 13578
`\Fld@onmouseup@code` . . . 5742,
 13580, 13582
`\Fld@printfalse` 5189
`\Fld@printtrue` 5188

<code>\Fld@radiosymbol</code> . . .	5510, 5693, 13725	<code>\Form</code>	5512	16736, 16741, 16746, 16751, 16756, 16761, 16766, 16771		
<code>\Fld@rotation</code> .	5511, 5723, 13622, 13624, 13652, 13657, 13659, 13679, 13685, 13687, 13713, 13715, 13746, 13752, 13754, 13781, 13786, 13788, 13816, 13821, 13823	<code>\Form@action</code>	5522, 12581, 13800	<code>\H@@footnotemark</code> . .	7095, 7112, 7239, 7246, 7258, 7269	
<code>\Fld@submitflags</code>	5263, 5265, 13802	<code>\Form@boolkey</code>	5516	<code>\H@@footnotetext</code> . . .	7094, 7104, 7131, 7188, 7247, 7261, 7269	
<code>\Fld@temp</code>	5696, 5698, 5701, 5702, 5711, 5712	<code>\Form@htmlfalse</code>	5515, 5534	<code>\H@@mpfootnotetext</code> .	7102, 7114, 7116	
<code>\Fld@validate@code</code> .	5736, 13560, 13562	<code>\Form@htmltrue</code>	5527	<code>\H@definecounter</code>	7859, 7861	
<code>\Fld@value</code>	5414, 5421, 5423, 5687, 12353, 12368, 12380, 12418, 12419, 12832, 12848, 12860, 12899, 12900, 13163, 13179, 13199, 13238, 13239, 13769	<code>\Form@method</code>	5546, 5554, 12581	<code>\H@endeqnarray</code>	6894, 6913	
<code>\Fld@width</code> . .	5643, 12354, 12367, 12371, 12381, 12417, 12428, 12430, 12454, 12466, 12486, 12498, 12506, 12515, 12529, 12541, 12547, 12550, 12833, 12847, 12852, 12861, 12898, 12909, 12911, 12945, 12958, 12979, 12992, 13000, 13014, 13028, 13041, 13048, 13052, 13164, 13178, 13181, 13200, 13237, 13248, 13250, 13269, 13305, 13336, 13353, 13361, 13376, 13390, 13408, 13415, 13417	<code>\freq</code>	651	<code>\H@endequation</code>	6857, 6889	
<code>\float@caption</code>	7310, 7370	<code>\frqq</code>	649	<code>\H@endsubeqnarray</code> . .	6923, 6935	
<code>\float@makebox</code>	7372, 7373	<code>\futurelet</code>	703, 1601	<code>\H@eqnarray</code>	6893, 6898	
<code>\floatingpenalty</code>	7210	<code>\FV@SetLineNo</code>	6695	<code>\H@equation</code>	6856, 6880	
<code>\fiq</code>	650	<code>\FV@StepLineNo</code>	6694, 6696, 6697	<code>\H@item</code> . .	6531, 6537, 7450, 7475	
<code>\fiqq</code>	648	G			<code>\H@newctr</code>	7864, 7866
<code>\fmtname</code>	7	<code>\G</code> . . .	14786, 14812, 14831, 15412, 15414, 15416, 15418, 15420, 15422, 15423, 15425, 15427, 15429, 15431, 15433, 15435	<code>\H@old@part</code>	14270, 14281	
<code>\fmtversion</code>	7	<code>\g@addto@macro</code>	6167, 6339, 7442, 7719, 7722, 7725, 7774, 9208, 10663, 10951, 11524, 11610, 11672, 11974, 12164	<code>\H@old@schapter</code> . .	14240, 14249	
<code>\fontencoding</code>	543, 547, 582, 12814	<code>\G@refundefinedtrue</code>	4845, 7542, 7565, 8309, 8329, 8346, 8463	<code>\H@old@ssect</code>	14291, 14302, 14311	
<code>\fontfamily</code>	583, 12813	<code>\gaf</code>	16824	<code>\H@old@spart</code>	14283, 14289	
<code>\fontseries</code> .	584, 6981, 7007, 7038, 12815	<code>\Gauge</code>	5822	<code>\H@old@sssect</code>	14226, 14231	
<code>\fontshape</code>	585, 4519, 12816	<code>\GenericError</code>	691, 3710	<code>\H@refstepcounter</code> . . .	6546, 6556, 6696, 6820, 6833, 6879, 7020, 7051, 7305, 8125, 8178	
<code>\fontsize</code>	586	<code>\GenericInfo</code>	693, 3708	<code>\H@seteqlabel</code>	7895, 7897	
<code>\footins</code>	7204	<code>\GenericWarning</code> .	283, 692, 3709	<code>\H@subeqnarray</code>	6922, 6926	
<code>\footnote</code>	5050	<code>\getpagerefnnumber</code>	6809	<code>\ha</code>	16808	
<code>\footnoteautorefname</code>	3077, 3095, 3113, 3131, 3149, 3167, 3185, 3206, 3209, 3243, 3261, 8537, 8541	<code>\getrefbykeydefault</code> . . .	6765, 6766	<code>\Haa</code>	16787	
<code>\footnotesep</code>	7208, 7215	<code>\gexmode</code> . . .	10694, 10695, 10783	<code>\halign</code>	666	
<code>\footnotesize</code>	615, 7206	<code>\ghayn</code>	16800	<code>\hamza</code>	16775	
<code>\footnotetext</code>	7166	<code>\Gin@setfile</code>	7954, 7955	<code>\HAR@checkcitations</code>	7630	
<code>\footref</code>	7234, 7235	<code>\glossary</code>	657	<code>\HAR@citetoaux</code>	7586	
<code>\foreignlanguage</code>	631	<code>\glq</code>	646	<code>\HAR@tempa</code> . .	7631, 7632, 7633, 7634, 7635, 7636	
		<code>\glqq</code>	644	<code>\harvardcite</code>	7580, 7617	
		<code>\Greeknumeral</code>	1099	<code>\harvarditem</code>	7605	
		<code>\greeknumeral</code>	1098	<code>\hbox</code>	1870, 1876, 1882, 2454, 3439, 3445, 4995, 4997, 5644, 5843, 5844, 5845, 5846, 7570, 7759, 87	

<code>\Hfootnoteautorefname</code> . . .	8537	<code>\hvtex@trans@effect@Box</code> .	10547	<code>\Hy@author</code>	6101, 6105
<code>\hhyperref</code>	5055	<code>\hvtex@trans@effect@Dissolve</code> . .	10548	<code>\Hy@babelnormalise</code> .	4808, 4810
<code>\hoffset</code>	7760	<code>\hvtex@trans@effect@Glitter</code> . . .	10549	<code>\Hy@backout</code> . .	4586, 5972, 5976, 7416
<code>\hphantom</code>	625	<code>\hvtex@trans@effect@R</code> . .	10552	<code>\Hy@backreffalse</code> .	441, 3041, 3063, 4241
<code>\href</code> .	658, 4707, 5049, 5050, 6013	<code>\hvtex@trans@effect@Split</code> .	10550	<code>\Hy@backreftrue</code> .	3034, 3038, 3060
<code>\href@</code>	4710, 4713, 4718	<code>\hvtex@trans@effect@Wipe</code> .	10551	<code>\Hy@BeginAnnot</code> .	9860, 9876, 9917, 9954, 9986, 10015
<code>\href@split</code>	4718, 4719	<code>\hvtex@trans@par</code> .	10585, 10589, 10591, 10594, 10597	<code>\Hy@bibcite</code>	7439, 7443
<code>\hsize</code>	7211	<code>\hvtex@trans@params</code> . . .	10579, 10581, 10605	<code>\Hy@bookmarksdepth</code> .	3424, 3429, 3441, 3447, 13850
<code>\hskip</code> .	1881, 1959, 2495, 2496, 4704, 5849, 12729	<code>\Hy@@boolkey</code>	2509, 2510	<code>\Hy@bookmarksnumberedfalse</code> . .	442
<code>\hspace</code>	654, 7620, 7621	<code>\Hy@@CleanupFile</code> . . .	4995, 4997	<code>\Hy@bookmarksopenfalse</code> . . .	443
<code>\hss</code>	7768, 14223	<code>\Hy@@DefNameKey</code> . .	2583, 2585	<code>\Hy@bookmarkstrue</code>	444
<code>\ht</code>	5851, 5854, 9383, 9458, 9467, 9474, 9495, 9505, 9512, 9535, 9545, 9552, 11202, 11822, 12102, 13148	<code>\Hy@@Escapeform</code> .	13495, 13508, 13514	<code>\Hy@bookmarkstype</code> .	3459, 3461, 7790, 13861
<code>\htmladdimg</code>	5048	<code>\Hy@@SectionAnchor</code> .	14213, 14216	<code>\Hy@boolkey</code> . .	2509, 2602, 2605, 2608, 2629, 2632, 2635, 2666, 2669, 2672, 2689, 2693, 2696, 2699, 2702, 2705, 2708, 2711, 3012, 3015, 3070, 3367, 3379, 3394, 3419, 3422, 3463, 3466, 3527, 3687, 3959, 3962, 3965, 3968, 3971, 3974, 3977, 3985, 4006, 4009, 6407
<code>\htmladdnormallink</code>	5049	<code>\Hy@@Temp</code> .	3469, 3471, 5746, 5748	<code>\Hy@BorderArrayPatch</code> . .	11257, 11260, 11523, 11973
<code>\htmladdnormallinkfoot</code> . . .	5050	<code>\Hy@@VersionCheck</code> . . .	305, 324	<code>\Hy@breaklinks@unsupported</code> . .	2677, 10811
<code>\htmlref</code>	5051	<code>\Hy@abspage</code> . .	6187, 6273, 6389, 6466	<code>\Hy@breaklinksfalse</code>	445
<code>\Huge</code>	612	<code>\Hy@Acrobatmenu</code> . . .	4118, 4159, 9270, 10014, 10517, 11378	<code>\Hy@breaklinksunhbox</code> . .	11156, 11210
<code>\huge</code>	616	<code>\Hy@ActiveAnchorfalse</code> .	4590, 8836, 9327, 9342, 9421, 9431, 9747, 10238, 10255, 10326, 10339, 10845, 11762, 11777, 12042, 12056	<code>\Hy@CatcodeWrapper</code> .	4448, 4507, 4551, 4580
<code>\Hurl</code>	4793, 4795, 4797	<code>\Hy@ActiveAnchortrue</code>	8832, 9324, 9338, 9419, 9428, 9743, 10234, 10252, 10324, 10336, 10835, 11759, 11773, 12039, 12052	<code>\Hy@centerwindowfalse</code>	446
<code>\hv@pdf@char</code> .	14008, 14073, 14074, 14075, 14076	<code>\Hy@AnchorName</code> . . .	4830, 4832, 4835, 4837, 4859, 4861, 4865, 4870, 4872	<code>\Hy@chapapp</code> . .	6601, 6609, 6635, 14244, 14255, 14337
<code>\hvtex@buffer</code> .	10558, 10562, 10570, 10573, 10582, 10586, 10602	<code>\Hy@Appendixstring</code> .	6600, 6609	<code>\Hy@chapterstring</code> . . .	6596, 6598, 6601, 6634
<code>\hvtex@gettoken</code> . .	10557, 10571, 10575, 10584, 10588	<code>\Hy@AtBeginDocument</code>	378, 1007, 2729, 2789, 2860, 2935, 2991, 3381, 4038, 4076, 4091, 4229, 4235, 4334, 4487, 4577, 5921, 6032, 6473, 6701, 7577, 8383, 8530, 8730, 9216, 9830, 10307, 11699, 11737, 12744, 12745	<code>\Hy@CheckOptionValue</code> . . .	2553, 2590
<code>\hvtex@gettoken@</code> .	10558, 10560	<code>\Hy@AtBeginDocumentHook</code> .	379, 384, 390, 391	<code>\Hy@CJKbookmarksfalse</code> . . .	447
<code>\hvtex@par@dimension</code> . .	10553, 10594	<code>\Hy@AtEndOfPackage</code> .	381, 902, 2370, 3345, 3353, 3360, 4217, 4243, 4249, 4439	<code>\Hy@cjkpu</code>	1270, 1272, 1293
<code>\hvtex@par@direction</code> . . .	10554, 10597	<code>\Hy@AtEndOfPackageHook</code> .	382, 385, 387, 388	<code>\Hy@CleanupFile</code> .	4993, 8897, 9919, 10403, 11449
<code>\hvtex@par@duration</code> .	10555, 10589			<code>\Hy@colorlink</code>	3373, 4511, 4519, 4523, 8731, 8817, 8890, 8930, 8966, 9293, 9325, 9348, 9379, 9392, 9420, 9436, 9461, 9477, 9499, 9516, 9539, 9556, 9831, 9908, 9947, 9979, 10008, 10033, 10325, 10347, 10417, 10443, 10478, 10511, 10529, 10863, 11140, 11142,
<code>\hvtex@par@motion</code> .	10556, 10591				
<code>\hvtex@param@dimension</code> .	10566, 10595, 10613, 10616				
<code>\hvtex@param@direction</code> .	10567, 10598, 10624, 10632				
<code>\hvtex@param@duration</code> .	10568, 10590, 10637, 10639				
<code>\hvtex@param@motion</code> . .	10569, 10592, 10613, 10620				
<code>\hvtex@parse@trans</code> .	10542, 10564				
<code>\hvtex@produce@trans</code> . . .	10603, 10609				
<code>\hvtex@token</code> .	10561, 10572, 10578, 10585, 10590, 10593, 10596, 10598				
<code>\hvtex@trans@code</code> .	10546, 10547, 10548, 10549, 10550, 10551, 10552, 10565, 10611, 10612, 10614, 10616, 10618, 10620, 10622, 10624, 10626, 10627, 10628, 10629, 10630, 10632				
<code>\hvtex@trans@effect@Blinds</code> .	10546				

11760, 11783, 11818, 11831, 12040, 12062, 12097, 12110	4270, 4274, 4280, 4284, 4287, 4291, 4296, 4300, 4303, 4307, 4310, 4312, 4316, 4321, 4325, 4328, 4331, 4342, 4345, 4348, 4357, 4358, 4369, 4371, 4377, 4379, 4381	\Hy@false . 2418, 2520, 3026, 3062, 5570
\Hy@colorlinksfalse 3370		\Hy@figuresfalse 449
\Hy@ColorList 3532, 3533		\Hy@finalfalse 407
\Hy@CounterExists . . 6496, 6509, 6512		\Hy@finaltrue 406
\Hy@currentbookmarklevel 13856, 13866, 13867, 13873, 13880, 13973, 13976, 13981, 13985	\Hy@dth@currentHref 7022, 7053, 7078	\Hy@FirstPage 4129
\Hy@defaultdriver . . . 4323, 4348, 4358, 4369	\Hy@DviErrMsg 2824, 2826, 2829, 2835, 2848	\Hy@FirstPageHook 6152, 6165, 6167, 6438, 6439, 11524, 11610, 11672, 11974, 12164
\Hy@DefFormAction . 5520, 5522	\Hy@DviModetrue . . . 2833, 2838	\Hy@fitwindowfalse 450
\Hy@DefNameKey . . . 2582, 3564, 3616, 3624, 3632, 3636, 3643, 3650, 3657, 3664, 3668, 3673, 3680, 3994	\Hy@DvipdfmxOutlineOpentru 4409, 4416	\Hy@FixNotFirstPage 9297, 9298, 9304
\Hy@DEST 11157, 11224	\Hy@EndAnnot 9866, 9911, 9950, 9982, 10011, 10036	\Hy@float@caption . . . 7311, 7361, 7363
\Hy@DestName 8778, 8785	\Hy@endcolorlink 3374, 4515, 4520, 4524, 8740, 8823, 9325, 9362, 9386, 9394, 9420, 9444, 9465, 9479, 9503, 9518, 9543, 9558, 9840, 9868, 10325, 10398, 10419, 10445, 10480, 10513, 10531, 10890, 11149, 11760, 11799, 11825, 11833, 12040, 12076, 12101, 12112	\Hy@float@currentHref 7364, 7366, 7368, 7376, 7379, 7381
\Hy@DisableOption 2539, 4111, 4112, 4113, 4115, 4222, 4248, 4385, 4386, 4387, 4388, 4389, 4390, 4391, 4392, 4393, 4394, 4395, 4396, 4397, 4398, 4399, 4400, 4401, 4402, 4447, 4500, 4528, 4529, 4588, 4589, 5925, 5926, 5927, 5928, 5929, 5930, 5931, 5932, 5933, 5934, 5935, 5936, 5937, 5938, 5939, 5940, 5941, 5942, 5943, 5944, 5945, 5946, 5947, 5948, 6125, 6341, 7273, 7959, 8057, 8058, 8655, 8758, 9126, 9127, 9128, 9129, 9130, 9131, 9132, 9133, 9134, 9135, 9265, 9586, 9587, 9588, 9589, 9590, 9591, 9592, 9593, 9594, 9595, 9858, 10076, 10077, 10078, 10079, 10080, 10081, 10082, 10083, 10084, 10085, 10167, 10309, 10763, 10764, 10765, 10766, 10767, 10768, 10769, 10770, 10771, 10772, 11030, 11031, 11032, 11033, 11034, 11035, 11036, 11037, 11038, 11039, 11590, 11883, 11884, 11885, 11886, 11887, 11888, 11889, 11890, 11891, 11892	\Hy@EndWrap . 4449, 4451, 4452, 4485	\Hy@formobjects . 12782, 13058, 13112, 13122, 13432, 13482
\Hy@displaydoctitlefalse . . . 476	\Hy@Error 277, 293, 299, 313, 2733, 2846, 2871, 2904, 2942, 2949, 2960, 2966, 4143, 4761, 4926, 5221, 5345, 5541, 5573, 5751, 5800, 12477, 12523, 12970, 13022, 13326, 13384	\Hy@frenchlinksfalse 3372
\Hy@DistillerDestFix 7733, 10776, 10778	\Hy@escapeform . . 12370, 12453, 12465, 12489, 12507, 12530, 12549, 12850, 12935, 12956, 12982, 13002, 13029, 13050, 13185, 13277, 13308, 13340, 13364, 13392, 13421, 13489, 13519, 13526	\Hy@Gin@setfile 7954, 7956
\Hy@draftfalse 406	\Hy@escapeformfalse 448	\Hy@GlobalStepCount 479, 6273, 6665, 6688, 7750, 8167, 8218
\Hy@drafttrue 407	\Hy@escapestring . . 13486, 13554, 13558, 13562, 13566, 13570, 13574, 13578, 13582, 13586, 13590, 13634, 13667, 13768, 13769, 13800	\Hy@gtemp 817, 818, 4181, 4187, 4189, 5418, 5419, 5423, 5424, 5435, 5449, 8610, 8612, 13547, 13549
\Hy@driver 481, 2682, 2857, 2869, 2879, 2884, 2889, 2902, 2912, 2917, 2922, 2929, 2932, 2958, 2974, 2981, 2986, 2996, 4251, 4254, 4258, 4261, 4265, 4268,	\Hy@EveryPageAnchor 7732, 7775	\Hy@href 4710, 4712
	\Hy@EveryPageBoxHook 6151, 6155, 6159, 7774, 10663, 10951	\Hy@href@nextactionraw 4747, 4770, 4772, 4773, 4775, 4780, 4784, 4786, 8886, 8926, 8962, 9289, 9904, 9943, 9975, 10004, 10024, 10362, 10432, 10500, 11474, 11503
	\Hy@EveryPageHook . 6150, 6154, 6339, 9208	\Hy@href@page 4725, 4727, 4731, 4732, 4734, 4741, 4744, 8922, 9938, 11470
	\Hy@ExchangeLeftParenthesis 8586, 8592	\Hy@hyperfootnotesfalse . . 7091
	\Hy@ExchangeRightParenthesis 8596, 8602	\Hy@hyperfootnotetrue . . . 451
		\Hy@hyperindextrue 452
		\Hy@hypertextnamesfalse . . 2374
		\Hy@hypertextnamestrue . . . 453
		\Hy@ifStringEndsWith 4961, 4973
		\Hy@imPLICITtrue 454
		\Hy@Info . . 280, 2528, 4192, 4194, 4197, 4199, 4202, 4204, 4207, 4209, 4212, 4214, 4432, 4438, 4516, 4521, 4525, 4669, 4696, 5128, 5882, 5884, 5887, 5889, 5892, 5894, 5897, 5899, 5902, 5904, 5907, 5909, 5912, 5914, 7517, 7578, 7795, 7812
		\Hy@InfoNoLine 281, 4224, 4226, 12019

\Hy@LastPage	4132	\Hy@newwindowtrue	4750	\Hy@pstringD	8899, 8924, 9921, 9940, 11451, 11472
\Hy@level	13862, 13864, 13875, 13880, 13881, 13882, 13913	\Hy@next	6289, 6299, 6304, 14254, 14263, 14266	\Hy@pstringdef	8557, 8777, 8801, 8861, 8898, 8899, 8936, 8937, 9042, 9685, 9885, 9920, 9921, 9955, 9956, 9987, 10116, 10346, 10424, 10487, 10488, 11093, 11288, 11297, 11424, 11450, 11451, 11482, 11483, 11946, 13512, 14131, 14147
\Hy@levelcheck	13863, 13878	\Hy@nextfalse	4161, 7969	\Hy@pstringDest	8777, 8778, 9685, 9732, 11288, 11289, 11293, 11297, 11298, 11302
\Hy@linkcounter	483, 485, 6665, 6666, 6688, 6689, 7898, 8167, 8168, 8172, 8218, 8219, 8223	\Hy@NextPage	4123	\Hy@pstringF	8896, 8897, 8898, 8918, 8936, 8955, 8960, 9918, 9919, 9920, 9935, 9955, 9968, 9973, 10402, 10403, 10407, 10487, 10494, 10498, 11448, 11449, 11450, 11467, 11482, 11498, 11501
\Hy@linkfileprefix	3503, 4945, 9365, 10203, 11803, 12079	\Hy@nexttrue	4162, 4163, 4164, 7970, 7971, 7972	\Hy@pstringName	14131, 14132, 14147, 14161
\Hy@LinkMath	10854, 10856, 10861, 10893, 11181, 11183, 11188, 11190, 11196, 11198	\Hy@number	3902, 3906, 3914	\Hy@pstringP	8937, 8960, 9956, 9973, 10488, 10498, 11483, 11501
\Hy@linktoc	2637, 2639, 2647, 2649, 2659, 7831	\Hy@numberline	13857, 13894, 13895, 13896, 13897	\Hy@pstringURI	8861, 8882, 9987, 10000, 10346, 10358, 10424, 10428, 11424, 11436
\Hy@linktoc@all	2645	\Hy@ObsoletePaperOption	2611, 2619	\Hy@PutCatalog	6335, 6343, 6455
\Hy@linktoc@none	2642	\Hy@ocgcolor	8734, 8748, 9834, 9848	\Hy@raisedlink	2442, 6589, 6771, 6792, 6793, 6794, 6797, 6847, 6886, 6889, 7075, 7122, 7137, 7192, 7218, 7349, 7427, 7451, 7456, 7476, 7874, 7899, 11512, 11595, 11853, 12017, 13842, 14220, 14245, 14256, 14286, 14338
\Hy@linktoc@page	2637, 2644, 2647	\Hy@ocgcolorlinksfalse	3371, 4495	\Hy@RemoveDurPageAttr	9165, 9178
\Hy@linktoc@section	2639, 2643, 2649	\Hy@Org@chapter	14252, 14267	\Hy@RemoveHidPageAttr	9188, 9200
\Hy@linktocpagefalse	455	\Hy@OrgMakeLabel	12133, 12140	\Hy@RemovePercentCr	4642, 4646, 4651
\Hy@localanchornamefalse	456	\Hy@OutlineName	14132, 14187	\Hy@RemoveTransPageAttr	9140, 9154
\Hy@LT@currentHref	6835, 6846	\Hy@OutlineRerunCheck	13997, 14096, 14178	\Hy@reserved@a	4875, 6896, 6925, 12588, 12638, 12701
\Hy@LT@footnotetext	7178, 7187	\Hy@PageAnchorSlide	7692, 7730, 7743	\Hy@RestoreCatcodes	205, 4058, 4384
\Hy@make@anchor	7872, 7878, 7884	\Hy@PageAnchorSlidesPlain	7679, 7729, 7738	\Hy@RestoreLastskip	2463, 8779, 9328, 9343, 9422, 9432, 9734, 10239, 10256, 10327, 10340, 10826, 10846, 11763, 11778,
\Hy@make@df@tag@@	7876, 7891	\Hy@pageanchortrue	462		
\Hy@make@df@tag@@@	7882, 7892	\Hy@pagecounter	484, 486, 6727, 7750, 7752		
\Hy@MakeCurrentHref	6676, 6689	\Hy@pageheight	4052, 11612, 11701		
\Hy@MakeCurrentHrefAuto	6687, 6769, 7873, 13841, 14228, 14244, 14255, 14285, 14299, 14337	\Hy@pagelabelsfalse	6174		
\Hy@MakeRemoteAction	4730, 8900, 9922, 11452	\Hy@pagelabelstrue	463		
\Hy@maketitle@end	7250, 7255, 7257	\Hy@param	6633, 6634, 6635, 6662, 6666		
\Hy@maketitle@optarg	7248, 7253	\Hy@pdfafalse	477		
\Hy@Match	328, 330, 3003, 3513, 3573, 3590, 3933, 4775, 5664	\Hy@pdfencoding@pdfdoc	2784		
\Hy@MaybeStopNow	2925, 4062	\Hy@pdfmarkererrorfalse	11120		
\Hy@menubartrue	457	\Hy@pdfmarkererrortrue	11290, 11299		
\Hy@Message	282, 2859, 2934, 4228, 4333, 4377, 10259, 10263, 10266, 10269, 10272, 10275, 10278, 10281, 12348, 12558, 12561, 12564, 12567, 12570, 12573, 12575, 12576, 12585, 12722, 13117	\Hy@pdfminorversion	8622, 8628, 8631, 8639, 8644, 8646, 8649, 8653		
\Hy@naturalnamesfalse	458	\Hy@pdfpagehiddenfalse	464		
\Hy@nestingfalse	459	\Hy@pdfstringdef	816, 5393, 5401		
\Hy@newline@author	6144	\Hy@pdfstringfalse	465, 5950		
\Hy@newline@title	6143	\Hy@pdfstringtrue	670, 5922		
\Hy@newwindowfalse	461	\Hy@pdfversion	2811, 2822, 5395, 8644, 8646, 8650, 8653, 13541		
\Hy@newwindowsetfalse	460, 3982	\Hy@plainpagesfalse	466		
\Hy@newwindowsettrue	3984, 4749	\Hy@PrevPage	4126		
		\Hy@ps@CR	11654, 11661, 11666, 11667, 11684, 11705, 11706, 11707, 11713, 11720, 11727, 11734		
		\Hy@pstringB	9042, 9047, 10116, 10128, 11093, 11109, 11946, 11962		

12043, 12057

\Hy@RestoreSavedSpaceFactor 2438, 9373, 9453, 9490, 9530, 11812, 12087

\Hy@RestoreSpaceFactor 2429, 2455, 2460, 9372, 9380, 9387, 9452, 9462, 9470, 9489, 9500, 9508, 9529, 9540, 9548, 10860, 10896, 11187, 11195, 11222, 11811, 11819, 11826, 12086, 12098, 12105, 12141, 12145

\Hy@ReturnAfterElseFiFiEnd 489, 1844

\Hy@ReturnAfterFiFiEnd 488, 1836, 1850, 1928, 1935

\Hy@ReturnEnd 487, 488, 489, 1856, 1940

\Hy@safe@activesfalse 490, 4541, 4546, 4889, 8452

\Hy@safe@activetrue 490, 4170, 4539, 4544, 4622, 4659, 4667, 4695, 4812, 4881, 8359, 8441, 14089, 14119

\Hy@samed@currentHref 7152, 7155

\Hy@samed@footnotemark 7244, 7259

\Hy@samed@footnotetext 7245, 7262

\Hy@samed@hook 6129, 6139

\Hy@samed@refstepcounter 6573, 6821

\Hy@SavedSpaceFactor 2425, 2427, 2432, 2433, 2439, 12138

\Hy@SaveLastskip 2463, 8775, 9316, 9331, 9413, 9425, 9682, 10226, 10242, 10317, 10330, 10816, 10830, 11752, 11766, 12032, 12046

\Hy@SaveSavedSpaceFactor 2437, 9371, 9451, 9488, 9528, 11810, 12085

\Hy@SaveSpaceFactor 2426, 2446, 2457, 9370, 9382, 9450, 9464, 9487, 9502, 9527, 9542, 10858, 10894, 11179, 11191, 11199, 11809, 11821, 12084, 12100, 12136, 12143

\Hy@scanauthor 6099, 6104

\Hy@scanoptauthor 6099, 6100

\Hy@scanopttitle 6090, 6091

\Hy@scantitle 6090, 6095

\Hy@secnum@part 14273, 14275, 14278

\Hy@SectionAnchorHref 668, 14211, 14233, 14304

\Hy@SectionHShift 14210, 14219, 14229, 14300

\Hy@seminarslidesfalse 8117

\Hy@seminarslidestrue 8115

\Hy@setbreaklinks 2674, 2678, 2690, 8618, 9675

\Hy@SetCatcodes 181, 231, 4060

\Hy@SetNewWindow 3988, 8920, 8957, 9942, 9970, 10495, 11466, 11497

\Hy@setouterhbox 11155, 11186

\Hy@setpagesizetrue 468

\Hy@setpdfborder 3606, 8807, 8866, 8904, 8941, 9273, 9896, 9928, 9962, 9993, 10026, 10366, 10387, 10410, 10436, 10470, 10504, 10522

\Hy@setpdfversiontrue 2810

\Hy@setref@link 8315, 8318

\Hy@SlidesFormatOptionalPage 6203, 7678, 7697, 7701

\Hy@SlidesPage 6210, 7711, 7712, 7718, 7720, 7723, 7726

\Hy@slidetitle 8144, 8146, 8153, 8161, 8171, 8195, 8197, 8204, 8212, 8222

\Hy@StartlinkName 8805, 8819

\Hy@StepCount 478, 6250, 12388, 12451, 12653, 12868, 12932, 13207, 13274, 13977, 13982, 14058

\Hy@StringLocalhost 4991, 4992, 5007

\Hy@temp 698, 705, 820, 892, 995, 998, 1006, 1007, 2617, 2622, 2623, 2624, 2625, 2626, 2627, 3468, 3477, 3478, 3479, 3480, 3481, 3482, 3483, 3533, 3534, 3535, 3538, 3540, 3543, 3553, 3556, 3557, 3558, 3559, 3560, 3561, 3571, 3584, 3588, 3603, 3765, 3766, 3769, 3772, 3775, 3800, 3808, 3809, 3810, 3811, 3812, 3813, 3814, 3815, 3816, 3980, 3981, 4150, 4154, 4155, 4156, 4157, 4256, 4258, 4263, 4265, 4268, 4282, 4284, 4289, 4291, 4298, 4300, 4305, 4307, 4310, 4370, 4371, 5118, 5122, 5123, 5134, 5218, 5219, 5220, 5222, 5226, 5538, 5539, 5540, 5542, 5546, 5547, 5662, 5674, 5745, 5761, 5762, 5763, 5764, 5765, 5766, 5767, 5768, 5770, 5776, 5782, 5783, 5784, 5785, 5786, 5787, 5788, 5789, 5790, 5791, 5792, 6230, 6233, 6242, 6244, 6248, 6252, 6296, 6298, 6721, 6724, 6727, 6733, 6859, 6865, 6973, 6996, 7228, 7234, 8066, 8067, 9057, 9086, 9088, 9605, 9610, 9616, 9620, 9623, 9628, 9659, 9661, 10088, 10131, 10133, 10993, 10996, 11000, 11001, 11007, 11008, 11014, 11042, 11047, 11053, 11057, 11060, 11065, 11098, 11100, 11161, 11162, 11166, 11254, 11255, 11263, 11264, 11368, 11369, 11895, 11900, 11906, 11910, 11913, 11918, 11951, 11953, 13494, 13495, 14129, 14135, 14143, 14158

\Hy@temp@A 729, 730, 1828, 1830, 1841, 1843, 1848, 1849, 1852, 3801, 3803, 7988, 7989, 7990, 7997, 8025, 8026, 8027, 8036

\Hy@temp@B 1829, 1830

\Hy@tempa 2511, 2513, 2515, 2516, 2518, 2520, 2522, 2525, 2528, 2529, 3022, 3023, 3024, 3026, 3027, 3029, 3030, 3032, 3036, 3040, 3051, 3053, 3055, 3056, 3058, 3062, 4628, 4629, 4640, 4644, 4813, 4817, 4880, 4883, 4892, 4894, 5525, 5526, 5566, 5567, 5570, 5574, 6279, 6281, 6319, 6321, 6466, 6468, 6943, 6945, 6946, 6949, 6950, 6951, 7306, 7311, 7316, 7789, 7790, 7808, 7809, 7815, 8131, 8132, 8183, 8184, 9349, 9350, 10207, 10355, 10356, 11784, 11785, 12063, 12064, 13860, 13861, 13884, 13886, 13905, 13906, 13914, 13938, 13940, 13941, 13943, 13944, 14327, 14352, 14357, 14360, 14363

\Hy@tempb 6280, 6281, 6320, 6321, 13885, 13886, 13914

\Hy@tempcolor 10872, 10874, 10887, 10963, 10965, 10977

\Hy@TempPageAnchor 7681, 7737, 7747, 7751, 7767

\Hy@Test@Alph 6622, 6645

\Hy@Test@alph 6613, 6641

\Hy@testname 8793, 8794, 8799, 8801, 8802, 8816, 9877, 9878, 9883, 9885, 9887, 9903, 10374, 10375, 10380, 10384, 10457, 10458, 10463, 10467, 10968, 10969, 10974, 10985

\Hy@texhtfalse 469

\Hy@texhttrue	2854, 4252	
\Hy@TheSlideOptionalPage	7696,	
7700, 7705, 7714		
\Hy@title	6092, 6096	
\Hy@toclevel	7800, 7804, 7817	
\Hy@toolbartrue	470	
\Hy@true	2417, 2516, 2518, 3056,	
3058, 5567		
\Hy@typexmlfalse	471	
\Hy@undefinedname	8790,	
8797, 8799, 9873, 9881, 9883,		
10343, 10378, 10380, 10461,		
10463, 10959, 10972, 10974		
\Hy@unicodefalse	472, 796, 806,	
2740, 2741, 2749, 3742, 3748,		
6723, 7742, 13543		
\Hy@unicodetrue	2741, 6400, 6414	
\Hy@useHidKeyfalse	3525	
\Hy@useHidKeytrue	3529	
\Hy@UseMaketitleInfos		
.	6145, 9099, 9567, 10048,	
10752, 10991, 11864		
\Hy@UseMaketitleString	6126,	
6146, 6147		
\Hy@UseNameKey		
.	2595, 9064, 9065, 9066,	
9067, 9068, 9069, 9070, 9071,		
9090, 9635, 9636, 9637, 9638,		
9639, 9640, 9641, 9642, 9663,		
10095, 10096, 10097, 10098,		
10099, 10100, 10101, 10102,		
10135, 10724, 10725, 10726,		
10727, 10728, 10729, 10730,		
10731, 11072, 11073, 11074,		
11075, 11076, 11077, 11078,		
11079, 11102, 11925, 11926,		
11927, 11928, 11929, 11930,		
11931, 11932, 11955		
\Hy@usetitlefalse	473	
\Hy@varioref@refstepcounter	6812,	
6819		
\Hy@varioref@undefined	6803,	
6807, 8447		
\Hy@VerboseAnchor	4692, 8776,	
9317, 9332, 9414, 9426, 9683,		
10227, 10243, 10318, 10331,		
10817, 10831, 11753, 11767,		
12033, 12047		
\Hy@verbosefalse	474	
\Hy@VerboseGlobalTemp	4668,	
4669, 4670, 4671, 4675		
\Hy@VerboseLinkInfo	4675, 4676,	
4679, 4686		
\Hy@VerboseLinkStart		
.	4664, 8839, 8849,	
9347, 9399, 9435, 9447, 9875,		
10183, 10206, 10345, 10450,		
10849, 10961, 11782, 11838,		
12061, 12118		
\Hy@VerboseLinkStop	4680, 8824	
\Hy@VersionCheck	290, 4381	
\Hy@VersionChecked	289, 322,	
4378, 4380		
\Hy@vt@PutCatalog	6372, 6374	
\Hy@VTeXversion	6352, 6364,	
10406, 10535, 10671, 14010		
\Hy@WarnHTMLFieldOption	5592, 5625, 5628, 5778	
\Hy@Warning	278, 353,	
512, 1768, 2533, 2548, 2573,		
2653, 2768, 2773, 3385, 3437,		
3516, 3579, 3598, 3777, 3824,		
3832, 3943, 4491, 4736, 4779,		
4895, 5017, 5175, 5530, 5593,		
5667, 6410, 6425, 7781, 8428,		
8477, 8795, 9716, 9720, 9879,		
10376, 10459, 10970, 11291,		
11300, 13869, 13887		
\Hy@WarningNoLine	279, 2612,	
2680, 2794, 3488, 3549, 3693,		
3793, 4045, 4109, 4260, 4269,		
4286, 4302, 4311, 6073, 6175,		
6366, 6480, 6708, 7791, 7946,		
11128		
\Hy@WarningPageBorderColor	3546, 3548, 3550	
\Hy@WarningPageColor	3485,	
3487, 3489		
\Hy@WarnOptionDisabled	2545,	
2547		
\Hy@WarnOptionValue	2526,	
2532, 3043, 3065		
\Hy@windowuitrue	475	
\Hy@wrapper@babel	4168, 4186	
\Hy@WrapperDef	4178, 8771,	
9315, 9330, 9412, 9424, 9681,		
10225, 10241, 10316, 10329,		
10815, 10829, 11751, 11765,		
12031, 12045		
\Hy@writebookmark	2422, 7801,	
8151, 8159, 8169, 8202, 8210,		
8220, 13846, 13988		
\Hy@xspace@end		
.	4074, 4079, 4082, 4086, 4089,	
4094, 4095, 4096, 4098, 4099,		
4100, 4101, 4102, 5961, 5962,		
5964, 5967, 5969, 5970, 5971,		
5975, 5978, 5981, 5983, 5984,		
5985, 8855, 8890, 8930, 8966,		
9392, 9463, 9478, 9501, 9517,		
9541, 9557, 9913, 9949, 9981,		
10010, 10035, 10187, 10197,		
10418, 10444, 10479, 10512,		
10530, 11189, 11197, 11820,		
11831, 12099, 12111, 12142		
\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	506, 510	
\HyCal@scan	497, 501, 525	
\HyColor@FieldBCColor	5726, 5729	
\HyColor@FieldColor	5732	
\HyColor@HyperrefBorderColor	3536, 3554	
\HyColor@HyperrefColor	3473,	
3492, 3493, 3494, 3495, 3496,		
3497, 3498		
\HyColor@UseColor	4513, 8737,	
8748, 9837, 9848		
\HyField@@AddToFields	12764,	
12768		
\HyField@@PDFChoices	5413,	
5414, 5429		
\HyField@@SetFlag	5108, 5110	
\HyField@@UseFlag	5098, 5100	

\HyField@AddToFields . . 12734,
12763, 12853, 12947, 12960,
12986, 13010, 13033, 13054
\HyField@AdvanceAnnotCount .
13154, 13183, 13279, 13309,
13337, 13365, 13393, 13419
\HyField@afields . . 12731, 12753,
12754, 12756, 12791
\HyField@AfterAuxOpen . 12744,
12751, 12769
\HyField@AnnotCount . . . 13152,
13155, 13158
\HyField@AuxAddToFields 12743,
12748, 12752, 12772
\HyField@FlagsAnnot 5268, 5287,
5301, 5314, 5330, 5362
\HyField@FlagsCheckBox . 5300,
12546, 13047, 13414
\HyField@FlagsChoice . . . 5361,
12427, 12908, 13247
\HyField@FlagsPushButton 5286,
12485, 12504, 12528, 12978,
12998, 13027, 13335, 13359,
13389
\HyField@FlagsRadioButton 5313,
12423, 12904, 13243
\HyField@FlagsSubmit . . . 5234,
12505, 12999, 13360
\HyField@FlagsText 5329, 12366,
12846, 13177
\HyField@NeedAppearancesfalse
. 5558, 5571
\HyField@NeedAppearancetrue
. 5561, 5564, 5568
\HyField@NewBitsetFlag . . 5066,
5069, 5077
\HyField@NewFlag . . 5064, 5140,
5141, 5142, 5143, 5144, 5145,
5146, 5147, 5148, 5149, 5150,
5151, 5152, 5153, 5154, 5155,
5156, 5157, 5158, 5159, 5164,
5165, 5166, 5167, 5168, 5169,
5170, 5171, 5172, 5205, 5207,
5208, 5210, 5211, 5213, 5214,
5215, 5216
\HyField@NewFlagOnly . . . 5068,
5206, 5209, 5212
\HyField@NewOption 5065, 5071
\HyField@PDFAFlagWarning . . .
5174, 5182, 5186, 5190, 5194,
5198, 5202
\HyField@PDFChoices 5386,
12464, 12954, 13303
\HyField@PrintFlags . 5115, 5261,
5279, 5293, 5306, 5322, 5354,
5379
\HyField@SetFlag . . . 5107, 5247,
5253, 5258, 5292, 5320
\HyField@SetKeys . . 5490, 12363,
12394, 12397, 12416, 12473,
12501, 12518, 12543, 12842,
12874, 12877, 12896, 12965,
12995, 13017, 13043, 13173,
13213, 13216, 13235, 13321,
13356, 13379, 13410
\HyField@TheAnnotCount 13157,
13187, 13192, 13284, 13296,
13311, 13316, 13342, 13348,
13367, 13372, 13395, 13400,
13423, 13428
\HyField@UseFlag . . . 5097, 5238,
5239, 5240, 5241, 5242, 5243,
5244, 5245, 5248, 5249, 5250,
5251, 5254, 5255, 5256, 5259,
5270, 5271, 5272, 5273, 5274,
5275, 5276, 5277, 5278, 5289,
5290, 5291, 5303, 5304, 5305,
5316, 5317, 5318, 5319, 5321,
5332, 5333, 5334, 5335, 5336,
5337, 5338, 5339, 5350, 5353,
5364, 5365, 5366, 5367, 5369,
5371, 5372, 5375, 5378
\HyInd@@@wrindex . . 7984, 7987,
8018, 8024
\HyInd@@hyperpage . 8064, 8074
\HyInd@@wrindex . . . 7979, 7980
\HyInd@EncapChar . . 3073, 4055,
7974
\HyInd@hyperpage . . . 8061, 8063,
8070
\HyInd@Org@wrindex . 7978, 7982,
7992, 7998, 8000, 8003
\HyInd@pagelink 8079, 8085, 8087,
8090
\HyInd@ParenLeft . . . 7961, 7989,
8026
\HyInd@ParenRight . . 7962, 7990,
7997, 8027, 8036
\HyInd@removespaces 8093, 8096,
8106
\HyInfo@AddonHandler . . . 3819,
3822
\HyInfo@AddonList . . 3846, 3847,
3881, 3888
\HyInfo@Addons 3867, 3883, 9123,
10073, 11023, 11027
\HyInfo@AddonUnsupportedtrue
. . . 9565, 10750, 11862
\HyInfo@do 3821, 3848, 3871
\HyInfo@GenerateAddons . 3865,
9100, 10049, 10992
\HyInfo@Key . . 3829, 3830, 3838,
3843, 3848, 3851, 3858, 3872,
3876
\HyInfo@KeyEscaped . 3828, 3829
\HyInfo@trapped@false 3769, 3788
\HyInfo@trapped@true 3766, 3787
\HyInfo@trapped@unknown 3772,
3789
\HyInfo@TrappedUnsupported . .
. . . 3790, 3794, 9568, 10753,
11865
\HyInfo@Value 3842, 3844
\HyLang@addto 3277, 3293, 3311,
3344, 3352
\HyLang@afrikaans 3075
\HyLang@DeclareLang 3291, 3320,
3321, 3322, 3323, 3324, 3325,
3326, 3327, 3328, 3329, 3330,
3331, 3332, 3333, 3334, 3335,
3336, 3337, 3338, 3339, 3340,
3341, 3342
\HyLang@english 3093
\HyLang@french 3111
\HyLang@german 3129
\HyLang@italian 3147
\HyLang@magyar 3165
\HyLang@portuges 3183
\HyLang@russian 3201
\HyLang@spanish 3241
\HyLang@vietnamese . 3259, 3344,
3352
\HyLinguex@OrgB 894, 898
\HyLinguex@OrgC 895, 899
\HyLinguex@OrgD 896, 900
\HyLinguex@Restore . . 897, 910,
914, 922, 2722
\HyOpt@CheckDvi . . 2842, 2878,
2883, 2888, 2911, 2916, 2921,
2973, 2980, 2985, 2990, 2995
\HyOpt@DriverFallback . . 2999,
3002, 3003, 3007, 4347, 4352
\HyOpt@DriverType . 4320, 4322,
4349, 4359, 4361, 4377
\HyOrg@addtoreset . . 7904, 7906,
7933
\HyOrg@appendix . . . 6604, 6610
\HyOrg@author . 6089, 6102, 6106
\HyOrg@float@makebox . . 7372,
7374
\HyOrg@hyperpage . . 7964, 7966,
7967
\HyOrg@languageshorthands 966,
980, 991, 1001
\HyOrg@make@df@tag@@ . 7889
\HyOrg@make@df@tag@@@ 7890
\HyOrg@maketitle . . . 7242, 7249,
7254
\HyOrg@subequations 6960, 6967
\HyOrg@title . . . 6088, 6093, 6097

<code>\HyOrg@url</code>	4792		
<code>\HyPat@NonNegativeReal</code> .	3574, 3575, 3576, 3577, 3593, 3595, 3924, 3934, 3935, 3936, 3938, 3939, 3940		
<code>\HyPat@ObjRef</code>	4776, 4777, 4790, 8619, 9676, 10812		
<code>\hyper@@anchor</code>	4093, 4802, 4804, 4835, 4837, 4870, 4872, 5014, 5962, 5977, 5993, 7118, 7123, 7133, 7138, 7190, 7193, 7219, 7347, 7350, 7378, 7682, 7737, 7747, 7752, 8150, 8158, 8168, 8201, 8209, 8219		
<code>\hyper@@link</code>	4662, 4720, 4825, 4849, 4851, 4875, 7435, 7581, 7582, 7583, 7631, 7633, 7635, 8320, 8335, 8437		
<code>\hyper@@normalise</code>	4631, 4635, 4639		
<code>\hyper@anchor</code>	5041, 5965, 5979, 6043, 6056, 8827, 9315, 9412, 9739, 10241, 10316, 10815, 11751, 12031		
<code>\hyper@anchorend</code>	4082, 4089, 4096, 5949, 5967, 5981, 5996, 6590, 6773, 6848, 6889, 6908, 6932, 7079, 7429, 7454, 7457, 7477, 7610, 7874, 7900, 8834, 9340, 9430, 9746, 10236, 10338, 10837, 11775, 12054, 13842, 13989, 14221, 14246, 14257, 14287, 14339		
<code>\hyper@anchorstart</code>	4095, 5949, 5966, 5980, 5995, 6590, 6772, 6848, 6886, 6908, 6932, 7076, 7427, 7452, 7457, 7477, 7610, 7874, 7900, 8830, 9330, 9424, 9742, 10225, 10329, 10829, 11765, 12045, 13842, 13989, 14221, 14246, 14257, 14287, 14339		
<code>\hyper@chars</code>	4656, 8862, 9320, 9334, 9354, 9376, 9390, 9404, 9484, 9524, 10192, 10213, 10229, 10246, 10321, 10333, 10425, 11425, 11769, 11789, 11815, 11829, 11843, 12049, 12068, 12091, 12108, 12123		
<code>\hyper@currentanchor</code>	10834, 10843, 10866, 10883		
<code>\hyper@currentlinktype</code>	10867, 10871, 10875		
<code>\hyper@hash</code>	4608, 4609, 4657, 4937, 4949, 4966, 4969, 5916, 5918, 5919, 5920, 5921, 5922, 5923, 5924, 5925, 5926, 5927, 5928, 5929, 5930, 5931, 5932, 5933, 5934, 5935, 5936, 5937, 5938, 5939, 5940, 5941, 5942, 5943, 5944, 5945, 5946, 5947, 5948, 5949, 5950, 5951, 5952, 5953, 5954, 5955, 5956, 5957, 5958, 5959, 5960, 5961, 5962, 5963, 5964, 5965, 5966, 5967, 5968, 5969, 5970, 5971, 5972, 5973, 5974, 5975, 5976, 5977, 5978, 5979, 5980, 5981, 5982, 5983, 5984, 5985, 5986, 5987, 5988, 5989, 5990, 5991, 5992, 5993, 5994, 5995, 5996, 5997, 5998, 5999, 6000, 6001, 6002, 6003, 6004, 6005, 6006, 6007, 6008, 6009, 6010, 6011, 6012, 6013, 6014, 6015, 6016, 6017, 6018, 6019, 6020, 6021, 6022, 6023, 6024, 6025, 6026, 6027, 6028, 6029, 6030, 6031, 6032, 6033, 6034, 6035, 6036, 6037, 6038, 6039, 6040, 6041, 6042, 6043, 6044, 6045, 6046, 6047, 6048, 6049, 6050, 6051, 6052, 6053, 6054, 6055, 6056, 6057, 6058, 6059, 6060, 6061, 6062, 6063, 6064, 6065, 6066, 6067, 6068, 6069, 6070, 6071, 6072, 6073, 6074, 6075, 6076, 6077, 6078, 6079, 6080, 6081, 6082, 6083, 6084, 6085, 6086, 6087, 6088, 6089, 6090, 6091, 6092, 6093, 6094, 6095, 6096, 6097, 6098, 6099, 6100, 6101, 6102, 6103, 6104, 6105, 6106, 6107, 6108, 6109, 6110, 6111, 6112, 6113, 6114, 6115, 6116, 6117, 6118, 6119, 6120, 6121, 6122, 6123, 6124, 6125, 6126, 6127, 6128, 6129, 6130, 6131, 6132, 6133, 6134, 6135, 6136, 6137, 6138, 6139, 6140, 6141, 6142, 6143, 6144, 6145, 6146, 6147, 6148, 6149, 6150, 6151, 6152, 6153, 6154, 6155, 6156, 6157, 6158, 6159, 6160, 6161, 6162, 6163, 6164, 6165, 6166, 6167, 6168, 6169, 6170, 6171, 6172, 6173, 6174, 6175, 6176, 6177, 6178, 6179, 6180, 6181, 6182, 6183, 6184, 6185, 6186, 6187, 6188, 6189, 6190, 6191, 6192, 6193, 6194, 6195, 6196, 6197, 6198, 6199, 6200, 6201, 6202, 6203, 6204, 6205, 6206, 6207, 6208, 6209, 6210, 6211, 6212, 6213, 6214, 6215, 6216, 6217, 6218, 6219, 6220, 6221, 6222, 6223, 6224, 6225, 6226, 6227, 6228, 6229, 6230, 6231, 6232, 6233, 6234, 6235, 6236, 6237, 6238, 6239, 6240, 6241, 6242, 6243, 6244, 6245, 6246, 6247, 6248, 6249, 6250, 6251, 6252, 6253, 6254, 6255, 6256, 6257, 6258, 6259, 6260, 6261, 6262, 6263, 6264, 6265, 6266, 6267, 6268, 6269, 6270, 6271, 6272, 6273, 6274, 6275, 6276, 6277, 6278, 6279, 6280, 6281, 6282, 6283, 6284, 6285, 6286, 6287, 6288, 6289, 6290, 6291, 6292, 6293, 6294, 6295, 6296, 6297, 6298, 6299, 6300, 6301, 6302, 6303, 6304, 6305, 6306, 6307, 6308, 6309, 6310, 6311, 6		

\HyPL@Alph	6195	\HyPsd@@CJKnumber 1452, 1454,	\HyPsd@CatcodeWarning . 1887,
\HyPL@alph	6196	1457, 1510, 1525, 1538, 1540,	1904, 1907, 1910, 1913, 1969
\HyPL@arabic	6192	1544	\HyPsd@Char 2172
\HyPL@CheckThePage 6227, 6275		\HyPsd@@ConvertToUnicode . . .	\HyPsd@CharOctByte 2192, 2194,
\HyPL@Entry . 6468, 6476, 6484,		. . . . . 2170	2197, 2206, 2211
6486		\HyPsd@@GetNextTwoTokens . .	\HyPsd@CharSurrogate . . 2186,
\HyPL@EveryPage . . . 6215, 6339		. . . . . 2168	2203
\HyPL@Format 6291, 6292, 6293,		\HyPsd@@GlyphProcessWarning	\HyPsd@CharTwoByte 2184, 2191
6294, 6295, 6307		. . . . . 2028, 2031	\HyPsd@CheckCatcodes 716, 1864
\HyPL@found . 6290, 6297, 6301,		\HyPsd@@GreekNum . 1114, 1123,	\HyPsd@CJK@Unicode 1334, 1338
6308, 6318, 6320		1222, 1226, 1230	\HyPsd@CJKActiveChars . 1274,
\HyPL@Labels . 6186, 6330, 6331,		\HyPsd@@hspace 1607, 1608	1289
6333, 6335, 6386, 6387, 6479,		\HyPsd@@LetCommand . . 1731,	\HyPsd@CJKdigit . . . 1563, 1573
6487, 6488		1752	\HyPsd@CJKdigits . . 1336, 1549
\HyPL@LastNumber . 6190, 6246,		\HyPsd@@nameref . . . 1668, 1669	\HyPsd@CJKhook 669, 1245, 1256
6269		\HyPsd@@pageref . . . 1650, 1651	\HyPsd@CJKhook@bookmarks .
\HyPL@LastPrefix . . . 6191, 6240,		\HyPsd@@ProtectSpacesFi . 1780,	. . . . . 1251, 1285
6271		1784, 1802, 1808, 1813	\HyPsd@CJKhook@unicode 1253,
\HyPL@LastType 6189, 6231, 6270		\HyPsd@@ref 1634, 1635	1333
\HyPL@page . . 6209, 6218, 6221,		\HyPsd@@RemoveBraces . . 1826	\HyPsd@CJKnumber . 1335, 1449
6227, 6236		\HyPsd@@RemoveBracesFi 1823,	\HyPsd@CJKnumberFour . 1467,
\HyPL@Prefix . 6236, 6238, 6240,		1826	1471, 1475, 1488, 1492, 1496,
6254, 6257, 6259, 6271, 6285,		\HyPsd@@RemoveCmdPrefix . . .	1502
6323		. . . . . 1985, 1988	\HyPsd@CJKnumberLarge . 1480,
\HyPL@Roman 6193		\HyPsd@@ReplaceFi . 2055, 2061,	1487
\HyPL@roman 6194		2066	\HyPsd@CJKnumberThree 1508,
\HyPL@SetPageLabels 6329, 6394,		\HyPsd@@UTFviii@four . . 2275,	1512, 1518
6482		2280	\HyPsd@CJKnumberTwo . . 1523,
\HyPL@SlidesOptionalPage 6202,		\HyPsd@add@accent . . 554, 1596	1527, 1533
6206, 6211		\HyPsd@AfterCountRemove 1871,	\HyPsd@ConvertToUnicode . 784,
\HyPL@SlidesSetPage 6197, 6199,		1942	2118
6219		\HyPsd@AfterDimenRemove . . .	\HyPsd@DecimalToOctal . . 1266,
\HyPL@StorePageLabel . . . 6254,		. . . . . 1877, 1945	1297
6256, 6326, 6384, 6463		\HyPsd@AfterSkipRemove . 1883,	\HyPsd@DecimalToOctalFirst . .
\HyPL@thisLabel 6183, 6185, 6217,		1957	. . . . . 1340, 1376
6221, 6222		\HyPsd@AMScsfix . 653, 1617,	\HyPsd@DecimalToOctalSecond
\HyPL@Type . . 6224, 6231, 6235,		1619	. . . . 1341, 1350, 1413
6253, 6261, 6270, 6284, 6322		\HyPsd@AppendItalcorr . . 1842,	\HyPsd@DefCommand . 699, 700,
\HyPL@Useless 6327, 6333		1849, 1858	701, 702, 1720
\HyPL@SlidesSetPage 6226		\HyPsd@autoref 663, 1686	\HyPsd@DisableCommands . 945,
\HyPsd@@@autoref . . 1689, 1691,		\HyPsd@autorefname . 1698, 1704	947
1694		\HyPsd@babel@danish 1010	\HyPsd@DoConvert . . 2120, 2130
\HyPsd@@@CJKdigits 1559, 1562,		\HyPsd@babel@dutch 1016	\HyPsd@DoEscape 2144
1570		\HyPsd@babel@finnish 1022	\HyPsd@doboxspace 756, 2091
\HyPsd@@@nameref . . 1671, 1673,		\HyPsd@babel@frenchb . . . 1027	\HyPsd@empty 741, 743, 747, 748,
1676		\HyPsd@babel@german . . . 1032	750, 758, 765
\HyPsd@@@pageref . . 1653, 1655,		\HyPsd@babel@macedonian 1039	\HyPsd@end 716, 720, 1781, 1784,
1658		\HyPsd@babel@ngerman . . 1045	1787, 1790, 1793, 1806, 1816,
\HyPsd@@@ref . . 1637, 1639, 1642		\HyPsd@babel@portuges . . 1051	1823, 1826, 1864, 1872, 1878,
\HyPsd@@@UTFviii@four . . 2291,		\HyPsd@babel@russian . . . 1056	1884, 1929, 1936, 1942, 1945,
2294		\HyPsd@babel@slovene . . . 1062	1957
\HyPsd@@AppendItalcorr . 1858		\HyPsd@babel@spanish . . . 1067	\HyPsd@endWithElse 1586, 1595
\HyPsd@@autoref . . . 1686, 1687		\HyPsd@babel@swedish . . . 1077	\HyPsd@EscapeTeX 795, 805, 2073
\HyPsd@@autorefname 1707, 1710		\HyPsd@babel@ukrainian . . 1083	\HyPsd@fi . 1798, 1804, 1808, 1814
\HyPsd@CJKdigits . 1551, 1553,		\HyPsd@babel@usorbian . . 1089	\HyPsd@GetNextTwoTokens 2168
1556		\HyPsd@BabelPatch . . 639, 965,	\HyPsd@GetOneByte 2163
		1000	\HyPsd@GetTwoBytes 2159

\HyPsd@GLYPHERR 721, 1583, 1597, 1604
\HyPsd@GlyphProcess 723, 2016, 2029
\HyPsd@GlyphProcessWarning 2023, 2027
\HyPsd@GobbleFiFi . 1588, 1594
\HyPsd@GreekNum . . 1103, 1106, 1108
\HyPsd@Greeknumeral 1099, 1105
\HyPsd@greeknumeral 1098, 1102
\HyPsd@GreekNumI . 1126, 1152, 1195, 1221
\HyPsd@GreekNumII . 1130, 1174, 1218, 1225
\HyPsd@GreekNumIII 1133, 1197, 1229
\HyPsd@GreekNumIV 1142, 1220
\HyPsd@GreekNumV . 1145, 1224
\HyPsd@GreekNumVI 1147, 1228
\HyPsd@GreekPatch . 636, 1095, 1097
\HyPsd@HighA 1344, 1353
\HyPsd@HighB 1354, 1359
\HyPsd@HighC 1360, 1363
\HyPsd@HighD 1356, 1368
\HyPsd@href 658, 1633
\HyPsd@hspace 654, 1607
\HyPsd@hspacetest . . 1610, 1612, 1615
\HyPsd@ifnextchar 685, 686, 687, 1757
\HyPsd@ignorespaces . . . 667, 956
\HyPsd@InitUnicode 919
\HyPsd@inmathwarn . . 553, 1580
\HyPsd@ITALCORR . . 677, 681, 1604
\HyPsd@langshort@system . . 971, 974
\HyPsd@LanguageShorthands 967, 972, 984
\HyPsd@LetCommand . 703, 704, 1720
\HyPsd@LetUnexpandableSpace . . . 672, 673, 674, 675, 1600, 1603
\HyPsd@LoadStringEnc . . . 2765, 2785, 2787, 2791, 2793, 6405
\HyPsd@LoadUnicode 2714, 2719, 2727, 2730, 2732, 2739, 6399
\HyPsd@nameref 662, 1668
\HyPsd@pageref 661, 1650
\HyPsd@pdfencoding . 785, 2713, 2716, 2748, 2760, 2763, 2764, 2769, 2784, 6401, 6403, 6420, 6423
\HyPsd@pdfencoding@auto . 785, 2754, 2764, 2781, 6403, 6422
\HyPsd@pdfencoding@pdfdoc 2747, 2769, 2782
\HyPsd@pdfencoding@unicode 2751, 2783, 6401, 6419
\HyPsd@PrerenderUnicode 3703, 3719, 3725, 3731, 3737, 3755, 3761, 3841
\HyPsd@protected@testopt . 688, 689, 1761
\HyPsd@ProtectSpaces 709, 1778, 1799, 1848
\HyPsd@ref 660, 1634
\HyPsd@RemoveBraces 711, 1820, 1837, 1845, 1851
\HyPsd@RemoveCmdPrefix 1978, 1984
\HyPsd@RemoveMask 719, 1787, 1793, 1806, 1816
\HyPsd@RemoveSpaceWarning 1952, 1964, 1990
\HyPsd@ReplaceSpaceWarning 1947, 1959, 2003
\HyPsd@Rest . . 1865, 1925, 1933, 1936, 1943, 1948, 1954, 1960, 1966
\HyPsd@RussianPatch . 638, 1238
\HyPsd@SanitizeForOutFile 13906, 13937
\HyPsd@SanitizeOut@BraceLeft . . . 13941, 13947, 13956
\HyPsd@SanitizeOut@BraceRight . . . 13944, 13959, 13968
\HyPsd@SPACEOPTI . 713, 728, 729, 731, 733, 735, 736, 775, 777, 1900, 2102
\HyPsd@spaceopti 777, 2047
\HyPsd@SpanishPatch . 637, 1232
\HyPsd@String 710, 712, 715, 717, 722, 724, 1831, 1832, 1842, 1894, 1895, 1899, 1900, 1915, 1916, 1946, 1958, 2017, 2018
\HyPsd@StringSubst . . 725, 727, 733, 739, 742, 745, 748, 767, 770, 772, 2070
\HyPsd@Subst . 721, 730, 734, 740, 746, 750, 754, 759, 760, 761, 762, 763, 764, 768, 771, 2054, 2071, 2086, 2087, 2088
\HyPsd@temp 788, 790, 791, 793, 794, 801, 803, 804, 2746, 2747, 2748, 2751, 2754, 2760, 2772, 2776, 6418, 6419, 6420, 6422, 6423, 6428
\HyPsd@ToBigChar 845, 846, 855
\HyPsd@ToBigChars . . . 798, 837
\HyPsd@tocsection . . 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1628
\HyPsd@UnescapedString . . 790, 839, 840, 846
\HyPsd@UnexpandableSpace 1603, 1789, 1813, 1948, 1960
\HyPsd@unichar 2233, 2300, 2306, 2311
\HyPsd@unichar@first@byte 2319, 2339
\HyPsd@unichar@octtwo . . 2341, 2349, 2355
\HyPsd@unichar@second@byte 2327, 2347
\HyPsd@UnicodeReplacementCharacter 2303, 2338
\HyPsd@utf@viii@undeferr . . 550, 2361
\HyPsd@UTFviii . 544, 2221, 2226
\HyPsd@UTFviii@@three . . 2256, 2265
\HyPsd@UTFviii@@two 2241, 2247
\HyPsd@UTFviii@ccxliv@def 2231, 2237
\HyPsd@UTFviii@ccxliv@undef 2230, 2236
\HyPsd@UTFviii@four 2229, 2274
\HyPsd@UTFviii@three 2228, 2255
\HyPsd@UTFviii@two 2227, 2240
\HyPsd@Warning 1765, 1970, 1991, 2004, 2033, 2039
\HyPsd@XeTeXBigCharsfalse 812, 826, 831
\HyPsd@XeTeXBigCharstrue 825, 834, 3718, 3724, 3730, 3736, 3754, 3760, 3840, 13546, 13904
\HyPsd@XSPACE 679, 755, 1604
\HyPsd@xspace . . . 753, 755, 756
\HyRef@StarSetRef . 8363, 8368
\HyRef@autopageref . 8420, 8422
\HyRef@autopagerefname . 8419, 8423, 8425
\HyRef@autoref 8437, 8439
\HyRef@autosetref . . . 8442, 8445
\HyRef@CaseStar 8506, 8512
\HyRef@currentHtag . 8458, 8476, 8479, 8485, 8492, 8498, 8513
\HyRef@MakeUppercaseFirstOfFive 8386, 8388
\HyRef@name . 8474, 8475, 8480, 8487, 8505, 8506, 8507, 8509
\HyRef@Ref 8392, 8394
\HyRef@ShowKeysInit 8515, 8528, 8532

`\HyRef@ShowKeysRef` 8446, 8514
`\HyRef@StarSetRef` . . 8357, 8375, 8378, 8381, 8386
`\HyRef@StripStar` . . . 8473, 8504
`\HyRef@testreftype` . . 8451, 8470
`\HyRef@thisref` 8448, 8451
`\HyTmp@found` . 5440, 5450, 5453
`\HyTmp@key` 5434, 5435
`\HyTmp@optitem` . . . 5390, 5406, 5433, 5438, 5444, 5465, 5476
`\HyTmp@optlist` 5389, 5404, 5405, 5436, 5437, 5442, 5443, 5451, 5452, 5472, 5474, 5481, 5484
`\HyXeTeX@CheckUnicode` . 3689, 3700, 3717, 3723, 3729, 3735, 3753, 3759, 3839, 6433

I

`\i` 14523, 14686, 14689, 14692, 14695, 14892, 15054, 15057, 15060, 15063, 15180, 15185, 15190, 15195, 15199, 15366, 15422
`\if` 1629, 2411, 6244, 6252, 6949, 6950, 10611, 10614, 10618, 10622, 10626, 10628, 10630, 13594
`\if@eqnstar` 6891, 6899
`\if@filesw` 2379, 4863, 6033, 6077, 6464, 6474, 6715, 7464, 7479, 7495, 7507, 7537, 7560, 7587, 7592, 7611, 8012, 12746, 12770, 13907, 14094, 14176
`\if@hyper@item` 6549, 6562
`\if@inlabel` 7065
`\if@Localurl` 10173, 10219
`\if@mid@expandable` 652
`\if@minipage` 7335, 7406
`\if@nmbrlist` 6536
`\if@nobreak` 7084
`\if@skiphyperref` 6550, 6560
`\if@twocolumn` 14341
`\if@twoside` 14330
`\ifcase` 346, 1159, 1181, 1204, 1298, 1347, 1369, 1372, 1378, 1414, 1458, 1574, 2269, 2751, 3434, 4380, 5236, 5341, 5470, 5547, 6614, 6623, 7831, 7989, 8026, 8255, 8447, 10684, 11174, 13652, 13679, 13746, 13781, 13816, 14014
`\ifcat` 1866, 1893, 1898, 1903, 1906, 1909, 1912, 5025, 5027
`\ifdim` 1615, 1946, 1950, 1958, 1962, 2466, 2485, 4042, 4406, 9229, 9233, 9238, 9242, 9249, 9252, 9256, 9259, 10153, 10154, 10159, 10160,

10292, 10295, 10299, 10302, 11203, 11217, 11576, 11577, 11582, 11583, 12390, 12428, 12429, 12870, 12909, 12910, 13209, 13248, 13249
`\ifetex@unexpanded` 1772
`\iffalse` 832, 5559
`\ifFileExists` 6072, 12150
`\ifFld@checked` 5493, 12708, 13639
`\ifFld@comb` 5340
`\ifFld@combo` . 5368, 5373, 12403, 12432, 12883, 12913, 13222, 13252
`\ifFld@disabled` 5494, 12709
`\ifFld@edit` 5374
`\ifFld@fileselect` 5343
`\ifFld@hidden` 12367, 12417, 12486, 12506, 12529, 12547, 12607, 12619, 12629, 12712, 12847, 12898, 12979, 13000, 13028, 13048, 13178, 13237, 13336, 13361, 13390, 13415
`\ifFld@multiline` 5341, 12356, 12614, 12835, 13166
`\ifFld@multiselect` 5412
`\ifFld@password` 5342, 12595
`\ifFld@popdown` 5160, 12404, 12884, 13223
`\ifFld@radio` . 12400, 12422, 12644, 12880, 12903, 13219, 13242
`\ifFld@readonly` . . . 12616, 12626, 12710
`\ifForm@html` 5514
`\ifhmode` . 2427, 2431, 2484, 2493, 4702, 6974, 6998, 7031, 7150, 7159, 7293, 7295, 8772, 8780, 11209, 12135
`\ifHy@activeanchor` . . . 396, 5038
`\ifHy@backref` . . 397, 4211, 4583, 5896, 7588, 7624
`\ifHy@bookmarks` 398, 4431
`\ifHy@bookmarksnumbered` . 399, 8143, 8194, 13893
`\ifHy@bookmarksopen` . 400, 4421
`\ifHy@breaklinks` 401, 2679, 10850, 10891, 11185, 11208
`\ifHy@centerwindow` 402, 9062, 9633, 10093, 10722, 11070, 11923
`\ifHy@CJKbookmarks` . 403, 1250
`\ifHy@colorlinks` . 404, 4502, 5901, 11738
`\ifHy@displaydoctitle` 439, 9063, 9634, 10094, 10723, 11071, 11924
`\ifHy@draft` 405, 4092
`\ifHy@DviMode` . 2823, 2843, 3001

`\ifHy@DvipdfmxOutlineOpen` 4404, 14149
`\ifHy@escapeform` . . . 408, 13490, 13520
`\ifHy@figures` 409, 4191, 5881, 7953
`\ifHy@fitwindow` 410, 9061, 9632, 10092, 10721, 11069, 11922
`\ifHy@frenchlinks` 411, 4518
`\ifHy@href@ismap` . . . 4758, 8883, 10001, 10359, 10429, 11437
`\ifHy@hyperfootnotes` . 412, 7092
`\ifHy@hyperindex` 413, 4201, 5891, 7960
`\ifHy@hypertextnames` 414, 6637, 6719, 7735, 8148, 8199
`\ifHy@implicit` . . 415, 4223, 14204
`\ifHy@linktocpage` 416, 2636, 2646
`\ifHy@localanchorname` 417, 6670, 6681
`\ifHy@menubar` . 418, 9059, 9630, 10090, 10719, 11067, 11920
`\ifHy@naturalnames` . . 419, 6649, 8149, 8200
`\ifHy@nesting` . . 420, 4196, 4801, 4834, 4869, 5023, 5886, 7117, 7132, 7189, 7346
`\ifHy@newwindow` . . . 422, 3991, 10406
`\ifHy@newwindowset` . . 421, 3989
`\ifHy@next` 1008, 4165, 7977
`\ifHy@ocgcolorlinks` . . 423, 3384, 4488, 4498, 5906, 8638, 8656, 8733, 8741, 9750, 9833, 9841
`\ifHy@pageanchor` 424, 6706, 6718, 6733, 7734
`\ifHy@pagelabels` 425, 6171, 6384, 6462
`\ifHy@pdfa` 440, 4116, 4490, 4925, 5173, 5749, 5798, 5911, 8806, 8878, 8916, 8953, 9285, 9895, 9927, 9961, 9992, 10020, 10365, 10386, 10409, 10435, 10469, 10503, 10521, 11312, 12325, 12476, 12522, 12799, 12969, 13021, 13136, 13325, 13383, 13596, 13642, 13806
`\ifHy@pdfmarkerror` 11117, 11125
`\ifHy@pdfpagehidden` . 426, 3528, 9189, 10660, 10946
`\ifHy@pdfstring` . . 427, 930, 6554
`\ifHy@plainpages` 428, 4206, 6720, 7736
`\ifHy@psize` 429
`\ifHy@raiselinks` . 430, 9369, 9449, 9486, 9526, 11808, 12083
`\ifHy@seminarslides` 431

<code>\ifHy@setpagesize</code> . . . 432, 9217, 10150, 10289, 11573	<code>\ifpdfstringunicode</code> 545, 548	<code>\itemautorefname</code> . . . 3078, 3096, 3114, 3132, 3150, 3168, 3186, 3215, 3216, 3244, 3262, 8538, 8539, 8542
<code>\ifHy@setpdfversion</code> . . 2802, 8643	<code>\ifportrait</code> 9228	<code>\itemindent</code> 7070
<code>\ifHy@texht</code> 433, 4278, 4530, 4578, 5584, 5616, 5769, 5793, 5949, 8303	<code>\ifthenelse</code> 7614	<code>\itshape</code> 606
<code>\ifHy@toolbar</code> . . 434, 9058, 9629, 10089, 10718, 11066, 11919	<code>\iftrue</code> 835, 1779, 1801, 2065, 5562, 14262	J
<code>\ifHy@typexml</code> . . 395, 4216, 4505, 4549, 6034, 14098, 14180	<code>\ifvmode</code> 2443, 2465, 2474	<code>\j</code> 15208, 15393, 15457
<code>\ifHy@unicode</code> . 435, 540, 573, 576, 726, 738, 766, 774, 783, 1109, 1269, 1972, 1993, 2006, 2035, 2041, 2301, 2712, 2762, 3691, 6408, 13542	<code>\ifvoid</code> 6841, 6845, 7069	<code>\jarr</code> 16814
<code>\ifHy@usehidkey</code> 3524, 9186, 10659, 10941	<code>\ifvtex</code> 2831, 2927, 2956	<code>\jeem</code> 16786
<code>\ifHy@usetitle</code> 436, 6087	<code>\ifvtexdvi</code> 2832	<code>\jeh</code> 16822
<code>\ifHy@verbose</code> . . 437, 4665, 4681, 4693, 5116, 7806	<code>\ifvtexhtml</code> 4299, 4330	<code>\jobname</code> 6036, 6072, 6079, 12150, 13999, 14090, 14097, 14124, 14169, 14171, 14179
<code>\ifHy@windowui</code> . 438, 9060, 9631, 10091, 10720, 11068, 11921	<code>\ifvtexpdf</code> 4341	K
<code>\ifHyField@NeedAppearances</code> 5557, 5559, 5562, 12327, 12801, 13138	<code>\ifvtexps</code> 4344	<code>\k</code> . . . 14403, 14745, 14747, 14752, 14754, 14797, 14815, 14834, 14841, 15105, 15107, 15145, 15147, 15192, 15194, 15195, 15330, 15332, 15389, 15391, 15988, 16027, 16030
<code>\ifHyInfo@AddonUnsupported</code> 3817, 3831, 3866	<code>\ifxetex</code> 789, 822, 2828, 2901, 3690, 4283, 4327, 4405	<code>\kaf</code> 16804
<code>\ifHyPsd@XeTeXBigChars</code> . . 830, 832, 835, 838	<code>\ignorespaces</code> . . . 667, 6801, 6969, 7225, 7331, 7342, 7345, 7402, 7410, 7472, 7487, 7503, 7512, 7622, 8128, 8180	<code>\kasra</code> 16817
<code>\ifmeasuring@</code> 6574, 6587	<code>\IJ</code> 14519, 15201	<code>\keepPDF@SetupDoc</code> 11742, 11749
<code>\ifmmode</code> 10853, 11180	<code>\ij</code> 14728, 15203	<code>\kern</code> 1875, 1947, 1952, 1964, 7070, 7756, 7757, 7758, 7760, 7761, 7766, 14219
<code>\ifnum</code> . . . 258, 862, 865, 868, 871, 874, 985, 1110, 1113, 1124, 1125, 1129, 1137, 1141, 1144, 1154, 1176, 1199, 1339, 1450, 1466, 1470, 1490, 1503, 1506, 1519, 1521, 1534, 1536, 1542, 2180, 2183, 2259, 2302, 2305, 2317, 2432, 2928, 2931, 2957, 3435, 3436, 4415, 4422, 4735, 5395, 5466, 5477, 6201, 6225, 6246, 6262, 6364, 7684, 7694, 8257, 8295, 8639, 8644, 8978, 8985, 8991, 8999, 9862, 9867, 10406, 10535, 10671, 10679, 10681, 10682, 10692, 10695, 10781, 10783, 10903, 11600, 12783, 12946, 13278, 13283, 13294, 13541, 13622, 13652, 13657, 13679, 13685, 13713, 13746, 13752, 13771, 13781, 13786, 13816, 13821, 13850, 13866, 14010, 14080, 14083, 14110, 14113, 14151, 14260, 14278, 14293	<code>\immediate</code> 6035, 6036, 6037, 6039, 6079, 6377, 6467, 6475, 6730, 6758, 7467, 7482, 7498, 7508, 7538, 7561, 7587, 7617, 8658, 8673, 8688, 10786, 11597, 12725, 12747, 12789, 14000, 14066, 14097, 14099, 14179, 14181	<code>\kernel@ifnextchar</code> 686
<code>\ifodd</code> 2283, 2288, 7761	<code>\incr@eqnum</code> 6860, 6873	<code>\kha</code> 16788
<code>\ifpdf</code> . 256, 2825, 2868, 4257, 4324	<code>\indent</code> 6979, 7005	<code>\KV@href@pdfnewwindow</code> . 4756
	<code>\index</code> 656	<code>\KV@href@pdfnewwindow@default</code> 4757
	<code>\indexentry</code> 8015, 8030, 8038, 8042, 8047	<code>\KV@Hyp@draft</code> 2610
	<code>\input</code> 913, 921, 2721, 3347, 3355, 3362, 4379, 11515, 11598, 11689, 11858	<code>\KV@Hyp@nolinks</code> 2610
	<code>\InputIfFileExists</code> . . 4059, 14090, 14124, 14169, 14171	<code>\KV@Hyp@pdfnewwindow</code> . 4756
	<code>\inputlineno</code> 4672, 5030	<code>\KV@Hyp@pdfnewwindow@default</code> 4757
	<code>\insert</code> 7204	<code>\kv@key</code> . . 3825, 3828, 3835, 5393, 5396, 5398, 5402, 5406
	<code>\IntCalcAdd</code> 2209	<code>\kv@parse</code> 5392
	<code>\IntCalcDec</code> 1361	<code>\kv@parse@normalized</code> 3850, 3857
	<code>\IntCalcDiv</code> 1355, 1364, 1369, 1472, 1481, 1493, 1510, 1525, 1540, 2193, 2199, 2205	<code>\kv@processor@default</code> 3853, 3860
	<code>\intcalcDiv</code> . 1345, 2200, 2207, 2210	<code>\kv@set@family@handler</code> . . 3818
	<code>\IntCalcMod</code> . . 1357, 1366, 1372, 1476, 1482, 1497, 1513, 1528, 1542, 1544, 2195, 2200, 2201, 2207, 2210, 2212	<code>\kv@value</code> . 3823, 5394, 5401, 5402
	<code>\intcalcMod</code> 1347	<code>\kvsetkeys</code> 2801, 2855, 2975, 3697, 3798, 4117, 4354, 4372, 4489, 5491, 8640, 11124, 12344, 12580, 12593, 12642, 12685, 12706, 12780, 13121
	<code>\intcalcSub</code> 2187	L
	<code>\interfootnotelinepenalty</code> . . 7207	<code>\L</code> 14512, 15232
	<code>\interlinepenalty</code> 7207	<code>\l</code> 14525, 15234
	<code>\item</code> 6531, 6534, 7494, 7506, 7609	<code>\l@slide</code> . . 8128, 8238, 8243, 8247, 8254
	<code>\Itemautorefname</code> 8538	

`\l@subslide` . 8180, 8243, 8250, 8294
`\label` 655, 7779
`\label@hyperref` 4841, 4843
`\label@hyperdef` 4827, 4855
`\label@hyperref` . 4808, 4840, 5052
`\labelsep` 7621
`\labelwidth` 7620
`\lam` 16805
`\language@group` 634
`\languageshorthands` . . 966, 967, 1001
`\LARGE` 613
`\Large` 614
`\large` . 617, 8260, 8268, 8278, 8286
`\lastbox` 7068
`\lastpage@putlabel` 6701
`\lastskip` . 2466, 2470, 2477, 2485, 2489, 2496
`\LaTeX` . . . 570, 572, 12156, 12157
`\LaTeXe` 571, 12157
`\LayoutCheckField` . 5837, 12548, 13049, 13420
`\LayoutChoiceField` . 5834, 12421, 12902, 13241
`\LayoutPushButtonField` . . 5840, 12480, 12487, 12973, 12980, 13329, 13338
`\LayoutTextField` . . . 5831, 12369, 12849, 13184
`\lccode` 364, 369, 861, 1279, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2224, 5709, 7974, 7975, 13924, 13925, 13926, 13927, 13928, 13929, 13930, 13931, 13932, 13933, 13934
`\ldots` 565
`\leavevmode` . . . 664, 2421, 4102, 4119, 4159, 4930, 6005, 7149, 7292, 7528, 8398, 8406, 8792, 8863, 8901, 8938, 9368, 9448, 9485, 9525, 9916, 9953, 9985, 10184, 10193, 10247, 10401, 10426, 10456, 10489, 10852, 11178, 11426, 11453, 11484, 11807, 12082, 12481, 12488, 12521, 12934, 12955, 12974, 12981, 13001, 13020, 13276, 13307, 13330, 13339, 13363, 13382, 14217
`\letLTXcmds@gttemp` 240
`\LetLtxMacro` . 5952, 5956, 6022, 6026
`\limits` 4648
`\listofslides` 8229
`\listslidename` . 8228, 8231, 8233, 8235
`\literals@out` 2419, 10775, 10780, 10832, 10838, 10864, 10870, 11135, 11146, 11175, 11176, 11204, 11206, 11218, 11220, 11513, 11596, 11659, 11856
`\lower` . . . 9375, 9455, 9492, 9532, 11206, 11814, 12089
`\lowercase` . . . 365, 370, 881, 1280, 2084, 2225, 2512, 3022, 3052, 3765, 3801, 5065, 5066, 5069, 5074, 5098, 5108, 5162, 5218, 5538, 5611, 5614, 5710, 7976, 10902, 13935
`\lslide@flag` 8255, 8258, 8276, 8295, 8299
`\LT@array` 6826
`\LT@foot` 6841, 6845
`\LT@p@ftn` . 7165, 7168, 7172, 7182
`\LT@p@ftntext` 7163, 7170
`\LT@start` 6843, 6853
`\ltx@backslashchar` . 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 344
`\ltx@empty` . . . 237, 240, 384, 385, 481, 2824, 2999, 3007, 3376, 3521, 3888, 3912, 3919, 4018, 4019, 4022, 4023, 4024, 4025, 4026, 4027, 4031, 4032, 4347, 4357, 4449, 5047, 5263, 5281, 5295, 5308, 5324, 5356, 5381, 5388, 5389, 5696, 5734, 5735, 5736, 5737, 5738, 5739, 5740, 5741, 5742, 5743, 5744, 6150, 6151, 6152, 6155, 6169, 6186, 6191, 6197, 6206, 6226, 9308, 10174, 10261, 10856, 11162, 11183, 11512, 11595, 11853, 12017, 12024, 12346, 12352, 12559, 12590, 12637, 12731, 12828, 12831, 13146, 13162
`\ltx@firstofone` . 2844, 6067, 13952, 13964
`\ltx@firstoftwo` 259, 351, 359, 4564, 4986
`\ltx@gobble` 286, 2850, 4080, 4087, 4437, 5965, 5966, 5977, 5979, 5980, 6345, 12131, 12743, 13950, 13962
`\ltx@gobblefour` 328
`\ltx@gobblethree` 7716
`\ltx@gobbletwo` 5968, 5982
`\ltx@ifclassloaded` 6198, 7677
`\ltx@ifpackagelater` 362
`\ltx@ifpackageloaded` 1246
`\ltx@ifUndefined` 253, 292, 298, 327, 633, 676, 751, 786, 904, 905, 906, 1009, 1015, 1021, 1026, 1031, 1038, 1044, 1050, 1055, 1061, 1066, 1076, 1082, 1088, 1094, 1233, 1239, 1616, 1711, 1712, 2373, 2406, 4075, 4077, 4162, 4163, 4164, 4563, 4564, 4760, 6127, 6515, 6602, 6606, 6921, 7430, 7695, 8426, 8427, 8471, 8472, 8474, 8475, 8840, 8850, 9248, 10291, 10348, 10451, 10828, 10871, 10962, 11139, 14251, 14261
`\ltx@ifundefined` 7077, 7711
`\ltx@leftbracechar` 342, 366
`\ltx@LocalAppendToMacro` . 234, 379, 382
`\ltx@one` . . 258, 6200, 6201, 6208, 7680, 7684, 7690, 7693, 7694, 7707
`\ltx@ReturnAfterElseFi` . . . 4630
`\ltx@ReturnAfterFi` . . 505, 2022, 4634, 4650, 8069, 8105, 8591, 8601, 13513
`\ltx@rightbracechar` 343, 371
`\ltx@secondoftwo` . . 254, 261, 265, 348, 4563, 4564, 4566, 4984
`\ltx@space` 345, 1767
`\ltx@undefined` 236
`\ltx@zero` . 2078, 2079, 2080, 2081, 2082, 2083
`\LTXcmds@gttemp` . 235, 236, 237, 239, 244, 245, 247
`\luatexrevision` 9022
`\luatexversion` 9014, 9019

M

`\m@ne` 4180, 4684, 4743, 5080, 6746, 6941, 9871, 14171, 14260, 14275
`\make@df@tag@@` 7889, 7891
`\make@df@tag@@@` . . . 7890, 7892
`\make@stripped@name` 6579, 6882, 6904, 6928, 6939
`\makeatletter` 3, 944, 6071
`\MakeButtonField` . . 5847, 12482, 12490, 12508, 12526, 12531, 12975, 12984, 13008, 13025, 13031, 13331, 13334, 13362, 13387, 13391
`\MakeCheckField` . . . 5844, 12550, 13052, 13417
`\MakeChoiceField` . . 5846, 12466, 12958, 13305
`\MakeFieldObject` . 12724, 12811, 12821, 12824
`\MakeLowercase` 630
`\MakeLowercaseUnsupportedInPdfStrings` 630

<code>\MakeRadioField</code> . . . 5843, 12454, 12945, 13269	N	<code>\nobreak</code> . 2467, 2475, 2486, 2494, 7150, 7293
<code>\makeslideheading</code> 8138	<code>\n</code> 872	<code>\nobreakspace</code> . . 675, 8401, 8430, 8433
<code>\makeslidesubheading</code> 8190	<code>\name@of@eq</code> 6547, 6577	<code>\noexpand</code> 22, 93, 95, 108, 116, 169, 171, 172, 173, 176, 206, 850, 954, 1293, 1726, 1743, 1866, 2238, 2473, 2474, 2475, 2478, 2492, 2493, 2494, 2497, 3305, 3307, 3309, 3310, 3311, 3313, 3329, 3535, 3536, 3538, 3883, 4182, 4186, 4187, 4354, 4642, 4815, 4895, 5025, 5027, 5128, 6300, 6301, 6310, 6312, 6315, 6440, 6743, 6744, 6746, 6771, 6772, 6773, 6774, 6775, 6783, 6784, 6785, 6945, 7166, 7174, 7175, 7176, 7178, 7302, 7391, 7466, 7481, 7497, 7682, 7908, 7910, 8363, 8364, 8480, 8481, 8486, 8488, 8493, 8494, 8499, 8500, 9021, 9617, 11054, 11121, 11656, 11907, 12396, 12397, 12398, 12399, 12876, 12877, 12878, 12879, 13215, 13216, 13217, 13218, 13492
<code>\maketag@@@</code> 7878	<code>\name@of@slide</code> 6548, 6558	<code>\nofrenchguillemets</code> 694, 696
<code>\MakeTextField</code> 5845, 12371, 12852, 13181	<code>\nameref</code> 662, 4568, 4572	<code>\NoHy@OrgPageRef</code> . . 5956, 5958, 6026, 6028
<code>\maketitle</code> 7242, 7243	<code>\nasb</code> 16812	<code>\NoHy@OrgRef</code> 5952, 5954, 6022, 6024
<code>\MakeUppercase</code> 629, 8233, 8235, 8389	<code>\netscape</code> 9411	<code>\NoHyper</code> 5960
<code>\MakeUppercaseUnsupportedInPdfStrings</code> 629	<code>\new@ifnextchar</code> 687	<code>\nohyperpage</code> . . 6004, 8059, 8061, 8063
<code>\MathBSuppress</code> . . 10194, 10198	<code>\new@pdfink</code> . . . 8771, 8828, 8831	<code>\nolinkurl</code> 4794
<code>\mathdisplay</code> 6863, 6872	<code>\new@crefstepcounter</code> . 6855, 6887	<code>\nolinkurl@</code> 4794, 4795
<code>\mathdisplay@push</code> . . 6861, 6870	<code>\newblock</code> 7625	<code>\NomFancyVerbLineautorefname</code> 3233
<code>\mathversion</code> 622	<code>\newcommand</code> 4, 9, 42, 2420, 6009, 6013, 6510, 6513, 6516, 6517, 6518, 6520, 6521, 6522, 6523, 6525, 6526, 6527, 6528, 6529, 6530, 6539, 6540, 6541, 6542, 6543, 6544, 6937, 7916, 8115, 8120, 8121, 13972, 13975, 13980	<code>\Nomfootnoteautorefname</code> . 3213
<code>\maxdimen</code> 3456, 12729	<code>\newcount</code> 483, 484, 2425, 4728, 5497, 6187, 12462, 12952, 13152, 13301, 14007	<code>\Nomtheoremautorefname</code> . 3237
<code>\MaybeStopEarly</code> 482, 2858, 2933, 4227, 4332, 6495	<code>\newcounter</code> . . . 6532, 7093, 9749, 13922	<code>\nonumber</code> 6916, 6919
<code>\mbox</code> 665, 7541, 7564, 8743, 9843	<code>\newdimen</code> 480, 5498, 5499	<code>\normalfont</code> 600, 6975, 7001, 7034
<code>\mddefault</code> 6981, 7007, 7038	<code>\newif</code> 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, 830, 1008, 2802, 2823, 3524, 3817, 4404, 4758, 5072, 5160, 5493, 5494, 5514, 5557, 6549, 6550, 6574, 6891, 10173, 11117	<code>\normalsize</code> 618, 7338, 7409
<code>\mdseries</code> 605	<code>\newlabel</code> . 2385, 4865, 6049, 6050, 6058, 6084, 6731, 6759	<code>\note</code> 7725
<code>\meaning</code> 62, 153, 159, 2382, 6111, 6662, 6946, 14135, 14143, 14158	<code>\newlabelxx</code> 6051, 6052	<code>\NR@getttitle</code> 7328
<code>\measuring@false</code> 6574	<code>\newlength</code> 14210	<code>\null</code> 7606, 7614, 8352, 8460
<code>\mediaheight</code> 10285, 10287, 10293, 10300	<code>\newline</code> 568, 6132	<code>\number</code> . 1127, 1131, 1134, 1142, 1145, 1147, 1452, 1454, 1481, 1482, 2184, 2242, 2243, 2244, 2245, 2249, 2250, 2251, 2252, 2253, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2267, 2268, 2269, 2270, 2271, 2272, 2275, 2277, 2281, 2282, 2284, 2286, 2288, 2291, 2295, 2296, 2297, 2298, 2307, 2308, 2312, 2313,
<code>\mediawidth</code> 10296, 10303	<code>\newname</code> 6580, 6883, 6905, 6929, 6942, 6951	
<code>\meem</code> 16806	<code>\newsavebox</code> 9679, 11154	
<code>\message</code> 8256	<code>\newtie</code> 14405, 14406, 14789, 14819, 14838, 14854	
<code>\MessageBreak</code> 294, 300, 314, 315, 354, 355, 513, 1978, 1999, 2012, 2035, 2040, 2042, 2534, 2535, 2549, 2571, 2574, 2576, 2654, 2655, 2681, 2682, 2734, 2735, 2736, 2774, 2775, 2795, 2806, 2847, 2872, 2905, 2943, 2950, 2961, 2967, 3044, 3386, 3517, 3518, 3580, 3581, 3599, 3600, 3694, 3778, 3833, 3834, 3944, 3945, 4047, 4261, 4262, 4270, 4271, 4287, 4288, 4303, 4304, 4312, 4313, 4492, 4737, 4738, 4762, 4763, 4779, 4780, 5119, 5124, 5133, 5176, 5222, 5346, 5459, 5531, 5542, 5574, 5575, 5594, 5668, 5669, 5670, 5671, 6176, 6411, 6426, 6427, 6709, 7783, 7813, 7814, 7815, 7816, 7817, 7948, 8796, 9880, 10377, 10460, 10971, 12737, 12739, 13871, 13889, 14002	<code>\newtoks</code> . 90, 5585, 10989, 11229, 11230	
<code>\MF</code> 580, 12159	<code>\newwrite</code> . . . 6078, 14095, 14177	
<code>\MP</code> 581, 12160	<code>\next</code> . . . 7615, 7616, 7617, 10603, 10605, 10607	
<code>\multiply</code> 9018, 10640, 10675	<code>\nfss@text</code> . 8310, 8330, 8347, 8464	
	<code>\NG</code> 15250	
	<code>\ng</code> 15252	
	<code>\noboundary</code> 16827	

2320, 2321, 2325, 2328, 2329,
2330, 2340, 2342, 2343, 2348,
2350, 2351, 2356, 2357, 3903,
4406, 4423, 5086, 6639, 6640,
6643, 6647, 8650, 8653, 9439,
9457, 9458, 9473, 9474, 9494,
9495, 9511, 9512, 9534, 9535,
9551, 9552

\numberline . . . 7331, 7402, 13894,
13899

\numberwithin 7913

\numexpr . 2249, 2250, 2251, 2253,
2259, 2267, 2268, 2269, 2270,
2271, 2272, 2276, 2278, 2282,
2284, 2286, 2288, 2292, 2295,
2296, 2298, 2307, 2312, 2329,
2343, 2351, 2357, 3907

\nun 16807

O

\O 14645, 15013, 15408

\o 14713, 15081, 15410

\obeylines 11655

\OBJ@acroform . . . 12807, 12808

\OBJ@Helv . 12786, 12795, 13111

\OBJ@OCG@print . . . 8687, 8690,
8698, 8724, 9767, 9769, 9782,
9786, 9795, 9824

\OBJ@OCG@view . . . 8672, 8690,
8723, 9751, 9753, 9766, 9786,
9823

\OBJ@OCGs . . 8693, 8696, 8702,
8707, 8712, 9783, 9785, 9789,
9793, 9799, 9804, 9809

\OBJ@pdfdocencoding . . . 12784,
13092, 13108

\OBJ@ZaDb 12785, 12794, 13101

\OCIRCUMFLEX . 16650, 16748,
16749, 16750, 16751, 16752

\ocircumflex 16643, 16688, 16689,
16690, 16691, 16692

\oddsidemargin 7762

\OE 14514, 15266

\oe 14527, 15268

\offinterlineskip 6158

\OHORN . . . 16651, 16753, 16754,
16755, 16756, 16757

\ohorn . . 3260, 3267, 16644, 16693,
16694, 16695, 16696, 16697

\oldb 904

\oldc 905

\oldcontentsline . 6044, 6047, 6057

\oldd 906

\oldnewlabel . . . 6049, 6054, 6058

\OMEGA 12155

\on@line 7810, 7811

\openout 6036, 6079, 14097, 14179

\OpMode . 2928, 2931, 2944, 2957,
2962, 10692, 10783, 11600

\or 349,
1161, 1162, 1163, 1164, 1165,
1166, 1167, 1168, 1169, 1183,
1184, 1185, 1186, 1187, 1188,
1189, 1190, 1191, 1206, 1207,
1208, 1209, 1210, 1211, 1212,
1213, 1214, 1299, 1300, 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, 1348,
1370, 1373, 1379, 1380, 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, 1415,
1416, 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, 1459, 1460, 1461, 1462,
1463, 1575, 1576, 1577, 5246,
5252, 5257, 5471, 6614, 6615,
6616, 6617, 6623, 6624, 6625,
6626, 7833, 7837, 8275, 8284,
10685, 14015, 14016, 14017,
14018, 14019, 14020, 14021,
14022, 14023, 14024, 14025,
14026, 14027, 14028, 14029,
14030, 14031, 14032, 14033,
14034, 14035, 14036, 14037,
14038, 14039, 14040, 14041,
14042, 14043, 14044, 14045,
14046

\overlay 7722

P

\P 564

\p@ 2308,
2313, 5500, 5506, 6983, 7009,
7040, 9384, 9468, 9506, 9546,
10639, 11823, 12103, 12392,
12872, 13211, 14335, 14336

\p@equation 7885

\PackageError 61

\PackageInfo . . 8634, 8648, 12735

\PackageWarning 2805, 5457

\pageautorefname . . . 3091, 3109,
3127, 3145, 3163, 3181, 3199,
3239, 3257, 3275, 8433, 8555

\pagename 8430

\pageref . . . 661, 4237, 4559, 5956,
5957, 6026, 6027, 6709, 8419,
8423

\paperheight 4040, 9233,
9235, 9238, 9240, 9252, 9253,
10154, 10155, 10292, 10293,
10295, 11577, 11578

\paperwidth 9229,
9231, 9242, 9244, 9249, 9250,
10153, 10155, 10296, 11576,
11578

\par . 6974, 6999, 7032, 7330, 7358,
7400, 7410, 7608, 7628

\paragraphautorefname . . . 3087,
3105, 3123, 3141, 3159, 3177,
3195, 3228, 3230, 3253, 3271,
8551

\partautorefname 3081, 3099, 3117,
3135, 3153, 3171, 3189, 3219,
3247, 3265, 8545

\partnumberline . . . 13896, 13901

\PassOptionsToPackage . . . 2976,
3033, 3037, 3059, 4069, 4373

\pdf@addtoks 11232, 11251, 11257,
11266, 11273, 11277, 11279,
11281, 11283, 11285, 11293,
11302, 11306, 11308, 11310,
11313, 11322, 11326, 11328,
11330, 11332, 11334, 11336,
11338, 11340, 11342, 11344,
11346, 11348, 11350, 11352,
11354, 11356, 11357, 11358,
11359, 11360, 11361, 11362,
11363, 11364, 11365, 11366,
11371

\pdf@addtoksx 11226, 11236, 11249

\pdf@box . . . 11154, 11186, 11194,
11202, 11203, 11206, 11210,
11212, 11215

\pdf@defaulttoks . . 11121, 11230,
11231, 11241

\pdf@docset 10989

\pdf@endanchor . 8784, 8828, 8835

\pdf@escapestring 8610

\PDF@FinishDoc 2861,
2862, 2936, 2937, 4034, 4104,
4230, 4231, 4335, 4336, 6003,
6168, 6169, 9097, 9308, 9566,
10047, 10174, 10751, 10990,
11863, 12024

\pdf@ifdraftmode 254, 257,
265, 6344, 8657, 9098, 9207,
12781, 14107

\pdf@linktype 11139, 11143, 11246,
11247

\pdf@rect . . . 11131, 11145, 11158

\PDF@SetupDoc	4033, 4103, 5923, 5924, 6002, 9028, 9309, 9597, 10087, 10175, 10700, 11041, 11744, 11894, 12025	\pdfliteral	8744, 8746, 8751	\pdftexversion	8983, 8985, 8988, 8991, 8994, 8995, 8999, 9005, 9006, 12783
\PDF@SetupDox	9028	\pdfm@box	9679, 13148, 13149, 13150, 13180, 13191, 13268, 13293, 13304, 13315, 13334, 13347, 13362, 13371, 13391, 13399, 13416, 13427	\pdfvorigin	9226
\pdf@strcmp	985	\pdfmark	6458, 9617, 9626, 9656, 10819, 10839, 10878, 10913, 10930, 10942, 10976, 11013, 11025, 11054, 11063, 11094, 11118, 11379, 11393, 11408, 11420, 11427, 11454, 11485, 11907, 11916, 11947, 12371, 12454, 12466, 12490, 12508, 12531, 12550, 14139	\pdfxform	8764, 12725
\pdf@toks	11121, 11136, 11147, 11229, 11233, 11237	\pdfmark@	11118, 11119	\peh	16820
\pdf@type	11123, 11127, 11136, 11147, 11224, 11244	\pdfmatch	346	\penalty	1869, 2447, 4703, 7535, 7558
\pdfannotlink	8762	\pdfminorversion	8631	\phantom	623
\pdfbookmark	2420, 6008, 6009, 13973, 13978, 13983, 13987	\PDFNextPage	11391	\phantomsection	4035, 6010, 7785, 13840, 13891, 14279
\pdfcatalog	6347, 8694, 9043, 9085, 12808	\PDFNextPage@	11391, 11392	\Preamble	12151
\PDFdefaults	11240	\pdfobj	8658, 8673, 8688, 12789, 13059, 13093, 13102	\PrerenderUnicode	3711
\pdfdest	8786	\PDFOpen	11419	\process@me	6109, 6121, 6122, 9031, 9040
\pdfdraftmode	258	\pdfoptionpdfminorversion	8628	\ProcessKeyvalOptions	4073
\pdfendlink	8825, 12852, 12945, 12959, 12985, 13009, 13032, 13053	\pdfoutline	14188	\protect	1867, 4845, 7331, 7402, 7466, 7481, 7497, 7613, 7620, 7621, 7823, 7854, 8128, 8180, 8309, 8329, 8335, 8346, 8463, 9319, 9416, 10245, 10320, 11755, 12035, 13912, 14212, 14335, 14336
\pdfescapestring	13521	\pdfpageattr	9141, 9145, 9146, 9156, 9165, 9169, 9170, 9180, 9188, 9191, 9192, 9202	\protected@edef	4880, 6202, 6296, 6814, 6943, 6963, 7696, 7700, 8793, 9877, 10374, 10457, 10968
\pdfform	8764	\pdfpageheight	9235, 9244, 9253, 9260	\protected@write	2384, 4864, 7593, 8014, 8029, 8037, 8041, 8046, 13911
\PDFForm@@Name	13529, 13532, 13536, 13539	\pdfpageresources	8721	\protected@xdef	7175, 7268
\PDFForm@Check	12549, 12551, 13050, 13051, 13421, 13425, 13613	\pdfpagesattr	9032, 9034, 9036	\providecommand	2401, 2402, 3411, 3412, 3415, 3416, 4323, 4536, 4537, 4656, 4799, 6040, 6326, 6351, 6476, 7431, 7432, 7447, 7525, 8111, 8112, 8228, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554, 8555, 8617, 8770, 8788, 8789, 9307, 9410, 9411, 9674, 9736, 9737, 9738, 10171, 10290, 10312, 10313, 10314, 10776, 11155, 11156, 11511, 11519, 11520, 11521, 11522, 11594, 11606, 11607, 11608, 11609, 11653, 11694, 11695, 11696, 11697, 11852, 11854, 11855, 11968, 11969, 12016, 12748
\PDFForm@List	12465, 12467, 12956, 12957, 13308, 13313, 13671	\pdfpagewidth	9231, 9240, 9250, 9257	\PushButton	5819
\PDFForm@Name	12845, 12897, 12968, 13046, 13176, 13236, 13324, 13413, 13528	\PDFPreviousPage	11404	\put@me@back	5020, 5033, 5043
\PDFForm@Push	12489, 12491, 12982, 12983, 13340, 13344, 13642	\PDFPreviousPage@	11405, 11407		
\PDFForm@Radio	12453, 12457, 12935, 12937, 13277, 13289, 13704	\pdfrefform	8766		
\PDFForm@Reset	12530, 12532, 13029, 13030, 13392, 13397, 13806	\pdfrefobj	12784, 12785, 12786		
\PDFForm@Submit	12507, 12510, 13002, 13004, 13364, 13369, 13773	\pdfrefxform	8766, 12729		
\PDFForm@Text	12370, 12372, 12850, 12851, 13185, 13188, 13738	\pdfstartlink	8761, 8762, 8820, 8864, 8902, 8939, 9271, 12851, 12936, 12957, 12983, 13003, 13030, 13051		
\pdfhorigin	9225	\pdfstringdef	533, 817, 3720, 3726, 3732, 3738, 3743, 3749, 3756, 3762, 3842, 5418, 5423, 5449, 6135, 6236, 6238, 6724, 7708, 7744, 13547, 13905		
\pdfinfo	9101	\pdfstringdefDisableCommands	903, 942, 6006, 6130		
\pdflastform	8765	\pdfstringdefPostHook	813, 936		
\pdflastlink	12765	\pdfstringdefPreHook	671, 936, 948, 950, 6129, 6139		
\pdflastobj	8672, 8687, 8693, 12807, 13092, 13101, 13111	\pdfstringdefWarn	567, 568, 666, 953, 1734, 1739, 1758, 1762		
\pdflastxform	8765, 12727, 12729	\pdftexrevision	8988, 8996, 9007		
\pdflinkmargin	8760, 8763, 8768				

\quotesinglbase . . . 14504, 14733,
16314, 16626

R

\r . 875, 14372, 14384, 14396, 14606,
14671, 14780, 14807, 14826,
14848, 14975, 15039, 15322,
15324, 16284, 16286

\ra 16791

\raff 16813

\raise 2454, 9385, 9469, 9507, 9547,
11220, 11824, 12104

\ReadBookmarks 4072, 4107, 4244,
4440, 4580, 14071, 14106

\real@setref 8306, 8372

\realfootnote 7265

\Ref 8391, 8395, 8400

\ref . . 660, 4236, 4556, 5060, 5952,
5953, 6022, 6023, 7230, 7237,
8410, 12127

\ref@one 4821, 4822

\rEfLiNK 12128, 12129

\refstepcounter 6546, 6553, 6573,
6796, 6819, 6820, 6821, 6830,
6855, 6879, 6887, 6991, 7394

\rem@ptetc 10903, 10905

\renewcommand 2376, 7373, 7930,
13987

\RequirePackage 22,
232, 250, 251, 269, 270, 271,
272, 273, 274, 275, 276, 394,
1244, 1771, 2370, 2786, 2856,
4218, 4219, 4508, 4552, 4584,
4791, 5063, 5992, 6149, 6392,
10172, 12021, 13997

\RerunFileCheck 13999

\Reset 5828

\reset@font 7541, 7564, 8310, 8330,
8347, 8464

\revtex@checking 7518

\Rightarrow 8262

\rlap 8745, 9845

\rm 611

\rmfamily 601

\Roman 6292

\roman 6293

\romannumeral 960, 961

\rule 7215

S

\sad 16795

\sbox 3707,
5848, 9372, 9452, 9489, 9529,
11155, 11194, 11811, 12086,
12724

\scr@LT@array 6829

\scriptsize 619

\scriptstyle 7531

\scrollmode 1786, 1811, 1821, 1834,
1926, 2058

\scshape 607, 6980, 7006

\section 8230

\sectionautorefname . . 3084, 3102,
3120, 3138, 3156, 3174, 3192,
3221, 3250, 3268, 8548

\seen 16793

\selectfont 587, 4519, 12817

\set@display@protect 4171

\setbox 1870, 1876,
1882, 3439, 3445, 5644, 6157,
7068, 8735, 9299, 9818, 9835,
13180, 13268, 13304, 13334,
13362, 13391, 13416

\setcounter 4734

\setkeys 4709, 4754

\setlength 517, 518, 2451,
9225, 9226, 9231, 9235, 9240,
9244, 9250, 9253, 9257, 9260,
10293, 10296, 10300, 10303,
10639, 14229, 14300

\setpdfinkmargin 3890, 3891, 8760

\settowidth . 12389, 12869, 13208

\SetupKeyvalOptions . 2505, 4063

\sffamily 602

\shadda 16818

\sheen 16794

\shortciteN 7656

\SK@ 8522

\SK@@ref 8522

\SK@ref 8519

\skip@ 1884, 1958, 1959, 1962, 1964,
2470, 2476, 2489, 2495

\slide 7719

\slide@cline 8248, 8261, 8269, 8279,
8287

\Slide@contents 8253

\slide@contents 8246

\slide@heading 8124

\slide@subheading 8177

\slide@undottedcline 8239

\slidenumberline 8240, 8248, 8262,
8270, 8280, 8288

\SliTeX 579

\slshape 608

\small 620

\smash 2448

\spacefactor 2427, 2433, 7150, 7159,
7293, 7295, 8773, 8781

\special@paper 4036

\SpecialDvipdfmxOutlineOpen .
. . 2895, 2897, 4408, 4415

\splitmaxdepth 7209

\splittopskip 7208

\SS 14729, 16623

\ss 3131, 14659, 14744, 15027

\st@rredfalse 6862, 6871

\stepcounter . . 6563, 6744, 6813,
6962, 7151, 7267, 9861, 13908

\stockheight . . . 4040, 9259, 9260,
10160, 10161, 10299, 10300,
11583, 11584

\stockwidth . . . 9256, 9257, 10159,
10161, 10302, 10303, 11582,
11584

\stop@hyper 5974

\StringEncodingConvertTest 791,
801

\strip@period 2389

\strip@prefix 62, 2382, 6111, 6662,
6946, 14135, 14143, 14158

\strip@pt 522, 529,
4052, 9231, 9235, 9240, 9244,
10642, 13636, 13699, 13727,
13766, 13815

\strip@pt@and@otherjunk 10838,
10870, 10905

\strutbox 7209

\sub@label 2376

\subeqnarray 6922, 6924

\subequations 6960, 6961

\subfig@oldlabel 2378

\Submit 5825

\SubmitObject 13005

\SubmitPObject 13005

\subparagraphautorefname 3088,
3106, 3124, 3142, 3160, 3178,
3196, 3229, 3231, 3254, 3272,
8552

\subpdfbookmark 13975

\subsection 11848

\subsectionautorefname . . 3085,
3103, 3121, 3139, 3157, 3175,
3193, 3226, 3251, 3269, 8549

\subsubsectionautorefname 3086,
3104, 3122, 3140, 3158, 3176,
3194, 3227, 3252, 3270, 8550

\sukun 16819

\surd 8270

T

\T 16783

\t 14404, 14799, 14818, 14837,
14853

\T@nameref 4573

\T@pageref 4543, 4560, 8408

\T@ref 4538, 4557

\T@temp 7519, 7522

\Ta 16797

\taa 16784

\tableautorefname . . . 3080, 3098,
3116, 3134, 3152, 3170, 3188,
3218, 3246, 3264, 8544

<code>\tagform@</code>	7884	<code>\textchi</code>	1211, 15615	<code>\textepsilon</code> 573, 576, 1165, 15563,	
<code>\tatweel</code>	16801	<code>\textcircled</code> .	14801, 14820, 14839,	15579	
<code>\tcheh</code>	16821		16460, 16462, 16464, 16466,	<code>\textequalsuperior</code>	16368
<code>\temp@online</code>	7810, 7813		16468, 16470, 16472, 16474,	<code>\textestimated</code>	16436
<code>\TeX</code>	569, 570, 577, 579, 12154,		16476, 16478, 16480, 16482,	<code>\textEta</code>	1168, 15496, 15520
	12156, 12158		16484, 16486, 16488, 16490,	<code>\texteta</code>	1168, 15565, 15583
<code>\texorpdfstring</code>	929, 6007		16492, 16494, 16496, 16498,	<code>\texteuro</code>	14533, 16412
<code>\textacute</code>	14368, 14380, 14392,		16500, 16502, 16504, 16506,	<code>\textexclamdown</code> 763, 1072, 14535,	
	14572, 14803, 14822, 14940		16508, 16510, 16512, 16514,	14903	
<code>\textacutedbl</code>	15472		16516, 16518, 16520, 16522,	<code>\textfi</code>	761, 14508, 16620
<code>\textaleph</code>	16438		16524, 16526, 16528, 16530,	<code>\TextField</code>	5810
<code>\textAlpha</code>	1161, 15492, 15508		16532, 16534, 16536, 16538,	<code>\textfiveinferior</code>	16386
<code>\textalpha</code>	1161, 15561, 15571		16540, 16542, 16544, 16546,	<code>\textfivesuperior</code>	16354
<code>\textampersand</code> 561, 14439, 14870			16548, 16550, 16552, 16554,	<code>\textfl</code>	762, 14510, 16622
<code>\textangstrom</code>	16434		16556, 16558, 16560, 16562,	<code>\textflorin</code>	14482, 15358
<code>\textasciicircum</code>	14941		16564, 16566, 16568, 16570,	<code>\textflq</code>	650, 14737, 16630
<code>\textasciibreve</code>	14415, 14811,		16572, 16574, 16576, 16578,	<code>\textflqq</code>	648, 14735, 16628
	14830, 15461		16580, 16582, 16584, 16586,	<code>\textfourinferior</code>	16384
<code>\textasciicaron</code>	14373, 14385,		16588, 16590, 16592, 16594,	<code>\textfoursuperior</code>	16352
	14397, 14417, 14808, 14827,		16596, 16598, 16600, 16602,	<code>\textfractionsolidus</code> 14484, 16342	
	15459		16604	<code>\textfrq</code>	651, 14738, 16631
<code>\textasciicircum</code>	14369, 14381,	<code>\textcircledP</code>	16422	<code>\textfrqq</code>	649, 14736, 16629
	14393, 14453, 14804, 14823,	<code>\textcircumflex</code>	14419	<code>\textGamma</code>	1163, 15512
	14886	<code>\textcolonmonetary</code>	16400	<code>\textgamma</code>	1163, 15575
<code>\textasciidieresis</code>	14371, 14383,	<code>\textcolor</code> 628, 12779, 12822, 12825,		<code>\textglq</code>	646, 14733, 16626
	14395, 14549, 14806, 14825,	13120		<code>\textglqq</code>	644, 14731, 16624
	14917	<code>\textcompwordmark</code>	16302	<code>\textgravedbl</code>	15474
<code>\textasciigrave</code> 14367, 14379, 14391,		<code>\textcopyright</code>	14551, 14919	<code>\textgreater</code>	14449, 14882
	14458, 14802, 14821, 14890	<code>\textCR</code>	14413, 14860	<code>\textgrq</code>	647, 14734, 16627
<code>\textasciimacron</code>	14376, 14388,	<code>\textcurrency</code>	14541, 14909	<code>\textgrqq</code>	645, 14732, 16625
	14400, 14562, 14813, 14832,	<code>\textdagger</code>	14472, 16322	<code>\textGslash</code>	15377
	14930	<code>\textdaggerdbl</code>	14474, 16324	<code>\textgslash</code>	15379
<code>\textasciitilde</code>	562, 4619, 14468,	<code>\textdegree</code>	14564, 14730, 14932	<code>\textguarani</code>	16416
	14901	<code>\textDelta</code>	1164, 15514	<code>\textHslash</code>	15173
<code>\textasteriskcentered</code>	14878	<code>\textdelta</code>	1164, 15577	<code>\texthslash</code>	15175
<code>\textbackslash</code>	557, 725, 2364,	<code>\textDigammagreek</code>	15636	<code>\textHT</code>	14409, 14856
	14451, 14884	<code>\textdigammagreek</code>	15638	<code>\texthungarumlaut</code> 14423, 14814,	
<code>\textbaht</code>	16146	<code>\textdiscount</code>	16348	14833, 15471, 15472	
<code>\textbar</code>	14464, 14897	<code>\textdiv</code>	14741, 16634	<code>\textinterrobang</code>	16340
<code>\textbardbl</code>	16308	<code>\textdivide</code>	14711, 14741, 15079,	<code>\textIota</code> 1183, 15498, 15524, 15557	
<code>\textBeta</code>	1162, 15510	16634		<code>\textiota</code> 1183, 15567, 15587, 15621	
<code>\textbeta</code>	1162, 14744, 15573	<code>\textdivorced</code>	16614	<code>\textlotadieresis</code>	15506, 15556
<code>\textbf</code>	594	<code>\textdollar</code>	559, 14435, 14866	<code>\textit</code>	596
<code>\textbigcircle</code> 14820, 14839, 16608		<code>\textdong</code>	16410	<code>\textKappa</code>	1184, 15526
<code>\textblank</code>	16456	<code>\textdotaccent</code> 14374, 14386, 14398,		<code>\textkappa</code>	1184, 15589
<code>\textbraceleft</code>	555, 2365, 14462,	14421, 14809, 14828, 15463		<code>\textKoppagreek</code>	1191, 15640
	14895	<code>\textdotbelow</code> 14378, 14390, 14402,		<code>\textkoppagreek</code>	1191, 15642
<code>\textbraceright</code> 556, 2365, 14466,		14445, 14817, 14836, 15482		<code>\textkra</code>	15214
	14899	<code>\textdoublegrave</code>	14812, 14831,	<code>\textLambda</code>	1185, 15528
<code>\textbrokenbar</code>	14545, 14913	15478		<code>\textlambda</code>	1185, 15591
<code>\textbullet</code>	14470, 16326	<code>\textdownarrow</code>	16446	<code>\textlangle</code>	16452
<code>\textcdot</code>	14743, 16636	<code>\texteightinferior</code>	16392	<code>\textlatin</code>	632, 6650
<code>\textcedilla</code>	14375, 14387, 14399,	<code>\teightsuperior</code>	16360	<code>\textlbrackdbl</code>	16616
	14580, 14810, 14829, 14949	<code>\textellipsis</code> 565, 566, 14476, 16328		<code>\textleftarrow</code>	16440
<code>\textcelsius</code>	14730, 16418	<code>\textemdash</code>	759, 14478, 16306	<code>\textless</code>	14447, 14880
<code>\textcent</code>	14537, 14905	<code>\textendash</code>	760, 14480, 16304	<code>\textLF</code>	14411, 14858
<code>\textChi</code>	1211, 15550	<code>\textEpsilon</code>	1165, 15494, 15516	<code>\textlira</code>	16402

<code>\textlnot</code>	14558, 14926	<code>\textperiodcentered</code> 14578, 14743, 14947, 16636	<code>\textTau</code>	1208, 15544
<code>\textlogicalnot</code>	14557, 14739, 14925, 16632	<code>\textpertenthousand</code>	<code>\texttau</code>	1208, 15609
<code>\textlongs</code>	15356, 16288	<code>\textperthousand</code> . .	<code>\textTheta</code>	1169, 15522
<code>\textlquill</code>	16344	<code>\textpeseta</code>	<code>\texttheta</code>	1169, 15585
<code>\textmacronbelow</code> .	14377, 14389, 14401, 14456, 14816, 14835, 15484	<code>\textpeso</code>	<code>\textthreeinferior</code>	16382
<code>\textmarried</code>	16612	<code>\textPhi</code>	<code>\textthreequarters</code> .	14592, 14961
<code>\textmd</code>	595	<code>\textphi</code>	<code>\textthreesuperior</code> .	14570, 14938
<code>\textmho</code>	16432	<code>\textpi</code>	<code>\texttie</code>	14818, 14837, 15486
<code>\textminus</code>	14490, 16448	<code>\textPi</code>	<code>\texttilde</code>	4166, 14370, 14382, 14394, 14429, 14805, 14824, 15469
<code>\textminussuperior</code>	16366	<code>\textplusminus</code> . . .	<code>\texttildelow</code>	15476
<code>\textMu</code>	1186, 15530	<code>\textplussuperior</code>	<code>\texttimes</code>	14740, 16633
<code>\textmu</code>	1186, 14574, 14943	<code>\textpm</code>	<code>\texttrademark</code> . . .	14506, 16428
<code>\textmugreek</code>	15593	<code>\textPsi</code>	<code>\textTslash</code>	15306
<code>\textmultiply</code> 14643, 14740, 15011, 16633		<code>\textpsi</code>	<code>\texttslash</code>	15308
<code>\textmusicalnote</code>	16610	<code>\textquestiondown</code> . . .	<code>\texttt</code>	593
<code>\textnaira</code>	16404		<code>\texttwoinferior</code>	16380
<code>\textnapostrophe</code>	15248	<code>\textquotedbl</code>	<code>\texttwosuperior</code> . .	14568, 14936
<code>\textneg</code>	14739, 16632	<code>\textquotedblleft</code> . .	<code>\textunderscore</code> .	563, 4613, 4614, 4616, 14455, 14888
<code>\textnewtie</code> .	14819, 14838, 15480		<code>\textup</code>	599
<code>\textnineinferior</code>	16394	<code>\textquotedblright</code> .	<code>\textuparrow</code>	16442
<code>\textninesuperior</code>	16362	<code>\textquoteleft</code> 14500, 14734, 16310, 16627	<code>\textUpsilon</code> .	1209, 15502, 15546, 15559
<code>\textnormal</code>	590	<code>\textquoteright</code> . . .	<code>\textupsilon</code> . .	1209, 15611, 15623, 15628
<code>\textnsuperior</code>	16374	<code>\textquotesingle</code>	<code>\textupsilonacute</code> . .	15569, 15627
<code>\textNu</code>	1187, 15532	<code>\texttriangle</code>	<code>\textvarsigma</code>	15605
<code>\textnu</code>	1187, 15595	<code>\texttrbrackdbl</code>	<code>\textvisiblespace</code>	16458
<code>\textnumbersign</code> 558, 14433, 14864		<code>\textrecipe</code>	<code>\textwon</code>	16408
<code>\textnumeralsigngreek</code> 1138, 15488		<code>\textreferencemark</code>	<code>\textXi</code>	1188, 15534
<code>\textnumeralsignlowergreek</code> 1155, 1177, 1200, 15490		<code>\textregistered</code>	<code>\textxi</code>	1188, 15597
<code>\textnumero</code>	16420	<code>\textRho</code>	<code>\textyen</code>	14543, 14911
<code>\textogonek</code> .	14425, 14815, 14834, 15467	<code>\textrho</code>	<code>\textzeroinferior</code>	16376
<code>\textohm</code>	16430	<code>\textrightarrow</code>	<code>\textzerosuperior</code>	16350
<code>\textOmega</code> . .	1213, 15504, 15554	<code>\textring</code> . . .	<code>\textZeta</code>	1167, 15518
<code>\textomega</code> . .	1213, 15619, 15630		<code>\textzeta</code>	1167, 15581
<code>\textOmicron</code> .	1189, 15500, 15536	<code>\textrm</code>	<code>\TH</code>	14657, 15025
<code>\textomicron</code> .	1189, 15599, 15625	<code>\textrquill</code>	<code>\th</code>	14725, 15093
<code>\textonehalf</code>	14590, 14959	<code>\textSampigreek</code> . . .	<code>\thaa</code>	16785
<code>\textoneinferior</code>	16378	<code>\textsampigreek</code>	<code>\thebookmark@seq@number</code> 13915	
<code>\textonequarter</code> . . .	14588, 14957	<code>\textsc</code>	<code>\theequation</code> . .	6579, 6882, 6904, 6928, 6964
<code>\textonesuperior</code> . .	14582, 14951	<code>\textsection</code>	<code>\thefootnote</code>	7110, 7287
<code>\textopenbullet</code>	16606	<code>\textservicemark</code>	<code>\theHchapter</code> . .	6520, 6521, 6522, 6523, 6608
<code>\textordfeminine</code> . .	14553, 14921	<code>\textseveninferior</code>	<code>\theHenumi</code>	6539
<code>\textordmasculine</code> .	14584, 14953	<code>\textsevensuperior</code>	<code>\theHenumii</code>	6540
<code>\textparagraph</code> 564, 14576, 14945		<code>\textsf</code>	<code>\theHenumiii</code>	6541
<code>\textparenleft</code> . .	767, 768, 14441, 14874	<code>\textSigma</code>	<code>\theHenumiv</code>	6542
<code>\textparenleftinferior</code>	16396	<code>\textsigma</code>	<code>\theHequation</code> .	6510, 6580, 6883, 6905, 6929, 6937, 6964, 6968
<code>\textparenleftsuperior</code> . . .	16370	<code>\textsixinferior</code>	<code>\theHfigure</code>	6517, 6521
<code>\textparenright</code> . .	14443, 14876	<code>\textsixsuperior</code>	<code>\theHHfootnote</code>	6543, 6545
<code>\textparenrightinferior</code> . . .	16398	<code>\textsl</code>	<code>\theHHmpfootnote</code>	6545
<code>\textparenrightsuperior</code> . .	16372	<code>\textsterling</code>		
<code>\textpercent</code> . . .	560, 14437, 14868	<code>\textStigmagreek</code> . . .		
		<code>\textstigmagreek</code> . . .		
		<code>\textsurd</code>		
		<code>\TextSymbolUnavailable</code> .		
		14403, 14404, 14406		

<code>\theHItem</code>	6533, 6539, 6540, 6541, 6542	<code>\title</code>	6088, 6090	<code>\tw@</code>	14232, 14237, 14303, 14308
<code>\theHlisting</code>	3415	<code>\TMP@EnsureCode</code>	4450, 4457, 4458, 4459, 4460, 4461, 4462, 4463, 4464, 4465, 4466, 4467, 4468, 4469, 4470, 4471, 4472, 4473, 4474, 4475, 4476, 4477, 4478, 4479, 4480, 4481, 4482, 4483	<code>\typeout</code>	5, 6, 7, 19, 26, 27, 36, 131, 155, 158, 159, 160, 5029, 14329, 16830
<code>\theHlstlisting</code>	3411	<code>\tocappendix</code>	1622	U	
<code>\theHmpfootnote</code>	6544	<code>\tocchapter</code>	1621	<code>\U</code>	14774, 15679, 15702, 15767, 15844, 16034, 16036, 16058, 16060, 16070, 16072
<code>\theHpage</code>	7701	<code>\toclevel@chapter</code>	3402	<code>\u</code>	14773, 14811, 14830, 14850, 15101, 15103, 15137, 15139, 15157, 15159, 15187, 15189, 15190, 15258, 15260, 15318, 15320
<code>\theHparagraph</code>	6527, 6528	<code>\toclevel@figure</code>	3408	<code>\UHORN</code>	16652, 16763, 16764, 16765, 16766, 16767
<code>\theHparentequation</code>	6963, 6968	<code>\toclevel@listing</code>	3416	<code>\uhorn</code>	3260, 3267, 16645, 16703, 16704, 16705, 16706, 16707
<code>\theHpart</code>	6513	<code>\toclevel@lstlisting</code>	3412	<code>\UnDef</code>	12128
<code>\theHsection</code>	6510, 6516, 6523, 6525, 6529, 6530, 6607	<code>\toclevel@paragraph</code>	3406	<code>\unhbox</code>	7082, 11156, 13191, 13315, 13347, 13371, 13399, 13427
<code>\theHslide</code>	8115	<code>\toclevel@part</code>	3398, 3400	<code>\unhcopy</code>	13293
<code>\theHslidesection</code>	8120, 8122, 8158, 8162	<code>\toclevel@section</code>	3403	<code>\unichar</code>	2233
<code>\theHslidesubsection</code>	8121, 8209, 8213	<code>\toclevel@subfigure</code>	2401	<code>\Unicode</code>	1334
<code>\theHsubequation</code>	6937	<code>\toclevel@subparagraph</code>	3407	<code>\unrestored@protected@xdef</code>	7099, 7110, 7230, 7237, 7280, 7287
<code>\theHsubparagraph</code>	6528	<code>\toclevel@subsection</code>	3404	<code>\unskip</code>	6974, 6999, 7032, 7529, 8398, 8402, 8406, 8411
<code>\theHsubsection</code>	6525, 6526	<code>\toclevel@subsubsection</code>	3405	<code>\upshape</code>	609, 6981, 7007, 7038
<code>\theHsubsubsection</code>	6526, 6527	<code>\toclevel@subtable</code>	2402	<code>\Url</code>	4793
<code>\theHtable</code>	6518, 6522	<code>\toclevel@table</code>	3409	<code>\url</code>	4792, 4796
<code>\theHtheorem</code>	6529	<code>\tocparagraph</code>	1626	<code>\url@</code>	4796, 4797
<code>\theHthm</code>	6530	<code>\tocpart</code>	1620	<code>\use@file</code>	4960, 4962, 4969
<code>\theHy@tempcnt</code>	4729, 4737, 4744	<code>\tocsection</code>	1623	<code>\usefont</code>	588
<code>\thelisting</code>	3415	<code>\tocsubsection</code>	1624	<code>\utf@viii@undeferr</code>	550
<code>\thelstlisting</code>	3411	<code>\tocsubsubsection</code>	1625	<code>\UTFviii@four@octets</code>	2229, 2238
<code>\thempfn</code>	7099, 7176, 7268, 7280	<code>\toks</code>	244, 245, 948, 949, 950, 4884, 4886, 4888, 4892, 4897, 8320, 8321, 8323, 14232, 14237, 14303, 14308	<code>\UTFviii@three@octets</code>	2228
<code>\theoremautorefname</code>	3090, 3108, 3126, 3144, 3162, 3180, 3198, 3236, 3256, 3274, 8554	<code>\toks@</code>	171, 208, 496, 499, 502, 520, 521, 843, 850, 882, 883, 1258, 1281, 1284, 1286, 1794, 1795, 3286, 3287, 3289, 3870, 3874, 3875, 3883, 4174, 4175, 4352, 4354, 4999, 5004, 5008, 5012, 6298, 6300, 6386, 6388, 6438, 6450, 6741, 6745, 6781, 6786, 7885, 7886, 8092, 8097, 8099, 8102, 14231, 14237, 14302, 14308	<code>\UTFviii@two@octets</code>	2227
<code>\thepage</code>	2387, 4847, 6177, 6203, 6218, 6724, 6732, 6759, 7544, 7567, 7596, 7697, 7744, 7823, 7854, 8015, 8032, 8038, 8042, 8049, 8312, 8332, 8349, 8466	<code>\topmargin</code>	7757	V	
<code>\theslideheading</code>	8141	<code>\trivlist</code>	6976, 7002, 7035	<code>\v</code>	14373, 14385, 14397, 14516, 14521, 14529, 14531, 14784, 14808, 14827, 14849, 15121, 15123, 15125, 15127, 15149, 15151, 15224, 15226, 15244, 15246, 15278, 15280, 15294, 15296, 15302, 15304, 15352, 15354, 15360, 15362, 15364, 15366, 15367, 15369, 15371, 15373, 15375, 15381, 15383, 15385, 15387, 15393, 15394, 15437, 15439
<code>\theslidesection</code>	8129, 8136, 8144, 8150, 8152, 8154, 8160, 8170	<code>\tryhyper@link</code>	4822, 4824	<code>\V@@@footnotetext</code>	7217
<code>\theslidesubheading</code>	8142, 8193	<code>\ttfamily</code>	603	<code>\V@@footnotetext</code>	7203
<code>\theslidesubsection</code>	8181, 8188, 8195, 8201, 8203, 8205, 8211, 8221	<code>\ttl@b</code>	6792, 6797	<code>\value</code>	6201, 7483, 7509, 7761, 7910, 9862, 9867
<code>\This@name</code>	6557, 6558, 6576, 6577	<code>\ttl@gobblecontents</code>	6801	<code>\vbox</code>	5843, 5844, 5845, 5846, 6157, 7755
<code>\thispdfpagelabel</code>	6182	<code>\ttl@Hy@PatchSaveWrite</code>	6775, 6779		
<code>\ThisShouldNotHappen</code>	13499	<code>\ttl@Hy@refstepcounter</code>	6791		
<code>\thm@headfont</code>	6980, 7006	<code>\ttl@Hy@saveanchor</code>	6770, 6794		
<code>\thm@headpunct</code>	6982, 7008, 7039	<code>\ttl@Hy@SavedCurrentHref</code>	6774, 6785		
<code>\thm@headsep</code>	6983, 7009, 7040	<code>\ttl@Hy@steplink</code>	6768		
<code>\thm@indent</code>	6979, 7005	<code>\ttl@savewrite</code>	6781, 6783		
<code>\thm@notefont</code>	6981, 7007, 7038				
<code>\thm@postskip</code>	6987, 7013, 7044				
<code>\thm@preskip</code>	6986, 7012, 7043				
<code>\thm@space@setup</code>	6984, 7010, 7041				
<code>\thm@swap</code>	6978, 7004, 7037				
<code>\thmheadnl</code>	6977, 7003, 7036				
<code>\tiny</code>	621				

`\vfill` 5843, 5844, 5845, 5846
`\voffset` 7756
`\vpageref` 8411
`\vphantom` 624
`\Vr@f` 8397
`\vr@f` 8405
`\vref@pagenum` 6805
`\vref@space` 8398, 8401, 8406
`\vskip` 2476, 2477
`\vss` 7770
`\vtex@trans@special` 10610, 10612,
 10615, 10619, 10623, 10627,
 10629, 10631, 10635, 10641,
 10642, 10645
`\VTeXInitMediaSize` 10290, 10307
`\VTeXOS` . . . 10680, 10681, 10682,
 10684
`\VTeXversion` . 6353, 6356, 6359,
 10672, 10676

W
`\waw` 16809
`\wawhamza` 16778
`\wd` . 9457, 9473, 9494, 9511, 9534,
 9551, 13149
`\write` 4684, 6037, 6039, 6467, 6475,
 6730, 6758, 7467, 7482, 7498,
 7508, 7538, 7561, 7587, 7617,
 12747, 12771, 14099, 14181
`\WriteBookmarks`
 4108, 4245, 4419, 4441,
 13848, 14092, 14125, 14126,
 14168, 14174
`\wwwbrowser` . . . 9411, 9496, 9513

X
`\x` 21, 25, 92, 98,
 168, 169, 176, 178, 206, 209,
 210, 211, 212, 213, 214, 215,
 216, 217, 218, 219, 220, 221,
 222, 223, 224, 225, 226, 227,

 228, 304, 309, 310, 519, 524,
 845, 848, 852, 857, 889, 958,
 964, 1721, 1749, 2176, 2178,
 2471, 2481, 2490, 2500, 2555,
 2556, 2561, 2577, 3297, 3300,
 3304, 3317, 3427, 3428, 3431,
 3432, 3433, 3437, 3440, 3446,
 3873, 3879, 3882, 3885, 4040,
 4041, 4046, 4047, 4121, 4122,
 4123, 4126, 4129, 4132, 4172,
 4173, 4175, 4176, 4353, 4356,
 4683, 4689, 4882, 4893, 4897,
 4900, 4975, 4976, 4977, 4989,
 5000, 5001, 5002, 5003, 5006,
 5007, 5081, 5095, 5120, 5124,
 5127, 5137, 6110, 6111, 6116,
 6742, 6749, 6782, 6789, 6830,
 6839, 6841, 6853, 8099, 8100,
 8322, 8325, 8360, 8361, 8362,
 8364, 8366, 8720, 8728, 9016,
 9017, 9020, 9022, 9025, 9686,
 9687, 9688, 9690, 9691, 9692,
 9694, 9695, 9696, 9698, 9699,
 9700, 9702, 9703, 9704, 9706,
 9707, 9708, 9710, 9711, 9712,
 9714, 9715, 9717, 9723, 9732,
 10780, 10785, 10789, 11160,
 11163, 11169, 11174, 11319,
 11320, 12395, 12415, 12875,
 12895, 13214, 13234, 14236,
 14238, 14307, 14309
`\XeTeXrevision` 4406, 10044
`\XeTeXversion` 4406, 10044
`\XR@CdURL` 2408, 2409
`\XR@addURL` 2408
`\XR@ext` . 2663, 2664, 4958, 4961,
 6351, 8617, 9307, 9410, 9674,
 10171, 11511, 11594, 11653,
 11852, 12016
`\XR@URL` 2413
`\xspace` 677, 679

`\xspaceaddexceptions` 4082

Y
`\y` 309, 311, 31
 863, 866, 869, 872, 87
 2557, 2562, 2567, 3433
 3435, 3436, 4124, 4127
 4133, 4135, 4141, 4978
 4980, 4981, 4989, 6111
 6826, 6828, 6829, 6832
 11165, 11166, 11167, 11
`\ya`
`\yahamza`

Z
`\z` 310, 311, 316, 2559, 2560
 4981, 4989
`\z@` 821, 861, 985, 1137
 1176, 1199, 1450, 1490
 1519, 1534, 1542, 1615
 1876, 1882, 1946, 1950
 1962, 2427, 2432, 2466
 2752, 2755, 2897, 3439
 4042, 4415, 6354, 6357
 7069, 7215, 9229, 9233
 9242, 9249, 9252, 9256
 10153, 10154, 10159,
 10671, 10695, 10903,
 11217, 11576, 11577,
 11583, 12385, 12865,
 13204, 13622, 13652,
 13679, 13685, 13713,
 13752, 13771, 13781,
 13816, 13821, 13926,
 13928, 13929, 13930,
 13932, 13933, 13934,
 14273
`\z@skip`
`\za`
`\zay`
`\ZWNJ`