

Hypertext marks in L^AT_EX

Sebastian Rahtz

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

Heiko Oberdiek

Email: `heiko.oberdiek at gmail.com`

2010/03/30 v6.80u

1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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


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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

2 Contents

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

6.6.7	Support for package <code>xspace</code>	57
6.6.8	Converting to Unicode	57
6.6.9	Support for UTF-8 input encoding	60
7	Support of other packages	63
7.1	Class memoir	63
7.2	Package subfigure	63
7.3	Package xr and xr-hyper	64
8	Help macros for links	64
9	Options	66
9.1	Help macros	66
9.2	Defining the options	68
10	Options for different drivers	72
11	Options to add extra features	74
12	Language options	75
13	Options to change appearance of links	82
14	Bookmarking	82
15	PDF-specific options	84
15.1	PDF/A	94
15.2	Patch for babel's <code>\texttilde</code>	95
15.2.1	Driver loading	96
15.2.2	Bookmarks	98
16	User hypertext macros	101
17	Underlying basic hypertext macros	106
18	Compatibility with the <i>BT_EX2html</i> package	109
19	Forms creation	110
19.1	Field flags	110
19.1.1	Declarations of field flags	112
19.1.2	Set submit flags	114
19.1.3	Set annot flags in fields	114
19.1.4	Pushbutton field	115
19.1.5	Check box field	115
19.1.6	Radio button field	115
19.1.7	Text fields	116
19.1.8	Choice fields	116
19.2	Choice field	117
19.3	Forms	119
20	Setup	124
21	Low-level utility macros	125
22	Localized nullifying of package	126

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

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

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

3 File hyccheck.tex

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

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

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

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

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

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

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

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

`\HyC@checkPackage`

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

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

```

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

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

```

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

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

```

59 \def\HyC@checkcommand{%
60   \ifx\HyC@next\relax
61     \PackageError{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#{%
126   \HyC@Toks={#1}%

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```
231 \Hy@SetCatcodes
```

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

```

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

```

4.2 Compatibility with format dumps

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

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

```

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

```

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

```

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

```

`\Hy@AtEndOfPackage`

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

```

251 \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
252 }

```

\Hy@AtBeginDocumentHook

```

253 \def\Hy@AtBeginDocumentHook{}

```

\Hy@AtEndOfPackageHook

```

254 \def\Hy@AtEndOfPackageHook{}

```

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

```

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

```

4.3 Switches

```

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

```

```

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

```

Defaults for the switches are now set.

```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

```

```

348 \newdimen\@linkdim
349 \let\Hy@driver\@empty
350 \let\MaybeStopEarly\relax
351 \newcount\Hy@linkcounter
352 \newcount\Hy@pagecounter
353 \Hy@linkcounter0
354 \Hy@pagecounter0

```

5.1 Macros for recursions

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

```

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

357 \let\Hy@ReturnEnd\@empty
358 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
359 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

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

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

```

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

```

`\hypercalcbp`

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

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

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

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

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

```
404 \begingroup
```

6.2.1 Preprocessing

Octal escape sequences. To avoid problems with eight bit or non printable characters, the octal escape notation is supported. So most glyphs in the encoding definitions for PD1 and PU produce these octal escape sequences. All three octal digits have to be used:

- Wrong results are avoided, if digits follow that are not part of the octal sequence.
- Macros rely on the fact that the octal sequences always consist of three digits (vTeX driver, Unicode support).

The escape sequences start with a backslash. By `\string` it will be printed. Therefore it is ensured that the \TeX escape character indeed prints as a normal backslash. Eventually this line can be removed, because this is standard \LaTeX behaviour.

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

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

```

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

```

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

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

```

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

```

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

```

421 \@inmathwarn\pdfstringdef

```

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

```

422 \let\@inmathwarn\HyPsd@inmathwarn

```

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

```

423 \let\add@accent\HyPsd@add@accent

```

Commands that don't use NFSS directly. There are several commands that prints characters in the printable ASCII area that don't obey the NFSS, so they have to be redefined here.

```

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

```

```

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

```

Newline \newline or \\ do not work in bookmarks, in text annotations they should expand to \r. In pdf strings \\ stands for a backslash. Therefore the commands are disabled now. The user can redefine them for a result what he want:

backslash: \pdfstringdefDisableCommands{\let\\\textbackslash}

new line: \pdfstringdefDisableCommands{\let\\\textCR}

disabled: \pdfstringdefDisableCommands{\let\\\empty}

At any case, however, the optional argument or the star cannot be scanned in a 100% sure manner.

```

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

```

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

```

438 \def\TeX{\TeX}%
439 \def\LaTeX{\LaTeX}%
440 \def\LaTeXe{\LaTeX2e}%
441 \def\eTeX{e-TeX}%
442 \def\SliTeX{\SliTeX}%
443 \def\MF{Metafont}%
444 \def\MP{Metapost}%

```

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

```

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

```

```

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

```

Package color.

```

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

```

Upper- and lowercase.

```

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

```

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

```

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

```

Disable \cyr, used in russianb.ldf.

```

502 \let\cyr\relax

```

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

```

503 \let\es@roman\@Roman

```

Package german.

```

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

```

```

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

```

Package french. The support is deferred, because it needs `\GenericError` to be disabled (see below).

Package FrenchPro. This package uses:

```

\if@mid@expandable{not fully expandable code}{fully expandable code}

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

```

AMS classes.

```

513 \HyPsd@AMSclassfix

```

Redefinition of `\hspace` `\hspace` don't work in bookmarks, the following fix tries to set a space if the argument is a positive length.

```

514 \let\hspace\HyPsd@hspace

```

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

```

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

```

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

```

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

```

Miscellaneous commands.

```

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

```

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

```

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

```

Patch for cjk bookmarks.

```

529 \HyPsd@CJKhook

```

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

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

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

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

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

Package `xspace`.

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

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

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

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

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

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

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

Support for package 'xargs':

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

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

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

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

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

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

```

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

```

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

```

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

```

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

```

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

```

6.2.3 Postprocessing

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

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

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

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

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

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

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

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

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

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

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


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

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

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

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

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

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

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

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

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

Right parenthesis. Also \xspace detects a right parenthesis. For the \xspace support and the following parenthesis check the different parenthesis notations), \), and \051 are converted to one type \) and before \HyPsd@empty with the meaning of \relax is introduced for \xspace. By redefining to \@empty \HyPsd@empty can easily removed later.

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

```

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

```

Support for package `xspace`. `\xspace` looks for the next token and decides if it expands to a space or not. Following tokens prevent its transformation to a space: Beginning and end of group, handled above by replacing by an italic correction, several punctuation marks, a closing parentheses, and several spaces.

Without package `xspace` there are tokens with catcode 11 and 12, `\HyPsd@empty` and `\HyPsd@SPACEOPTI`. With package `xspace` marker for the italic correction `\` and `\xspace` come with. In the package `xspace` case the two markers are replaced by commands and an `\edef` performs the `\xspace` processing.

In the opposite of the original `\xspace` `\HyPsd@xspace` uses an argument instead of a `\futurelet`, so we have to provide such an argument, if `\HyPsd@xspace` comes last. Because `\HyPsd@Subst` with several equal tokens (`--`) needs a safe last token, in both cases the string gets an additional `\HyPsd@empty`.

```

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

```

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

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

```

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

```

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

```

625      \let\HyPsd@empty\@empty

```

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

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

```

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

```

```

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

```

Optimizing spaces. Spaces are often used, but they have a very long form \040. They are converted back to real spaces, but not all, so that no space follows after another. In the bookmark case several spaces are written to the .out file, but if the entries are read back, several spaces are merged to a single one.

With Unicode the spaces are replaced by their octal sequences.

```

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

```

Converting to Unicode. At last the eight bit letters have to be converted to Unicode, the masks \8 and \9 are removed and the Unicode marker is added.

```

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

```

Try conversion back to PDFDocEncoding.

```

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

```

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

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

`\Hy@pdfstringdef`

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

6.3 Encodings

6.3.1 XeTeX

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

```

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

```

6.3.2 Workaround for package linguex

```

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

```

6.3.3 PD1 encoding

The PD1 encoding implements the PDFDocEncoding for use with $\text{\LaTeX 2}_{\epsilon}$'s NFSS. Because the informational strings are not set by \TeX 's typesetting mechanism but for inter-

preting by the PDF reader, the glyphs of the PD1 encoding are implemented to be safely written to a file (PDF output file, .out file).

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

```

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

```

6.3.4 PU encoding

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

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

```

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

```

6.4 Additional user commands

6.4.1 \texorpdfstring

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

```

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

```

6.4.2 Hooks for \pdfstringdef

`\pdfstringdefPreHook` Default definition of the hooks for `\pdfstringdef`. The construct `\ifundefined` with `\pdfstringdefPostHook` `\let` is a little bit faster than `\providecommand`.

```

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

```

```

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

```

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

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

```

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

```

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

```

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

```

`\HyPsd@DisableCommands`

```

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

```

`\pdfstringdefWarn` The purpose of `\pdfstringdefWarn` is to produce a warning message, so the user can see, that something can go wrong with the conversion to PDF strings.

The prefix `\<>-` is added to the token. `\noexpand` protects the probably undefined one during the first expansion step. Then `\HyPsd@CheckCatcodes` can detect the not allowed token, `\HyPsd@CatcodeWarning` prints a warning message, after `\HyPsd@RemovePrefix` has removed the prefix.

`\pdfstringdefWarn` is intended for document authors or package writers, examples for use can be seen in the definition of `\HyPsd@ifnextchar` or `\HyPsd@protected@testopt`.

```

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

```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little. In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```

814 \begingroup

```

```

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

```

6.5.2 Babel languages

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

```

\pdfstringdefDisableCommands{%
\languageshorthands{system}%
}

```

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

```

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

```



```

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

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

```

```

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

```

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

```

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

```

```

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

```

```

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

```

```

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

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

```

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

```

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

```

6.5.3 CJK patch

```

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

```

\HyPsd@CJKhook

```

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

```

6.5.4 CJK bookmarks

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

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

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

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

```

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

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

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

```

\HyPsd@CJK@Unicode

```

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

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

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

```

```

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

```



```

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

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

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

```

```

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

```

```

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

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

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

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

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

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

```

\HyPsd@add@accent

```

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

```

6.5.7 Unexpandable spaces

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

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

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

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

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

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

6.5.8 Marker for commands

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

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

6.5.9 `\hspace fix`

`\HyPsd@hspace`

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

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

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

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

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

6.5.10 Fix for AMS classes

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

```

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

```

6.5.11 Reference commands

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

\HyPsd@@autorefname

```

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

```

6.5.12 Redefining the defining commands

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

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of \relax). To avoid side effects this should be done in \pdfstringdef shortly before the \xdef job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. \pdfstringdef is slow enough, so this isn't done.

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

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

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

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

\HyPsd@DefCommand

\HyPsd@LetCommand

```

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

```



```

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

```

6.5.13 \ifnextchar

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

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

```

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

```

6.5.14 \@protected@testoptifnextchar

`\HyPsd@protected@testopt` Macros with optional arguments doesn't work properly, because they call `\@ifnextchar` to detect the optional argument (see the explanation of `\HyPsd@ifnextchar`). But a warning, that `\@ifnextchar` doesn't work, doesn't help the user very much. Therefore `\@protected@testopt` is also disabled, because its first argument is the problematic macro with the optional argument and it is called before `\@ifnextchar`.

```

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

```

```

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

```

6.6 Help macros for postprocessing

6.6.1 Generic warning.

`\HyPsd@Warning` For several reasons `\space` is masked and does not have its normal meaning. But it is used in warning messages, so it is redefined locally:

```

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

```

6.6.2 Protecting spaces

```

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

```

`\HyPsd@ProtectSpaces` `\HyPsd@ProtectSpaces` calls with the expanded string `\HyPsd@@ProtectSpacesFi`. The expanded string is protected by `|` at the beginning and end of the expanded string. Because of this there can be no group at the beginning or end of the string and grouping characters are not removed by the call of `\HyPsd@@ProtectSpacesFi`.

```

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

```

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

```

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

```

Remove mask.

`\HyPsd@RemoveMask` `\HyPsd@RemoveMask` removes the protecting `|`. It is used by `\HyPsd@@ProtectSpacesFi` and by the code in `\pdfstringdef` that removes the grouping characters.

```

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

```

```

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

```

6.6.3 Remove grouping braces

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

```

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

```

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

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

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

```

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

```

```

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

```

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

```

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

```

6.6.4 Catcode check

Check catcodes.

\HyPsd@CheckCatcodes Because \ifcat expands its arguments, this is prevented by \noexpand. In case of command tokens and active characters \ifcat now sees a \relax. After protecting spaces and removing braces #1 should be a single token, no group of several tokens, nor an empty group. (So the \expandafter\relax between \ifcat and \noexpand is only for safety and it should be possible to remove it.)

\protect and \relax should be removed silently. But it is too dangerous and breaks some code giving them the meaning of \@empty. So commands with the meaning of \protect are removed here. (\protect should have the meaning of \@typeset@protect that is equal to \relax).

```

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

```

```

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

```

```

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

```

Remove counts, dimens, skips.

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

```

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

```

`\HyPsd@AfterDimenRemove` If the value of the `dimen` (`\kern`) is zero, it can be removed silently. All other values are difficult to interpret. Negative values do not work in bookmarks. Should positive values be removed or should they be replaced by space(s)? The following code replaces positive values greater than `1ex` with a space and removes them else.

```

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

```

`\HyPsd@AfterSkipRemove` The glue part of skips do not work in PDF strings and are ignored. Skips (`\hskip`), that are not zero, have the same interpreting problems like `dimens` (see above).

```

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

```

Catcode warnings.

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

```

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

```

```

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

```

\HyPsd@RemoveSpaceWarning

```

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

```

\HyPsd@ReplaceSpaceWarning

```

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

```

6.6.5 Check for wrong glyphs

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

```

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

```

```

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

```

Spaces.

\HyPsd@spaceopti In the string the spaces are represented by \HyPsd@spaceopti tokens. Within an \edef it prints itself as a simple space and looks for its next argument. If another space follows, so it replaces the next \HyPsd@spaceopti by an protected space \040.

```

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

```

6.6.6 Replacing tokens

\HyPsd@Subst To save tokens \HyPsd@StringSubst is an wrapper for the command \HyPsd@Subst that does all the work: In string stored in command #3 it replaces the tokens #1 with #2.

```

#1 Exact the tokens that should be replaced.
#2 The replacement (don't need to be expanded).
#3 Command with the string.

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

```



```

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

```

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

```

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

```

6.6.7 Support for package `xspace`

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

```

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

```

6.6.8 Converting to Unicode

Eight bit characters are converted to the sixteen bit ones, `\8` is replaced by `\00`, and `\9` is removed. The result should be a valid Unicode PDF string without the Unicode marker at the beginning.

```

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

```

`\HyPsd@ConvertToUnicode`

```

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

```

```

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

```

\HyPsd@DoConvert

```

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

```

\HyPsd@DoEscape

```

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

```

\HyPsd@GetTwoBytes

```

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

```

\HyPsd@GetOneByte

```

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

```

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

```

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

```

\HyPsd@Char

```

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

```

6.6.9 Support for UTF-8 input encoding

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

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

```

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

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

The two octet form of UTF-8 110aaabb (A) and 10cccd (B) must be converted into octal numbers 00a and bcd. The result is `\8a\bcd` (with a, b, c, d as octal numbers). The conversion equations.

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

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

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

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

$$(5)$$

```

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

```

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

```

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

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

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

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

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

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

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

$$(12)$$

```

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

```

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

```

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

```

```

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

```

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

7 Support of other packages

7.1 Class memoir

```

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

```

7.2 Package subfigure

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

```

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

```

```

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

```

7.3 Package xr and xr-hyper

The beta version of xr that supports \XR@addURL is called xr-hyper. Therefore we test for the macro itself and not for the package name:

```

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

```

If reading external aux files check whether they have a non zero fourth field in \newlabel and if so, add the URL as the fifth field.

```

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

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

```

Providing dummy definitions.

```

2251 \let\literalps@out\@gobble
2252 \newcommand\pdfbookmark[3]{}{}
2253 \def\Acrobatmenu#1#2{\leavevmode#2}
2254 \def\Hy@writebookmark#1#2#3#4#5{}%

```

8 Help macros for links

Anchors get created on the baseline of where they occur. If an XYZ PDF view is set, this means that the link places the top of the screen *on the baseline* of the target. If this is an equation, for instance, it means that you cannot see anything. Some links, of course, are created at the start of environments, and so it works. To allow for this, anchors are raised, where possible, by some small amount. This defaults to \baselineskip, but users can set it to something else in two ways (thanks to Heiko Oberdiek for suggesting this):

1. Redefine \HyperRaiseLinkDefault to be eg the height of a \strut
2. Redefine \HyperRaiseLinkHook to do something complicated; it must give a value to \HyperRaiseLinkLength, which is what actually gets used

```

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

```


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

```

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

```

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

```

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

```

```

2311 \fi
2312 \fi
2313 }%

```

9 Options

9.1 Help macros

`\Hy@boolkey`

```

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

```

`\Hy@WarnOptionValue`

```

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

```

`\Hy@DisableOption`

```

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

```

`\Hy@WarnOptionDisabled`

```

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

```

```

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

```

`\Hy@CheckOptionValue` Some options take a string value out of a limited set of values. Macro `\Hy@CheckOptionValue` checks whether the given value `#1` for option `#2` is a member of the value list `#3`.

```

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

```

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

```

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

```

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

```

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

```

\Hy@UseNameKey

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

9.2 Defining the options

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

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

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

```

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

```

If we are going to PDF via HyperTeX \special commands, the dvips (-z option) processor does not know the *height* of a link, as it works solely on the position of the closing \special. If we use this option, the \special is raised up by the right amount, to fool the dvi processor.

```

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

```

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

```

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

```

Determines whether an automatic anchor is put on each page

```

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

```

```

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

```

Are the page links done as plain arabic numbers, or do they follow the formatting of the package? The latter loses if you put in typesetting like `\textbf` or the like.

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

```

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

```

```

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

```

10 Options for different drivers

```

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

```



```

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

```

```

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

```

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

```

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

```

11 Options to add extra features

Make included figures (assuming they use the standard graphics package) be hypertext links. Off by default. Needs more work.

```

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

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

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

```

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

```

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

```

```

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

```

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

```

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

```

Configuration of encap char.

```

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

```

12 Language options

The `\autoref` feature depends on the language.

```

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

```

```

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

```

```

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

```


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

```
2951 \def\partautorefname{\cyr\cyrch.}%
2952 \def\chapterautorefname{\cyr\cyrg\cyr.}%
2953 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

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

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

The sectioning command have stable (almost standard) and common abbreviation form for all levels (the meaning of these references visible from the section number). No problem.

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

The names of references to paragraphs also have stable (almost standard) and common abbreviation form for all levels (the meaning of these references is visible from the section number). No problem in the middle of sentence.

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

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

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

The name of verbatim line. Here could be a standard of the abbreviation (used very rare). But the author preprint publications (which have not any editor or corrector) can use this abbreviation for the page reference. So the meaning of the line reference can be read as reference to the page.

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

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

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

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

```
2967 % \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyrk.}%
```

The names of theorem: if we want have “the good face of the book”, so the theorem reference must have the full name (like equation reference). But . . .

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

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

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

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

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

```

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

```

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

```

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

```



```

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

```

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

```

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

```

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

```

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

```

```

3081 }%
3082 }%
3083 }

```

13 Options to change appearance of links

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

```

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

```

14 Bookmarking

```

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

```

```

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

```

The depth of the outlines is controlled by option `bookmarksdepth`. The option acts globally and distinguishes three cases:

- `bookmarksdepth`: Without value `hyperref` uses counter `tocdepth` (compatible behaviour and default).
- `bookmarksdepth=<number>`: the depth is set to `<number>`.
- `bookmarksdepth=<name>`: The `<name>` must not start with a number or minus sign. It is a document division name (part, chapter, section, ...). Internally the value of macro `\toclevel@<name>` is used.

```

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

```

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

```

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

```

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

```

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

Option CJKbookmarks enables the patch for CJK bookmarks.

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

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

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

```

15 PDF-specific options

`\@pdfpagetransition` The value of option `pdfpagetransition` is stored in `\@pdfpagetransition`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

3206 \let\@pdfpagetransition\relax
3207 \define@key{Hyp}{pdfpagetransition}{\def\@pdfpagetransition{#1}}

```

`\@pdfpageduration` The value of option `pdfpageduration` is stored in `\@pdfpageduration`. Its initial value is set to `\relax` in order to be able to differentiate between a not used option and an option with an empty value.

```

3208 \let\@pdfpageduration\relax
3209 \define@key{Hyp}{pdfpageduration}{\def\@pdfpageduration{#1}}

```

The entry for the `/Hid` key in the page object is only necessary, if it is used and set to true for at least one time. If it is always false, then the `/Hid` key is not written to the pdf page object in order not to enlarge the pdf file.

```

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

```

The value of the bordercolor options are not processed by the color package. Therefore the value consists of space separated rgb numbers in the range 0 until 1.

Package xcolor provides \XC@bordercolor since version 1.1. If the two spaces in the color specification are missing, then the value is processed as color specification from package xcolor by using \XC@bordercolor (since xcolor 2004/05/09 v1.11, versions 2005/03/24 v2.02 until 2006/11/28 v2.10 do not work because of a bug that is fixed in 2007/01/21 v2.11).

```

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

```

```

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

```

```

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

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

```

```

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

```



```

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

```

```

3487 \edef\HyInfo@AddonList{%
3488 \HyInfo@AddonList
3489 \HyInfo@do{\HyInfo@Key}%
3490 }%
3491 \kv@parse@normalized{%
3492 \HyInfo@Key={#2}%
3493 }{%
3494 \kv@processor@default{pdfinfo}%
3495 }%
3496 \fi
3497 \else
3498 \kv@parse@normalized{%
3499 \HyInfo@Key={#2}%
3500 }{%
3501 \kv@processor@default{pdfinfo}%
3502 }%
3503 \fi
3504 \fi
3505 }
3506 \def\HyInfo@GenerateAddons{%
3507 \ifHyInfo@AddonUnsupported
3508 \def\HyInfo@Addons{}%
3509 \else
3510 \begingroup
3511 \toks@{}%
3512 \def\HyInfo@do##1{%
3513 \EdefEscapeName\HyInfo@Key{##1}%
3514 \edef\x{%
3515 \toks@{%
3516 \the\toks@
3517 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3518 }%
3519 }%
3520 \x
3521 }%
3522 \HyInfo@AddonList
3523 \edef\x{\endgroup
3524 \def\noexpand\HyInfo@Addons{\the\toks@}%
3525 }%
3526 \x
3527 \fi
3528 }
3529 \def\HyInfo@AddonList{}
3530 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3531 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3532 \let\setpdfinkmargin\@gobble
3533 \def\calculate@pdfview#1 #2\{%
3534 \def\@pdfview{#1}%
3535 \ifx\#2\%
3536 \def\@pdfviewparams{-32768}%
3537 \else
3538 \def\@pdfviewparams{#2}%
3539 \fi
3540 }
3541 \begingroup\expandafter\expandafter\expandafter\endgroup
3542 \expandafter\ifx\csname numexpr\endcsname\relax
3543 \def\Hy@number#1{%

```

```

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

```

```

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

```

Default values:

```

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

```

```

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

```

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

```

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

```

To add flexibility, we will not use the ordinary processing of package options, but put them through the *keyval* package. This section was written by David Carlisle.

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

```

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

```

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

```

3676 \@ifpackageloaded{tex4ht}{\%
3677   \ifpackagewith{hyperref}{tex4ht}{\{}}{\}%
3678   \PassOptionsToPackage{tex4ht}{hyperref}%
3679   }%
3680 \{}
3681 \let\ReadBookmarks\relax
3682 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

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

```

```

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

```

15.1 PDF/A

```

3707 \Hy@DisableOption{pdfa}

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

```

15.2 Patch for babel's \texttilde

Babel does not define \texttilde in NFSS2 manner, so the NFSS2 definitions of PD1 or PU encoding is not compatible. To fix this, \texttilde is defined in babel manner.

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

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

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

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

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

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

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

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

```

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

```

15.2.1 Driver loading

```

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

```

Some drivers can be detected. Check for these drivers, whether the given driver option is ok. Otherwise force the right driver or use the default driver.

```

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

```



```

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

```

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

```

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

```

```

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

```

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

```

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

```

15.2.2 Bookmarks

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

for grouping consistency:

```

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

```

```

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

```

4124 \begingroup
4125 \endlinechar=-1 %
4126 \catcode'\^^A=14 %
4127 \catcode'\^^M\active
4128 \catcode'\%\active
4129 \catcode'\#\active
4130 \catcode'\_\active
4131 \catcode'\$\active
4132 \catcode'\&\active
4133 \gdef\hyper@normalise{^^A
4134   \begingroup
4135   \catcode'\^^M\active
4136   \def^^M{ }^^A
4137   \catcode'\%\active
4138   \let%\@percentchar
4139   \let%\@percentchar
4140   \catcode'\#\active
4141   \def#{\hyper@hash}^^A
4142   \def\#{\hyper@hash}^^A
4143   \@makeother\&^^A
4144   \edef&{\string&}^^A
4145   \edef&{\string&}^^A
4146   \edef\textunderscore{\string_}^^A
4147   \let_\textunderscore
4148   \catcode'\_\active
4149   \let_\textunderscore
4150   \let~\hyper@tilde
4151   \let~\hyper@tilde
4152   \let\textasciitilde\hyper@tilde
4153   \let\\ \@backslashchar
4154   \edef${\string$}^^A
4155   \Hy@safe@activetrue
4156   \hyper@n@rmalise
4157 }^^A
4158 \catcode'\#=6 ^^A
4159 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4160 \gdef\hyper@n@rmalise#1#2{^^A
4161   \def\Hy@tempa{#2}^^A
4162   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4163     \Hy@ReturnAfterElseFi{^^A
4164       \hyper@@normalise{#1}^^A
4165     }^^A
4166   \else
4167     \Hy@ReturnAfterFi{^^A
4168       \hyper@@normalise{#1}{#2}^^A
4169     }^^A
4170   \fi
4171 }^^A
4172 \gdef\hyper@@normalise#1#2{^^A
4173   \edef\Hy@tempa{^^A
4174     \endgroup
4175     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
4176   }^^A
4177   \Hy@tempa
4178 }^^A

```

```

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

4194 \def\hyperlink#1#2{%
4195   \hyper@@link{}{#1}{#2}%
4196 }

4197 \def\Hy@VerboseLinkStart#1#2{%
4198   \ifHy@verbose
4199     \begingroup
4200     \Hy@safe@activetrue
4201     \xdef\Hy@VerboseGlobalTemp{(#1 '#2')%
4202     \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4203     \xdef\Hy@VerboseGlobalTemp{%
4204     \Hy@VerboseGlobalTemp, %
4205     line \the\inputlineno
4206   }%
4207   \endgroup
4208   \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4209   \@onelevel@sanitize\Hy@VerboseLinkInfo
4210   \fi
4211 }

4212 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4213 \def\Hy@VerboseLinkStop{%
4214   \ifHy@verbose
4215     \begingroup
4216     \edef\x{\endgroup
4217     \write\m@ne{%
4218       Package 'hyperref' Info: %
4219       End of reference \Hy@VerboseLinkInfo.%
4220     }%
4221   }%
4222   \x
4223   \fi
4224 }

4225 \def\Hy@VerboseAnchor#1{%
4226   \ifHy@verbose
4227     \begingroup
4228     \Hy@safe@activetrue
4229     \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4230   \endgroup
4231   \fi
4232 }

4233 \def\Hy@AllowHyphens{%
4234   \relax

```

```

4235 \ifhmode
4236   \penalty\@M
4237   \hskip\z@skip
4238 \fi
4239 }

4240 \DeclareRobustCommand*{\href}{%
4241   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4242 }
4243 \def\Hy@href#{%
4244   \hyper@normalise\href@
4245 }
4246 \begingroup
4247   \catcode'\$=6 %
4248   \catcode'\#=12 %
4249   \gdef\href$1{\expandafter\href@split$1##\}%
4250   \gdef\href@split$1#$2#$3\{%
4251     \hyper@@link{$1}{$2}%
4252   }%
4253 \endgroup

```

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

```

4254 \RequirePackage{url}
4255 \let\HyOrg@url\url
4256 \def\Hurl{\begingroup \Url}
4257 \DeclareRobustCommand*{\nolinkurl}{\hyper@normalise\nolinkurl@}
4258 \def\nolinkurl@#1{\Hurl{#1}}
4259 \DeclareRobustCommand*{\url}{\hyper@normalise\url@}
4260 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

4261 \DeclareRobustCommand*{\hyperimage}{\hyper@normalise\hyper@image}
4262 \providecommand\hyper@image[2]{#2}

4263 \def\hypertarget#1#2{%
4264   \ifHy@nesting
4265     \hyper@@anchor{#1}{#2}%
4266   \else
4267     \hyper@@anchor{#1}{\relax}#2%
4268   \fi
4269 }

```

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

```

4270 \DeclareRobustCommand*{\hyperref}{%
4271   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4272 }
4273 \def\Hy@babelnormalise#1[#2]{%
4274   \begingroup
4275     \Hy@safe@activetrue
4276     \edef\Hy@tempa{%
4277       \endgroup
4278       \noexpand#1[#2]}%
4279   }%
4280   \Hy@tempa
4281 }

```



```

4282 \def\@hyperref{\hyper@normalise\@hyperref}
4283 \def\@hyperref#1#2#3{%
4284   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4285   \expandafter\tryhyper@link\ref@one\{#1}%
4286 }
4287 \def\tryhyper@link#1\#2{%
4288   \hyper@@link{#2}{#1}%
4289 }

4290 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4291 \def\@hyperdef#1#2#3{%, category, name, text
4292   \ifx\#1\%
4293     \def\Hy@AnchorName{#2}%
4294   \else
4295     \def\Hy@AnchorName{#1.#2}%
4296   \fi
4297   \ifHy@nesting
4298     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4299   \else
4300     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4301   \fi
4302 }

```

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

```

4303 \def\label@hyperref[#1]{%
4304   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4305 }%
4306 \def\label@@hyperref#1#2#3{%
4307   \ifx#1\relax
4308     \protect\G@refundefinedtrue
4309     \@latex@warning{%
4310       Hyper reference ‘#2’ on page \thepage \space undefined%
4311     }%
4312     \hyper@@link{}{??}{#3}%
4313   \else
4314     \hyper@@link{\expandafter\@fifthoffive#1}%
4315     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4316   \fi
4317 }
4318 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4319                               % anchor text
4320   \@bsphack
4321   \ifx\#2\%
4322     \def\Hy@AnchorName{#3}%
4323   \else
4324     \def\Hy@AnchorName{#2.#3}%
4325   \fi
4326   \if@filesw
4327     \protected@write\@auxout{}{%
4328       \string\newlabel{#1}{\{ }\{ }\{ \Hy@AnchorName\} }%
4329     }%
4330   \fi
4331   \@esphack
4332   \ifHy@nesting
4333     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4334   \else
4335     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%

```

```

4336 \fi
4337 }

```

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.

```

4338 \def\hyper@@link{\let\Hy@reserved@a\relax
4339 \ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
4340 }
4341 \def\hyper@link@[#1]#2#3#4{%
4342 \begingroup
4343 \protected@edef\Hy@tempa{#2}%
4344 \Hy@safe@activestrue
4345 \edef\x{#3}%
4346 \ifx\Hy@tempa\@empty
4347 \toks0{\hyper@link{#1}}%
4348 \else
4349 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4350 \fi
4351 \toks2{%
4352 \Hy@safe@activesfalse
4353 #4%
4354 }%
4355 \edef\Hy@tempa{\the\toks2}%
4356 \edef\x{\endgroup
4357 \ifx\Hy@tempa\@empty
4358 \noexpand\Hy@Warning{Suppressing empty link}%
4359 \else
4360 \the\toks0 {\x}{\the\toks2}}%
4361 \fi
4362 }%
4363 \x
4364 }

```

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.

```

4365 \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.

```

4366 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4367 }

```

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

```
4368 \def\@pdftempwordfile{file}%
4369 \def\@pdftempwordrun{run}%
4370 \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:

```
4371 \ifx\\#6\\%
4372 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4373 \else
4374 \ifx\\#4\\%
4375 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
4376 \else
```

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

```
4377 \def\@pdftempa{#4}%
4378 \ifx\@pdftempa\@pdftempwordfile
4379 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
4380 \else
```

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

```
4381 \ifx\@pdftempa\@pdftempwordrun
4382 \ifHy@pdfa
4383 \PackageError{hyperref}{%
4384 PDF/A: Launch action is prohibited%
4385 }\@ehc
4386 \begingroup
4387 \leavevmode
4388 #2%
4389 \endgroup
4390 \else
4391 \expandafter\@hyper@launch#7\\{#3}{#2}%
4392 \fi
4393 \else
```

otherwise its a URL

```
4394 \hyper@linkurl{#3}{#7\ifx\\#2\\%
4395 \fi
4396 \fi
4397 \fi
4398 \fi
4399 }
```

By default, turn run: into file:

```
4400 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
4401 \hyper@linkurl{#2}{%
4402 \Hy@linkfileprefix
4403 #1%
4404 \ifx\\#3\\%
4405 \else
4406 \hyper@hash
4407 #3%
4408 \fi
4409 }%
4410 }
```

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

```

4411 \def\@hyper@linkfile file:#1\\#2#3{%
4412   %file url,link string, name
4413   \filename@parse{#1}%
4414   \ifx\filename@ext\relax
4415     \edef\filename@ext{\XR@ext}%
4416   \fi
4417   \def\use@file{\filename@area\filename@base.\filename@ext}%
4418   \Hy@ifStringEndsWith\filename@ext\XR@ext{%
4419     \hyper@linkfile{#2}{\use@file}{#3}%
4420   }{%
4421     \ifx\@baseurl\@empty
4422       \hyper@linkurl{#2}{%
4423         \Hy@linkfileprefix\use@file\ifx\\#3\\else\hyper@hash#3\fi
4424       }%
4425     \else
4426       \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4427     \fi
4428   }%
4429 }

4430 \def\Hy@ifStringEndsWith#1#2{%
4431   \begingroup
4432   \edef\x{#1}%
4433   \@onelevel@sanitize\x
4434   \edef\x{.\x$}%
4435   \edef\y{#2}%
4436   \@onelevel@sanitize\y
4437   \edef\y{.\y$}%
4438   \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4439     \endgroup
4440     \ifx\relax##2\relax
4441       \expandafter\ltx@secondoftwo
4442     \else
4443       \expandafter\ltx@firstoftwo
4444     \fi
4445   }%
4446   \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4447 }

```

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 it's 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.

```

4448 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4449 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4450   \ifx\\#1\\%
4451     #2\Hy@Warning{Ignoring empty anchor}%
4452   \else
4453     \def\anchor@spot{#2#3}%
4454     \let\put@me@back\@empty
4455     \ifx\relax#2\relax
4456     \else

```

```

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

```

18 Compatibility with the *L^AT_EX2html* package

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

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

```

4481 \let\htmladding\hyperimage
4482 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4483 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4484 \def\htmlref#1#2{% anchor text, label
4485 \label@hyperref[{#2}]{#1}%
4486 }

```

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

```

4487 \def\@latextohtmlX{%
4488 \let\hhyperref\hyperref
4489 \def\hyperref##1##2##3##4{% anchor text for HTML
4490 % text to print before label in print
4491 % label
4492 % post-label text in print
4493 ##2\ref{##4}##3%
4494 }%
4495 }

```

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.

```
4496 \RequirePackage{bitset}
```

Each flag has a option name, an \if switch, and a bit position. The default is always ‘false’, the flag is clear. This is also the default of the switch created by \newif.

The names of the flags in the PDF specification (1.7) are used as lowercase option names.

```
\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
4497 \def\HyField@NewFlag#1#2{%
4498   \lowercase{\HyField@NewOption{#2}}}%
4499   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4500 }
```

```
\HyField@NewFlagOnly
4501 \def\HyField@NewFlagOnly#1#2{%
4502   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4503 }
```

```
\HyField@NewOption #1: option name
4504 \def\HyField@NewOption#1{%
4505   \expandafter\newif\csname ifFld@#1\endcsname
4506   \define@key{Field}{#1}[true]{%
4507     \lowercase{\Field@boolkey{##1}}{#1}%
4508   }%
4509 }
```

\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
4510 \def\HyField@NewBitsetFlag#1#2#3#4{%
4511   \begingroup
4512     \count@=#4\relax
4513     \advance\count@\m@ne
4514     \def\x##1{%
4515       \endgroup
4516       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4517       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4518         \expandafter\edef\csname HyField@#3@##1\endcsname{%
4519           (\number#4) #2%
4520         }%
4521       \else
4522         \expandafter\edef\csname HyField@#3@##1\endcsname{%
```

```

4523     \csname HyField@#3@#1\endcsname
4524     /#2%
4525     }%
4526     \fi
4527     }%
4528     \expandafter\x\expandafter{\the\count@}%
4529 }

```

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

```

4530 \def\HyField@UseFlag#1#2{%
4531   \lowercase{\HyField@@UseFlag{#2}}{#1}%
4532 }

```

\HyField@@UseFlag

```

4533 \def\HyField@@UseFlag#1#2{%
4534   \bitsetSetValue{HyField@#2}{%
4535     \csname HyField@#2@#1\endcsname
4536   }{%
4537     \csname ifFld@#1\endcsname 1\else 0\fi
4538   }%
4539 }

```

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

```

4540 \def\HyField@SetFlag#1#2{%
4541   \lowercase{\HyField@@SetFlag{#2}}{#1}%
4542 }

```

\HyField@@SetFlag

```

4543 \def\HyField@@SetFlag#1#2{%
4544   \bitsetSetValue{HyField@#2}{%
4545     \csname HyField@#2@#1\endcsname
4546   }{1}%
4547 }

```

\HyField@PrintFlags

```

4548 \def\HyField@PrintFlags#1#2{%
4549   \ifHy@verbose
4550     \begingroup
4551     \let\Hy@temp\@empty
4552     \let\MessageBreak\relax
4553     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4554     \bitsetGetSetBitList{HyField@#1}\do{%
4555       \edef\Hy@temp{%
4556         \Hy@temp
4557         \csname HyField@#1@\x\endcsname\MessageBreak
4558       }%
4559     }%
4560   \edef\x{\endgroup
4561     \noexpand\Hy@Info{%
4562       Field flags: %
4563       \expandafter\ifx\@car#1\@nil S\else/\fi
4564       #1 %
4565       \bitsetGetDec{HyField@#1} %
4566       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4567     \Hy@temp
4568     for #2%

```

```

4569     }%
4570     }\x
4571     \fi
4572 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4573 \HyField@NewFlag{Ff}{ReadOnly}{1}
4574 \HyField@NewFlag{Ff}{Required}{2}
4575 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4576 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4577 \HyField@NewFlag{Ff}{Radio}{16}
4578 \HyField@NewFlag{Ff}{Pushbutton}{17}
4579 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4580 \HyField@NewFlag{Ff}{Multiline}{13}
4581 \HyField@NewFlag{Ff}{Password}{14}
4582 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4583 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4584 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4585 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4586 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4587 \HyField@NewFlag{Ff}{Combo}{18}
4588 \HyField@NewFlag{Ff}{Edit}{19}
4589 \HyField@NewFlag{Ff}{Sort}{20}
4590 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4591 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4592 \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.

```

4593 \newif\ifFld@popdown
4594 \define@key{Field}{popdown}[true]{%
4595   \lowercase{\Field@boolkey{#1}}{popdown}%
4596 }

```

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.

```

4597 \HyField@NewFlag{F}{Invisible}{1}
4598 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4599 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4600 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4601 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4602 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4603 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4604 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4605 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

```



```

4606 \ifHy@pdfa
4607 \def\HyField@PDFAFflagWarning#1#2{%
4608   \Hy@Warning{%
4609     PDF/A: Annotation flag '#1' must\MessageBreak
4610     be set to '#2'%
4611   }%
4612 }%
4613 \Fld@invisiblefalse
4614 \def\Fld@invisibletrue{%
4615   \HyField@PDFAFflagWarning{invisible}{false}%
4616 }%
4617 \Fld@hiddenfalse
4618 \def\Fld@hiddentrue{%
4619   \HyField@PDFAFflagWarning{hidden}{false}%
4620 }%
4621 \Fld@printtrue
4622 \def\Fld@printfalse{%
4623   \HyField@PDFAFflagWarning{print}{true}%
4624 }%
4625 \Fld@nozoomtrue
4626 \def\Fld@nozoomfalse{%
4627   \HyField@PDFAFflagWarning{nozoom}{true}%
4628 }%
4629 \Fld@norotatetrue
4630 \def\Fld@norotatefalse{%
4631   \HyField@PDFAFflagWarning{norotate}{true}%
4632 }%
4633 \Fld@noviewfalse
4634 \def\Fld@noviewtrue{%
4635   \HyField@PDFAFflagWarning{noview}{false}%
4636 }%
4637 \fi

```

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

```

4638 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4639 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4640 \HyField@NewFlag{Submit}{GetMethod}{4}
4641 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4642 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4643 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4644 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4645 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4646 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4647 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4648 \HyField@NewFlag{Submit}{ExclFKey}{12}
4649 \HyField@NewFlag{Submit}{EmbedForm}{14}

4650 \define@key{Field}{export}{%
4651   \lowercase{\def\Hy@temp{#1}}%
4652   \@ifundefined{Fld@export@\Hy@temp}{%
4653     \@onelevel@sanitize\Hy@temp
4654     \PackageError{hyperref}{%
4655       Unknown export format '\Hy@temp'\MessageBreak
4656       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4657     }\@ehc
4658   }{%
4659     \let\Fld@export\Hy@temp
4660   }%

```

```

4661 }
4662 \def\Fld@export{fdf}
4663 \@namedef{Fld@export@fdf}{0}%
4664 \@namedef{Fld@export@html}{1}%
4665 \@namedef{Fld@export@xfdf}{2}%
4666 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4667 \def\HyField@FlagsSubmit{%
4668   \bitsetReset{HyField@Submit}%
4669   \ifcase\@nameuse{Fld@export@}\Fld@export} %
4670   % FDF
4671   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4672   \HyField@UseFlag{Submit}{SubmitCoordinates}%
4673   \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4674   \HyField@UseFlag{Submit}{IncludeAnnotations}%
4675   \HyField@UseFlag{Submit}{CanonicalFormat}%
4676   \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4677   \HyField@UseFlag{Submit}{ExclFKey}%
4678   \HyField@UseFlag{Submit}{EmbedForm}%
4679   \or % HTML
4680   \HyField@SetFlag{Submit}{ExportFormat}%
4681   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4682   \HyField@UseFlag{Submit}{GetMethod}%
4683   \HyField@UseFlag{Submit}{SubmitCoordinates}%
4684   \HyField@UseFlag{Submit}{CanonicalFormat}%
4685   \or % XFDF
4686   \HyField@SetFlag{Submit}{XFDF}%
4687   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4688   \HyField@UseFlag{Submit}{SubmitCoordinates}%
4689   \HyField@UseFlag{Submit}{CanonicalFormat}%
4690   \or % PDF
4691   \HyField@SetFlag{Submit}{SubmitPDF}%
4692   \HyField@UseFlag{Submit}{GetMethod}%
4693   \fi
4694   \HyField@PrintFlags{Submit}{submit button field}%
4695   \bitsetIsEmpty{HyField@Submit}{%
4696     \def\Fld@submitflags{%
4697     }{%
4698       \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}}%
4699   }%
4700 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4701 \def\HyField@FlagsAnnot#1{%
4702   \bitsetReset{HyField@F}%
4703   \HyField@UseFlag{F}{Invisible}%
4704   \HyField@UseFlag{F}{Hidden}%
4705   \HyField@UseFlag{F}{Print}%
4706   \HyField@UseFlag{F}{NoZoom}%
4707   \HyField@UseFlag{F}{NoRotate}%
4708   \HyField@UseFlag{F}{NoView}%

```

```

4709 \HyField@UseFlag{F}{Locked}%
4710 \HyField@UseFlag{F}{ToggleNoView}%
4711 \HyField@UseFlag{F}{LockedContents}%
4712 \HyField@PrintFlags{F}{#1}%
4713 \bitsetIsEmpty{HyField@F}{%
4714   \def\Fld@annotflags{%
4715   }{%
4716   \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
4717 }%
4718 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4719 \def\HyField@FlagsPushButton{%
4720 \HyField@FlagsAnnot{push button field}%
4721 \bitsetReset{HyField@Ff}%
4722 \HyField@UseFlag{Ff}{ReadOnly}%
4723 \HyField@UseFlag{Ff}{Required}%
4724 \HyField@UseFlag{Ff}{NoExport}%
4725 \HyField@SetFlag{Ff}{Pushbutton}%
4726 \HyField@PrintFlags{Ff}{push button field}%
4727 \bitsetIsEmpty{HyField@Ff}{%
4728   \def\Fld@flags{%
4729   }{%
4730   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4731 }%
4732 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4733 \def\HyField@FlagsCheckBox{%
4734 \HyField@FlagsAnnot{check box field}%
4735 \bitsetReset{HyField@Ff}%
4736 \HyField@UseFlag{Ff}{ReadOnly}%
4737 \HyField@UseFlag{Ff}{Required}%
4738 \HyField@UseFlag{Ff}{NoExport}%
4739 \HyField@PrintFlags{Ff}{check box field}%
4740 \bitsetIsEmpty{HyField@Ff}{%
4741   \def\Fld@flags{%
4742   }{%
4743   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4744 }%
4745 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4746 \def\HyField@FlagsRadioButton{%
4747 \HyField@FlagsAnnot{radio button field}%
4748 \bitsetReset{HyField@Ff}%
4749 \HyField@UseFlag{Ff}{ReadOnly}%
4750 \HyField@UseFlag{Ff}{Required}%
4751 \HyField@UseFlag{Ff}{NoExport}%
4752 \HyField@UseFlag{Ff}{NoToggleToOff}%

```

```

4753 \HyField@SetFlag{Ff}{Radio}%
4754 \HyField@UseFlag{Ff}{RadiosInUnison}%
4755 \HyField@PrintFlags{Ff}{radio button field}%
4756 \bitsetIsEmpty{HyField@Ff}{%
4757   \def\Fld@flags{%
4758   }{%
4759   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4760   }%
4761 }

```

19.1.7 Text fields

\HyField@FlagsText

```

4762 \def\HyField@FlagsText{%
4763   \HyField@FlagsAnnot{text field}%
4764   \bitsetReset{HyField@Ff}%
4765   \HyField@UseFlag{Ff}{ReadOnly}%
4766   \HyField@UseFlag{Ff}{Required}%
4767   \HyField@UseFlag{Ff}{NoExport}%
4768   \HyField@UseFlag{Ff}{Multiline}%
4769   \HyField@UseFlag{Ff}{Password}%
4770   \HyField@UseFlag{Ff}{FileSelect}%
4771   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4772   \HyField@UseFlag{Ff}{DoNotScroll}%
4773   \ifFld@comb
4774     \ifcase0\ifFld@multiline
4775       \else\ifFld@password
4776       \else\ifFld@fileselect
4777       \else 1\fi\fi\fi\relax
4778     \PackageError{hyperref}{%
4779       Field option ‘comb’ cannot used together with\MessageBreak
4780       ‘multiline’, ‘password’, or ‘fileselect’%
4781     }\@ehc
4782   \else
4783     \HyField@UseFlag{Ff}{Comb}%
4784   \fi
4785 \fi
4786 \HyField@UseFlag{Ff}{RichText}%
4787 \HyField@PrintFlags{Ff}{text field}%
4788 \bitsetIsEmpty{HyField@Ff}{%
4789   \def\Fld@flags{%
4790   }{%
4791   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4792   }%
4793 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4794 \def\HyField@FlagsChoice{%
4795   \HyField@FlagsAnnot{choice field}%
4796   \bitsetReset{HyField@Ff}%
4797   \HyField@UseFlag{Ff}{ReadOnly}%
4798   \HyField@UseFlag{Ff}{Required}%
4799   \HyField@UseFlag{Ff}{NoExport}%
4800   \HyField@UseFlag{Ff}{Combo}%

```

```

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

```

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.

```

4819 \def\HyField@PDFChoices#1{%
4820   \begingroup
4821   \gdef\Fld@choices{%
4822     \def\HyTmp@optlist{%
4823       \let\HyTmp@optitem\relax
4824       \count@=0 %
4825       \kv@parse{#1}{%
4826         \Hy@pdfstringdef\kv@key\kv@key
4827         \ifx\kv@value\relax
4828           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4829             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4830           \else
4831             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4832           \fi
4833         \else
4834           \Hy@pdfstringdef\kv@value\kv@value
4835           \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4836         \fi
4837       \edef\HyTmp@optlist{%
4838         \HyTmp@optlist
4839         \HyTmp@optitem{\the\count@}{\kv@key}0%
4840       }%
4841       \advance\count@ by 1 %
4842       \@gobbletwo
4843     }%
4844     \xdef\Fld@choices{/Opt[\Fld@choices]}%
4845     \ifFld@multiselect
4846       \HyField@@PDFChoices{DV}\Fld@default
4847       \HyField@@PDFChoices{V}\Fld@value
4848     \else
4849       \ifx\Fld@default\relax
4850       \else
4851         \pdfstringdef\Hy@gtemp\Fld@default

```

```

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

```

\HyField@@PDFChoices

```

4862 \def\HyField@@PDFChoices#1#2{%
4863   \ifx#2\relax
4864   \else
4865     \count@=0 %
4866     \def\HyTmp@optitem##1##2##3{%
4867       \def\HyTmp@key{##2}%
4868       \ifx\HyTmp@key\Hy@gtemp
4869         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4870           \HyTmp@optlist
4871           \HyTmp@optitem{##1}{##2}1%
4872         }%
4873         \let\HyTmp@found=Y%
4874       \else
4875         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4876           \HyTmp@optlist
4877           \HyTmp@optitem{##1}{##2}##3%
4878         }%
4879       \fi
4880     }%
4881     \expandafter\comma@parse\expandafter{#2}{%
4882       \pdfstringdef\Hy@gtemp\comma@entry
4883       \let\HyTmp@found=N %
4884       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4885       \HyTmp@optlist
4886       \ifx\HyTmp@found Y%
4887         \advance\count@ by 1 %
4888       \else
4889         \@onelevel@sanitize\comma@entry
4890         \PackageWarning{hyperref}{%
4891           \string\ChoiceBox: Ignoring value '\comma@entry',%
4892           \MessageBreak
4893           it cannot be found in the choices%
4894         }%
4895       \fi
4896       \@gobble
4897     }%
4898     \def\HyTmp@optitem##1##2##3{%
4899       \ifnum##3=1 %
4900         (##2)%
4901       \fi
4902     }%
4903     \ifcase\count@
4904     \or
4905       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4906     \else

```

```

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

```

19.3 Forms

\HyField@SetKeys

```

4923 \def\HyField@SetKeys{%
4924 \setkeys{Field}%
4925 }

4926 \newif\ifFld@checked
4927 \newif\ifFld@disabled
4928 \Fld@checkedfalse
4929 \Fld@disabledfalse
4930 \newcount\Fld@menulength
4931 \newdimen\Fld@Width
4932 \newdimen\Fld@charsize
4933 \Fld@charsize=10\p@
4934 \def\Fld@maxlen{0}
4935 \def\Fld@align{0}
4936 \def\Fld@color{0 0 0 rg}
4937 \def\Fld@bcolor{1 1 1}
4938 \def\Fld@bordercolor{1 0 0}
4939 \def\Fld@bordersep{1\p@}
4940 \def\Fld@borderwidth{1}
4941 \def\Fld@borderstyle{S}
4942 \def\Fld@cbsymbol{4}
4943 \def\Fld@radiosymbol{H}
4944 \def\Fld@rotation{0}
4945 \def\Form{\@ifnextchar{\@Form}{\@Form[]}}
4946 \def\endForm{\@endForm}
4947 \newif\ifForm@html
4948 \Form@htmlfalse
4949 \def\Form@boolkey#1#2{%
4950 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4951 }
4952 \define@key{Form}{action}{%
4953 \hyper@normalise\Hy@DefFormAction{#1}%
4954 }
4955 \def\Hy@DefFormAction{\def\Form@action}
4956 \def\enc@html{html}
4957 \define@key{Form}{encoding}{%
4958 \def\Hy@tempa{#1}%

```

```

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

```



```

5016 \define@key{Field}{accesskey}{%
5017   \Field@addtoks{accesskey}{#1}%
5018 }
5019 \define@key{Field}{tabkey}{%
5020   \Field@addtoks{tabkey}{#1}%
5021 }
5022 \define@key{Field}{name}{%
5023   \def\Fld@name{#1}%
5024 }
5025 \define@key{Field}{width}{%
5026   \def\Fld@width{#1}%
5027   \Field@Width#1\setbox0=\hbox{m}%
5028 }
5029 \define@key{Field}{maxlen}{%
5030   \def\Fld@maxlen{#1}%
5031 }
5032 \define@key{Field}{menulength}{%
5033   \Fld@menulength=#1\relax
5034 }
5035 \define@key{Field}{height}{%
5036   \def\Fld@height{#1}%
5037 }
5038 \define@key{Field}{charsize}{%
5039   \Fld@charsize#1%
5040 }
5041 \define@key{Field}{borderwidth}{%
5042   \def\Fld@borderwidth{#1}%
5043 }
5044 \define@key{Field}{borderstyle}{%
5045   \def\Fld@borderstyle{#1}%
5046 }
5047 \define@key{Field}{bordersep}{%
5048   \def\Fld@bordersep{#1}%
5049 }
5050 \define@key{Field}{default}{%
5051   \def\Fld@default{#1}%
5052 }
5053 \define@key{Field}{align}{%
5054   \def\Fld@align{#1}%
5055 }
5056 \define@key{Field}{value}{%
5057   \def\Fld@value{#1}%
5058 }
5059 \define@key{Field}{checkboxsymbol}{%
5060   \Fld@DingDef\Fld@cbsymbol{#1}%
5061 }
5062 \define@key{Field}{radiosymbol}{%
5063   \Fld@DingDef\Fld@radiosymbol{#1}%
5064 }
5065 \def\Fld@DingDef#1#2{%
5066   \def\Fld@temp{}%
5067   \Fld@@DingDef#2\ding{}\@nil
5068   \let#1\Fld@temp
5069 }
5070 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5071   \expandafter\def\expandafter\Fld@temp\expandafter{%
5072     \Fld@temp

```

```

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

5092 \define@key{Field}{rotation}{%
5093   \def\Fld@rotation{#1}%
5094 }

5095 \define@key{Field}{backgroundcolor}{%
5096   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5097 }
5098 \define@key{Field}{bordercolor}{%
5099   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5100 }
5101 \define@key{Field}{color}{%
5102   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5103 }

5104 \def\Fld@onclick@code{}
5105 \def\Fld@format@code{}
5106 \def\Fld@validate@code{}
5107 \def\Fld@calculate@code{}
5108 \def\Fld@keystroke@code{}
5109 \def\Fld@onfocus@code{}
5110 \def\Fld@onblur@code{}
5111 \def\Fld@onmousedown@code{}
5112 \def\Fld@onmouseup@code{}
5113 \def\Fld@onenter@code{}
5114 \def\Fld@onexit@code{}
5115 \def\Hy@temp#1{%
5116   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5117 }
5118 \def\Hy@@temp#1#2{%
5119   \ifHy@pdfa
5120     \define@key{Field}{#2}{%
5121       \PackageError{hyperref}{%
5122         PDF/A: Additional action ‘#2’ is prohibited%
5123       }\@ehc
5124     }%
5125   \else
5126     \define@key{Field}{#2}{%
5127       \def#1{##1}%
5128     }%

```

```

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

5167 \DeclareRobustCommand\TextField{%
5168   \@ifnextchar[{\@TextField}{\@TextField[]}%
5169 }
5170 \DeclareRobustCommand\ChoiceMenu{%
5171   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5172 }
5173 \DeclareRobustCommand\CheckBox{%
5174   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5175 }
5176 \DeclareRobustCommand\PushButton{%
5177   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5178 }
5179 \DeclareRobustCommand\Gauge{%
5180   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5181 }
5182 \DeclareRobustCommand\Submit{%
5183   \@ifnextchar[{\@Submit}{\@Submit[]}%
5184 }
5185 \DeclareRobustCommand\Reset{%

```

```

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

Default options for the types of \ChoiceMenu.
5234 \def\DefaultOptionsofListBox{print}
5235 \def\DefaultOptionsofComboBox{print,edit,sort}
5236 \def\DefaultOptionsofPopdownBox{print}
5237 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5238 \ifHy@figures
5239 \Hy@Info{Hyper figures ON}%
5240 \else
5241 \Hy@Info{Hyper figures OFF}%
5242 \fi
5243 \ifHy@nesting
5244 \Hy@Info{Link nesting ON}%
5245 \else
5246 \Hy@Info{Link nesting OFF}%
5247 \fi
5248 \ifHy@hyperindex
5249 \Hy@Info{Hyper index ON}%
5250 \else
5251 \Hy@Info{Hyper index OFF}%
5252 \fi
5253 \ifHy@backref
5254 \Hy@Info{backreferencing ON}%
5255 \else
5256 \Hy@Info{backreferencing OFF}%
5257 \fi
5258 \ifHy@colorlinks
5259 \Hy@Info{Link coloring ON}%
5260 \else
5261 \Hy@Info{Link coloring OFF}%
5262 \fi
5263 \ifHy@ocgcolorlinks
5264 \Hy@Info{Link coloring with OCG ON}%
5265 \else
5266 \Hy@Info{Link coloring with OCG OFF}%
5267 \fi
5268 \ifHy@pdfa
5269 \Hy@Info{PDF/A mode ON}%
5270 \else
5271 \Hy@Info{PDF/A mode OFF}%
5272 \fi

```

21 Low-level utility macros

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

```

5273 \edef\hyper@hash{\string#}
5274 \edef\hyper@tilde{\string~}
5275 \edef\hyper@quote{\string"}
5276 \let\@currentHref\@empty
5277 \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.

```

5278 \Hy@AtBeginDocument{%
5279 \Hy@pdfstringtrue
5280 \PDF@SetupDoc
5281 \let\PDF@SetupDoc\@empty
5282 \Hy@DisableOption{pdfpagescrop}%
5283 \Hy@DisableOption{pdfpagemode}%
5284 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5285 \Hy@DisableOption{pdfdirection}%
5286 \Hy@DisableOption{pdfviewarea}%
5287 \Hy@DisableOption{pdfviewclip}%

```

```

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

```

Ignore star from referencing macros:

```

5309 \LetLtxMacro\NoHy@OrgRef\ref
5310 \DeclareRobustCommand*{\ref}{%
5311 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5312 }
5313 \LetLtxMacro\NoHy@OrgPageRef\pageref
5314 \DeclareRobustCommand*{\pageref}{%
5315 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5316 }

```

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.

```

5317 \def\NoHyper{%
5318 \def\hyper@link@[##1]##2##3##4{##4}%
5319 \def\hyper@@anchor##1{%
5320 \global\let\hyper@livelink\hyper@link
5321 \gdef\hyper@link##1##2##3{##3}%
5322 \def\hyper@anchor##1{%
5323 \def\hyper@anchorstart##1{%
5324 \let\hyper@anchorend\@empty
5325 \def\hyper@linkstart##1##2{%
5326 \let\hyper@linkend\@empty
5327 \def\hyper@linkurl##1##2{##1}%
5328 \def\hyper@linkfile##1##2##3{##1}%
5329 \def\hyper@link@[##1]##2##3{%
5330 \let\Hy@backout\@gobble
5331 }
5332 \def\stop@hyper{%
5333 \def\hyper@link@[##1]##2##3##4{##4}%
5334 \let\Hy@backout\@gobble

```

```

5335 \def\hyper@anchor##1{%
5336 \def\hyper@link##1##2##3{##3}%
5337 \def\hyper@anchor##1{%
5338 \def\hyper@anchorstart##1{%
5339 \let\hyper@anchorend\@empty
5340 \def\hyper@linkstart##1##2{%
5341 \let\hyper@linkend\@empty
5342 \def\hyper@linkurl##1##2{##1}%
5343 \def\hyper@linkfile##1##2##3{##1}%
5344 \def\hyper@link@[##1]##2##3{%
5345 }
5346 \def\endNoHyper{%
5347 \global\let\hyper@link\hyper@livelink
5348 }
5349 \</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:

```

5350 \*nohyperref
5351 \RequirePackage{letltxmacro}[2008/06/13]
5352 \let\hyper@@anchor\@gobble
5353 \def\hyper@link##1##2##3{##3}%
5354 \let\hyper@anchorstart\@gobble
5355 \let\hyper@anchorend\@empty
5356 \let\hyper@linkstart\@gobbletwo
5357 \let\hyper@linkend\@empty
5358 \def\hyper@linkurl##1##2{##1}%
5359 \def\hyper@linkfile##1##2##3{##1}%
5360 \def\hyper@link@[##1]##2##3{%
5361 \let\PDF@SetupDoc\@empty
5362 \let\PDF@FinishDoc\@empty
5363 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5364 \def\Acrobatmenu#1#2{\leavevmode#2}
5365 \let\pdfstringdefDisableCommands\@gobbletwo
5366 \let\texorpdfstring\@firstoftwo
5367 \let\pdfbookmark\@undefined
5368 \newcommand\pdfbookmark[3]{}
5369 \let\phantomsection\@empty
5370 \let\hypersetup\@gobble
5371 \let\hyperbaseurl\@gobble
5372 \let\href\@gobble
5373 \let\hyperdef\@gobbletwo
5374 \let\hyperlink\@gobble
5375 \let\hypertarget\@gobble
5376 \def\hyperref{%
5377 \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5378 }
5379 \long\def\@gobbleopt[#1]{

```

```
5380 \let\hyperpage\@empty
```

Ignore star from referencing macros:

```
5381 \LetLtxMacro\NoHy@OrgRef\ref
5382 \DeclareRobustCommand*\ref{%
5383   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5384 }
5385 \LetLtxMacro\NoHy@OrgPageRef\pageref
5386 \DeclareRobustCommand*\pageref{%
5387   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5388 }
5389 \</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}

```
5390 \<*package>
5391 \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.

```
5392 \if@filesw
5393   \ifHy@typexml
5394     \immediate\closeout\@mainaux
5395     \immediate\openout\@mainaux\jobname.aux\relax
5396     \immediate\write\@auxout{<relaxxml>\relax}%
5397   \fi
5398   \immediate\write\@auxout{%
5399     \string\providecommand\string\HyperFirstAtBeginDocument{%
5400       \string\AtBeginDocument}^^J%
5401     \string\HyperFirstAtBeginDocument{%
5402       \string\ifx\string\hyper@anchor\string\@undefined^^J%
5403       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5404       \string\gdef\string\contentsline%
5405         \string#1\string#2\string#3\string#4{%
5406           \string\oldcontentsline%
5407           {\string#1}{\string#2}{\string#3}}^^J%
5408       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5409       \string\gdef\string\newlabel\string#1\string#2{%
5410         \string\newlabelxx{\string#1}\string#2}^^J%
5411       \string\gdef\string\newlabelxx%
5412         \string#1\string#2\string#3\string#4\string#5\string#6{%
5413         \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.

```
5414     \string\AtEndDocument{%
5415       \string\ifx\string\hyper@anchor\string\@undefined^^J%
5416       \string\let\string\contentsline\string\oldcontentsline^^J%
5417       \string\let\string\newlabel\string\oldnewlabel^^J%
5418       \string\fi%
5419     }^^J%
```



```

5463 \def\Hy@scanauthor#1{%
5464   \gdef\Hy@author{#1}%
5465   \HyOrg@author{#1}%
5466 }%

```

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.

```

5467 \begingroup
5468 \def\process@me#1\@nil#2{%
5469   \expandafter\let\expandafter\x\csname @#2\endcsname
5470   \edef\y{\expandafter\strip@prefix\meaning\x}%
5471   \def\c##1#1##2\@nil{%
5472     \ifx\\##1\\%
5473     \else
5474       \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5475         \expandafter{x}%
5476     \fi
5477   }%
5478   \expandafter\c\y\relax#1\@nil
5479 }%
5480 \expandafter\process@me\string\@latex@\@nil{title}%
5481 \expandafter\process@me\string\@latex@\@nil{author}%
5482 \endgroup
5483 \fi
5484 \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.

```

5485 \def\Hy@UseMaketitleString#1{%
5486   \ltx@ifundefined{Hy@#1}{-}{%
5487     \begingroup
5488     \let\Hy@saved@hook\pdfstringdefPreHook
5489     \pdfstringdefDisableCommands{%
5490       \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5491       \let\newline\\%
5492     }%
5493     \expandafter\ifx\csname @pdf#1\endcsname\@empty
5494       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5495         \csname Hy@#1\endcsname\@empty
5496       }%
5497     \fi
5498     \global\let\pdfstringdefPreHook\Hy@saved@hook
5499   \endgroup
5500 }%
5501 }
5502 \def\Hy@newline@title#1{ #1}
5503 \def\Hy@newline@author#1{, #1}
5504 \def\Hy@UseMaketitleInfos{%
5505   \Hy@UseMaketitleString{title}%
5506   \Hy@UseMaketitleString{author}%

```

5507 }

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```
5508 \RequirePackage{atbegshi}[2007/09/09]
5509 \def\Hy@EveryPageHook{}
5510 \def\Hy@EveryPageBoxHook{}
5511 \def\Hy@FirstPageHook{}
5512 \AtBeginShipout{%
5513   \Hy@EveryPageHook
5514   \ifx\Hy@EveryPageBoxHook\empty
5515   \else
5516     \setbox\AtBeginShipoutBox=\vbox{%
5517       \offinterlineskip
5518       \Hy@EveryPageBoxHook
5519       \box\AtBeginShipoutBox
5520     }%
5521   \fi
5522 }
5523 \AtBeginShipoutFirst{%
5524   \Hy@FirstPageHook
5525 }
5526 \g@addto@macro\Hy@FirstPageHook{%
5527   \PDF@FinishDoc
5528   \gdef\PDF@FinishDoc{}%
5529 }
```

27.1 PDF /PageLabels

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

```
5530 \ifHy@pagelabels
5531   \begingroup\expandafter\expandafter\expandafter\endgroup
5532   \expandafter\ifx\csname thepage\endcsname\relax
5533     \Hy@pagelabelsfalse
5534     \Hy@WarningNoLine{%
5535       Option 'pdfpagelabels' is turned off\MessageBreak
5536       because \string\thepage\space is undefined%
5537     }%
5538     \csname fi\endcsname
5539     \csname iffalse\expandafter\endcsname
5540   \fi
```

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

```
5541 \def\thispdfpagelabel#1{%
5542   \gdef\HyPL@thisLabel{#1}%
5543 }%
5544 \global\let\HyPL@thisLabel\relax
```

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

```
5545 \def\HyPL@Labels{}%
```

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

```
5546 \newcount\Hy@abspage
5547 \Hy@abspage=0 %
```

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

```
5548 \def\HyPL@LastType{init}%
5549 \def\HyPL@LastNumber{0}%
5550 \def\HyPL@LastPrefix{}%
```

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

```
5551 \def\HyPL@arabic{D}%
5552 \def\HyPL@Roman{R}%
5553 \def\HyPL@roman{r}%
5554 \def\HyPL@Alph{A}%
5555 \def\HyPL@alph{a}%
```

\HyPL@EveryPage If a page is shipout and the page number is known, \HyPL@EveryPage has to be called. It stores the current page label.

```
5556 \def\HyPL@EveryPage{%
5557   \begingroup
5558   \ifx\HyPL@thisLabel\relax
5559     \let\HyPL@page\thepage
5560   \else
5561     \let\HyPL@page\HyPL@thisLabel
5562     \global\let\HyPL@thisLabel\relax
5563   \fi
5564   \let\HyPL@Type\relax
5565   \ifnum\the\c@page>0 %
5566     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5567   \fi
5568   \let\Hy@temp Y%
5569   \ifx\HyPL@Type\HyPL@LastType
5570   \else
5571     \let\Hy@temp N%
5572   \fi
5573   \ifx\HyPL@Type\relax
5574     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5575   \else
5576     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5577   \fi
5578   \ifx\HyPL@Prefix\HyPL@LastPrefix
5579   \else
5580     \let\Hy@temp N%
5581   \fi
5582   \if Y\Hy@temp
5583     \advance\c@page by -1 %
5584     \ifnum\HyPL@LastNumber=\the\c@page\relax
5585     \else
5586       \let\Hy@temp N%
5587     \fi
5588     \Hy@StepCount\c@page
5589   \fi
5590   \if N\Hy@temp
5591     \ifx\HyPL@Type\relax
5592       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5593     \else
5594       \HyPL@StorePageLabel{%
```

```

5595     \ifx\HyPL@Prefix\@empty
5596     \else
5597         /P(\HyPL@Prefix)%
5598     \fi
5599     /S/\csname HyPL\HyPL@Type\endcsname
5600     \ifnum\the\c@page=1 %
5601     \else
5602         \space/St \the\c@page
5603     \fi
5604     }%
5605     \fi
5606     \fi
5607     \xdef\HyPL@LastNumber{\the\c@page}%
5608     \global\let\HyPL@LastType\HyPL@Type
5609     \global\let\HyPL@LastPrefix\HyPL@Prefix
5610     \endgroup
5611     \Hy@GlobalStepCount\Hy@abspage
5612 }%

```

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

```

5613 \def\HyPL@CheckThePage#1\@nil{%
5614     \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5615 }%

```

`\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`.

```

5616 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5617     \def\Hy@tempa{#4}%
5618     \def\Hy@tempb{\csname\endcsname\c@page}%
5619     \ifx\Hy@tempa\Hy@tempb
5620         \expandafter\ifx\csname HyPL#3\endcsname\relax
5621         \else
5622             \def\HyPL@Type{#3}%
5623             \def\HyPL@Prefix{#2}%
5624         \fi
5625     \else
5626         \begingroup
5627             \let\Hy@next\endgroup
5628             \let\HyPL@found\@undefined
5629             \def\arabic{\HyPL@Format{arabic}}%
5630             \def\Roman{\HyPL@Format{Roman}}%
5631             \def\roman{\HyPL@Format{roman}}%
5632             \def\Alph{\HyPL@Format{Alph}}%
5633             \def\alph{\HyPL@Format{alph}}%
5634             \protected@edef\Hy@temp{#1}%
5635             \ifx\HyPL@found\relax
5636                 \toks@{\expandafter{\Hy@temp}}%
5637                 \edef\Hy@next{\endgroup
5638                     \noexpand\HyPL@@@CheckThePage\the\toks@
5639                     \noexpand\HyPL@found\relax\noexpand\@nil
5640                 }%
5641             \fi
5642             \Hy@next
5643         \fi

```

5644 }%

`\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`.

```
5645 \def\HyPL@Format#1#2{%
5646   \ifx\HyPL@found\@undefined
5647     \expandafter\ifx\csname c@#2\endcsname\c@page
5648       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5649     \else
5650       \expandafter\noexpand\csname#1\endcsname{#2}%
5651     \fi
5652   \else
5653     \expandafter\noexpand\csname#1\endcsname{#2}%
5654   \fi
5655 }%
```

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

```
5656 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5657   \def\Hy@tempa{#3}%
5658   \def\Hy@tempb{\HyPL@found\relax}%
5659   \ifx\Hy@tempa\Hy@tempb
5660     \def\HyPL@Type{#2}%
5661     \def\HyPL@Prefix{#1}%
5662   \fi
5663 }%
```

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

```
5664 \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`.

```
5665 \def\HyPL@Useless{0<</S/D>>}%
5666 \@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.

```
5667 \def\HyPL@SetPageLabels{%
5668   \@onelevel@sanitize\HyPL@Labels
5669   \ifx\HyPL@Labels\@empty
5670   \else
5671     \ifx\HyPL@Labels\HyPL@Useless
5672     \else
5673       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5674     \fi
5675   \fi
5676 }%
```

```
5677 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5678 \fi
```

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

```
5679 \Hy@DisableOption{pdfpagelabels}
```

```
5680 </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`

```
5681 <pdfTeX>\let\Hy@PutCatalog\pdfcatalog
```

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

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

```
5682 <*vTeX>
5683 \providecommand*{\XR@ext}{pdf}
5684 \edef\Hy@VTeXversion{%
5685   \ifx\VTeXversion\@undefined
5686     \z@
5687   \else
5688     \ifx\VTeXversion\relax
5689       \z@
5690     \else
5691       \VTeXversion
5692     \fi
5693   \fi
5694 }
5695 \begingroup
5696   \ifnum\Hy@VTeXversion<660 %
5697     \gdef\Hy@PutCatalog#1{%
5698       \Hy@WarningNoLine{%
5699         VTeX 6.59g or above required for pdfpagelabels%
5700       }%
5701     }%
5702   \else
5703     \gdef\Hy@PutCatalog#1{%
5704       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5705     }%
5706     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5707       \ifx\#2\%
5708         \else
5709           \immediate\special{!pdfpagelabels #2}%
5710         \fi
5711       }%
5712     \fi
5713 \endgroup
5714 </vTeX>

5715 <*pdfTeX | vTeX>
```

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

```
5716 \ifHy@pagelabels
5717   \def\HyPL@StorePageLabel#1{%
5718     \toks@\expandafter{\HyPL@Labels}%
5719     \xdef\HyPL@Labels{%
5720       \the\toks@
5721       \the\Hy@abspage<<#1>>%
5722     }%
5723   }%
```

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.

```

5724 \RequirePackage{atveryend}[2009/12/07]%
5725 \AtVeryEndDocument{%
5726   \HyPL@SetPageLabels
5727 }%

5728 \fi
5729 </pdfTeX | vTeX>

```

27.1.2 xetex

```

5730 < *xetex >
5731 \HyPsd@LoadUnicode
5732 \Hy@unicodetrue
5733 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5734 \else
5735   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5736 \fi
5737 \HyPsd@LoadStringEncoding
5738 \define@key{Hyp}{unicode}[true]{%
5739   \Hy@boolkey{unicode}{#1}%
5740   \ifHy@unicode
5741     \else
5742       \Hy@Warning{%
5743         XeTeX driver only supports 'unicode=true'.\MessageBreak
5744         Ignoring option setting 'unicode=false'%
5745       }%
5746       \Hy@unicodetrue
5747 \fi
5748 }
5749 \define@key{Hyp}{pdfencoding}{%
5750   \edef\HyPsd@temp{#1}%
5751   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5752     \let\HyPsd@pdfencoding\HyPsd@temp
5753   \else
5754     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5755       \let\HyPsd@pdfencoding\HyPsd@temp
5756     \else
5757       \Hy@Warning{%
5758         XeTeX driver only supports\MessageBreak
5759         'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
5760         setting 'pdfencoding=\HyPsd@temp'%
5761       }%
5762     \fi
5763   \fi
5764 }
5765 \let\HyXeTeX@CheckUnicode\relax
5766 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5767 < *pdfmarkbase >
5768 \begingroup
5769 \@ifundefined{headerps@out}{}{%
5770   \toks@\expandafter{\Hy@FirstPageHook}%
5771   \xdef\Hy@FirstPageHook{%

```



```

5772 \noexpand\headerps@out{%
5773 systemdict /pdfmark known%
5774 {%
5775 userdict /?pdfmark systemdict /exec get put%
5776 }{%
5777 userdict /?pdfmark systemdict /pop get put %
5778 userdict /pdfmark systemdict /cleartomark get put%
5779 }%
5780 ifelse%
5781 }%
5782 \the\toks@
5783 }%
5784 }%
5785 \endgroup
5786 \pdfmarkbase>

```

\Hy@PutCatalog

```

5787 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5788 <*pdfmarkbase>
5789 \def\Hy@PutCatalog#1{%
5790 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5791 }
5792 \pdfmarkbase>

5793 <*pdfmarkbase | dvipdfm | xetex>
5794 \ifHy@pagelabels

```

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

```

5795 \def\HyPL@StorePageLabel#1{%
5796 \if@filesw
5797 \begingroup
5798 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5799 \immediate\write\@mainaux{%
5800 \string\HyPL@Entry{\Hy@tempa}%
5801 }%
5802 \endgroup
5803 \fi
5804 }%

```

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.

```

5805 \Hy@AtBeginDocument{%
5806 \if@filesw
5807 \immediate\write\@mainaux{%
5808 \string\providecommand\string*\string\HyPL@Entry[1]{}%
5809 }%
5810 \fi
5811 \ifx\HyPL@Labels\@empty
5812 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5813 \else
5814 \HyPL@SetPageLabels
5815 \fi
5816 \let\HyPL@Entry\@gobble
5817 }%

```

\HyPL@Entry

```

5818 \def\HyPL@Entry#1{%

```

```

5819 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5820 \HyPL@Labels
5821 #1%
5822 }%
5823 }%

5824 \fi
5825 </pdfmarkbase | dvipdfm | xetex>

5826 <*package>

5827 \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

```

5828 \def\Hy@CounterExists#1{%
5829 \begingroup\expandafter\expandafter\expandafter\endgroup
5830 \expandafter\ifx\csname c@#1\endcsname\relax
5831 \expandafter\@gobble
5832 \else
5833 \begingroup\expandafter\expandafter\expandafter\endgroup
5834 \expandafter\ifx\csname the#1\endcsname\relax
5835 \expandafter\expandafter\expandafter\@gobble
5836 \else
5837 \expandafter\expandafter\expandafter\@firstofone
5838 \fi
5839 \fi
5840 }
5841 \Hy@CounterExists{section}{%
5842 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5843 }
5844 \Hy@CounterExists{part}{%
5845 \newcommand\theHpart{\arabic{part}}}%
5846 }
5847 \ltx@ifundefined{thechapter}{%
5848 \newcommand\theHsection {\arabic{section}}}%
5849 \newcommand\theHfigure {\arabic{figure}}}%
5850 \newcommand\theHtable {\arabic{table}}}%
5851 }{%
5852 \newcommand\theHchapter {\arabic{chapter}}}%

```

```

5853 \newcommand\theHfigure    {\theHchapter.\arabic{figure}}%
5854 \newcommand\theHtable    {\theHchapter.\arabic{table}}%
5855 \newcommand\theHsection    {\theHchapter.\arabic{section}}%
5856 }
5857 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5858 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5859 \newcommand\theHparagraph    {\theHsubsubsection.\arabic{paragraph}}
5860 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5861 \newcommand\theHtheorem      {\theHsection.\arabic{theorem}}
5862 \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.

```

5863 \let\H@item\item
5864 \newcounter{Item}
5865 \def\theHItem{\arabic{Item}}
5866 \def\item{%
5867   \@hyper@itemfalse
5868   \if@nmbrlist\@hyper@itemtrue\fi
5869   \H@item
5870 }
5871 \newcommand\theHenumi      {\theHItem}
5872 \newcommand\theHenumii     {\theHItem}
5873 \newcommand\theHenumiii    {\theHItem}
5874 \newcommand\theHenumiv     {\theHItem}
5875 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5876 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5877 \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.

```

5878 \let\H@refstepcounter\refstepcounter
5879 \edef\name@of@eq{equation}%
5880 \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.

```

5881 \newif\if@hyper@item
5882 \newif\if@skiphyperref
5883 \@hyper@itemfalse
5884 \@skiphyperreffalse
5885 \def\refstepcounter#1{%
5886   \ifHy@pdfstring
5887   \else
5888     \H@refstepcounter{#1}%
5889     \edef\This@name{#1}%
5890     \ifx\This@name\name@of@slide
5891     \else
5892       \if@skiphyperref
5893       \else
5894         \if@hyper@item
5895           \stepcounter{Item}%
5896           \hyper@refstepcounter{Item}%
5897         \@hyper@itemfalse
5898       \else

```

```

5899     \hyper@refstepcounter{#1}%
5900     \fi
5901     \fi
5902     \fi
5903     \fi
5904 }

```

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.

```

5905 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5906 \def\hyper@refstepcounter#1{%
5907   \edef\This@name{#1}%
5908   \ifx\This@name\name@of@eq
5909     \ifundefined{theHequation}{%
5910       \make@stripped@name{\theequation}%
5911       \let\theHequation\newname
5912     }{}%
5913   \fi
5914   \ifundefined{theH#1}{%
5915     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5916   }{}%
5917   \hyper@makecurrent{#1}%
5918   \ifmeasuring@
5919     \else
5920     \Hy@raisedlink{%
5921       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5922     }%
5923   \fi
5924 }

```

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`.

```

5925 \begingroup\expandafter\expandafter\expandafter\endgroup
5926 \expandafter\ifx\csname chapter\endcsname\relax
5927   \def\Hy@chapterstring{section}%
5928 \else
5929   \def\Hy@chapterstring{chapter}%
5930 \fi
5931 \def\Hy@appendixstring{appendix}
5932 \def\Hy@chapapp{\Hy@chapterstring}
5933 \let\HyOrg@appendix\appendix
5934 \def\appendix{%
5935   \ltx@ifundefined{chapter}%
5936     {\gdef\theHsection{\Alph{section}}}%
5937     {\gdef\theHchapter{\Alph{chapter}}}%
5938   \xdef\Hy@chapapp{\Hy@appendixstring}%
5939   \HyOrg@appendix
5940 }

```

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

```

5941 \def\hyper@makecurrent#1{%
5942   \begingroup
5943   \edef\Hy@param{#1}%
5944   \ifx\Hy@param\Hy@chapterstring
5945     \let\Hy@param\Hy@chapapp
5946   \fi
5947   \ifHy@hypertextnames
5948     \let\@number\@firstofone
5949     \@ifundefined{latin@Alph}{}{%
5950       \ifx\@Alph\greek@Alph
5951         \def\@Alph{Alph\@arabic}%
5952       \fi
5953     }%
5954     \ifx\@Alph\@Alph@bul
5955       \def\@Alph{Alph\@arabic}%
5956     \fi
5957     \ifx\@alph\@alph@bul
5958       \def\@alph{alph\@arabic}%
5959     \fi
5960     \ifHy@naturalnames
5961       \let\textlatin\@firstofone
5962       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
5963     \else
5964       \xdef\HyperGlobalCurrentHref{%
5965         \csname
5966           the%
5967           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5968           #1%
5969         \endcsname
5970       }%
5971     \fi
5972     \xdef\HyperGlobalCurrentHref{%
5973       \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
5974     }%
5975   \else
5976     \Hy@GlobalStepCount\Hy@linkcounter
5977     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
5978   \fi
5979 \endgroup
5980 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
5981 \ifHy@localanchorname
5982   \let\@currentHref\HyperLocalCurrentHref
5983 \else
5984   \global\let\@currentHref\HyperGlobalCurrentHref
5985 \fi
5986 }

```

\Hy@MakeCurrentHref

```

5987 \def\Hy@MakeCurrentHref#1{%
5988   \edef\HyperLocalCurrentHref{#1}%
5989   \@onelevel@sanitize\HyperLocalCurrentHref
5990   \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
5991   \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
5992   \ifHy@localanchorname
5993     \let\@currentHref\HyperLocalCurrentHref
5994   \else
5995     \global\let\@currentHref\HyperGlobalCurrentHref

```

```
5996 \fi
5997 }
```

`\Hy@MakeCurrentHrefAuto`

```
5998 \def\Hy@MakeCurrentHrefAuto#1{%
5999 \Hy@GlobalStepCount\Hy@linkcounter
6000 \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6001 }
```

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

```
6002 \def\@currentHlabel{\@currentHref}

6003 \@ifpackageloaded{fancyvrb}{%
6004 \@ifpackagelater{fancyvrb}{1998/05/20}{%
6005 \def\FV@StepLineNo{%
6006 \FV@SetLineNo
6007 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6008 \FV@StepLineNo
6009 }%
6010 }%
6011 }{}
```

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`

```
6012 \Hy@AtBeginDocument{%
6013 \@ifclassloaded{revtex4}{%
6014 \@namedef{ver@lastpage.sty}{1994/06/25}%
6015 }{}%
6016 \@ifpackageloaded{lastpage}{%
6017 \ifHy@pageanchor
6018 \else
6019 \Hy@WarningNoLine{%
6020 The \string\pageref{LastPage} link doesn't work\MessageBreak
6021 with disabled option 'pageanchor'%
6022 }%
6023 \fi
6024 \def\lastpage@putlabel{%
6025 \addtocounter{page}{-1}%
6026 \if@filesn
6027 \begingroup
6028 \let\@number\@firstofone
6029 \ifHy@pageanchor
6030 \ifHy@hypertextnames
6031 \ifHy@plainpages
6032 \def\Hy@temp{\arabic{page}}%
6033 \else
```

```

6034         \Hy@unicodedefalse
6035         \pdfstringdef\Hy@temp{\thepage}%
6036     \fi
6037 \else
6038     \def\Hy@temp{\the\Hy@pagecounter}%
6039 \fi
6040 \fi
6041 \immediate\write\@auxout{%
6042     \string\newlabel
6043     {LastPage}{\thepage}{\thepage}%
6044     \ifHy@pageanchor page.\Hy@temp\fi}%
6045 }%
6046 \endgroup
6047 \fi
6048 \addtocounter{page}{1}%
6049 }%
6050 \@ifclassloaded{revtex4}{%
6051     \begingroup
6052     \toks@{\expandafter{\lastpage@putlabel}%
6053     \edef\x{\endgroup
6054         \def\noexpand\lastpage@putlabel{%
6055             \noexpand\stepcounter{page}%
6056             \the\toks@
6057             \noexpand\addtocounter{page}\noexpand\m@ne
6058         }%
6059     }%
6060     \x
6061     }{}%
6062 }{}%
6063 }
6064 \end{package}
6065 \check
6066 \checkpackage{lastpage}[1994/06/25]
6067 \checkcommand\def\lastpage@putlabel{%
6068     \addtocounter{page}{-1}%
6069     \immediate\write\@auxout{%
6070         \string\newlabel{LastPage}{\thepage}{\thepage}%
6071     }%
6072     \addtocounter{page}{1}%
6073 }
6074 \end{check}
6075 \end{package}

```

30 Package ifthen support

Since version 6.75a this is done in package nameref.

For compatibility `\hypergetref` and `\hypergetpageref` are still provided. But they do not generate warnings, if the reference is undefined.

```

6076 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
6077 \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:

```

6078 \ifpackageloaded{titlesec}{%
6079   \def\ttl@Hy@steplink#1{%
6080     \Hy@MakeCurrentHrefAuto{#1*}%
6081     \edef\ttl@Hy@saveanchor{%
6082       \noexpand\Hy@raisedlink{%
6083         \noexpand\hyper@anchorstart{\@currentHref}%
6084         \noexpand\hyper@anchorend
6085         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6086         \noexpand\ttl@Hy@PatchSaveWrite
6087       }%
6088     }%
6089   }%
6090   \def\ttl@Hy@PatchSaveWrite{%
6091     \begingroup
6092     \toks@{\expandafter{\ttl@savewrite}%
6093     \edef\x{\endgroup
6094       \def\noexpand\ttl@savewrite{%
6095         \let\noexpand\@currentHref
6096         \noexpand\ttl@Hy@SavedCurrentHref
6097         \the\toks@
6098       }%
6099     }%
6100     \x
6101   }%
6102   \def\ttl@Hy@refstepcounter#1{%
6103     \let\ttl@b\Hy@raisedlink
6104     \def\Hy@raisedlink##1{%
6105       \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6106     }%
6107     \refstepcounter{#1}%
6108     \let\Hy@raisedlink\ttl@b
6109   }%
6110 }{}

```

Package titletoc support:

```

6111 \ifpackageloaded{titletoc}{%
6112   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6113 }{}

```

32 Package varioref support

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

```

6114 \def\Hy@varioref@undefined{???}{?}{-}{-}
6115 \ifpackageloaded{varioref}{%
6116   \def\vref@pagenum#1#2{%
6117     \ifundefined{r@#2}{%
6118       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6119     }{}%
6120     \edef#1{\getpagerefnumber{#2}}%
6121   }%
6122 }{}

```


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

```

6123 \ifpackageloaded{longtable}{%
6124   \begingroup
6125   \def\y{\LT@array}%
6126   \ifundefined{scr@LT@array}{\def\y{\scr@LT@array}}%
6127   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6128     \expandafter\endgroup
6129     \expandafter\def\y[#1]##2{%
6130       \H@refstepcounter{#1}%
6131       \hyper@makecurrent{table}%
6132       \let\Hy@LT@currentHref\@currentHref
6133       #2\@sharp###4%
6134     }%
6135   }%
6136   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6137 \begingroup
6138 \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
6139   \endgroup
6140   \def\LT@start{%
6141     #1%
6142     \let\@currentHref\Hy@LT@currentHref
6143     \Hy@raisedlink{%
6144       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6145     }%
6146     \ifvoid\LT@firsthead\copy
6147     #2%
6148   }%
6149 }%
6150 \expandafter\x\LT@start\@nil
6151 }{}

```

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.

```

6152 \let\new@refstepcounter\refstepcounter
6153 \let\H@equation\equation
6154 \let\H@endequation\endequation
6155 \ifpackageloaded{amsmath}{%
6156   \long\def\Hy@temp{%
6157     \incr@eqnum
6158     \mathdisplay@push
6159     \st@rredfalse \global\@eqnswtrue
6160     \mathdisplay{equation}%

```

```

6161 }%
6162 \ifx\Hy@temp\equation
6163   \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6164     \csname iftrue\endcsname
6165   \else
6166     \long\def\equation{%
6167       \mathdisplay@push
6168       \st@rredfalse \global\@eqnswtrue
6169       \mathdisplay{equation}%
6170       \incr@eqnum
6171     }%
6172   \fi
6173 \fi
6174 }{%
6175 \def\equation{%
6176   \let\refstepcounter\H@refstepcounter
6177   \H@equation
6178   \@ifundefined{theHequation}{%
6179     \make@stripped@name{\theequation}%
6180     \let\theHequation\newname
6181   }{%
6182     \hyper@makecurrent{equation}%
6183     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6184     \let\refstepcounter\new@refstepcounter
6185   }%
6186   \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6187 }

```

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.

```

6188 \newif\if@eqnstar
6189 \@eqnstarfalse
6190 \let\H@eqnarray\eqnarray
6191 \let\H@endeqnarray\endeqnarray
6192 \def\eqnarray{%
6193   \let\Hy@reserved@a\relax
6194   \def\@currentHref{}%
6195   \H@eqnarray
6196   \if@eqnstar
6197   \else
6198     \ifx\\\@currentHref\\%
6199     \else
6200       \@ifundefined{theHequation}{%
6201         \make@stripped@name{\theequation}%
6202         \let\theHequation\newname
6203       }{%
6204         \hyper@makecurrent{equation}%
6205         \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6206       \fi
6207     \fi
6208 }
6209 \def\endeqnarray{%
6210   \H@endeqnarray
6211 }

```

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.

```

6212 \@namedef{eqnarray*}{%
6213   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
6214 }
6215 \@namedef{endeqnarray*}{%
6216   \nonumber\endeqnarray\@eqnstarfalse
6217 }

```

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

```

6218 \ltx@ifundefined{subeqnarray}{}{%
6219   \let\H@subeqnarray\subeqnarray
6220   \let\H@endsubeqnarray\endsubeqnarray
6221   \def\subeqnarray{%
6222     \let\Hy@reserved@a\relax
6223     \H@subeqnarray
6224     \@ifundefined{theHequation}{%
6225       \make@stripped@name{\theequation}%
6226       \let\theHequation\newname
6227     }{}%
6228     \hyper@makecurrent{equation}%
6229     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6230   }%
6231   \def\endsubeqnarray{%
6232     \H@endsubeqnarray
6233   }%
6234   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6235 }

```

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

```

6236 \def\make@stripped@name#1{%
6237   \begingroup
6238   \escapechar\m@ne
6239   \global\let\newname\@empty
6240   \protected@edef\Hy@tempa{#1}%
6241   \edef\@tempb{%
6242     \noexpand\@tfor\noexpand\Hy@tempa:=%
6243     \expandafter\strip@prefix\meaning\Hy@tempa
6244   }%
6245   \@tempb\do{%
6246     \if{\Hy@tempa\else
6247     \if}\Hy@tempa\else
6248       \xdef\newname{\newname\Hy@tempa}%
6249     \fi
6250   }%
6251   \endgroup
6252 }

```

Support for amsmath's subequations:

```

6254 \begingroup\expandafter\expandafter\expandafter\endgroup
6255 \expandafter\ifx\cname subequations\endcename\relax
6256 \else
6257   \let\HyOrg@subequations\subequations
6258   \def\subequations{%
6259     \stepcounter{equation}%
6260     \protected@edef\theHparentequation{%

```

```

6261 \ifundefined{theHequation}\theequation\theHequation
6262 }%
6263 \addtocounter{equation}{-1}%
6264 \HyOrg@subequations
6265 \def\theHequation{\theHparentequation\alph{equation}}%
6266 \ignorespaces
6267 }%
6268 \fi

Support for package amsthm (Daniel Müllner):
6269 \ifpackageloaded{amsthm}{%
6270 \def\@thm#1#2#3{%
6271 \ifhmode
6272 \unskip\unskip\par
6273 \fi
6274 \normalfont
6275 \trivlist
6276 \let\thmheadnl\relax
6277 \let\thm@swap\@gobble
6278 \thm@notefont{\fontseries\mddefault\upshape}%
6279 \thm@headpunct{.}% add period after heading
6280 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6281 \thm@space@setup
6282 #1% style overrides
6283 \@topsep \thm@preskip % used by thm head
6284 \@topsepadd \thm@postskip % used by \@endparenv
6285 \def\dth@counter{#2}%
6286 \ifx\@empty\dth@counter
6287 \def\@tempa{%
6288 \@oparg{\@begintheorem{#3}{}}{}%
6289 }%
6290 \else
6291 \H@refstepcounter{#2}%
6292 \hyper@makecurrent{#2}%
6293 \let\Hy@dth@currentHref\@currentHref
6294 \def\@tempa{%
6295 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{}%
6296 }%
6297 \fi
6298 \@tempa
6299 }%
6300 \dth@everypar={%
6301 \@minipagefalse
6302 \global\@newlistfalse
6303 \@noparitemfalse
6304 \if@inlabel
6305 \global\@inlabelfalse
6306 \begingroup
6307 \setbox\z@\lastbox
6308 \ifvoid\z@
6309 \kern-\itemindent
6310 \fi
6311 \endgroup
6312 \ifx\@empty\dth@counter
6313 \else
6314 \Hy@raisedlink{%
6315 \hyper@anchorstart{%
6316 \ltx@ifundefined{Hy@dth@currentHref}%

```

```

6317         \@currentHref\Hy@dth@currentHref
6318     }\hyper@anchorend
6319 }%
6320 \fi
6321 \unhbox\@labels
6322 \fi
6323 \if@nobreak
6324     \@nobreakfalse \clubpenalty\@M
6325 \else
6326     \clubpenalty\@clubpenalty \everypar{}\%
6327 \fi
6328 }%
6329 }{}

```

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.

```

6330 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6331 \ifHy@hyperfootnotes
6332     \newcounter{Hfootnote}%
6333     \let\H@@@footnotetext\@footnotetext
6334     \let\H@@@footnotemark\@footnotemark
6335     \def\@xfootnotenext[#1]{%
6336         \begingroup
6337             \csname c@\@mpfn\endcsname #1\relax
6338             \unrestored@protected@xdef\@thefnmark{\thempfn}%
6339         \endgroup
6340         \ifx\@footnotetext\@mpfootnotetext
6341             \expandafter\H@@@mpfootnotetext
6342         \else
6343             \expandafter\H@@@footnotetext
6344         \fi
6345     }%
6346     \def\@xfootnotemark[#1]{%
6347         \begingroup
6348             \c@footnote #1\relax
6349             \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6350         \endgroup
6351         \H@@@footnotemark
6352     }%
6353     \let\H@@@mpfootnotetext\@mpfootnotetext
6354     \long\def\@mpfootnotetext#1{%
6355         \H@@@mpfootnotetext{%
6356             \ifHy@nesting
6357                 \expandafter\hyper@@@anchor\expandafter{%
6358                     \Hy@footnote@currentHref
6359                 }\{#1}%
6360             \else
6361                 \Hy@raisedlink{%
6362                     \expandafter\hyper@@@anchor\expandafter{%
6363                         \Hy@footnote@currentHref
6364                     }\{relax}%

```

```

6365     }#1%
6366     \fi
6367   }%
6368 }%
6369 \long\def\@footnotetext#1{%
6370   \H@@footnotetext{%
6371     \ifHy@nesting
6372       \expandafter\hyper@@anchor\expandafter{%
6373         \Hy@footnote@currentHref
6374       }{#1}%
6375     \else
6376       \Hy@raisedlink{%
6377         \expandafter\hyper@@anchor\expandafter{%
6378           \Hy@footnote@currentHref
6379         }{\relax}%
6380       }%
6381       \let\@currentHref\Hy@footnote@currentHref
6382       \let\@currentlabelname\@empty
6383       #1%
6384     \fi
6385   }%
6386 }%

```

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.

```

6387 \def\@footnotemark{%
6388   \leavevmode
6389   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6390   \stepcounter{Hfootnote}%
6391   \global\let\Hy@saved@currentHref\@currentHref
6392   \hyper@makecurrent{Hfootnote}%
6393   \global\let\Hy@footnote@currentHref\@currentHref
6394   \global\let\@currentHref\Hy@saved@currentHref
6395   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6396   \@makefnmark
6397   \hyper@linkend
6398   \ifhmode\spacefactor\@x@sf\fi
6399   \relax
6400 }%

```

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

```

6401 \ifpackageloaded{longtable}{%
6402   \CheckCommand*\LT@p@ftntext}[1]{%
6403     \edef\@tempa{%
6404       \the\LT@p@ftn
6405       \noexpand\footnotetext[\the\c@footnote]%
6406     }%
6407     \global\LT@p@ftn\expandafter{\@tempa{#1}}}%
6408 }%
6409 \long\def\LT@p@ftntext#1{%
6410   \edef\@tempa{%
6411     \the\LT@p@ftn
6412     \begingroup

```

```

6413 \noexpand\c@footnote=\the\c@footnote\relax
6414 \noexpand\protected@xdef
6415 \noexpand\@thefnmark{\noexpand\thempfn}%
6416 \noexpand\protected@xdef\noexpand\@thefnmark{%
6417 \noexpand\thempfn
6418 }%
6419 \expandafter\noexpand\expandafter\Hy@LT@footnotetext
6420 \expandafter{%
6421 \Hy@footnote@currentHref
6422 }%
6423 }%
6424 \global\LT@p@ftn\expandafter{%
6425 \@tempa{#1}%
6426 \endgroup
6427 }%
6428 }%
6429 \long\def\Hy@LT@footnotetext#1#2{%
6430 \H@@@footnotetext{%
6431 \ifHy@nesting
6432 \hyper@@@anchor{#1}{#2}%
6433 \else
6434 \Hy@raisedlink{%
6435 \hyper@@@anchor{#1}{\relax}%
6436 }%
6437 \def\@currentHref{#1}%
6438 \let\@currentlabelname\@empty
6439 #2%
6440 \fi
6441 }%
6442 }%
6443 }{}%

```

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

```

6444 \@ifpackageloaded{fancyvrb}{%
6445 \def\V@@@footnotetext{%
6446 \insert\footins\bgroup
6447 \csname reset@font\endcsname
6448 \footnotesize
6449 \interlinepenalty\interfootnotelinepenalty
6450 \splittopskip\footnotesep
6451 \splitmaxdepth\dp\strutbox
6452 \floatingpenalty \@MM
6453 \hsize\columnwidth
6454 \@parboxrestore
6455 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6456 \@makefnmark{}%
6457 \rule{\z@}{\footnotesep}%
6458 \bgroup
6459 \aftergroup\V@@@footnotetext
6460 \Hy@raisedlink{%
6461 \expandafter\hyper@@@anchor\expandafter{%
6462 \Hy@footnote@currentHref
6463 }{\relax}%
6464 }%
6465 \let\@currentHref\Hy@footnote@currentHref
6466 \let\@currentlabelname\@empty
6467 \ignorespaces
6468 }%

```

```
6469 }{}%
```

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

```
6470 \def\Hy@temp#1{%
6471   \begingroup
6472     \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6473   \endgroup
6474   \@footnotemark
6475 }%
6476 \ifx\Hy@temp\footref
6477   \def\footref#1{%
6478     \begingroup
6479       \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6480     \endgroup
6481     \H@@@footnotemark
6482   }%
6483 \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.

```
6484 \let\HyOrg@maketitle\maketitle
6485 \def\maketitle{%
6486   \let\Hy@saved@footnotemark\@footnotemark
6487   \let\Hy@saved@footnotetext\@footnotetext
6488   \let\@footnotemark\H@@@footnotemark
6489   \let\@footnotetext\H@@@footnotetext
6490   \@ifnextchar[\Hy@maketitle@optarg{% ]
6491     \HyOrg@maketitle
6492     \Hy@maketitle@end
6493   }%
6494 }%
6495 \def\Hy@maketitle@optarg[#1]{%
6496   \HyOrg@maketitle[{#1}]%
6497   \Hy@maketitle@end
6498 }%
6499 \def\Hy@maketitle@end{%
6500   \ifx\@footnotemark\H@@@footnotemark
6501     \let\@footnotemark\Hy@saved@footnotemark
6502   \fi
6503   \ifx\@footnotetext\H@@@footnotetext
6504     \let\@footnotetext\Hy@saved@footnotetext
6505   \fi
6506 }%
```

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

```
6507 \def\realfootnote{%
6508   \@ifnextchar[\@xfootnote{%
6509     \stepcounter{\@mpfn}%
6510     \protected@xdef\@thefnmark{\thempfn}%
6511     \H@@@footnotemark\H@@@footnotetext
6512   }%
6513 }%
6514 \fi
6515 \Hy@DisableOption{hyperfootnotes}
6516 \end{package}
6517 \check
```



```

6518 \checklatex
6519 \checkcommand\def\@xfootnotenext[#1]{%
6520   \begingroup
6521     \csname c@\@mpfn\endcsname #1\relax
6522     \unrestored@protected@xdef\@thefnmark{\thempfn}%
6523   \endgroup
6524   \@footnotetext
6525 }
6526 \checkcommand\def\@xfootnotemark[#1]{%
6527   \begingroup
6528     \c@footnote #1\relax
6529     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6530   \endgroup
6531   \@footnotemark
6532 }
6533 \checkcommand\def\@footnotemark{%
6534   \leavevmode
6535   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6536   \@makefnmark
6537   \ifhmode\spacefactor\@x@sf\fi
6538   \relax
6539 }
6540 </check>
6541 <*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.

```

6542 \def\caption{%
6543   \ifx\@capttype\@undefined
6544     \@latex@error{\noexpand\caption outside float}\@ehd
6545     \expandafter\@gobble
6546   \else
6547     \H@refstepcounter\@capttype
6548     \let\Hy@tempa\@caption
6549     \ifundefined{float@caption}{%
6550       }{%
6551         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6552           \float@caption
6553         \let\Hy@tempa\Hy@float@caption
6554       \fi
6555     }%
6556     \expandafter\@firstofone
6557   \fi
6558   {\@dblarg{\Hy@tempa\@capttype}}%
6559 }
6560 \long\def\@caption#1[#2]#3{%
6561   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6562     \csname iftrue\endcsname
6563     \global\let\@currentHref\hc@currentHref
6564   \else
6565     \hyper@makecurrent{\@capttype}%
6566   \fi
6567   \@ifundefined{NR@gettitle}{%
6568     \def\@currentlabelname{#2}%

```

```

6569 }{%
6570   \NR@gettitle{#2}%
6571 }%
6572 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6573   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6574 }%
6575 \begingroup
6576   \@parboxrestore
6577   \if@minipage
6578     \setminipage
6579   \fi
6580   \normalsize
6581   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6582     \csname iftrue\endcsname
6583     \global\@capstartfalse
6584     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6585   \else
6586     \makecaption{\csname fnum@#1\endcsname}{%
6587       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6588   \ifHy@nesting
6589     \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6590   \else
6591     \Hy@raisedlink{%
6592       \expandafter\hyper@@anchor\expandafter{%
6593         \@currentHref
6594       }\relax}%
6595     }%
6596     #3%
6597   \fi
6598 }%
6599 \fi
6600 \par
6601 \endgroup
6602 }

```

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.

```

6603 \let\Hy@float@caption\@caption
6604 \@ifpackageloaded{float}{%
6605   \def\Hy@float@caption{%
6606     \ifx\Hy@float@currentHref\@undefined
6607       \hyper@makecurrent{\@capytype}%
6608       \global\let\Hy@float@currentHref\@currentHref
6609     \else
6610       \let\@currentHref\Hy@float@currentHref
6611     \fi
6612     \float@caption
6613   }%
6614   \let\HyOrg@float@makebox\float@makebox
6615   \renewcommand{\float@makebox}[1]{%
6616     \HyOrg@float@makebox{%
6617       #1\relax
6618     \ifx\Hy@float@currentHref\@undefined
6619     \else
6620       \expandafter\hyper@@anchor\expandafter{%
6621         \Hy@float@currentHref

```

```

6622     }\relax}%
6623     \global\let\Hy@float@currentHref\@undefined
6624     \fi
6625   }%
6626 }%
6627 }{}

6628 \end{package}
6629 \check
6630 \checklatex[1999/06/01 - 2000/06/01]
6631 \checkcommand\def\caption{%
6632   \ifx\@capttype\@undefined
6633     \latexerror{\noexpand\caption outside float}\@ehd
6634     \expandafter\@gobble
6635   \else
6636     \refstepcounter\@capttype
6637     \expandafter\@firstofone
6638     \fi
6639   {\@dblarg{\@caption\@capttype}}%
6640 }

6641 \checkcommand\long\def\@caption#1[#2]#3{%
6642   \par
6643   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6644     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6645   }%
6646   \begingroup
6647     \@parboxrestore
6648     \if@minipage
6649       \setminipage
6650     \fi
6651     \normalize
6652     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6653   \endgroup
6654 }
6655 \end{check}
6656 \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.

```

6657 \def\hyper@natlinkstart#1{%
6658   \Hy@backout{#1}%
6659   \hyper@linkstart{cite}{cite.#1}%
6660   \def\hyper@nat@current{#1}%
6661 }
6662 \def\hyper@natlinkend{%
6663   \hyper@linkend
6664 }
6665 \def\hyper@natlinkbreak#1#2{%

```

```

6666 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6667 }
6668 \def\hyper@natanchorstart#1{%
6669 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6670 }
6671 \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.

```

6672 \ltx@ifundefined{NAT@parse}{%
6673 \providecommand*\@extra@binfo{%
6674 \providecommand*\@extra@b@citeb{%
6675 \def\bibcite#1#2{%
6676 \@newl@bel{b}{#1\@extra@binfo}{%
6677 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6678 }%
6679 }%
6680 \gdef\@extra@binfo{%

```

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

```

6681 \let\Hy@bibcite\bibcite
6682 \begingroup
6683 \@ifundefined{bbl@cite@choice}{%
6684 \g@addto@macro\bbl@cite@choice{%
6685 \let\bibcite\Hy@bibcite
6686 }%
6687 }%
6688 \endgroup

```

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

```

6689 \providecommand*\@BIBLABEL{\@biblabel}%
6690 \def\@bibitem[#1]#2{%
6691 \@skiphyperrreftrue
6692 \H@item{%
6693 \ifx\Hy@raisedlink\@empty
6694 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6695 \@BIBLABEL{#1}%
6696 \hyper@anchorend
6697 \else
6698 \Hy@raisedlink{%
6699 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6700 }%
6701 \@BIBLABEL{#1}%
6702 \fi
6703 \hfill
6704 ]%
6705 \@skiphyperrreffalse
6706 \if@filesw
6707 \begingroup
6708 \let\protect\noexpand
6709 \immediate\write\@auxout{%
6710 \string\bibcite{#2}{#1}%
6711 }%
6712 \endgroup
6713 \fi

```

```

6714 \ignorespaces
6715 }%

```

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

```

6716 \def\@bibitem#1{%
6717   \@skiphyperreftrue\H@item\@skiphyperreffalse
6718   \Hy@raisedlink{%
6719     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6720   }%
6721   \if@filesw
6722     \begingroup
6723       \let\protect\noexpand
6724       \immediate\write\@auxout{%
6725         \string\bibcite{#1}{\the\value{\@listctr}}}%
6726       }%
6727     \endgroup
6728   \fi
6729   \ignorespaces
6730 }%
6731 }{}

6732 \</package>
6733 \< *check>
6734 \checklatex
6735 \checkcommand\def\@lbibitem[#1]#2{%
6736   \item[\@biblabel{#1}\hfill]%
6737   \if@filesw
6738     {%
6739       \let\protect\noexpand
6740       \immediate\write\@auxout{%
6741         \string\bibcite{#2}{#1}%
6742       }%
6743     }%
6744   \fi
6745   \ignorespaces
6746 }
6747 \checkcommand\def\@bibitem#1{%
6748   \item
6749   \if@filesw
6750     \immediate\write\@auxout{%
6751       \string\bibcite{#1}{\the\value{\@listctr}}}%
6752     }%
6753   \fi
6754   \ignorespaces
6755 }
6756 \< /check>
6757 \< *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.

```

6758 \@ifclassloaded{revtex}{%
6759   \Hy@Info{*** compatibility with revtex **** }%
6760   \def\revtex@checking#1#2{%
6761     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6762     \expandafter\def\csname b@#1\endcsname{#2}%
6763     \@SetMaxRnhfLabel{#1}%

```

```

6764 \expandafter\let\csname b@#1\endcsname\T@temp
6765 }%

```

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

```

6766 \ifundefined{@CITE}{\def\CITE{\@cite}}}%
6767 \providecommand*{\@extra@b@citeb}{}%
6768 \def\CITEX[#1]#2{%
6769 \let\@citea\@empty
6770 \leavevmode
6771 \unskip
6772 $~{%
6773 \scriptstyle
6774 \@CITE{%
6775 \@for\@citeb:=#2\do{%
6776 \@citea
6777 \def\@citea{,\penalty\@m\ }%
6778 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6779 \if@filesw
6780 \immediate\write\@auxout{\string\citation{\@citeb}}%
6781 \fi
6782 \ifundefined{b@\@citeb\extra@b@citeb}{%
6783 \mbox{\reset@font\bfseries ?}%
6784 \G@refundefinedtrue
6785 \@latex@warning{%
6786 Citation '\@citeb' on page \thepage \space undefined%
6787 }%
6788 }{%
6789 {\csname b@\@citeb\extra@b@citeb\endcsname}%
6790 }%
6791 }%
6792 }{#1}%
6793 }$%
6794 }%

```

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.

```

6795 \def\@citex[#1]#2{%
6796 \let\@citea\@empty
6797 \@cite{%
6798 \@for\@citeb:=#2\do{%
6799 \@citea
6800 \def\@citea{,\penalty\@m\ }%
6801 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6802 \if@filesw
6803 \immediate\write\@auxout{\string\citation{\@citeb}}%
6804 \fi
6805 \ifundefined{b@\@citeb\extra@b@citeb}{%
6806 \mbox{\reset@font\bfseries ?}%
6807 \G@refundefinedtrue
6808 \@latex@warning{%
6809 Citation '\@citeb' on page \thepage \space undefined%
6810 }%
6811 }{%
6812 \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6813 }%
6814 }%
6815 }{#1}%

```

```

6816 }%
6817 }{}

```

37.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to `\begin{document}`, because if `harvard.sty` is loaded and `html.sty` is present and detects pdf \TeX , then `hyperref` is already loaded at the begin of `harvard.sty`, and the `\newcommand` macros causes error messages.

```

6818 \ifpackageloaded{harvard}{%
6819   \Hy@AtBeginDocument{%
6820     \Hy@Info{*** compatibility with harvard **** }%
6821     \Hy@raiselinksfalse
6822     \def\harvardcite#1#2#3#4{%
6823       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
6824       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
6825       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
6826       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6827     }%
6828     \def\HAR@citetoaux#1{%
6829       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6830       \ifHy@backref
6831         \ifx\@empty\@currentlabel
6832           \else
6833             \@bsphack
6834             \if@filesw
6835               \protected@write\@auxout{}{%
6836                 \string\@writefile{brf}{%
6837                   \string\backcite{#1}{%
6838                     {\thepage}{\@currentlabel}{\@currentHref}}%
6839                 }%
6840             }%
6841           }%
6842         \fi
6843       \@esphack
6844     \fi
6845   \fi
6846 }%
6847 \def\harvarditem{%
6848   \ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
6849 }%
6850 \def\@harvarditem[#1]#2#3#4#5\par{%
6851   \item[]%
6852   \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6853   \if@filesw
6854     \begingroup
6855     \def\protect##1{\string ##1\space}%
6856     \ifthenelse{\equal{#1}{\null}}{%
6857       {\def\next{{#4}{#2}{#3}}}%
6858       {\def\next{{#4}{#2}{#1}{#3}}}%
6859     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6860   \endgroup
6861   \fi
6862   \protect\hspace*{-\labelwidth}%

```

```

6863 \protect\hspace*{-\labelsep}%
6864 \ignorespaces
6865 #5%
6866 \ifHy@backref
6867 \newblock
6868 \backref{\csname br@#4\endcsname}%
6869 \fi
6870 \par
6871 }%

```

`\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`:

```

6872 \long\def\HAR@checkcitations#1#2#3#4{%
6873 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#2}}%
6874 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6875 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#3}}%
6876 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6877 \def\HAR@tempa{\hyper@@link[cite]{\cite.#1}{#4}}%
6878 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6879 \else
6880 \@tempswatrue
6881 \fi
6882 \else
6883 \@tempswatrue
6884 \fi
6885 \else
6886 \@tempswatrue
6887 \fi
6888 }%
6889 }%

6890 }{}

```

37.2 Package chicago

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

```

6891 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

6892 \def\citeN{%
6893 \def\@citesep{-1000}%
6894 \def\@cite##1##2{##1}%
6895 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6896 \@citedata@opt
6897 }%

```

`\shortciteN`

```

6898 \def\shortciteN{%
6899 \def\@citesep{-1000}%
6900 \def\@cite##1##2{##1}%
6901 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6902 \@citedata@opt
6903 }%

```


\@citedata@opt

```
6904 \def\@citedata@opt{%
6905   \let\@cite@opt\@empty
6906   \ifnextchar [{%
6907     \@tempswatrue
6908     \@citedatax@opt
6909   }{%
6910     \@tempswafalse
6911     \@citedatax[]%
6912   }%
6913 }%
```

\@citedatax@opt

```
6914 \def\@citedatax@opt[#1]{%
6915   \def\@cite@opt{, #1}%
6916   \@citedatax[{#1}]%
6917 }%

6918 }{}
```

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.

```
6919 \def\Hy@EveryPageAnchor{%
6920   \Hy@DistillerDestFix
6921   \ifHy@pageanchor
6922     \ifHy@hypertextnames
6923       \ifHy@plainpages
6924         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6925       \else
6926         \begingroup
6927           \let\@number\@firstofone
6928           \Hy@unicodedefalse
6929           \pdfstringdef\@the@H@page{\thepage}%
6930         \endgroup
6931         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6932       \fi
6933     \else
6934       \Hy@GlobalStepCount\Hy@pagecounter
6935       \def\Hy@TempPageAnchor{%
6936         \hyper@@anchor{page.\the\Hy@pagecounter}%
6937       }%
6938     \fi
6939   \vbox to 0pt{%
6940     \kern\hoffset
6941     \kern\topmargin
6942     \kern-1bp\relax
6943     \hbox to 0pt{%
6944       \kern\hoffset
6945       \kern\ifodd\value{page}%

```

```

6946         \oddsidemargin
6947     \else
6948         \evensidemargin
6949     \fi
6950     \kern-1bp\relax
6951     \Hy@TempPageAnchor
6952     \hss
6953 }%
6954 \vss
6955 }%
6956 \fi
6957 }
6958 \g@addto@macro\Hy@EveryPageBoxHook{%
6959     \Hy@EveryPageAnchor
6960 }

```

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.

```

6961 \def\addcontentsline#1#2#3{% toc extension, type, tag
6962     \begingroup
6963     \let\label\@gobble
6964     \ifx\@currentHref\@empty
6965         \Hy@Warning{%
6966             No destination for bookmark of \string\addcontentsline,%
6967             \MessageBreak destination is added%
6968         }%
6969         \phantomsection
6970     \fi
6971     \expandafter\ifx\csname toplevel@#2\endcsname\relax
6972     \begingroup
6973         \def\Hy@tempa{#1}%
6974         \ifx\Hy@tempa\Hy@bookmarkstype
6975             \Hy@WarningNoLine{%
6976                 bookmark level for unknown #2 defaults to 0%
6977             }%
6978         \else
6979             \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6980         \fi
6981     \endgroup
6982     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6983     \fi
6984     \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
6985     \Hy@writebookmark{\csname the#2\endcsname}%
6986         {#3}%
6987         {\@currentHref}%
6988         {\Hy@toclevel}%
6989         {#1}%
6990     \ifHy@verbose
6991     \begingroup
6992         \def\Hy@tempa{#3}%
6993         \@onelevel@sanitize\Hy@tempa
6994         \let\temp@online\on@line
6995         \let\on@line\@empty

```

```

6996 \Hy@Info{%
6997   bookmark\temp@online:\MessageBreak
6998   thecounter {\csname the#2\endcsname}\MessageBreak
6999   text {\Hy@tempa}\MessageBreak
7000   reference {\@currentHref}\MessageBreak
7001   toplevel {\Hy@toclevel}\MessageBreak
7002   type {\#1}%
7003 }%
7004 \endgroup
7005 \fi
7006 \addtocontents{\#1}{%
7007   \protect\contentsline{\#2}{\#3}{\thepage}{\@currentHref}%
7008 }%
7009 \endgroup
7010 }
7011 \def\contentsline#1#2#3#4{%
7012   \ifx\#4\%
7013     \csname l@#1\endcsname{\#2}{\#3}%
7014   \else
7015     \ifcase\Hy@linktoc % none
7016       \csname l@#1\endcsname{\#2}{\#3}%
7017     \or % section
7018       \csname l@#1\endcsname{%
7019         \hyper@linkstart{link}{\#4}{\#2}\hyper@linkend
7020       }{\#3}%
7021     \or % page
7022       \csname l@#1\endcsname{\#2}{\#3}%
7023       \hyper@linkstart{link}{\#4}{\#3}\hyper@linkend
7024     }%
7025     \else % all
7026       \csname l@#1\endcsname{%
7027         \hyper@linkstart{link}{\#4}{\#2}\hyper@linkend
7028       }{\#3}%
7029       \hyper@linkstart{link}{\#4}{\#3}\hyper@linkend
7030     }%
7031   \fi
7032 \fi
7033 }
7034 \end{package}
7035 \end{check}
7036 \checklatex
7037 \checkcommand\def\addcontentsline#1#2#3{%
7038   \addtocontents{\#1}{\protect\contentsline{\#2}{\#3}{\thepage}}%
7039 }
7040 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7041 \end{check}
7042 \end{package}

```

40 New counters

The whole theorem business makes up new counters on the fly; we are going to intercept this. Sigh. Do it at the level where new counters are defined.

```

7043 \let\H@definecounter\@definecounter
7044 \def\@definecounter#1{%
7045   \H@definecounter{#1}%
7046   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%

```

```
7047 }
```

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.

```
7048 \let\H@newctr\@newctr
7049 \def\@newctr#1[#2]{%
7050   \H@newctr#1[#2]}%
7051 \expandafter\def\csname theH#1\endcsname{%
7052   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
7053 }%
7054 }
```

41 AMS \LaTeX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```
7055 \ifpackageloaded{amsmath}{%
7056   \def\Hy@make@anchor{%
7057     \Hy@MakeCurrentHrefAuto{AMS}%
7058     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7059   }%
7060   \def\Hy@make@df@tag@@#1{%
7061     \gdef\df@tag{%
7062       \maketag@@@{\Hy@make@anchor#1}%
7063       \def\@currentlabel{#1}%
7064     }%
7065   }%
7066   \def\Hy@make@df@tag@@@#1{%
7067     \gdef\df@tag{%
7068       \tagform@{\Hy@make@anchor#1}%
7069       \toks@{\xp{p@equation{#1}}}%
7070       \edef\@currentlabel{the\toks@}%
7071     }%
7072   }%
7073   \let\HyOrg@make@df@tag@@\make@df@tag@@
7074   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7075   \let\make@df@tag@@\Hy@make@df@tag@@
7076   \let\make@df@tag@@@\Hy@make@df@tag@@@
7077 }{}
```

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

```
7078 \ifpackagewith{hyperref}{pdf $\text{\TeX}$ }{%
7079   \let\H@seteqlabel\@seteqlabel
7080   \def\@seteqlabel#1{%
7081     \H@seteqlabel{#1}%
7082     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
7083     \Hy@raisedlink{%
7084       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7085     }%
7086   }%
7087 }
```

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.

```
7088 \let\HyOrg@addtoreset\@addtoreset
7089 \def\@addtoreset#1#2{%
7090   \HyOrg@addtoreset{#1}{#2}%
7091   \expandafter\xdef\csname theH#1\endcsname{%
7092     \expandafter\noexpand
7093       \csname the\@ifundefined{theH#2}{H#2\endcsname
7094       .\noexpand\the\noexpand\value{#1}}%
7095   }%
7096 }
```

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

```
7097 </package>
7098 <*check>
7099 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7100 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7101   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7102     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7103       \@addtoreset{#2}{#3}%
7104       \@xp\xdef\csname the#2\endcsname{%
7105         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7106       }%
7107     }%
7108   }%
7109 }%
7110 </check>
7111 <*package>
7112 \ifpackageloaded{amsmath}{%
7113   \ifpackagelater{amsmath}{1999/12/14}{%
7114     \renewcommand*\numberwithin[3][\arabic]{%
7115       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7116         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7117           \HyOrg@addtoreset{#2}{#3}%
7118           \@xp\xdef\csname the#2\endcsname{%
7119             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7120           }%
7121           \@xp\xdef\csname theH#2\endcsname{%
7122             \@xp\@nx
7123             \csname the\@ifundefined{theH#3}{H#3\endcsname
7124             .\@nx#1{#2}%
7125           }%
7126         }%
7127       }%
7128     }%
7129   }%
7130 }
```

```

7127 }%
7128 }%
7129 }{%
7130 \Hy@WarningNoLine{%
7131 \string\numberwithin\space of package ‘amsmath’ %
7132 only fixed\MessageBreak
7133 for version 2000/06/06 v2.12 or newer%
7134 }%
7135 }%
7136 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7137 \ifHy@figures
7138 \let\Hy@Gin@setfile\Gin@setfile
7139 \def\Gin@setfile#1#2#3{%
7140 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7141 }%
7142 \fi
7143 \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.

```

7144 \ifHy@hyperindex
7145 \def\HyInd@ParenLeft{(%
7146 \def\HyInd@ParenRight{)%
7147 \def\hyperindexformat#1#2{%
7148 \let\HyOrg@hyperpage\hyperpage
7149 \let\hyperpage\@firstofone
7150 #1{\HyOrg@hyperpage{#2}}%
7151 \let\hyperpage\HyOrg@hyperpage
7152 }%
7153 \Hy@nextfalse
7154 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7155 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7156 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7157 \begingroup
7158 \lccode‘\|=\expandafter‘\HyInd@EncapChar\relax
7159 \lccode‘\/=‘\\relax
7160 \lowercase{\endgroup
7161 \ifHy@next
7162 \let\HyInd@org@wrindex\@wrindex
7163 \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2}||\}%
7164 \def\HyInd@@wrindex#1#2|#3|#4\{\%

```

```

7165 \ifx\#3\%
7166 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7167 \else
7168 \HyInd@@@wrindex{#1}{#2}#3\%
7169 \fi
7170 }%
7171 \def\HyInd@@@wrindex#1#2#3#4\%
7172 \def\Hy@temp@A{#3}%
7173 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7174 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7175 \relax
7176 \HyInd@org@wrindex{#1}{%
7177 #2|hyperindexformat{/#3#4}%
7178 }%
7179 \else
7180 \ifx\#4\%
7181 \ifx\Hy@temp@A\HyInd@ParenRight
7182 \HyInd@org@wrindex{#1}{#2|#3}%
7183 \else
7184 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7185 \fi
7186 \else
7187 \HyInd@org@wrindex{#1}{%
7188 #2|#3hyperindexformat{/#4}%
7189 }%
7190 \fi
7191 \fi
7192 }%
7193 \else
7194 \def\@wrindex#1{\@wrindex#1||\}%
7195 \def\@wrindex#1|#2|#3\%
7196 \if@filesw
7197 \ifx\#2\%
7198 \protected@write\@indexfile{}\%
7199 \string\indexentry{#1|hyperpage}{\thepage}%
7200 }%
7201 \else
7202 \HyInd@@@wrindex{#1}#2\%
7203 \fi
7204 \fi
7205 \endgroup
7206 \@esphack
7207 }%
7208 \def\HyInd@@@wrindex#1#2#3\%
7209 \def\Hy@temp@A{#2}%
7210 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7211 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7212 \relax
7213 \protected@write\@indexfile{}\%
7214 \string\indexentry{%
7215 #1|hyperindexformat{/#2#3}%
7216 }{\thepage}%
7217 }%
7218 \else
7219 \ifx\#3\%
7220 \ifx\Hy@temp@A\HyInd@ParenRight
7221 \protected@write\@indexfile{}\%

```

```

7222         \string\indexentry{#1|#2}{\thepage}%
7223     }%
7224     \else
7225         \protected@write\@indexfile{}{%
7226             \string\indexentry{#1|#2hyperpage}{\thepage}%
7227         }%
7228     \fi
7229     \else
7230         \protected@write\@indexfile{}{%
7231             \string\indexentry{%
7232                 #1|#2hyperindexformat{/#3}%
7233             }{\thepage}%
7234         }%
7235     \fi
7236 \fi
7237 }%
7238 \fi
7239 }%
7240 \fi
7241 \Hy@DisableOption{hyperindex}
7242 \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.

```

7243 \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.

```

7244 \def\hyperpage#1{%
7245     \HyInd@hyperpage#1\nohyperpage{}\@nil
7246 }
7247 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7248     \HyInd@@hyperpage{#1}%
7249     #2%
7250     \def\Hy@temp{#3}%
7251     \ifx\Hy@temp\@empty
7252     \else
7253         \Hy@ReturnAfterFi{%
7254             \HyInd@hyperpage#3\@nil
7255         }%
7256     \fi
7257 }
7258 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7259 \def\@hyperpage#1--#2--#3\{\{%
7260     \ifx\#2\%
7261         \@commahyperpage{#1}%
7262     \else
7263         \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7264     \fi
7265 }
7266 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7267 \def\@commahyperpage#1, #2,#3\{\{%
7268     \ifx\#2\%
7269         \HyInd@pagelink{#1}%
7270     \else
7271         \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7272     \fi

```



```
7273 }
```

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

```
7274 \def\HyInd@pagelink#1{%
7275   \begingroup
7276   \toks@={}%
7277   \HyInd@removespaces#1 \@nil
7278   \endgroup
7279 }
7280 \def\HyInd@removespaces#1 #2\@nil{%
7281   \toks@=\expandafter{\the\toks@#1}%
7282   \ifx\#2\%
7283     \edef\x{\the\toks@}%
7284     \ifx\x\@empty
7285       \else
7286         \hyperlink{page.\the\toks@}{\the\toks@}%
7287         \fi
7288       \else
7289         \Hy@ReturnAfterFi{%
7290           \HyInd@removespaces#2\@nil
7291         }%
7292       \fi
7293 }
```

44 Compatibility with foiltex

```
7294 \@ifclassloaded{foils}{%
7295   \providecommand*\ext@table{lot}%
7296   \providecommand*\ext@figure{lof}%
7297 }{}
```

45 Compatibility with seminar slide package

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

```
7298 \@ifclassloaded{seminar}{%
7299   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
7300 }{%
7301   \Hy@seminarslidesfalse
7302 }
7303 \@ifpackageloaded{slidesec}{%
7304   \newcommand\theHslidesection {\arabic{slidesection}}%
7305   \newcommand\theHslidesubsection{%
7306     \theHslidesection.\arabic{slidesubsection}%
7307   }%
7308   \def\slide@heading[#1]#2{%
7309     \H@refstepcounter{slidesection}%
7310     \@addtoreset{slidesubsection}{slidesection}%
7311     \addtocontents{los}{%
7312       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7313       {\@SCTR}{slideheading.\theslidesection}%
7314     }%
7315   \def\Hy@tempa{#2}%
7316   \ifx\Hy@tempa\@empty
7317     \else
```

```

7318 {%
7319 \edef\@currentlabel{%
7320 \csname p@slidesection\endcsname\theslidesection
7321 }%
7322 \makeslideheading{#2}%
7323 }%
7324 \fi
7325 \gdef\theslideheading{#1}%
7326 \gdef\theslidesubheading{}%
7327 \ifHy@bookmarksnumbered
7328 \def\Hy@slidetitle{\theslidesection\space #1}%
7329 \else
7330 \def\Hy@slidetitle{#1}%
7331 \fi
7332 \ifHy@hypertextnames
7333 \ifHy@naturalnames
7334 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7335 \Hy@writebookmark
7336 {\theslidesection}%
7337 {\Hy@slidetitle}%
7338 {slideheading.\theslidesection}%
7339 {1}%
7340 {toc}%
7341 \else
7342 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7343 \Hy@writebookmark
7344 {\theslidesection}%
7345 {\Hy@slidetitle}%
7346 {slideheading.\theHslidesection}%
7347 {1}%
7348 {toc}%
7349 \fi
7350 \else
7351 \Hy@GlobalStepCount\Hy@linkcounter
7352 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7353 \Hy@writebookmark
7354 {\theslidesection}%
7355 {\Hy@slidetitle}%
7356 {slideheading.\the\Hy@linkcounter}%
7357 {1}%
7358 {toc}%
7359 \fi
7360 }%
7361 \def\slide@subheading[#1]#2{%
7362 \H@refstepcounter{slidesubsection}%
7363 \addtocontents{los}{%
7364 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7365 {\@SCTR}{slideheading.\theslidesubsection}%
7366 }%
7367 \def\Hy@tempa{#2}%
7368 \ifx\Hy@tempa\@empty
7369 \else
7370 {%
7371 \edef\@currentlabel{%
7372 \csname p@slidesubsection\endcsname\theslidesubsection
7373 }%
7374 \makeslidesubheading{#2}%

```

```

7375 }%
7376 \fi
7377 \gdef\theslidesubheading{#1}%
7378 \ifHy@bookmarksnumbered
7379   \def\Hy@slidetitle{\theslidesubsection\space #1}%
7380 \else
7381   \def\Hy@slidetitle{#1}%
7382 \fi
7383 \ifHy@hypertextnames
7384   \ifHy@naturalnames
7385     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7386     \Hy@writebookmark
7387       {\theslidesubsection}%
7388       {\Hy@slidetitle}%
7389       {slideheading.\theslidesubsection}%
7390       {2}%
7391       {toc}%
7392   \else
7393     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7394     \Hy@writebookmark
7395       {\theslidesubsection}%
7396       {\Hy@slidetitle}%
7397       {slideheading.\theHslidesubsection}%
7398       {2}%
7399       {toc}%
7400   \fi
7401 \else
7402   \Hy@GlobalStepCount\Hy@linkcounter
7403   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7404   \Hy@writebookmark
7405     {\theslidesubsection}%
7406     {\Hy@slidetitle}%
7407     {slideheading.\the\Hy@linkcounter}%
7408     {1}%
7409     {toc}%
7410 \fi
7411 }%
7412 \providecommand*{\listslidenam}{List of Slides}%
7413 \def\listofslides{%
7414   \section*{%
7415     \listslidenam
7416     \@mkboth{%
7417       \expandafter\MakeUppercase\listslidenam
7418     }{%
7419       \expandafter\MakeUppercase\listslidenam
7420     }%
7421   }%
7422   \def\l@slide##1##2##3##4{%
7423     \slide@undottedcline{%
7424       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7425     }{%
7426     }%
7427     \let\l@subslide\l@slide
7428     \@startlos
7429   }%
7430   \def\slide@contents{%
7431     \def\l@slide##1##2##3##4{%

```

```

7432 \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7433 }%
7434 \let\l@subslide\@gobblefour
7435 \@startlos
7436 }%
7437 \def\Slide@contents{%
7438 \def\l@slide##1##2##3##4{%
7439 \ifcase\lslide@flag
7440 \message{##1 ** \the\c@slidesection}%
7441 \ifnum##1>\c@slidesection
7442 \def\lslide@flag{1}%
7443 {%
7444 \large
7445 \slide@cline{%
7446 \slidenumberline{$\rightarrow\bullet$}%
7447 {\hyperlink{##4}{##2}}%
7448 }{##3}%
7449 }%
7450 \else
7451 {%
7452 \large
7453 \slide@cline{%
7454 \slidenumberline{$\surd\bullet$}%
7455 {\hyperlink{##4}{##2}}%
7456 }{##3}%
7457 }%
7458 \fi
7459 \or
7460 \def\lslide@flag{2}%
7461 {%
7462 \large
7463 \slide@cline{%
7464 \slidenumberline{$\bullet$}%
7465 {\hyperlink{##4}{##2}}%
7466 }{##3}%
7467 }%
7468 \or
7469 {%
7470 \large
7471 \slide@cline{%
7472 \slidenumberline{$\bullet$}%
7473 {\hyperlink{##4}{##2}}%
7474 }{##3}%
7475 }%
7476 \fi
7477 }%
7478 \def\l@subslide##1##2##3##4{%
7479 \ifnum\lslide@flag=1 %
7480 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7481 \fi
7482 }%
7483 \def\lslide@flag{0}%
7484 \@startlos
7485 }%
7486 }{}

```

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.)

```

7487 \ifHy@texht
7488   \expandafter\endinput
7489 \fi
7490 \let\real@setref\@setref
7491 \def\@setref#1#2#3{% csname, extract group, refname
7492   \ifx#1\relax
7493     \protect\G@refundefinedtrue
7494     \nfss@text{\reset@font\bfseries ??}%
7495     \@latex@warning{%
7496       Reference '#3' on page \thepage \space undefined%
7497     }%
7498   \else
7499     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7500   \fi
7501 }
```

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

```

7502 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7503   \begingroup
7504     \toks0={\hyper@@link{#5}{#4}}%
7505     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7506     \edef\x{\endgroup
7507       \the\toks0 {\the\toks1 }%
7508     }%
7509   \x
7510 }
7511 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7512   \ifx#1\relax
7513     \protect\G@refundefinedtrue
7514     \nfss@text{\reset@font\bfseries ??}%
7515     \@latex@warning{%
7516       Reference '#3' on page \thepage \space undefined%
7517     }%
7518   \else
7519     \protect\hyper@@link
7520     {\expandafter\@fifthoffive#1}%
7521     {page.\expandafter\@secondoffive#1}%
7522     {\expandafter\@secondoffive#1}%
7523   \fi
7524 }

7525 </package>
7526 <*check>
7527 \checklatex
7528 \checkcommand\def\@setref#1#2#3{%
7529   \ifx#1\relax
7530     \protect\G@refundefinedtrue
7531     \nfss@text{\reset@font\bfseries ??}%
7532     \@latex@warning{%
7533       Reference '#3' on page \thepage \space undefined%
7534     }%
7535   \else
7536     \expandafter#2#1\@null
7537   \fi
7538 }
7539 </check>
```

7540 `\package`

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

```

7541 \def\HyRef@StarSetRef#1{%
7542   \begingroup
7543   \Hy@safe@activetrue
7544   \edef\x{#1}%
7545   \@onelevel@sanitize\x
7546   \edef\x{\endgroup
7547     \noexpand\HyRef@@StarSetRef
7548     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7549   }%
7550   \x
7551 }
7552 \def\HyRef@@StarSetRef#1#2#3{%
7553   \ifx#1\@undefined
7554     \let#1\relax
7555   \fi
7556   \real@setref#1#3{#2}%
7557 }
7558 \def\@refstar#1{%
7559   \HyRef@StarSetRef{#1}\@firstoffive
7560 }
7561 \def\@pagerefstar#1{%
7562   \HyRef@StarSetRef{#1}\@secondoffive
7563 }
7564 \Hy@AtBeginDocument{%
7565   \@ifpackageloaded{varioref}{%
7566     \def\@Refstar#1{%
7567       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7568     }%
7569     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7570       \MakeUppercase#1%
7571     }%
7572     \DeclareRobustCommand*\@Ref{-}%
7573     \@ifstar\@Refstar\HyRef@Ref
7574   }%
7575   \def\HyRef@Ref#1{%
7576     \hyperref[{#1}]{\Ref*{#1}}%
7577   }%
7578   \def\Vr@f#1{%
7579     \leavevmode\unskip\vref@space
7580     \hyperref[{#1}]{%
7581       \Ref*{#1}%
7582       \let\vref@space\nobreakspace
7583       \@vpageref[\unskip]{#1}%
7584     }%
7585   }%
7586   \def\vr@f#1{%
7587     \leavevmode\unskip\vref@space
7588     \begingroup
7589     \let\T@pageref\@pagerefstar
7590     \hyperref[{#1}]{%
7591       \ref*{#1}%
7592       \vpageref[\unskip]{#1}%
7593     }%
7594     \endgroup

```

```

7595 }%
7596 }{}%
7597 }
7598 \DeclareRobustCommand*{\autopageref}{%
7599 \ifstar{%
7600 \HyRef@autopagerefname\pageref*%
7601 }\HyRef@autopageref
7602 }
7603 \def\HyRef@autopageref#1{%
7604 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7605 }
7606 \def\HyRef@autopagerefname{%
7607 \ltx@ifundefined{pageautorefname}{%
7608 \ltx@ifundefined{pagename}{%
7609 \Hy@Warning{No autoref name for 'page'}%
7610 }{%
7611 \pagename\nobreakspace
7612 }%
7613 }{}%
7614 \pageautorefname\nobreakspace
7615 }%
7616 }
7617 \DeclareRobustCommand*{\autoref}{%
7618 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7619 }
7620 \def\HyRef@autoref#1#2{%
7621 \begingroup
7622 \Hy@safe@activetrue
7623 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7624 \endgroup
7625 }
7626 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7627 \HyRef@ShowKeysRef{#2}}%
7628 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7629 \edef\HyRef@thisref{%
7630 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7631 }%
7632 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7633 \Hy@safe@activetrue
7634 #3{%
7635 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7636 }{%
7637 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7638 }{%
7639 \HyRef@currentHtag
7640 \expandafter\@firstoffive#1\@empty\@empty\@empty
7641 \null
7642 }%
7643 \else
7644 \protect\G@refundefinedtrue
7645 \nfss@text{\reset@font\bfseries ??}%
7646 \@latex@warning{%
7647 Reference '#2' on page \thepage\space undefined%
7648 }%
7649 \fi
7650 }
7651 \def\HyRef@testreftype#1.#2\{\%

```

```

7652 \ltx@ifundefined{#1autorefname}{%
7653   \ltx@ifundefined{#1name}{%
7654     \HyRef@StripStar#1\\*\\\@nil{#1}%
7655     \ltx@ifundefined{\HyRef@name autorefname}{%
7656       \ltx@ifundefined{\HyRef@name name}{%
7657         \def\HyRef@currentHtag{%
7658           \Hy@Warning{No autoref name for ‘#1’}%
7659         }{%
7660           \edef\HyRef@currentHtag{%
7661             \expandafter\noexpand\csname\HyRef@name name\endcsname
7662             \noexpand~%
7663           }%
7664         }%
7665       }{%
7666         \edef\HyRef@currentHtag{%
7667           \expandafter\noexpand
7668           \csname\HyRef@name autorefname\endcsname
7669           \noexpand~%
7670         }%
7671       }%
7672     }{%
7673       \edef\HyRef@currentHtag{%
7674         \expandafter\noexpand\csname#1name\endcsname
7675         \noexpand~%
7676       }%
7677     }%
7678   }{%
7679     \edef\HyRef@currentHtag{%
7680       \expandafter\noexpand\csname#1autorefname\endcsname
7681       \noexpand~%
7682     }%
7683   }%
7684 }
7685 \def\HyRef@StripStar#1*\\\#2\@nil#3{%
7686   \def\HyRef@name{#2}%
7687   \ifx\HyRef@name\HyRef@CaseStar
7688     \def\HyRef@name{#1}%
7689   \else
7690     \def\HyRef@name{#3}%
7691   \fi
7692 }
7693 \def\HyRef@CaseStar{*\\}
7694 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7695 \let\HyRef@ShowKeysRef\@gobble
7696 \def\HyRef@ShowKeysInit{%
7697   \begingroup\expandafter\expandafter\expandafter\endgroup
7698   \expandafter\ifx\csname SK@@label\endcsname\relax
7699   \else
7700     \ifx\SK@ref\@empty
7701     \else
7702       \def\HyRef@ShowKeysRef{%
7703         \SK@\SK@@ref
7704       }%
7705     \fi

```



```

7706 \fi
7707 }
7708 \@ifpackageloaded{showkeys}{%
7709   \HyRef@ShowKeysInit
7710 }{%
7711   \Hy@AtBeginDocument{%
7712     \@ifpackageloaded{showkeys}{%
7713       \HyRef@ShowKeysInit
7714     }{}%
7715   }%
7716 }

```

Defaults for the names that `\autoref` uses.

```

7717 \providecommand*\AMSautorefname{\equationautorefname}
7718 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7719 \providecommand*\Itemautorefname{\itemautorefname}
7720 \providecommand*\itemautorefname{item}
7721 \providecommand*\equationautorefname{Equation}
7722 \providecommand*\footnoteautorefname{footnote}
7723 \providecommand*\itemautorefname{item}
7724 \providecommand*\figureautorefname{Figure}
7725 \providecommand*\tableautorefname{Table}
7726 \providecommand*\partautorefname{Part}
7727 \providecommand*\appendixautorefname{Appendix}
7728 \providecommand*\chapterautorefname{chapter}
7729 \providecommand*\sectionautorefname{section}
7730 \providecommand*\subsectionautorefname{subsection}
7731 \providecommand*\subsubsectionautorefname{subsubsection}
7732 \providecommand*\paragraphautorefname{paragraph}
7733 \providecommand*\subparagraphautorefname{subparagraph}
7734 \providecommand*\FancyVerbLineautorefname{line}
7735 \providecommand*\theoremautorefname{Theorem}
7736 \providecommand*\pageautorefname{page}
7737 </package>

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

7738 <*pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
7739 \RequirePackage{pdfTEXcmds}[2009/04/10]
7740 \begingroup\expandafter\expandafter\expandafter\endgroup
7741 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
7742   \begingroup
7743     \catcode'\| =0 %
7744     \@makeother\| %
7745     |@firstofone{| endgroup
7746     |def|Hy@pstringdef#1#2{%
7747       |begingroup

```

```

7748     |edef~{string~}%
7749     |xdef|Hy@gtemp{#2}%
7750   |endgroup
7751   |let#1|Hy@gtemp
7752   |@onelevel@sanitize#1%
7753   |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7754   |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7755   |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7756 }%
7757 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7758   #1%
7759   |ifx|\#2|\%%
7760   |else
7761     \\\%
7762     |Hy@ReturnAfterFi{%
7763       |Hy@ExchangeBackslash#2|@nil
7764     }%
7765   |fi
7766 }%
7767 }%
7768 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7769   #1%
7770   \ifx\#2\%%
7771   \else
7772     \@backslashchar(%
7773     \Hy@ReturnAfterFi{%
7774       \Hy@ExchangeLeftParenthesis#2\@nil
7775     }%
7776   \fi
7777 }%
7778 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7779   #1%
7780   \ifx\#2\%%
7781   \else
7782     \@backslashchar)%
7783     \Hy@ReturnAfterFi{%
7784       \Hy@ExchangeRightParenthesis#2\@nil
7785     }%
7786   \fi
7787 }%
7788 \else
7789 \def\Hy@pstringdef#1#2{%
7790   \begingroup
7791     \edef~{string~}%
7792     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7793   \endgroup
7794   \let#1\Hy@gtemp
7795 }%
7796 \fi
7797 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdftex

```

7798 <*pdftex>
7799 \providecommand*{\XR@ext}{pdf}
7800 \Hy@setbreaklinks{true}

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option pdfversion.

- pdfT_EX 1.10a, 2003-01-16: \pdfoptionpdfminorversion

- pdfT_EX 1.30, 2005-08-081: \pdfminorversion

```

7801 \let\Hy@pdfminorversion\relax
7802 \begingroup\expandafter\expandafter\expandafter\endgroup
7803 \expandafter\ifx\csname pdfminorversion\endcsname\relax
7804 \begingroup\expandafter\expandafter\expandafter\endgroup
7805 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7806 \else
7807 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7808 \fi
7809 \else
7810 \def\Hy@pdfminorversion{\pdfminorversion}%
7811 \fi
7812 \@ifundefined{Hy@pdfminorversion}{%
7813 \PackageInfo{hyperref}{%
7814 PDF version is not set, because pdfTeX is too old (<1.10a)%
7815 }%
7816 }{%
7817 \ifHy@ocgcolorlinks
7818 \ifnum\Hy@pdfminorversion<5 %
7819 \setkeys{Hyp}{pdfversion=1.5}%
7820 \fi
7821 \fi
7822 \ifHy@setpdfversion
7823 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7824 \else
7825 \Hy@pdfminorversion=\Hy@pdfversion\relax
7826 \fi
7827 \PackageInfo{hyperref}{%
7828 \expandafter\string\Hy@pdfminorversion
7829 :=\number\Hy@pdfversion\space
7830 }%
7831 \fi
7832 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7833 }
7834 \Hy@DisableOption{pdfversion}%

7835 \ifHy@ocgcolorlinks
7836 \immediate\pdfobj{%
7837 <<%
7838 /Type/OCG%
7839 /Name(View)%
7840 /Usage<<%
7841 /Print<<%
7842 /PrintState/OFF%
7843 >>%
7844 /View<<%
7845 /ViewState/ON%
7846 >>%
7847 >>%
7848 >>%
7849 }%

```

```

7850 \edef\OBJ@OCG@view{\the\pdfastobj\space 0 R}%
7851 \immediate\pdfobj{%
7852   <<%
7853     /Type/OCG%
7854     /Name(Print)%
7855     /Usage<<%
7856     /Print<<%
7857     /PrintState/ON%
7858     >>%
7859     /View<<%
7860     /ViewState/OFF%
7861     >>%
7862     >>%
7863   >>%
7864 }%
7865 \edef\OBJ@OCG@print{\the\pdfastobj\space 0 R}%
7866 \immediate\pdfobj{%
7867   [%
7868     \OBJ@OCG@view\space\OBJ@OCG@print
7869   ]%
7870 }%
7871 \edef\OBJ@OCGs{\the\pdfastobj\space 0 R}%
7872 \pdfcatalog{%
7873   /OCProperties<<%
7874     /OCGs \OBJ@OCGs
7875     /D<<%
7876       /OFF[\OBJ@OCG@print]%
7877       /AS[%
7878         <<%
7879           /Event/View%
7880           /OCGs \OBJ@OCGs
7881           /Category[/View]%
7882         >>%
7883         <<%
7884           /Event/Print%
7885           /OCGs \OBJ@OCGs
7886           /Category[/Print]%
7887         >>%
7888         <<%
7889           /Event/Export%
7890           /OCGs \OBJ@OCGs
7891           /Category[/Print]%
7892         >>%
7893       ]%
7894     >>%
7895   >>%
7896 }%
7897 \begingroup
7898 \edef\x{\endgroup
7899   \pdfpageresources{%
7900     /Properties<<%
7901       /OCView \OBJ@OCG@view
7902       /OCPrint \OBJ@OCG@print
7903     >>%
7904   }%
7905 }%
7906 \x

```

```

7907 \Hy@AtBeginDocument{%
7908   \def\Hy@colorlink#1{%
7909     \begingroup
7910     \ifHy@ocgcolorlinks
7911       \def\Hy@ocgcolor{#1}%
7912       \setbox0=\color@hbox
7913     \else
7914       \HyColor@UseColor#1%
7915     \fi
7916   }%
7917   \def\Hy@endcolorlink{%
7918     \ifHy@ocgcolorlinks
7919       \color@endbox
7920     \mbox{%
7921       \pdfliteral page{/OC/OCPrint BDC}%
7922       \rlap{\copy0}%
7923       \pdfliteral page{EMC/OC/OCView BDC}%
7924     \begingroup
7925       \expandafter\HyColor@UseColor\Hy@ocgcolor
7926     \box0 %
7927     \endgroup
7928     \pdfliteral page{EMC}%
7929   }%
7930   \fi
7931 \endgroup
7932 }%
7933 }%
7934 \else
7935 \Hy@DisableOption{ocgcolorlinks}%
7936 \fi

```

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

```

7937 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7938 \ifx\pdfstartlink\@undefined% less than version 14
7939 \let\pdfstartlink\pdfannotlink
7940 \let\pdfinkmargin\@tempdima
7941 \let\pdfxform\pdfform
7942 \let\pdfastxform\pdfastform
7943 \let\pdfrefxform\pdfrefform
7944 \else
7945 \pdfinkmargin1pt %
7946 \fi

```

First set up the default linking

```
7947 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7948 \def\new@pdfink#1{%
7949   \Hy@SaveLastskip
7950   \Hy@VerboseAnchor{#1}%
7951   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7952   \Hy@DestName\Hy@pstringDest\@pdfview
7953   \Hy@RestoreLastskip
7954 }
7955 \let\pdf@endanchor\@empty

```

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

```

7956 \def\Hy@DestName#1#2{%
7957   \pdfdest name{#1}#2\relax
7958 }

```

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.

```

7959 \providecommand*\@pdfborder{0 0 1}
7960 \providecommand*\@pdfborderstyle{}
7961 \def\Hy@undefinedname{UNDEFINED}
7962 \def\find@pdflink#1#2{%
7963   \leavevmode
7964   \protected@edef\Hy@testname{#2}%
7965   \ifx\Hy@testname\@empty
7966     \Hy@Warning{%
7967       Empty destination name,\MessageBreak
7968       using '\Hy@undefinedname'%
7969     }%
7970     \let\Hy@testname\Hy@undefinedname
7971   \else
7972     \Hy@pstringdef\Hy@testname{%
7973       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7974     }%
7975   \fi
7976   \Hy@StartlinkName{%
7977     \ifHy@pdfa /F 4\fi
7978     \Hy@setpdfborder
7979     \ifx\@pdfhighlight\@empty
7980       \else
7981         /H\@pdfhighlight
7982       \fi
7983       \ifx\CurrentBorderColor\relax
7984         \else
7985           /C[\CurrentBorderColor]%
7986         \fi
7987     }\Hy@testname
7988     \expandafter\Hy@colorlink\csname @#1color\endcsname
7989   }
7990 \def\Hy@StartlinkName#1#2{%
7991   \pdfstartlink attr{#1}goto name{#2}\relax
7992 }
7993 \def\close@pdflink{%
7994   \Hy@endcolorlink
7995   \Hy@VerboseLinkStop
7996   \pdfendlink
7997 }
7998 \def\hyper@anchor#1{%
7999   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8000 }
8001 \def\hyper@anchorstart#1{%
8002   \new@pdflink{#1}%
8003   \Hy@activeanchortrue
8004 }
8005 \def\hyper@anchorend{%
8006   \pdf@endanchor
8007   \Hy@activeanchorfalse

```

```

8008 }
8009 \def\hyper@linkstart#1#2{%
8010   \Hy@VerboseLinkStart{#1}{#2}%
8011   \ltx@ifundefined{@#1bordercolor}{%
8012     \let\CurrentBorderColor\relax
8013   }{%
8014     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8015   }%
8016   \find@pdfink{#1}{#2}%
8017 }
8018 \def\hyper@linkend{\close@pdfink}
8019 \def\hyper@link#1#2#3{%
8020   \Hy@VerboseLinkStart{#1}{#2}%
8021   \ltx@ifundefined{@#1bordercolor}{%
8022     \let\CurrentBorderColor\relax
8023   }{%
8024     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8025   }%
8026   \find@pdfink{#1}{#2}#3%
8027   \close@pdfink
8028 }
8029 \let\CurrentBorderColor\@linkbordercolor
8030 \def\hyper@linkurl#1#2{%
8031   \begingroup
8032     \Hy@pstringdef\Hy@pstringURI{#2}%
8033     \hyper@chars
8034     \leavevmode
8035     \pdfstartlink
8036     attr{%
8037       \Hy@setpdfborder
8038       \ifx\@pdfhighlight\@empty
8039       \else
8040         /H\@pdfhighlight
8041       \fi
8042       \ifx\@urlbordercolor\relax
8043       \else
8044         /C[\@urlbordercolor]%
8045       \fi
8046     }%
8047     user{%
8048       /Subtype/Link%
8049       \ifHy@pdfa /F 4\fi
8050       /A<<%
8051         /Type/Action%
8052         /S/URI%
8053         /URI(\Hy@pstringURI)%
8054       >>%
8055     }%
8056     \relax
8057     \Hy@colorlink\@urlcolor#1%
8058     \close@pdfink
8059   \endgroup
8060 }
8061 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8062   \begingroup
8063     \Hy@pstringdef\Hy@pstringF{#2}%
8064     \Hy@pstringdef\Hy@pstringD{#3}%

```

```

8065 \leavevmode
8066 \pdfstartlink
8067   attr{%
8068     \Hy@setpdfborder
8069     \ifx\@pdfhighlight\@empty
8070     \else
8071       /H\@pdfhighlight
8072     \fi
8073     \ifx\@filebordercolor\relax
8074     \else
8075       /C[\@filebordercolor]%
8076     \fi
8077   }%
8078   user {%
8079     /Subtype/Link%
8080     \ifHy@pdfa /F 4\fi
8081     /A<<%
8082     /F(\Hy@pstringF)%
8083     /S/GoToR%
8084     \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}

```

```

8085   \ifx\#3\%
8086     /D[0 \@pdfstartview]%
8087   \else
8088     /D(\Hy@pstringD)%
8089   \fi
8090   >>%
8091 }%
8092 \relax
8093 \Hy@colorlink\@filecolor#1%
8094 \close@pdflink
8095 \endgroup
8096 }
8097 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8098   \begingroup
8099     \Hy@pstringdef\Hy@pstringF{#1}%
8100     \Hy@pstringdef\Hy@pstringP{#3}%
8101   \leavevmode
8102   \pdfstartlink
8103     attr{%
8104       \Hy@setpdfborder
8105       \ifx\@pdfhighlight\@empty
8106       \else
8107         /H\@pdfhighlight
8108       \fi
8109       \ifx\@runbordercolor\relax
8110       \else

```



```

8111      /C[\@runbordercolor]%
8112      \fi
8113    }%
8114    user {%
8115      /Subtype/Link%
8116      \ifHy@pdfa /F 4\fi
8117      /A<<%
8118      /F(\Hy@pstringF)%
8119      /S/Launch%
8120      \Hy@SetNewWindow
8121      \ifx\#3\%
8122      \else
8123      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8124      \fi
8125      >>%
8126    }%
8127    \relax
8128    \Hy@colorlink\@runcolor#2%
8129    \close@pdflink
8130  \endgroup
8131 }

```

\@pdfproducer

```

8132 \ifx\@pdfproducer\relax
8133 \begingroup\expandafter\expandafter\expandafter\endgroup
8134 \expandafter\ifx\csname luatexversion\endcsname\relax
8135 \def\@pdfproducer{pdfTeX}%
8136 \ifx\eTeXversion\@undefined
8137 \else
8138 \ifx\eTeXversion\relax
8139 \else
8140 \ifnum\eTeXversion>0 %
8141 \def\@pdfproducer{pdfTeX}%
8142 \fi
8143 \fi
8144 \fi
8145 \ifx\pdfTeXversion\@undefined
8146 \else
8147 \ifnum\pdfTeXversion<100 %
8148 \edef\@pdfproducer{%
8149 \@pdfproducer
8150 \the\pdfTeXversion.\pdfTeXrevision
8151 }%
8152 \else
8153 \ifnum\pdfTeXversion<130 %
8154 \edef\@pdfproducer{%
8155 \@pdfproducer-%
8156 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8157 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8158 \pdfTeXrevision
8159 }%
8160 \else
8161 \ifnum\pdfTeXversion<140 %
8162 \else
8163 \def\@pdfproducer{pdfTeX}%
8164 \fi
8165 \edef\@pdfproducer{%

```

```

8166      \@pdfproducer-%
8167      \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8168      \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8169      \pdfTeXrevision
8170    }%
8171  \fi
8172 \fi
8173 \fi
8174 \else
8175 \begingroup
8176   \count@=\luatexversion
8177   \divide\count@ by 100 %
8178   \edef\x{\the\count@}%
8179   \count@=-\x\relax
8180   \multiply\count@ by 100 %
8181   \advance\count@ by \luatexversion
8182   \edef\x{\endgroup
8183     \def\noexpand\@pdfproducer{%
8184       LuaTeX-\x.\the\count@.\luatexrevision
8185     }%
8186   }%
8187 \x
8188 \fi
8189 \fi

```

\PDF@SetupDox

```

8190 \def\PDF@SetupDoc{%
8191   \ifx\@pdfpagescrop\@empty
8192   \else
8193     \edef\process@me{%
8194       \pdfpagesattr={%
8195         /CropBox[\@pdfpagescrop]%
8196         \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
8197         \else
8198           ^^J\the\pdfpagesattr
8199         \fi
8200       }%
8201     }%
8202     \process@me
8203   \fi
8204   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8205   \pdfcatalog{%
8206     /PageMode/\@pdfpagemode
8207     \ifx\@baseurl\@empty
8208     \else
8209       /URI<</Base(\Hy@pstringB)>>%
8210     \fi
8211   }%
8212   \ifx\@pdfstartpage\@empty
8213   \else
8214     \ifx\@pdfstartview\@empty
8215     \else
8216       openaction goto page\@pdfstartpage{\@pdfstartview}%
8217     \fi
8218   \fi
8219   \edef\Hy@temp{%
8220     \ifHy@toolbar\else /HideToolbar true\fi

```

```

8221 \ifHy@menubar\else /HideMenubar true\fi
8222 \ifHy@windowui\else /HideWindowUI true\fi
8223 \ifHy@fitwindow /FitWindow true\fi
8224 \ifHy@centerwindow /CenterWindow true\fi
8225 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8226 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8227 \Hy@UseNameKey{Direction}\@pdfdirection
8228 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8229 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8230 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8231 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8232 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8233 \Hy@UseNameKey{Duplex}\@pdfduplex
8234 \ifx\@pdfpicktraybypdfsize\@empty
8235 \else
8236 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8237 \fi
8238 \ifx\@pdfprintpagerange\@empty
8239 \else
8240 /PrintPageRange[\@pdfprintpagerange]%
8241 \fi
8242 \ifx\@pdfnumcopies\@empty
8243 \else
8244 /NumCopies \@pdfnumcopies
8245 \fi
8246 }%
8247 \pdfcatalog{%
8248 \ifx\Hy@temp\@empty
8249 \else
8250 /ViewerPreferences<<\Hy@temp>>%
8251 \fi
8252 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8253 \ifx\@pdflang\@empty
8254 \else
8255 /Lang(\@pdflang)%
8256 \fi
8257 }%
8258 }

```

\PDF@FinishDoc

```

8259 \def\PDF@FinishDoc{%
8260 \Hy@UseMaketitleInfos
8261 \HyInfo@GenerateAddons
8262 \pdfinfo{%
8263 /Author(\@pdfauthor)%
8264 /Title(\@pdftitle)%
8265 /Subject(\@pdfsubject)%
8266 /Creator(\@pdfcreator)%
8267 \ifx\@pdfcreationdate\@empty
8268 \else
8269 /CreationDate(\@pdfcreationdate)%
8270 \fi
8271 \ifx\@pdfmoddate\@empty
8272 \else
8273 /ModDate(\@pdfmoddate)%
8274 \fi
8275 \ifx\@pdfproducer\relax

```

```

8276 \else
8277   /Producer(\@pdfproducer)%
8278 \fi
8279 /Keywords(\@pdfkeywords)%
8280 \ifx\@pdftrapped\@empty
8281 \else
8282   /Trapped/\@pdftrapped
8283 \fi
8284 \HyInfo@Addons
8285 }%
8286 \Hy@DisableOption{pdfauthor}%
8287 \Hy@DisableOption{pdftitle}%
8288 \Hy@DisableOption{pdfsubject}%
8289 \Hy@DisableOption{pdfcreator}%
8290 \Hy@DisableOption{pdfcreationdate}%
8291 \Hy@DisableOption{pdfmoddate}%
8292 \Hy@DisableOption{pdfproducer}%
8293 \Hy@DisableOption{pdfkeywords}%
8294 \Hy@DisableOption{pdftrapped}%
8295 \Hy@DisableOption{pdfinfo}%
8296 }

```

`\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`.

```

8297 \def\hyper@pagetransition{%
8298   \ifx\@pdfpagetransition\relax
8299   \else
8300     \expandafter\Hy@RemoveTransPageAttr
8301     \the\pdfpageattr^^J/Trans{}}>>\END
8302   \ifx\@pdfpagetransition\@empty
8303   \else
8304     \edef\@processme{%
8305       \global\pdfpageattr{%
8306         \the\pdfpageattr
8307         ^^J/Trans << /S /\@pdfpagetransition\space >>%
8308       }%
8309     }%
8310     \@processme
8311   \fi
8312 \fi
8313 }

```

`\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.

```

8314 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8315   \ifx\#2\%
8316     \global\pdfpageattr{#1}%
8317   \else
8318     \Hy@RemoveTransPageAttr#1#4\END
8319   \fi
8320 }

```

`\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.

```

8321 \def\hyper@pageduration{%
8322   \ifx\@pdfpageduration\relax
8323   \else
8324     \expandafter
8325     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
8326   \ifx\@pdfpageduration\@empty
8327   \else
8328     \edef\@processme{%
8329       \global\pdfpageattr{%
8330         \the\pdfpageattr
8331         ^^J/Dur \@pdfpageduration\space
8332       }%
8333     }%
8334     \@processme
8335   \fi
8336 \fi
8337 }

```

\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.

```

8338 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8339   \ifx\#2\%
8340     \global\pdfpageattr{#1}%
8341   \else
8342     \Hy@RemoveDurPageAttr#1#4\END
8343   \fi
8344 }

```

\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).

```

8345 \def\hyper@pagehidden{%
8346   \ifHy@useHidKey
8347   \expandafter
8348   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8349   \ifHy@pdfpagehidden
8350   \edef\@processme{%
8351     \global\pdfpageattr{%
8352       \the\pdfpageattr
8353       ^^J/Hid true % SPACE
8354     }%
8355   }%
8356   \@processme
8357 \fi
8358 \fi
8359 }

```

\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.

```

8360 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8361   \ifx\#2\%

```

```

8362 \global\pdfpageattr{#1}%
8363 \else
8364 \Hy@RemoveHidPageAttr#1#4\END
8365 \fi
8366 }

```

```

8367 \g@addto@macro\Hy@EveryPageHook{%
8368 \hyper@pagetransition
8369 \hyper@pageduration
8370 \hyper@pagehidden
8371 }

```

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

```

8372 </pdfTeX>
8373 <*pdfTeX | xetex>
8374 \Hy@AtBeginDocument{%
8375 \ifHy@setpagesize
8376 \expandafter\@firstofone
8377 \else
8378 \expandafter\@gobble
8379 \fi
8380 {%
8381 \@ifclassloaded{seminar}{%
8382 <*pdfTeX>
8383 \setlength{\pdfhorigin}{1truein}%
8384 \setlength{\pdfvorigin}{1truein}%
8385 </pdfTeX>
8386 \ifportrait
8387 \ifdim\paperwidth=\z@
8388 \else
8389 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8390 \fi
8391 \ifdim\paperheight=\z@
8392 \else
8393 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8394 \fi
8395 \else
8396 \ifdim\paperheight=\z@
8397 \else
8398 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8399 \fi
8400 \ifdim\paperwidth=\z@
8401 \else
8402 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8403 \fi
8404 \fi
8405 }{%
8406 \ltx@ifundefined{stockwidth}{%
8407 \ifdim\paperwidth>\z@
8408 \setlength{\pdfpagewidth}{\paperwidth}%
8409 \fi
8410 \ifdim\paperheight>\z@
8411 \setlength{\pdfpageheight}{\paperheight}%
8412 \fi
8413 }{%
8414 \ifdim\stockwidth>\z@
8415 \setlength{\pdfpagewidth}{\stockwidth}%

```

```

8416      \fi
8417      \ifdim\stockheight>\z@
8418        \setlength{\pdfpageheight}{\stockheight}%
8419      \fi
8420    }%
8421  }%
8422 }%
8423 \Hy@DisableOption{setpagesize}%
8424 }
8425 </pdftex | xetex>
8426 <*pdftex>
8427 \def\Acrobatmenu#1#2{%
8428   \Hy@Acrobatmenu{#1}{#2}{%
8429     \pdfstartlink
8430     attr{%
8431       \Hy@setpdfborder
8432       \ifx\@pdfhighlight\@empty
8433       \else
8434         /H\@pdfhighlight
8435       \fi
8436       \ifx\@menubordercolor\relax
8437       \else
8438         /C[\@menubordercolor]%
8439       \fi
8440     }%
8441     user{%
8442       /Subtype/Link%
8443       \ifHy@pdfa /F 4\fi
8444       /A<<%
8445       /S/Named/N/#1%
8446     >>%
8447     }%
8448     \relax
8449     \Hy@colorlink\@menucolor#2%
8450   \close@pdflink
8451   }%
8452 }

```

46.2.1 Fix for problem with different nesting levels

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

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

```

8453 \def\Hy@FixNotFirstPage{%
8454   \gdef\Hy@FixNotFirstPage{%
8455     \setbox\AtBeginShipoutBox=\hbox{%
8456       \copy\AtBeginShipoutBox
8457     }%
8458   }%
8459 }
8460 \AtBeginShipout{\Hy@FixNotFirstPage}
8461 </pdftex>

```

46.3 hypertext

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

```
8462 \*hypertext)
8463 \providecommand*{\XR@ext}{dvi}
8464 \def\PDF@FinishDoc{}
8465 \def\PDF@SetupDoc{%
8466   \ifx\@baseurl\@empty
8467   \else
8468     \special{html:<base href="\@baseurl">}%
8469   \fi
8470 }
8471 \def\hyper@anchor#1{%
8472   \Hy@SaveLastskip
8473   \Hy@VerboseAnchor{#1}%
8474   \begingroup
8475     \let\protect=\string
8476     \hyper@chars
8477     \special{html:<a name=%
8478       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8479   \endgroup
8480   \Hy@activeanchortrue
8481   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8482   \special{html:</a>}%
8483   \Hy@activeanchorfalse
8484   \Hy@RestoreLastskip
8485 }
8486 \def\hyper@anchorstart#1{%
```



```

8487 \Hy@SaveLastskip
8488 \Hy@VerboseAnchor{#1}%
8489 \begingroup
8490 \hyper@chars
8491 \special{html:<a name=%
8492 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8493 \endgroup
8494 \Hy@activeanchortrue
8495 }
8496 \def\hyper@anchorend{%
8497 \special{html:</a>}%
8498 \Hy@activeanchorfalse
8499 \Hy@RestoreLastskip
8500 }
8501 \def\@urltype{url}
8502 \def\hyper@linkstart#1#2{%
8503 \Hy@VerboseLinkStart{#1}{#2}%
8504 \expandafter\Hy@colorlink\csname @#1color\endcsname
8505 \def\Hy@tempa{#1}%
8506 \ifx\Hy@tempa\@urltype
8507 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8508 \else
8509 \begingroup
8510 \hyper@chars
8511 \special{html:<a href=%
8512 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8513 \endgroup
8514 \fi
8515 }
8516 \def\hyper@linkend{%
8517 \special{html:</a>}%
8518 \Hy@endcolorlink
8519 }
8520 \def\hyper@linkfile#1#2#3{%
8521 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8522 }
8523 \def\hyper@linkurl#1#2{%

```

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

```

8524 \leavevmode
8525 \ifHy@raiselinks
8526 \setbox\@tempboxa=\color@hbox #1\color@endbox
8527 \@linkdim\dp\@tempboxa
8528 \lower\@linkdim\hbox{%
8529 \hyper@chars
8530 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8531 }%
8532 \Hy@colorlink\@urlcolor#1%
8533 \@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).

```

8534 \advance\@linkdim by -6.5\p@
8535 \raise\@linkdim\hbox{\special{html:</a>}}%
8536 \Hy@endcolorlink
8537 \else

```

```

8538 \begingroup
8539 \hyper@chars
8540 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8541 \Hy@colorlink\@urlcolor#1%
8542 \special{html:</a>}%
8543 \Hy@endcolorlink
8544 \endgroup
8545 \fi
8546 }

```

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

```

8547 \def\hyper@link#1#2#3{%
8548 \Hy@VerboseLinkStart{#1}{#2}%
8549 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
8550 }

8551 \def\hyper@image#1#2{%
8552 \begingroup
8553 \hyper@chars
8554 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8555 \endgroup
8556 }
8557 </hypertex>
8558 <*dviwindo>

```

46.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default c:/netscape/netscape is not suitable) Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertex cfg. For dviwindo, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

8559 \providecommand*\{XR@ext}{dvi}
8560 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8561 \def\hyper@anchor#1{%
8562 \Hy@SaveLastskip
8563 \Hy@VerboseAnchor{#1}%
8564 \begingroup
8565 \let\protect=\string
8566 \special{mark: #1}%
8567 \endgroup
8568 \Hy@activeanchortrue
8569 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8570 \Hy@activeanchorfalse
8571 \Hy@RestoreLastskip
8572 }
8573 \def\hyper@anchorstart#1{%
8574 \Hy@SaveLastskip
8575 \Hy@VerboseAnchor{#1}%
8576 \special{mark: #1}%
8577 \Hy@activeanchortrue
8578 }

```

```

8579 \def\hyper@anchorend{%
8580   \Hy@activeanchorfalse
8581   \Hy@RestoreLastskip
8582 }
8583 \def\hyper@linkstart#1#2{%
8584   \Hy@VerboseLinkStart{#1}{#2}%
8585   \expandafter\Hy@colorlink\csname @#1color\endcsname
8586   \special{button: %
8587     10000000 %
8588     \number\baselineskip\space
8589     #2%
8590   }%
8591 }
8592 \def\hyper@linkend{%
8593   \Hy@endcolorlink
8594 }
8595 \def\hyper@link#1#2#3{%
8596   \Hy@VerboseLinkStart{#1}{#2}%
8597   \setbox\@tempboxa=\color@hbox #3\color@endbox
8598   \leavevmode
8599   \ifHy@raiselinks
8600     \@linkdim\dp\@tempboxa
8601     \lower\@linkdim\hbox{%
8602       \special{button: %
8603         \number\wd\@tempboxa\space
8604         \number\ht\@tempboxa\space
8605         #2%
8606       }%
8607       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8608       \Hy@endcolorlink
8609     }%
8610     \@linkdim\ht\@tempboxa
8611     \advance\@linkdim by -6.5\p@
8612     \raise\@linkdim\hbox{}%
8613   \else
8614     \special{button: %
8615       \number\wd\@tempboxa\space
8616       \number\ht\@tempboxa\space
8617       #2%
8618     }%
8619     \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8620     \Hy@endcolorlink
8621   \fi
8622 }
8623 \def\hyper@linkurl#1#2{%
8624   \begingroup
8625   \hyper@chars
8626   \leavevmode
8627   \setbox\@tempboxa=\color@hbox #1\color@endbox
8628   \ifHy@raiselinks
8629     \@linkdim\dp\@tempboxa
8630     \lower\@linkdim\hbox{%
8631       \special{button: %
8632         \number\wd\@tempboxa\space
8633         \number\ht\@tempboxa\space
8634         launch: \wwwbrowser\space
8635         #2%

```

```

8636     }%
8637     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8638   }%
8639   \@linkdim\ht\@tempboxa
8640   \advance\@linkdim by -6.5\p@
8641   \raise\@linkdim\hbox{}%
8642 \else
8643   \special{button: %
8644     \number\wd\@tempboxa\space
8645     \number\ht\@tempboxa\space
8646     launch: \wwwbrowser\space
8647     #2%
8648   }%
8649   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8650 \fi
8651 \endgroup
8652 }
8653 \def\hyper@linkfile#1#2#3{%
8654   \begingroup
8655   \hyper@chars
8656   \leavevmode
8657   \setbox\@tempboxa=\color@hbox #1\color@endbox
8658   \ifHy@raiselinks
8659     \@linkdim\dp\@tempboxa
8660     \lower\@linkdim\hbox{%
8661       \special{button: %
8662         \number\wd\@tempboxa\space
8663         \number\ht\@tempboxa\space
8664         #3,%
8665         file: #2%
8666       }%
8667       \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8668     }%
8669     \@linkdim\ht\@tempboxa
8670     \advance\@linkdim by -6.5\p@
8671     \raise\@linkdim\hbox{}%
8672 \else
8673   \special{button: %
8674     \number\wd\@tempboxa\space
8675     \number\ht\@tempboxa\space
8676     #3,%
8677     file: #2%
8678   }%
8679   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8680 \fi
8681 \endgroup
8682 }
8683 \ifx\@pdfproducer\relax
8684   \def\@pdfproducer{dviwindo + Distiller}%
8685 \fi
8686 \HyInfo@AddonUnsupportedtrue
8687 \def\PDF@FinishDoc{%
8688   \Hy@UseMaketitleInfos
8689   \HyInfo@TrappedUnsupported
8690   \special{PDF: Keywords \@pdfkeywords}%
8691   \special{PDF: Title \@pdftitle}%
8692   \special{PDF: Creator \@pdfcreator}%

```

```

8693 \ifx\@pdfcreationdate\@empty
8694 \else
8695   \special{PDF: CreationDate \@pdfcreationdate}%
8696 \fi
8697 \ifx\@pdfmoddate\@empty
8698 \else
8699   \special{PDF: ModDate \@pdfmoddate}%
8700 \fi
8701 \special{PDF: Author \@pdfauthor}%
8702 \ifx\@pdfproducer\relax
8703 \else
8704   \special{PDF: Producer \@pdfproducer}%
8705 \fi
8706 \special{PDF: Subject \@pdfsubject}%
8707 \Hy@DisableOption{pdfauthor}%
8708 \Hy@DisableOption{pdftitle}%
8709 \Hy@DisableOption{pdfsubject}%
8710 \Hy@DisableOption{pdfcreator}%
8711 \Hy@DisableOption{pdfcreationdate}%
8712 \Hy@DisableOption{pdfmoddate}%
8713 \Hy@DisableOption{pdfproducer}%
8714 \Hy@DisableOption{pdfkeywords}%
8715 \Hy@DisableOption{pdftrapped}%
8716 \Hy@DisableOption{pdfinfo}%
8717 }
8718 \def\PDF@SetupDoc{%
8719 \ifx\@baseurl\@empty
8720 \else
8721   \special{PDF: Base \@baseurl}%
8722 \fi
8723 \ifx\@pdfpagescrop\@empty\else
8724   \special{PDF: BBox \@pdfpagescrop}%
8725 \fi
8726 \def\Hy@temp{%
8727 \ifx\@pdfstartpage\@empty
8728 \else
8729   \ifx\@pdfstartview\@empty
8730   \else
8731     \edef\Hy@temp{%
8732       ,Page=\@pdfstartpage
8733       ,View=\@pdfstartview
8734     }%
8735   \fi
8736 \fi
8737 \edef\Hy@temp{%
8738   \noexpand\pdfmark{%
8739     pdfmark=/DOCVIEW,%
8740     PageMode=/\@pdfpagemode
8741   }\Hy@temp
8742 }%
8743 }%
8744 \Hy@temp
8745 \ifx\@pdfpagescrop\@empty
8746 \else
8747   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8748 \fi
8749 \edef\Hy@temp{%

```

```

8750 \ifHy@toolbar\else /HideToolbar true\fi
8751 \ifHy@menubar\else /HideMenubar true\fi
8752 \ifHy>windowui\else /HideWindowUI true\fi
8753 \ifHy@fitwindow /FitWindow true\fi
8754 \ifHy@centerwindow /CenterWindow true\fi
8755 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8756 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8757 \Hy@UseNameKey{Direction}\@pdfdirection
8758 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8759 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8760 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8761 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8762 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8763 \Hy@UseNameKey{Duplex}\@pdfduplex
8764 \ifx\@pdfpicktraybypdfsize\@empty
8765 \else
8766 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8767 \fi
8768 \ifx\@pdfprintpagerange\@empty
8769 \else
8770 /PrintPageRange[\@pdfprintpagerange]%
8771 \fi
8772 \ifx\@pdfnumcopies\@empty
8773 \else
8774 /NumCopies \@pdfnumcopies
8775 \fi
8776 }%
8777 \pdfmark{pdfmark=/PUT,%
8778 Raw={%
8779 \string{Catalog\string}<<%
8780 \ifx\Hy@temp\@empty
8781 \else
8782 /ViewerPreferences<<\Hy@temp>>%
8783 \fi
8784 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8785 \ifx\@pdflang\@empty
8786 \else
8787 /Lang(\@pdflang)%
8788 \fi
8789 >>%
8790 }%
8791 }%
8792 }
8793 </dviwindo>
8794 <*dvi pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8795 \providecommand*{\XR@ext}{pdf}
8796 \Hy@setbreaklinks{true}
8797 \newsavebox{\pdfm@box}
8798 \def\@pdfm@mark#1{\special{pdf:#1}}
8799 \def\@pdfm@dest#1{%
8800 \Hy@SaveLastskip
8801 \Hy@VerboseAnchor{#1}%
8802 \begingroup

```

```

8803 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8804 \def\x{XYZ}%
8805 \ifx\x\@pdfview
8806   \def\x{XYZ @xpos @ypos null}%
8807 \else
8808   \def\x{FitH}%
8809   \ifx\x\@pdfview
8810     \def\x{FitH @ypos}%
8811   \else
8812     \def\x{FitBH}%
8813     \ifx\x\@pdfview
8814       \def\x{FitBH @ypos}%
8815     \else
8816       \def\x{FitV}%
8817       \ifx\x\@pdfview
8818         \def\x{FitV @xpos}%
8819       \else
8820         \def\x{FitBV}%
8821         \ifx\x\@pdfview
8822           \def\x{FitBV @xpos}%
8823         \else
8824           \def\x{Fit}%
8825           \ifx\x\@pdfview
8826             \let\x\@pdfview
8827           \else
8828             \def\x{FitB}%
8829             \ifx\x\@pdfview
8830               \let\x\@pdfview
8831             \else
8832               \def\x{FitR}%
8833               \ifx\x\@pdfview
8834                 \Hy@Warning{'pdfview=FitR' is not supported}%
8835                 \def\x{XYZ @xpos @ypos null}%
8836               \else
8837                 \@onelevel@sanitize\@pdfview
8838                 \Hy@Warning{%
8839                   Unknown value '\@pdfview' for pdfview%
8840                 }%
8841                 \def\x{XYZ @xpos @ypos null}%
8842             \fi
8843           \fi
8844         \fi
8845       \fi
8846     \fi
8847   \fi
8848 \fi
8849 \fi
8850 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8851 \endgroup
8852 \Hy@RestoreLastskip
8853 }
8854 \providecommand*\@pdfview{XYZ}
8855 \providecommand*\@pdfborder{0 0 1}
8856 \providecommand*\@pdfborderstyle{}
8857 \def\hyper@anchor#1{%
8858   \@pdfm@dest{#1}%
8859 }

```

```

8860 \def\hyper@anchorstart#1{%
8861   \Hy@activeanchortrue
8862   \@pdfm@dest{#1}%
8863 }
8864 \def\hyper@anchorend{%
8865   \Hy@activeanchorfalse
8866 }

8867 \newcounter{Hy@AnnotLevel}

8868 \ifHy@ocgcolorlinks
8869   \def\OBJ@OCG@view{@OCG@view}%
8870   \@pdfm@mark{%
8871     obj \OBJ@OCG@view <<%
8872       /Type/OCG%
8873       /Name(View)%
8874       /Usage<<%
8875       /Print<<%
8876       /PrintState/OFF%
8877       >>%
8878       /View<<%
8879       /ViewState/ON%
8880       >>%
8881       >>%
8882     >>%
8883   }%
8884   \@pdfm@mark{close \OBJ@OCG@view}%
8885   \def\OBJ@OCG@print{@OCG@print}%
8886   \@pdfm@mark{%
8887     obj \OBJ@OCG@print <<%
8888       /Type/OCG%
8889       /Name(Print)%
8890       /Usage<<%
8891       /Print<<%
8892       /PrintState/ON%
8893       >>%
8894       /View<<%
8895       /ViewState/OFF%
8896       >>%
8897       >>%
8898     >>%
8899   }%
8900   \@pdfm@mark{close \OBJ@OCG@print}%
8901   \def\OBJ@OCGs{@OCGs}%
8902   \@pdfm@mark{%
8903     obj \OBJ@OCGs [%
8904       \OBJ@OCG@view\space\OBJ@OCG@print
8905     ]%
8906   }%
8907   \@pdfm@mark{close \OBJ@OCGs}%
8908   \@pdfm@mark{%
8909     put @catalog <<%
8910       /OCProperties<<%
8911       /OCGs \OBJ@OCGs
8912       /D<<%
8913       /OFF[\OBJ@OCG@print]%
8914       /AS[%
8915         <<%
8916         /Event/View%

```



```

8917         /OCGs \OBJ@OCGs
8918         /Category[/View]%
8919     >>%
8920     <<%
8921         /Event/Print%
8922         /OCGs \OBJ@OCGs
8923         /Category[/Print]%
8924     >>%
8925     <<%
8926         /Event/Export%
8927         /OCGs \OBJ@OCGs
8928         /Category[/Print]%
8929     >>%
8930     l%
8931     >>%
8932     >>%
8933     >>%
8934 }%
8935 \AtBeginShipout{%
8936     \setbox\AtBeginShipoutBox=\hbox{%
8937         \copy\AtBeginShipoutBox
8938         \@pdfm@mark{%
8939             put @resources <<%
8940                 /Properties<<%
8941                     /OCView \OBJ@OCG@view
8942                     /OCPrint \OBJ@OCG@print
8943                 >>%
8944             >>%
8945         }%
8946     }%
8947 }%
8948 \Hy@AtBeginDocument{%
8949     \def\Hy@colorlink#1{%
8950         \begingroup
8951         \ifHy@ocgcolorlinks
8952             \def\Hy@ocgcolor{#1}%
8953             \setbox0=\color@hbox
8954         \else
8955             \HyColor@UseColor#1%
8956         \fi
8957     }%
8958     \def\Hy@endcolorlink{%
8959         \ifHy@ocgcolorlinks
8960             \color@endbox
8961             \mbox{%
8962                 \@pdfm@mark{content /OC/OCPrint BDC}%
8963                 \rlap{\copy0}%
8964                 \@pdfm@mark{content EMC/OC/OCView BDC}%
8965             \begingroup
8966                 \expandafter\HyColor@UseColor\Hy@ocgcolor
8967                 \box0 %
8968             \endgroup
8969             \@pdfm@mark{content EMC}%
8970         }%
8971         \fi
8972     \endgroup
8973 }%

```

```

8974 }%
8975 \else
8976 \Hy@DisableOption{ocgcolorlinks}%
8977 \fi

8978 \def\Hy@BeginAnnot#1{%
8979 \stepcounter{Hy@AnnotLevel}%
8980 \ifnum\value{Hy@AnnotLevel}=\@ne
8981 #1%
8982 \fi
8983 }
8984 \def\Hy@endAnnot{%
8985 \ifnum\value{Hy@AnnotLevel}=\@ne
8986 \Hy@endcolorlink
8987 \@pdfm@mark{eann}%
8988 \fi
8989 \addtocounter{Hy@AnnotLevel}\m@ne
8990 }

8991 \def\Hy@undefinedname{UNDEFINED}
8992 \def\hyper@linkstart#1#2{%
8993 \Hy@VerboseLinkStart{#1}{#2}%
8994 \Hy@BeginAnnot{%
8995 \protected@edef\Hy@testname{#2}%
8996 \ifx\Hy@testname\@empty
8997 \Hy@Warning{%
8998 Empty destination name,\MessageBreak
8999 using '\Hy@undefinedname'%
9000 }%
9001 \let\Hy@testname\Hy@undefinedname
9002 \else
9003 \Hy@pstringdef\Hy@testname{%
9004 \expandafter\HyperDestNameFilter\expandafter{%
9005 \Hy@testname
9006 }%
9007 }%
9008 \fi
9009 \@pdfm@mark{%
9010 bann<<%
9011 /Type/Annot%
9012 /Subtype/Link%
9013 \ifHy@pdfa /F 4\fi
9014 \Hy@setpdfborder
9015 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9016 \else
9017 /C[\csname @#1bordercolor\endcsname]%
9018 \fi
9019 /A<<%
9020 /S/GoTo%
9021 /D(\Hy@testname)%
9022 >>%
9023 >>%
9024 }%
9025 \expandafter\Hy@colorlink\csname @#1color\endcsname
9026 }%
9027 }
9028 \def\hyper@linkend{\Hy@endAnnot}%
9029 \def\hyper@link#1#2#3{%
9030 \hyper@linkstart{#1}{#2}#3\hyper@linkend

```

```

9031 }
9032 \def\hyper@linkfile#1#2#3{%
9033 \leavevmode
9034 \Hy@BeginAnnot{%
9035 \Hy@pstringdef\Hy@pstringF{#2}%
9036 \Hy@pstringdef\Hy@pstringD{#3}%
9037 \@pdfm@mark{%
9038 bann<<%
9039 /Type/Annot%
9040 /Subtype/Link%
9041 \ifHy@pdfa /F 4\fi
9042 \Hy@setpdfborder
9043 \ifx\@filebordercolor\relax
9044 \else
9045 /C[\@filebordercolor]%
9046 \fi
9047 /A<<%
9048 /S/GoToR%
9049 /F(\Hy@pstringF)%
9050 /D\ifx\@#3\@0 \@pdfstartview\else(\Hy@pstringD)\fi
9051 \Hy@SetNewWindow
9052 >>%
9053 >>%
9054 }%
9055 \Hy@colorlink\@filecolor
9056 }%
9057 #1%
9058 \Hy@endAnnot
9059 }
9060 \def\hyper@linkurl#1#2{%
9061 \leavevmode
9062 \Hy@BeginAnnot{%
9063 \Hy@pstringdef\Hy@pstringURI{#2}%
9064 \@pdfm@mark{%
9065 bann<<%
9066 /Type/Annot%
9067 /Subtype/Link%
9068 \ifHy@pdfa /F 4\fi
9069 \Hy@setpdfborder
9070 \ifx\@urlbordercolor\relax
9071 \else
9072 /C[\@urlbordercolor]%
9073 \fi
9074 /A<<%
9075 /S/URI%
9076 /URI(\Hy@pstringURI)%
9077 >>%
9078 >>%
9079 }%
9080 \Hy@colorlink\@urlcolor
9081 }%
9082 #1%
9083 \Hy@endAnnot
9084 }
9085 \def\Acrobatmenu#1#2{%
9086 \Hy@Acrobatmenu{#1}{#2}{%
9087 \Hy@BeginAnnot{%

```

```

9088 \pdfmark{%
9089   bann<<%
9090   /Type/Annot%
9091   /Subtype/Link%
9092   \ifHy@pdfa /F 4\fi
9093   /A<<%
9094   /S/Named%
9095   /N/#1%
9096   >>%
9097   \Hy@setpdfborder
9098   \ifx\@menubordercolor\relax
9099   \relax
9100   /C[\@menubordercolor]%
9101   \fi
9102   >>%
9103   }%
9104   \Hy@colorlink\@menucolor
9105   }%
9106   #2%
9107   \Hy@endAnnot
9108   }%
9109 }
9110 \ifx\@pdfproducer\relax
9111 \def\@pdfproducer{dvipdfm}%

```

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

```

9112 \begingroup\expandafter\expandafter\expandafter\endgroup
9113 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9114 \else
9115 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9116 \fi
9117 \fi
9118 \def\PDF@FinishDoc{%
9119 \Hy@UseMaketitleInfos
9120 \HyInfo@GenerateAddons
9121 \@pdfmark{%
9122   docinfo<<%
9123   /Title(\@pdftitle)%
9124   /Subject(\@pdfsubject)%
9125   /Creator(\@pdfcreator)%
9126   \ifx\@pdfcreationdate\@empty
9127   \else
9128   /CreationDate(\@pdfcreationdate)%
9129   \fi
9130   \ifx\@pdfmoddate\@empty
9131   \else
9132   /ModDate(\@pdfmoddate)%
9133   \fi
9134   /Author(\@pdfauthor)%
9135   \ifx\@pdfproducer\relax
9136   \else
9137   /Producer(\@pdfproducer)%
9138   \fi
9139   /Keywords(\@pdfkeywords)%
9140   \ifx\@pdftrapped\@empty
9141   \else
9142   /Trapped/\@pdftrapped
9143   \fi

```

```

9144 \HyInfo@Addons
9145 >>%
9146 }%
9147 \Hy@DisableOption{pdfauthor}%
9148 \Hy@DisableOption{pdftitle}%
9149 \Hy@DisableOption{pdfsubject}%
9150 \Hy@DisableOption{pdfcreator}%
9151 \Hy@DisableOption{pdfcreationdate}%
9152 \Hy@DisableOption{pdfmoddate}%
9153 \Hy@DisableOption{pdfproducer}%
9154 \Hy@DisableOption{pdfkeywords}%
9155 \Hy@DisableOption{pdftrapped}%
9156 \Hy@DisableOption{pdfinfo}%
9157 }

9158 \def\PDF@SetupDoc{%
9159 \edef\Hy@temp{%
9160 \ifHy@toolbar\else /HideToolbar true\fi
9161 \ifHy@menubar\else /HideMenubar true\fi
9162 \ifHy>windowui\else /HideWindowUI true\fi
9163 \ifHy@fitwindow /FitWindow true\fi
9164 \ifHy@centerwindow /CenterWindow true\fi
9165 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9166 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9167 \Hy@UseNameKey{Direction}\@pdfdirection
9168 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9169 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9170 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9171 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9172 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9173 \Hy@UseNameKey{Duplex}\@pdfduplex
9174 \ifx\@pdfpicktraybypdfsize\@empty
9175 \else
9176 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9177 \fi
9178 \ifx\@pdfprintpagerange\@empty
9179 \else
9180 /PrintPageRange[\@pdfprintpagerange]%
9181 \fi
9182 \ifx\@pdfnumcopies\@empty
9183 \else
9184 /NumCopies \@pdfnumcopies
9185 \fi
9186 }%
9187 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9188 \@pdfm@mark{%
9189 docview<<%
9190 \ifx\@pdfstartpage\@empty
9191 \else
9192 \ifx\@pdfstartview\@empty
9193 \else
9194 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9195 \fi
9196 \fi
9197 \ifx\@baseurl\@empty
9198 \else
9199 /URI<</Base(\Hy@pstringB)>>%
9200 \fi

```

```

9201 /PageMode/\@pdfpagemode
9202 \ifx\Hy@temp\@empty
9203 \else
9204 /ViewerPreferences<<\Hy@temp>>%
9205 \fi
9206 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9207 \ifx\@pdflang\@empty
9208 \else
9209 /Lang(\@pdflang)%
9210 \fi
9211 >>%
9212 }%
9213 \ifx\@pdfpagescrop\@empty
9214 \else
9215 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9216 \fi
9217 }
9218 </dvipdfm | xetex>

```

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

```

9219 <*dvipdfm>
9220 \AtBeginShipoutFirst{%
9221 \ifHy@setpagesize
9222 \begingroup
9223 \@ifundefined{stockwidth}{%
9224 \ifdim\paperwidth>\z@
9225 \ifdim\paperheight>\z@
9226 \special{papersize=\the\paperwidth,\the\paperheight}%
9227 \fi
9228 \fi
9229 }{%
9230 \ifdim\stockwidth>\z@
9231 \ifdim\stockheight>\z@
9232 \special{papersize=\the\stockwidth,\the\stockheight}%
9233 \fi
9234 \fi
9235 }%
9236 \endgroup
9237 \fi
9238 \Hy@DisableOption{setpagesize}%
9239 }
9240 </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.

```

9241 <*vtexhtml>
9242 \providecommand*\XR@ext\{htm}
9243 \RequirePackage{vtexhtml}
9244 \newif\if@Localurl
9245 \def\PDF@FinishDoc{}
9246 \def\PDF@SetupDoc{%
9247 \ifx\@baseurl\@empty
9248 \else
9249 \special{!direct <base href="\@baseurl">}%

```

```

9250 \fi
9251 }
9252 \def\@urlltype{url}
9253 \def\hyper@link#1#2#3{%
9254 \Hy@VerboseLinkStart{#1}{#2}%
9255 \leavevmode
9256 \special{!direct <a href=%
9257 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9258 #3%
9259 \special{!direct </a>}}%
9260 }
9261 \def\hyper@linkurl#1#2{%
9262 \begingroup
9263 \hyper@chars
9264 \leavevmode
9265 \MathBSuppress=1\relax
9266 \special{!direct <a href=%
9267 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}}%
9268 #1%
9269 \MathBSuppress=0\relax
9270 \special{!direct </a>}}%
9271 \endgroup
9272 }
9273 \def\hyper@linkfile#1#2#3{%
9274 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9275 }
9276 \def\hyper@linkstart#1#2{%
9277 \Hy@VerboseLinkStart{#1}{#2}%
9278 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9279 \@Localurltrue
9280 \special{!direct <a href=\hyper@quote#2\hyper@quote>}}%
9281 \else
9282 \@Localurlfalse
9283 \begingroup
9284 \hyper@chars
9285 \special{!aref \HyperDestNameFilter{#2}}}%
9286 \endgroup
9287 \fi
9288 }
9289 \def\hyper@linkend{%
9290 \if@Localurl
9291 \special{!endaref}}%
9292 \else
9293 \special{!direct </a>}}%
9294 \fi
9295 }
9296 \def\hyper@anchorstart#1{%
9297 \Hy@SaveLastskip
9298 \Hy@VerboseAnchor{#1}%
9299 \begingroup
9300 \hyper@chars
9301 \special{!aname #1}%
9302 \special{!direct <a name=%
9303 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9304 \endgroup
9305 \Hy@activeanchortrue
9306 }

```

```

9307 \def\hyper@anchorend{%
9308   \special{!direct </a>}%
9309   \Hy@activeanchorfalse
9310   \Hy@RestoreLastskip
9311 }
9312 \def\hyper@anchor#1{%
9313   \Hy@SaveLastskip
9314   \Hy@VerboseAnchor{#1}%
9315   \begingroup
9316     \let\protect=\string
9317     \hyper@chars
9318     \leavevmode
9319     \special{!aname #1}%
9320     \special{!direct <a name=%
9321       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9322   \endgroup
9323   \Hy@activeanchortrue
9324   \bgroup\anchor@spot\egroup
9325   \special{!direct </a>}%
9326   \Hy@activeanchorfalse
9327   \Hy@RestoreLastskip
9328 }
9329 \def\@Form[#1]{%
9330   \typeout{Sorry, TeXpider does not yet support FORMs}%
9331 }
9332 \def\@endForm{}
9333 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9334   \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9335 }
9336 \def\@TextField[#1]#2{% parameters, label
9337   \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9338 }
9339 \def\@CheckBox[#1]#2{% parameters, label
9340   \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9341 }
9342 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9343   \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9344 }
9345 \def\@PushButton[#1]#2{% parameters, label
9346   \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9347 }
9348 \def\@Reset[#1]#2{%
9349   \typeout{Sorry, TeXpider does not yet support FORMs}%
9350 }
9351 \def\@Submit[#1]#2{%
9352   \typeout{Sorry, TeXpider does not yet support FORMs}%
9353 }
9354 \end{vtexhtml}
9355 \end{*vtex}

```

VTeX version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

9356 \ifx\mediaheight\@undefined
9357 \else
9358   \ifx\mediaheight\relax
9359   \else

```



```

9360 \ifHy@setpagesize
9361 \providecommand*\VTeXInitMediaSize{%
9362 \ltx@ifundefined{stockwidth}{%
9363 \ifdim\paperheight>0pt %
9364 \setlength\mediaheight\paperheight
9365 \fi
9366 \ifdim\paperheight>0pt %
9367 \setlength\mediawidth\paperwidth
9368 \fi
9369 }{%
9370 \ifdim\stockheight>0pt %
9371 \setlength\mediaheight\stockheight
9372 \fi
9373 \ifdim\stockwidth>0pt %
9374 \setlength\mediawidth\stockwidth
9375 \fi
9376 }%
9377 }%
9378 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
9379 \fi
9380 \Hy@DisableOption{setpagesize}%
9381 \fi
9382 \fi

```

Older versions of VTeX require xyz in lower case.

```

9383 \providecommand*\@pdfview{xyz}
9384 \providecommand*\@pdfborder{0 0 1}
9385 \providecommand*\@pdfborderstyle{}
9386 \let\CurrentBorderColor\@linkbordercolor
9387 \def\hyper@anchor#1{%
9388 \Hy@SaveLastskip
9389 \Hy@VerboseAnchor{#1}%
9390 \begingroup
9391 \let\protect=\string
9392 \hyper@chars
9393 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9394 \endgroup
9395 \Hy@activeanchortrue
9396 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9397 \Hy@activeanchorfalse
9398 \Hy@RestoreLastskip
9399 }
9400 \def\hyper@anchorstart#1{%
9401 \Hy@SaveLastskip
9402 \Hy@VerboseAnchor{#1}%
9403 \begingroup
9404 \hyper@chars
9405 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9406 \endgroup
9407 \Hy@activeanchortrue
9408 }
9409 \def\hyper@anchorend{%
9410 \Hy@activeanchorfalse
9411 \Hy@RestoreLastskip
9412 }
9413 \def\@urltype{url}
9414 \def\Hy@undefinedname{UNDEFINED}
9415 \def\hyper@linkstart#1#2{%

```

```

9416 \Hy@VerboseLinkStart{#1}{#2}%
9417 \Hy@pstringdef\Hy@pstringURI{#2}%
9418 \expandafter\Hy@colorlink\csname @#1color\endcsname
9419 \ltx@ifundefined{@#1bordercolor}{%
9420   \let\CurrentBorderColor\relax
9421 }{%
9422   \edef\CurrentBorderColor{%
9423     \csname @#1bordercolor\endcsname
9424   }%
9425 }%
9426 \def\Hy@tempa{#1}%
9427 \ifx\Hy@tempa\@uratype
9428   \special{!%
9429     aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9430     a=<%
9431       \ifHy@pdfa /F 4\fi
9432       \Hy@setpdfborder
9433       \ifx\CurrentBorderColor\relax
9434         \else
9435           /C [\CurrentBorderColor]%
9436         \fi
9437       >%
9438     }%
9439   \else
9440     \protected@edef\Hy@testname{#2}%
9441     \ifx\Hy@testname\@empty
9442       \Hy@Warning{%
9443         Empty destination name,\MessageBreak
9444         using '\Hy@undefinedname'%
9445       }%
9446       \let\Hy@testname\Hy@undefinedname
9447     \fi
9448     \special{!%
9449       aref \expandafter\HyperDestNameFilter
9450         \expandafter{\Hy@testname};%
9451       a=<%
9452         \ifHy@pdfa /F 4\fi
9453         \Hy@setpdfborder
9454         \ifx\CurrentBorderColor\relax
9455           \else
9456             /C [\CurrentBorderColor]%
9457           \fi
9458         >%
9459       }%
9460     \fi
9461   }
9462 \def\hyper@linkend{%
9463   \special{!endaref}%
9464   \Hy@endcolorlink
9465 }
9466 \def\hyper@linkfile#1#2#3{%
9467   \leavevmode
9468   \special{!%
9469     aref <%
9470     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9471     f=#2>#3;%
9472     a=<%

```

```

9473 \ifHy@pdfa /F 4\fi
9474 \Hy@setpdfborder
9475 \ifx\@filebordercolor\relax
9476 \else
9477 /C [\@filebordercolor]%
9478 \fi
9479 >%
9480 }%
9481 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9482 \special{!endaref}%
9483 }
9484 \def\hyper@linkurl#1#2{%
9485 \begingroup
9486 \Hy@pstringdef\Hy@pstringURI{#2}%
9487 \hyper@chars
9488 \leavevmode
9489 \special{!%
9490 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9491 a=<%
9492 \ifHy@pdfa /F 4\fi
9493 \Hy@setpdfborder
9494 \ifx\@urlbordercolor\relax
9495 \else
9496 /C [\@urlbordercolor]%
9497 \fi
9498 >%
9499 }%
9500 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9501 \special{!endaref}%
9502 \endgroup
9503 }
9504 \def\hyper@link#1#2#3{%
9505 \Hy@VerboseLinkStart{#1}{#2}%
9506 \ltx@ifundefined{@#1bordercolor}{%
9507 \let\CurrentBorderColor\relax
9508 }{%
9509 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9510 }%
9511 \leavevmode
9512 \protected@edef\Hy@testname{#2}%
9513 \ifx\Hy@testname\@empty
9514 \Hy@Warning{%
9515 Empty destination name,\MessageBreak
9516 using '\Hy@undefinedname'%
9517 }%
9518 \let\Hy@testname\Hy@undefinedname
9519 \fi
9520 \special{!%
9521 aref \expandafter\HyperDestNameFilter
9522 \expandafter{\Hy@testname};%
9523 a=<%
9524 \ifHy@pdfa /F 4\fi
9525 \Hy@setpdfborder
9526 \ifx\CurrentBorderColor\relax
9527 \else
9528 /C [\CurrentBorderColor]%
9529 \fi

```

```

9530   >%
9531 }%
9532 \expandafter
9533 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9534 \special{!endaref}%
9535 }
9536 \def\hyper@image#1#2{%
9537 \hyper@linkurl{#2}{#1}%
9538 }
9539 \def\@hyper@launch run:#1\#2#3{%
9540 \Hy@pstringdef\Hy@pstringF{#1}%
9541 \Hy@pstringdef\Hy@pstringP{#3}%
9542 \leavevmode
9543 \special{!aref %
9544 <u=%
9545 /Type/Action%
9546 /S/Launch%
9547 /F(\Hy@pstringF)%
9548 \Hy@SetNewWindow
9549 \ifx\#3\%
9550 \else
9551 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9552 \fi%
9553 >,%
9554 a=<%
9555 \ifHy@pdfa /F 4\fi
9556 \Hy@setpdfborder
9557 \ifx\@runbordercolor\relax
9558 \else
9559 /C[\@runbordercolor]%
9560 \fi
9561 >%
9562 }%
9563 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9564 \special{!endaref}%
9565 }
9566 \def\Acrobatmenu#1#2{%
9567 \Hy@Acrobatmenu{#1}{#2}{%
9568 \special{!%
9569 aref <u=/S /Named /N /#1>,%
9570 a=<%
9571 \ifHy@pdfa /F 4\fi
9572 \Hy@setpdfborder
9573 \ifx\@menubordercolor\relax
9574 \else
9575 /C[\@menubordercolor]%
9576 \fi
9577 >%
9578 }%
9579 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9580 \special{!endaref}%
9581 }%
9582 }

```

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

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

Please never use $\text{\@ifundefined\TeXversion}\{..\}\{...\}$ globally.

```

9583 \ifnum\Hy@VTeXversion<702 %

```

```

9584 \else
9585   \def\hyper@pagetransition{%
9586     \ifx\@pdfpagetransition\relax
9587       \else
9588         \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9589   \else
9590     \hvtex@parse@trans\@pdfpagetransition
9591   \fi
9592 \fi
9593 }%

```

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:

```

9594 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9595 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9596 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9597 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9598 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9599 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9600 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

9601 \def\hvtex@par@dimension{/Dm}%
9602 \def\hvtex@par@direction{/Di}%
9603 \def\hvtex@par@duration{/D}%
9604 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

9605 \def\hvtex@gettoken{%
9606   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9607 }%

```

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

```

9608 \def\hvtex@gettoken@#1 #2\@nil{%
9609   \edef\hvtex@token{#1}%
9610   \edef\hvtex@buffer{#2}%
9611 }%
9612 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

9613 \let\hvtex@trans@code\@empty
9614 \let\hvtex@param@dimension\@empty
9615 \let\hvtex@param@direction\@empty
9616 \let\hvtex@param@duration\@empty
9617 \let\hvtex@param@motion\@empty
9618 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

9619 \hvtex@gettoken
9620 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

9621 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

9622 \else
9623 \hvtex@gettoken
9624 \fi
9625 \fi
9626 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

9627 \hvtex@trans@params
9628 }%

```

Reentrant macro to parse optional parameters.

```

9629 \def\hvtex@trans@params{%
9630 \ifx\hvtex@buffer\@empty
9631 \else
9632 \hvtex@gettoken
9633 \let\hvtex@trans@par\hvtex@token
9634 \ifx\hvtex@buffer\@empty
9635 \else
9636 \hvtex@gettoken
9637 \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

9638 \let\hvtex@param@duration\hvtex@token
9639 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

9640 \expandafter\edef\expandafter\hvtex@param@motion
9641 \expandafter{\expandafter\@gobble\hvtex@token}%
9642 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

9643 \expandafter\edef\expandafter\hvtex@param@dimension
9644 \expandafter{\expandafter\@gobble\hvtex@token}%
9645 \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).

```

9646 \let\hvtex@param@direction\hvtex@token
9647 \fi\fi\fi\fi
9648 \fi
9649 \fi
9650 \ifx\hvtex@buffer\@empty
9651 \let\next\hvtex@produce@trans
9652 \else
9653 \let\next\hvtex@trans@params

```

```

9654   \fi
9655   \next
9656 }%

```

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

```

9657 \def\hvtex@produce@trans{%
9658   \let\vtex@trans@special\@empty
9659   \if S\hvtex@trans@code
9660     \edef\vtex@trans@special{\hvtex@trans@code
9661       \hvtex@param@dimension\hvtex@param@motion}%
9662   \else\if B\hvtex@trans@code
9663     \edef\vtex@trans@special{%
9664       \hvtex@trans@code\hvtex@param@dimension
9665     }%
9666   \else\if X\hvtex@trans@code
9667     \edef\vtex@trans@special{%
9668       \hvtex@trans@code\hvtex@param@motion
9669     }%
9670   \else\if W\hvtex@trans@code
9671     \edef\vtex@trans@special{%
9672       \hvtex@trans@code\hvtex@param@direction
9673     }%
9674   \else\if D\hvtex@trans@code
9675     \let\vtex@trans@special\hvtex@trans@code
9676   \else\if R\hvtex@trans@code
9677     \let\vtex@trans@special\hvtex@trans@code
9678   \else\if G\hvtex@trans@code
9679     \edef\vtex@trans@special{%
9680       \hvtex@trans@code\hvtex@param@direction
9681     }%
9682   \fi\fi\fi\fi\fi\fi
9683   \ifx\vtex@trans@special\@empty
9684   \else
9685     \ifx\hvtex@param@duration\@empty
9686     \else
9687       \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

9688     \multiply\dimen@\@m
9689     \edef\vtex@trans@special{%
9690       \vtex@trans@special,\strip@pt\dimen@
9691     }%
9692   \fi

```

And all the mess is just for this.

```

9693   \special{!trans \vtex@trans@special}%
9694   \fi
9695 }%

9696 \def\hyper@pageduration{%
9697   \ifx\@pdfpageduration\relax
9698   \else
9699     \ifx\@pdfpageduration\@empty
9700     \special{!duration-}%
9701   \else
9702     \special{!duration \@pdfpageduration}%
9703   \fi
9704 }

```

```

9705 }%
9706 \def\hyper@pagehidden{%
9707   \ifHy@useHidKey
9708     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9709   \fi
9710 }%
9711 \g@addto@macro\Hy@EveryPageBoxHook{%
9712   \hyper@pagetransition
9713   \hyper@pageduration
9714   \hyper@pagehidden
9715 }%
9716 \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

```

9717 \ifx\@pdfproducer\relax
9718   \def\@pdfproducer{VTeX}%
9719   \ifnum\Hy@VTeXversion>\z@
9720     \count@\VTeXversion
9721     \divide\count@ 100 %
9722     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9723     \multiply\count@ -100 %
9724     \advance\count@\VTeXversion
9725     \edef\@pdfproducer{%
9726       \@pdfproducer
9727       .\ifnum\count@<10 0\fi\the\count@
9728       \ifx\VTeXOS\@undefined\else
9729         \ifnum\VTeXOS>0 %
9730           \ifnum\VTeXOS<6 %
9731             \space(
9732             \ifcase\VTeXOS
9733               \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9734             \fi
9735             )%
9736           \fi
9737         \fi
9738       \fi
9739       ,\space
9740       \ifnum\OpMode=\@ne PDF\else PS\fi
9741       \space backend%
9742       \ifx\gexmode\@undefined\else
9743         \ifnum\gexmode>\z@\space with GeX\fi
9744       \fi
9745     }%
9746   \fi
9747 \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).

```

9748 \def\PDF@SetupDoc{%
9749 \ifx\@pdfpagescrop\@empty
9750 \else
9751 \special{!pdfinfo b=<\@pdfpagescrop>}%
9752 \fi
9753 \ifx\@pdfstartpage\@empty
9754 \else
9755 \ifx\@pdfstartview\@empty
9756 \else
9757 \special{!onopen Page\@pdfstartpage}%
9758 \fi
9759 \fi
9760 \special{!pdfinfo p=</\@pdfpagemode>}%
9761 \ifx\@baseurl\@empty
9762 \else
9763 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9764 \fi
9765 \special{!pdfinfo v=<<<%
9766 \ifHy@toolbar\else /HideToolbar true\fi
9767 \ifHy@menubar\else /HideMenubar true\fi
9768 \ifHy>windowui\else /HideWindowUI true\fi
9769 \ifHy@fitwindow /FitWindow true\fi
9770 \ifHy@centerwindow /CenterWindow true\fi
9771 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9772 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9773 \Hy@UseNameKey{Direction}\@pdfdirection
9774 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9775 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9776 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9777 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9778 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9779 \Hy@UseNameKey{Duplex}\@pdfduplex
9780 \ifx\@pdfpicktraybypdfsize\@empty
9781 \else
9782 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9783 \fi
9784 \ifx\@pdfprintpagerange\@empty
9785 \else
9786 /PrintPageRange[\@pdfprintpagerange]%
9787 \fi
9788 \ifx\@pdfnumcopies\@empty
9789 \else
9790 /NumCopies \@pdfnumcopies

```

```

9791 \fi
9792 >>>}%
9793 \ifx\@pdfpagelayout\@empty
9794 \else
9795 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9796 \fi
9797 }%
9798 \HyInfo@AddonUnsupportedtrue
9799 \def\PDF@FinishDoc{%
9800 \Hy@UseMaketitleInfos
9801 \HyInfo@TrappedUnsupported
9802 \special{!pdfinfo a=<\@pdfauthor>}%
9803 \special{!pdfinfo t=<\@pdftitle>}%
9804 \special{!pdfinfo s=<\@pdfsubject>}%
9805 \special{!pdfinfo c=<\@pdfcreator>}%
9806 \ifx\@pdfproducer\relax
9807 \else
9808 \special{!pdfinfo r=<\@pdfproducer>}%
9809 \fi
9810 \special{!pdfinfo k=<\@pdfkeywords>}%
9811 \Hy@DisableOption{pdfauthor}%
9812 \Hy@DisableOption{pdftitle}%
9813 \Hy@DisableOption{pdfsubject}%
9814 \Hy@DisableOption{pdfcreator}%
9815 \Hy@DisableOption{pdfcreationdate}%
9816 \Hy@DisableOption{pdfmoddate}%
9817 \Hy@DisableOption{pdfproducer}%
9818 \Hy@DisableOption{pdfkeywords}%
9819 \Hy@DisableOption{pdftrapped}%
9820 \Hy@DisableOption{pdfinfo}%
9821 }
9822 </vtex>

```

46.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

9823 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9824 <package>\providecommand*{\Hy@DistillerDestFix}{%
9825 <*pdfmark | dviwindo>
9826 \def\Hy@DistillerDestFix{%
9827 \begingroup
9828 \let\x\literalps@out

```

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

```

9829 \ifnum \@ifundefined{OpMode}{0}{%
9830 \ifundefined{gexmode}{0}{%
9831 \ifnum\gexmode>0 \OpMode\else 0\fi
9832 }}>1 %

```

```

9833 \def\x##1{%
9834 \immediate\special{!=##1}%
9835 }%
9836 \fi
9837 \x{%
9838 /product where{%
9839 pop %
9840 product(Distiller)search{%
9841 pop pop pop %
9842 version(.)search{%
9843 exch pop exch pop%
9844 (3011)eq{%
9845 gsave %
9846 newpath 0 0 moveto closepath clip%
9847 /Courier findfont 10 scalefont setfont %
9848 72 72 moveto(.)show %
9849 grestore%
9850 }if%
9851 }{pop}ifelse%
9852 }{pop}ifelse%
9853 }if%
9854 }%
9855 \endgroup
9856 }
9857 </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

```

9858 <*pdfmark>
9859 \Hy@breaklinks@unsupported
9860 \def\hyper@anchor#1{%
9861 \Hy@SaveLastskip
9862 \Hy@VerboseAnchor{#1}%
9863 \begingroup
9864 \pdfmark[\anchor@spot]{%
9865 pdfmark=/DEST,%
9866 linktype=anchor,%
9867 View=/\@pdfview \@pdfviewparams,%
9868 DestAnchor={#1}%
9869 }%
9870 \endgroup
9871 \Hy@RestoreLastskip
9872 }
9873 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}

```

```

9874 \def\hyper@anchorstart#1{%
9875   \Hy@SaveLastskip
9876   \Hy@VerboseAnchor{#1}%
9877   \literalps@out{H.S}%
9878   \Hy@AllowHyphens
9879   \xdef\hyper@currentanchor{#1}%
9880   \Hy@activeanchortrue
9881 }
9882 \def\hyper@anchorend{%
9883   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9884   \pdfmark{%
9885     pdfmark=/DEST,%
9886     linktype=anchor,%
9887     View=/\@pdfview \@pdfviewparams,%
9888     DestAnchor=\hyper@currentanchor,%
9889   }%
9890   \Hy@activeanchorfalse
9891   \Hy@RestoreLastskip
9892 }
9893 \def\hyper@linkstart#1#2{%
9894   \Hy@VerboseLinkStart{#1}{#2}%
9895   \ifHy@breaklinks
9896   \else
9897     \leavevmode\hbox\bgroup
9898     \fi
9899     \expandafter\Hy@colorlink\csname @#1color\endcsname
9900     \literalps@out{H.S}%
9901     \Hy@AllowHyphens
9902     \xdef\hyper@currentanchor{#2}%
9903     \gdef\hyper@currentlinktype{#1}%
9904 }
9905 \def\hyper@linkend{%
9906   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9907   \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
9908     \let\Hy@tempcolor\relax
9909   }{%
9910     \edef\Hy@tempcolor{%
9911       \csname @\hyper@currentlinktype bordercolor\endcsname
9912     }%
9913   }%
9914   \pdfmark{%
9915     pdfmark=/ANN,%
9916     linktype=link,%
9917     Subtype=/Link,%
9918     PDFAFlags=4,%
9919     Dest=\hyper@currentanchor,%
9920     AcroHighlight=\@pdfhighlight,%
9921     Border=\@pdfborder,%
9922     BorderStyle=\@pdfborderstyle,%
9923     Color=\Hy@tempcolor,%
9924     Raw=H.B%
9925   }%
9926   \Hy@endcolorlink
9927   \ifHy@breaklinks
9928   \else
9929     \egroup
9930   \fi

```

```
9931 }
```

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.

```
9932 \begingroup
9933 \catcode'P=12 %
9934 \catcode'T=12 %
9935 \lowercase{\endgroup
9936 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>z@.#2\fi}%
9937 }
9938 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}
```

\hyper@pagetransition

```
9939 \def\hyper@pagetransition{%
9940 \ifx\@pdfpagetransition\relax
9941 \else
9942 \ifx\@pdfpagetransition\@empty
9943 % 1. Does an old entry have to be deleted?
9944 % 2. If 1=yes, how to delete?
9945 \else
9946 \pdfmark{%
9947 pdfmark=/PUT,%
9948 Raw={%
9949 \string{ThisPage\string}%
9950 <</Trans << /S /\@pdfpagetransition\space >> >>%
9951 }%
9952 }%
9953 \fi
9954 \fi
9955 }
```

\hyper@pageduration

```
9956 \def\hyper@pageduration{%
9957 \ifx\@pdfpageduration\relax
9958 \else
9959 \ifx\@pdfpageduration\@empty
9960 % 1. Does an old entry have to be deleted?
9961 % 2. If 1=yes, how to delete?
9962 \else
9963 \pdfmark{%
9964 pdfmark=/PUT,%
9965 Raw={%
9966 \string{ThisPage\string}%
9967 <</Dur \@pdfpageduration>>%
9968 }%
9969 }%
9970 \fi
9971 \fi
9972 }
```

\hyper@pagehidden

```
9973 \def\hyper@pagehidden{%
9974 \ifHy@useHidKey
9975 \pdfmark{%
9976 pdfmark=/PUT,%
9977 Raw={%
```

```

9978     \string{ThisPage\string}%
9979     <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9980   }%
9981 }%
9982 \fi
9983 }

9984 \g@addto@macro\Hy@EveryPageBoxHook{%
9985   \hyper@pagetransition
9986   \hyper@pageduration
9987   \hyper@pagehidden
9988 }

9989 \def\hyper@image#1#2{%
9990   \hyper@linkurl{#2}{#1}%
9991 }

9992 \def\Hy@undefinedname{UNDEFINED}
9993 \def\hyper@link#1#2#3{%
9994   \Hy@VerboseLinkStart{#1}{#2}%
9995   \ltx@ifundefined{@#1bordercolor}{%
9996     \let\Hy@tempcolor\relax
9997   }{%
9998     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
9999   }%
10000 \begingroup
10001   \protected@edef\Hy@testname{#2}%
10002   \ifx\Hy@testname\@empty
10003     \Hy@Warning{%
10004       Empty destination name,\MessageBreak
10005       using '\Hy@undefinedname'%
10006     }%
10007     \let\Hy@testname\Hy@undefinedname
10008   \fi
10009   \pdfmark[{#3}]{%
10010     Color=\Hy@tempcolor,%
10011     linktype={#1},%
10012     AcroHighlight=\@pdfhighlight,%
10013     Border=\@pdfborder,%
10014     BorderStyle=\@pdfborderstyle,%
10015     pdfmark=/ANN,%
10016     Subtype=/Link,%
10017     PDFAFlags=4,%
10018     Dest=\Hy@testname
10019   }%
10020 \endgroup
10021 }

10022 \newtoks\pdf@docset
10023 \def\PDF@FinishDoc{%
10024   \Hy@UseMaketitleInfos
10025   \Hy@Info@GenerateAddons
10026   \let\Hy@temp\@empty
10027   \ifx\@pdfcreationdate\@empty
10028   \else
10029     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10030   \fi
10031   \ifx\@pdfmoddate\@empty
10032   \else
10033     \expandafter\def\expandafter\Hy@temp\expandafter{%
10034       \Hy@temp

```

```

10035     ModDate=\@pdfmoddate,%
10036   }%
10037 \fi
10038 \ifx\@pdfproducer\relax
10039 \else
10040   \expandafter\def\expandafter\Hy@temp\expandafter{%
10041     \Hy@temp
10042     Producer=\@pdfproducer,%
10043   }%
10044 \fi
10045 \expandafter
10046 \pdfmark\expandafter{%
10047   \Hy@temp
10048   pdfmark=/DOCINFO,%
10049   Title=\@pdftitle,%
10050   Subject=\@pdfsubject,%
10051   Creator=\@pdfcreator,%
10052   Author=\@pdfauthor,%
10053   Keywords=\@pdfkeywords,%
10054   Trapped=\@pdftrapped
10055 }%
10056 \ifx\HyInfo@Addons\@empty
10057 \else
10058   \pdfmark{%
10059     pdfmark=/DOCINFO,%
10060     Raw={\HyInfo@Addons}%
10061   }%
10062 \fi
10063 \Hy@DisableOption{pdfauthor}%
10064 \Hy@DisableOption{pdftitle}%
10065 \Hy@DisableOption{pdfsubject}%
10066 \Hy@DisableOption{pdfcreator}%
10067 \Hy@DisableOption{pdfcreationdate}%
10068 \Hy@DisableOption{pdfmoddate}%
10069 \Hy@DisableOption{pdfproducer}%
10070 \Hy@DisableOption{pdfkeywords}%
10071 \Hy@DisableOption{pdftrapped}%
10072 \Hy@DisableOption{pdfinfo}%
10073 }
10074 \def\PDF@SetupDoc{%
10075   \def\Hy@temp{}%
10076   \ifx\@pdfstartpage\@empty
10077   \else
10078     \ifx\@pdfstartview\@empty
10079     \else
10080       \edef\Hy@temp{%
10081         ,Page=\@pdfstartpage
10082         ,View=\@pdfstartview
10083       }%
10084     \fi
10085   \fi
10086   \edef\Hy@temp{%
10087     \noexpand\pdfmark{%
10088       pdfmark=/DOCVIEW,%
10089       PageMode=/\@pdfpagemode
10090     }\Hy@temp
10091   }%

```

```

10092 }%
10093 \Hy@temp
10094 \ifx\@pdfpagescrop\@empty
10095 \else
10096 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10097 \fi
10098 \edef\Hy@temp{%
10099 \ifHy@toolbar\else /HideToolbar true\fi
10100 \ifHy@menubar\else /HideMenubar true\fi
10101 \ifHy>windowui\else /HideWindowUI true\fi
10102 \ifHy@fitwindow /FitWindow true\fi
10103 \ifHy@centerwindow /CenterWindow true\fi
10104 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10105 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10106 \Hy@UseNameKey{Direction}\@pdfdirection
10107 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10108 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10109 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10110 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10111 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10112 \Hy@UseNameKey{Duplex}\@pdfduplex
10113 \ifx\@pdfpicktraybypdfsize\@empty
10114 \else
10115 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10116 \fi
10117 \ifx\@pdfprintpagerange\@empty
10118 \else
10119 /PrintPageRange[\@pdfprintpagerange]%
10120 \fi
10121 \ifx\@pdfnumcopies\@empty
10122 \else
10123 /NumCopies \@pdfnumcopies
10124 \fi
10125 }%
10126 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10127 \pdfmark{%
10128 pdfmark=/PUT,%
10129 Raw={%
10130 \string{Catalog\string}<<%
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 \ifx\@baseurl\@empty
10141 \else
10142 /URI<</Base(\Hy@pstringB)>>%
10143 \fi
10144 >>%
10145 }%
10146 }%
10147 }
10148 \pdfmark}

```


10149 \langle *pdfmarkbase \rangle

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.

```

10150 \newif\ifHy@pdfmarkerror
10151 \def\pdfmark{\@ifnextchar[\pdfmark@]{\pdfmark@[]}}
10152 \def\pdfmark@[#1]#2{%
10153   \Hy@pdfmarkerrorfalse
10154   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10155   \@processme
10156   \let\pdf@type\relax
10157   \setkeys{PDF}{#2}%
10158   \ifHy@pdfmarkerror
10159   \else
10160     \ifx\pdf@type\relax
10161       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10162       \ifx\#1\%
10163         \else
10164           \pdf@rect{#1}%
10165           \fi
10166         \else
10167           \ifx\#1\%
10168             \literalps@out{%
10169               [\the\pdf@toks\space\pdf@type\space pdfmark%
10170               ]%
10171             \else
10172               \ltx@ifundefined{@\pdf@linktype color}{%
10173                 \Hy@colorlink\@linkcolor
10174               }{%
10175                 \expandafter\Hy@colorlink
10176                 \csname @\pdf@linktype color\endcsname
10177               }%
10178               \pdf@rect{#1}%
10179               \literalps@out{%
10180                 [\the\pdf@toks\space\pdf@type\space pdfmark%
10181                 ]%
10182                 \Hy@endcolorlink
10183               \fi
10184             \fi
10185             \fi
10186 }
```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (toby@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}
```

```
10187 \newsavebox{\pdf@box}
```

```

10188 \providecommand*{\Hy@setouterhbox}{\sbox}
10189 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10190 \def\Hy@DEST{/DEST}
10191 \def\pdf@rect#1{%
10192   \leavevmode
10193   \ifHy@breaklinks
10194     \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10195   \else
10196     \sbox\pdf@box{#1}%
10197   \fi
10198   \dimen@ \ht\pdf@box
10199   \ifdim\dp\pdf@box=\z@
10200     \literalps@out{H.S}%
10201   \else
10202     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10203   \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...).

```

10204   \ifHy@breaklinks
10205     \expandafter\Hy@breaklinksunhbox
10206   \else
10207     \expandafter\box
10208   \fi
10209   \pdf@box

```

but if it can have multiple paragraphs you'd need one of these, but in that case the measured box size would be wrong anyway.

```

      \ifHy@breaklinks#1\else\box\pdf@box\fi
      \ifHy@breaklinks{#1}\else\box\pdf@box\fi

10210 \ifdim\dimen@=\z@
10211   \literalps@out{H.R}%
10212 \else
10213   \raise\dimen@\hbox{\literalps@out{H.R}}%
10214 \fi
10215 \ifx\pdf@type\Hy@DEST
10216 \else
10217   \pdf@addtoksx{H.B}%
10218 \fi
10219 }

```

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.

```

10220 \newtoks\pdf@toks
10221 \newtoks\pdf@defaulttoks
10222 \pdf@defaulttoks={}%
10223 \def\pdf@addtoks#1#2{%
10224   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10225   \@processme
10226 }
10227 \def\pdf@addtoksx#1{%
10228   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10229   \@processme
10230 }
10231 \def\PDFdefaults#1{%
10232   \pdf@defaulttoks={#1}%
10233 }

```

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

```
10234 % what is the type of pdfmark?
10235 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10236 % what is the link type?
10237 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10238 \def\pdf@linktype{link}
10239 % parameter is a stream of PDF
10240 \define@key{PDF}{Raw}{\pdf@addtoks{#1}}
10241 % parameter is a name
10242 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10243 % parameter is a array
10244 \define@key{PDF}{Border}{%
10245   \edef\Hy@temp{#1}%
10246   \ifx\Hy@temp\@empty
10247   \else
10248     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10249   \fi
10250 }
10251 \let\Hy@BorderArrayPatch\@empty
10252 % parameter is a dictionary
10253 \define@key{PDF}{BorderStyle}{%
10254   \edef\Hy@temp{#1}%
10255   \ifx\Hy@temp\@empty
10256   \else
10257     \pdf@addtoks{<<#1>>}{BS}%
10258   \fi
10259 }
10260 % parameter is a array
10261 \define@key{PDF}{Color}{%
10262   \ifx\relax#1\relax
10263   \else
10264     \pdf@addtoks{[#1]}{Color}% hash-ok
10265   \fi
10266 }
10267 % parameter is a string
10268 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10269 % parameter is a integer
10270 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10271 % parameter is a array
10272 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10273 % parameter is a string
10274 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10275 % parameter is a string or file
10276 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10277 % parameter is a destination
10278 \define@key{PDF}{Dest}{%
10279   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10280   \ifx\Hy@pstringDest\@empty
10281     \Hy@pdfmarkerrortrue
10282     \Hy@Warning{Destination with empty name ignored}%
10283   \else
10284     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10285   \fi
10286 }
10287 \define@key{PDF}{DestAnchor}{%
10288   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10289   \ifx\Hy@pstringDest\@empty
```

```

10290 \Hy@pdfmarkerrortrue
10291 \Hy@Warning{Destination with empty name ignored}%
10292 \else
10293 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10294 \fi
10295 }
10296 % parameter is a string
10297 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10298 % parameter is a string
10299 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10300 % parameter is a int
10301 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10302 \define@key{PDF}{PDFAFlags}{%
10303 \ifHy@pdfa
10304 \pdf@addtoks{#1}{F}%
10305 \fi
10306 }
10307 % parameter is a name
10308 \define@key{PDF}{AcroHighlight}{%
10309 \begingroup
10310 \edef\x{#1}%
10311 \expandafter\endgroup\ifx\x@empty
10312 \else
10313 \pdf@addtoks{#1}{H}%
10314 \fi
10315 }
10316 % parameter is a string
10317 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
10318 % parameter is a string
10319 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
10320 % parameter is a string
10321 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10322 % parameter is a string
10323 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
10324 % parameter is a Boolean
10325 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10326 % parameter is a integer or name
10327 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10328 % parameter is a name
10329 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10330 % parameter is a string
10331 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
10332 % parameter is a array
10333 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
10334 % parameter is a integer
10335 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10336 % parameter is a name
10337 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10338 % parameter is a string
10339 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
10340 % parameter is a string
10341 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
10342 % parameter is a string
10343 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
10344 % parameter is an array
10345 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
10346 % parameter is a string

```

```
10347 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}
```

These are the keys used in the DOCINFO section.

```
10348 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
10349 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
10350 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
10351 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10352 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
10353 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
10354 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
10355 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
10356 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
10357 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
10358 \define@key{PDF}{Trapped}{%
10359   \edef\Hy@temp{#1}%
10360   \ifx\Hy@temp\@empty
10361     \else
10362       \pdf@addtoks{/#1}{Trapped}%
10363     \fi
10364 }
10365
10366 </pdfmarkbase>
10367 <*pdfmark>
10368 \def\Acrobatmenu#1#2{%
10369   \Hy@Acrobatmenu{#1}{#2}{%
10370     \pdfmark[{#2}]{%
10371       linktype=menu,%
10372       pdfmark=/ANN,%
10373       AcroHighlight=\@pdfhighlight,%
10374       Border=\@pdfborder,%
10375       BorderStyle=\@pdfborderstyle,%
10376       Action={<< /Subtype /Named /N /#1 >>},%
10377       Subtype=/Link,%
10378       PDFAFlags=4%
10379     }%
10380   }%
10381 }
```

And now for some useful examples:

```
10382 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
10383 \def\PDFNextPage@[#1]#2{%
10384   \pdfmark[{#2}]{%
10385     #1,%
10386     Border=\@pdfborder,%
10387     BorderStyle=\@pdfborderstyle,%
10388     Color=.2 .1 .5,%
10389     pdfmark=/ANN,%
10390     Subtype=/Link,%
10391     PDFAFlags=4,%
10392     Page=/Next%
10393   }%
10394 }
10395 \def\PDFPreviousPage{%
10396   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10397 }
10398 \def\PDFPreviousPage@[#1]#2{%
10399   \pdfmark[{#2}]{%
10400     #1,%
```

```

10401   Border=\@pdfborder,%
10402   BorderStyle=\@pdfborderstyle,%
10403   Color=.4 .4 .1,%
10404   pdfmark=/ANN,%
10405   Subtype=/Link,%
10406   PDFAFlags=4,%
10407   Page=/Prev%
10408 }%
10409 }
10410 \def\PDFOpen#1{%
10411   \pdfmark{#1,pdfmark=/DOCVIEW}%
10412 }

```

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

```

10413 \def\hyper@linkurl#1#2{%
10414   \begingroup
10415     \Hy@pstringdef\Hy@pstringURI{#2}%
10416     \hyper@chars
10417     \leavevmode
10418     \pdfmark[{#1}]{%
10419       pdfmark=/ANN,%
10420       linktype=url,%
10421       AcroHighlight=\@pdfhighlight,%
10422       Border=\@pdfborder,%
10423       BorderStyle=\@pdfborderstyle,%
10424       Color=\@urlbordercolor,%
10425       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10426       Subtype=/Link,%
10427       PDFAFlags=4%
10428     }%
10429   \endgroup
10430 }
10431 \def\hyper@linkfile#1#2#3{%
10432   \begingroup
10433     \Hy@pstringdef\Hy@pstringF{#2}%
10434     \Hy@pstringdef\Hy@pstringD{#3}%
10435     \leavevmode
10436     \pdfmark[{#1}]{%
10437       pdfmark=/ANN,%
10438       Subtype=/Link,%
10439       PDFAFlags=4,%
10440       AcroHighlight=\@pdfhighlight,%
10441       Border=\@pdfborder,%
10442       BorderStyle=\@pdfborderstyle,%
10443       linktype=file,%
10444       Color=\@filebordercolor,%
10445       Action={%
10446         <<%
10447           /S/GoToR%
10448           \Hy@SetNewWindow
10449           /F(\Hy@pstringF)%
10450           /D\ifx\#3\@pdfstartview\else(\Hy@pstringD)cvn\fi
10451         >>%
10452       }%
10453     }%
10454   \endgroup
10455 }
10456 \def\@hyper@launch run:#1\#2#3{%

```

```

10457 \begingroup
10458   \Hy@pstringdef\Hy@pstringF{#1}%
10459   \Hy@pstringdef\Hy@pstringP{#3}%
10460   \leavevmode
10461   \pdfmark[{#2}]{%
10462     pdfmark=/ANN,%
10463     Subtype=/Link,%
10464     PDFAFlags=4,%
10465     AcroHighlight=\@pdfhighlight,%
10466     Border=\@pdfborder,%
10467     BorderStyle=\@pdfborderstyle,%
10468     linktype=run,%
10469     Color=\@runbordercolor,%
10470     Action={%
10471       <<%
10472         /S/Launch%
10473         \Hy@SetNewWindow
10474         /F(\Hy@pstringF)%
10475         \ifx\#3\%
10476         \else
10477           /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10478         \fi
10479       >>%
10480     }%
10481   }%
10482 \endgroup
10483 }
10484 </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.

```

10485 <*dvips>
10486 \providecommand*{\XR@ext}{pdf}
10487 \def\Hy@raisedlink{}
10488 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
10489 \def\headerps@out#1{\special{! #1}}%
10490 \input{pdfmark.def}%
10491 \ifx\@pdfproducer\relax
10492   \def\@pdfproducer{dvips + Distiller}%
10493 \fi
10494 \providecommand*\@pdfborder{0 0 1}
10495 \providecommand*\@pdfborderstyle{}
10496 \providecommand*\@pdfview{XYZ}
10497 \providecommand*\@pdfviewparams{H.V}
10498 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10499 \g@addto@macro\Hy@FirstPageHook{%
10500   \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.

```
10501 /DvipsToPDF{72.27 mul Resolution div} def%
10502 /PDFToDvips{72.27 div Resolution mul} def%
10503 /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.

```
10504 /BorderArrayPatch{%
10505   lsexch{%
10506     dup dup type/integertype eq exch type/realtype eq or%
10507     {BPToDvips}if%
10508   }forall}%
10509 }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.

```
10510 /HyperBorder {1 PDFToDvips} def%
10511 /H.V {pdf@hoff pdf@voff null} def%
10512 /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

```
10513 /H.S {%
10514   currentpoint %
10515   HyperBorder add /pdf@lly exch def %
10516   dup DvipsToPDF 72 add /pdf@hoff exch def %
10517   HyperBorder sub /pdf@llx exch def%
10518 } def%
```

The calculation of upper left y is done without raising the point in T_EX, by simply adding on the current \baselineskip to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The x and y coordinates of the current point, minus the baselineskip

```
10519 /H.L {%
10520   2 sub dup%
10521   /HyperBasePt exch def %
10522   PDFToDvips /HyperBaseDvips exch def %
10523   currentpoint %
10524   HyperBaseDvips sub /pdf@ury exch def%
10525   /pdf@urx exch def%
10526 } def%
10527 /H.A {%
10528   H.L %
10529 % |pdf@voff| = the distance from the top of the page to a point
10530 % |\baselineskip| above the current point in PDF coordinates
10531   currentpoint exch pop %
```



```

10532     vsize 72 sub exch DvipsToPDF %
10533     HyperBasePt sub % baseline skip
10534     sub /pdf@voff exch def%
10535   } def%
10536   /H.R. {%
10537     currentpoint %
10538     HyperBorder sub /pdf@ury exch def %
10539     HyperBorder add /pdf@urx exch def %
10540 % | /pdf@voff| = the distance from the top of the page to the current point, in
10541 % PDF coordinates
10542     currentpoint exch pop vsize 72 sub %
10543     exch DvipsToPDF sub /pdf@voff exch def%
10544   } def%
10545 } %
10546 }
10547 \AtBeginShipoutFirst{%
10548   \ifHy@setpagesize
10549     \begingroup
10550     \@ifundefined{stockwidth}{%
10551       \ifdim\paperwidth>\z@
10552         \ifdim\paperheight>\z@
10553           \special{papersize=\the\paperwidth,\the\paperheight}%
10554         \fi
10555       \fi
10556     }{%
10557       \ifdim\stockwidth>\z@
10558         \ifdim\stockheight>\z@
10559           \special{papersize=\the\stockwidth,\the\stockheight}%
10560         \fi
10561       \fi
10562     }%
10563   \endgroup
10564 \fi
10565 \Hy@DisableOption{setpagesize}%
10566 }
10567 </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.

```

10568 <*vtexpdfmark>
10569 \providecommand*{\XR@ext}{pdf}
10570 \def\Hy@raisedlink{}
10571 \def\literalps@out#1{\special{pS:#1}}%
10572 \def\headerps@out#1{\immediate\special{pS:#1}}%
10573 \input{pdfmark.def}%
10574 \ifx\@pdfproducer\relax
10575   \ifnum\OpMode=\@ne
10576     \def\@pdfproducer{VTeX}%
10577   \else
10578     \def\@pdfproducer{VTeX + Distiller}%
10579   \fi
10580 \fi

```

```

10581 \providecommand*\@pdfborder{0 0 1}
10582 \providecommand*\@pdfborderstyle{}
10583 \providecommand*\@pdfview{XYZ}
10584 \providecommand*\@pdfviewparams{ H.V}

10585 \g@addto@macro\Hy@FirstPageHook{%
10586   \headerps@out{%
10587     /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.

```

10588   /HyperBorder {1} def%
10589   /H.V {pdf@hoff pdf@voff null} def%
10590   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def%

```

H.S (start of anchor, link, or rect) stores the x and y coordinates of the current point, in PDF coordinates: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10591   /H.S {%
10592     currentpoint %
10593     HyperBorder sub%
10594     /pdf@lly exch def %
10595     dup 72 add /pdf@hoff exch def %
10596     HyperBorder sub%
10597     /pdf@llx exch def%
10598   } def%

```

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

```

10599   /H.L {%
10600     2 sub%
10601     /HyperBasePt exch def %
10602     currentpoint %
10603     HyperBasePt add HyperBorder add%
10604     /pdf@ury exch def %
10605     HyperBorder add%
10606     /pdf@urx exch def%
10607   } def%
10608   /H.A {%
10609     H.L %
10610     currentpoint exch pop %
10611     vsize 72 sub exch %
10612     HyperBasePt add add%
10613     /pdf@voff exch def%
10614   } def%

```

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

```

10615   /H.R {%
10616     currentpoint %
10617     HyperBorder add%
10618     /pdf@ury exch def %
10619     HyperBorder add%
10620     /pdf@urx exch def %
10621     currentpoint exch pop vsize 72 sub add%
10622     /pdf@voff exch def%
10623   } def%
10624 }%
10625 }
10626 </vtxpdfmark>

```

46.11 Textures

```
10627 ⟨*textures⟩
10628 \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.

```
10629 \begingroup
10630 \obeylines %
10631 \gdef\Hy@ps@CR{\noexpand
10632 }%
10633 \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.

```
10634 \def\literalps@out#1{%
10635 \special{postscript 0 0 transform}%
10636 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10637 }%
10638 %
```

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.

```
10639 \def\headerps@out#1{%
10640 \special{%
10641 prepostscript TeXdict begin\Hy@ps@CR
10642 #1\Hy@ps@CR
10643 end%
10644 }%
10645 }%
10646 %
```

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.

```
10647 \g@addto@macro\Hy@FirstPageHook{%
10648 \headerps@out{%
10649 /betterpdfmark {%
10650 systemdict begin %
10651 dup /BP eq%
10652 {cleartomark gsave nulldevice []%
10653 {dup /EP eq%
10654 {cleartomark cleartomark grestore}%
```

```

10655      {cleartomark}%
10656      ifelse%
10657    }ifelse %
10658  end%
10659 }def\Hy@ps@CR
10660 ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
10661 }% end of \headerps@out
10662 }% end of \AtBeginShipoutFirst
10663 %
10664 \input{pdfmark.def}%
10665 %
10666 \ifx\@pdfproducer\relax
10667   \def\@pdfproducer{Textures + Distiller}%
10668 \fi
10669 \providecommand*\@pdfborder{0 0 1}
10670 \providecommand*\@pdfborderstyle{}
10671 \providecommand*\@pdfview{XYZ}
10672 \providecommand*\@pdfviewparams{ H.V}
10673 %

```

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

```

10674 \Hy@AtBeginDocument{%
10675   \headerps@out{%

```

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

```

10676   /vsize {\Hy@pageheight} def%
10677   /DvipsToPDF {} def%
10678   /PDFToDvips {} def%
10679   /BPToDvips {} def%
10680   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10681   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10682   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10683   /H.S {%
10684     currentpoint %
10685     HyperBorder add /pdf@lly exch def %
10686     dup DvipsToPDF 72 add /pdf@hoff exch def %
10687     HyperBorder sub /pdf@llx exch def%
10688   } def\Hy@ps@CR
10689   /H.L {%
10690     2 sub %
10691     PDFToDvips /HyperBase exch def %
10692     currentpoint %
10693     HyperBase sub /pdf@ury exch def%
10694     /pdf@urx exch def%
10695   } def\Hy@ps@CR
10696   /H.A {%
10697     H.L %
10698     currentpoint exch pop %
10699     vsize 72 sub exch DvipsToPDF %
10700     HyperBase sub % baseline skip
10701     sub /pdf@voff exch def%
10702   } def\Hy@ps@CR
10703   /H.R {%
10704     currentpoint %

```

```

10705   HyperBorder sub /pdf@ury exch def %
10706   HyperBorder add /pdf@urx exch def %
10707   currentpoint exch pop vsize 72 sub %
10708   exch DvipsToPDF sub /pdf@voff exch def%
10709   } def\Hy@ps@CR
10710 }%
10711 }

10712 \Hy@AtBeginDocument{%
10713   \ifHy@colorlinks
10714     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10715   \fi
10716 }

```

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.

```

10717 \expandafter\let\expandafter\keepPDF@SetupDoc
10718   \csname PDF@SetupDoc\endcsname
10719 \def\PDF@SetupDoc{%
10720   \ifx\@baseurl\@empty
10721     \else
10722       \special{html:<base href="\@baseurl">}%
10723     \fi
10724   \keepPDF@SetupDoc
10725 }

10726 \def\hyper@anchor#1{%
10727   \Hy@SaveLastskip
10728   \Hy@VerboseAnchor{#1}%
10729   \begingroup
10730     \let\protect=\string
10731     \special{html:<a name=%
10732       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10733   \endgroup
10734   \Hy@activeanchortrue
10735   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10736   \special{html:</a>}%
10737   \Hy@activeanchorfalse
10738   \Hy@RestoreLastskip
10739 }

10740 \def\hyper@anchorstart#1{%
10741   \Hy@SaveLastskip
10742   \Hy@VerboseAnchor{#1}%
10743   \begingroup
10744     \hyper@chars
10745     \special{html:<a name=%
10746       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10747   \endgroup
10748   \Hy@activeanchortrue
10749 }

10750 \def\hyper@anchorend{%
10751   \special{html:</a>}%
10752   \Hy@activeanchorfalse
10753   \Hy@RestoreLastskip
10754 }

10755 \def\@urltype{url}
10756 \def\hyper@linkstart#1#2{%
10757   \Hy@VerboseLinkStart{#1}{#2}%
10758   \expandafter\Hy@colorlink\csname @#1color\endcsname

```

```

10759 \def\Hy@tempa{#1}%
10760 \ifx\Hy@tempa\@urlltype
10761   \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10762 \else
10763   \begingroup
10764     \hyper@chars
10765     \special{%
10766       html:<a href=%
10767         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>%
10768     }%
10769   \endgroup
10770 \fi
10771 }
10772 \def\hyper@linkend{%
10773   \special{html:</a>}%
10774   \Hy@endcolorlink
10775 }
10776 \def\hyper@linkfile#1#2#3{%
10777   \hyper@linkurl{#1}{%
10778     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10779   }%
10780 }
10781 \def\hyper@linkurl#1#2{%
10782   \leavevmode
10783   \ifHy@raiselinks
10784     \setbox\@tempboxa=\color@hbox #1\color@endbox
10785     \@linkdim\dp\@tempboxa
10786     \lower\@linkdim\hbox{%
10787       \hyper@chars
10788       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10789     }%
10790     \Hy@colorlink\@urlcolor#1%
10791     \@linkdim\ht\@tempboxa
10792     \advance\@linkdim by -6.5\p@
10793     \raise\@linkdim\hbox{\special{html:</a>}}%
10794     \Hy@endcolorlink
10795   \else
10796     \begingroup
10797       \hyper@chars
10798       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10799       \Hy@colorlink\@urlcolor#1%
10800       \special{html:</a>}%
10801       \Hy@endcolorlink
10802     \endgroup
10803   \fi
10804 }

```

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

```

10805 \def\hyper@link#1#2#3{%
10806   \Hy@VerboseLinkStart{#1}{#2}%
10807   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
10808 }
10809 \def\hyper@image#1#2{%
10810   \begingroup
10811     \hyper@chars
10812     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10813   \endgroup
10814 }

```

10815 </textures>

46.12 dvipsone

```
10816 % \subsection{dvipsone driver}
10817 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10818 % |\special| commands.
10819 <*dvipsone>
10820 \providecommand*\XR@ext}{pdf}
10821 \def\Hy@raisedlink{}
10822 \providecommand*\@pdfborder{0 0 1}
10823 \providecommand*\@pdfborderstyle{}
10824 \def\literalps@out#1{\special{ps:#1}}%
10825 \def\headerps@out#1{\special{headertext=#1}}%
10826 \input{pdfmark.def}%
10827 \ifx\@pdfproducer\relax
10828   \def\@pdfproducer{dvipsone + Distiller}%
10829 \fi
10830 \HyInfo@AddonUnsupportedtrue
10831 \def\PDF@FinishDoc{%
10832   \Hy@UseMaketitleInfos
10833   \HyInfo@TrappedUnsupported
10834   \special{PDF: Keywords \@pdfkeywords}%
10835   \special{PDF: Title \@pdftitle}%
10836   \special{PDF: Creator \@pdfcreator}%
10837   \ifx\@pdfcreationdate\@empty
10838     \else
10839     \special{PDF: CreationDate \@pdfcreationdate}%
10840   \fi
10841   \ifx\@pdfmoddate\@empty
10842     \else
10843     \special{PDF: ModDate \@pdfmoddate}%
10844   \fi
10845   \special{PDF: Author \@pdfauthor}%
10846   \ifx\@pdfproducer\relax
10847     \else
10848     \special{PDF: Producer \@pdfproducer}%
10849   \fi
10850   \special{PDF: Subject \@pdfsubject}%
10851   \Hy@DisableOption{pdfauthor}%
10852   \Hy@DisableOption{pdftitle}%
10853   \Hy@DisableOption{pdfsubject}%
10854   \Hy@DisableOption{pdfcreator}%
10855   \Hy@DisableOption{pdfcreationdate}%
10856   \Hy@DisableOption{pdfmoddate}%
10857   \Hy@DisableOption{pdfproducer}%
10858   \Hy@DisableOption{pdfkeywords}%
10859   \Hy@DisableOption{pdftrapped}%
10860   \Hy@DisableOption{pdfinfo}%
10861 }
10862 \def\PDF@SetupDoc{%
10863   \def\Hy@temp{}%
10864   \ifx\@pdfstartpage\@empty
10865     \else
10866     \ifx\@pdfstartview\@empty
10867       \else
10868       \edef\Hy@temp{%
```

```

10869     ,Page=\@pdfstartpage
10870     ,View=\@pdfstartview
10871   }%
10872 \fi
10873 \fi
10874 \edef\Hy@temp{%
10875   \noexpand\pdfmark{%
10876     pdfmark=/DOCVIEW,%
10877     PageMode=/\@pdfpagemode
10878   \Hy@temp
10879 }%
10880 }%
10881 \Hy@temp
10882 \ifx\@pdfpagescrop\@empty
10883 \else
10884   \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10885 \fi
10886 \edef\Hy@temp{%
10887   \ifHy@toolbar\else /HideToolbar true\fi
10888   \ifHy@menubar\else /HideMenubar true\fi
10889   \ifHy>windowui\else /HideWindowUI true\fi
10890   \ifHy@fitwindow /FitWindow true\fi
10891   \ifHy@centerwindow /CenterWindow true\fi
10892   \ifHy@displaydoctitle /DisplayDocTitle true\fi
10893   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10894   \Hy@UseNameKey{Direction}\@pdfdirection
10895   \Hy@UseNameKey{ViewArea}\@pdfviewarea
10896   \Hy@UseNameKey{ViewClip}\@pdfviewclip
10897   \Hy@UseNameKey{PrintArea}\@pdfprintarea
10898   \Hy@UseNameKey{PrintClip}\@pdfprintclip
10899   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10900   \Hy@UseNameKey{Duplex}\@pdfduplex
10901   \ifx\@pdfpicktraybypdfsize\@empty
10902   \else
10903     /PickTrayByPDFSize \@pdfpicktraybypdfsize
10904   \fi
10905   \ifx\@pdfprintpagerange\@empty
10906   \else
10907     /PrintPageRange[\@pdfprintpagerange]%
10908   \fi
10909   \ifx\@pdfnumcopies\@empty
10910   \else
10911     /NumCopies \@pdfnumcopies
10912   \fi
10913 }%
10914 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10915 \pdfmark{%
10916   pdfmark=/PUT,%
10917   Raw={%
10918     \string{Catalog\string}<<%
10919     \ifx\Hy@temp\@empty
10920     \else
10921       /ViewerPreferences<<\Hy@temp>>%
10922     \fi
10923     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10924     \ifx\@pdflang\@empty
10925     \else

```



```

10926      /Lang(\@pdflang)%
10927      \fi
10928      \ifx\@baseurl\@empty
10929      \else
10930      /URI<</Base(\Hy@pstringB)>>%
10931      \fi
10932      >>%
10933      }%
10934      }%
10935      }
10936      \providecommand*\@pdfview{XYZ}
10937      \providecommand*\@pdfviewparams{ %
10938      gsave revscl currentpoint grestore %
10939      72 add exch pop null exch null%
10940      }
10941      \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 .

```

10942      \g@addto@macro\Hy@FirstPageHook{%
10943      \headerps@out{%

```

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

```

10944      /DvipsToPDF { 65781 div } def%
10945      /PDFToDvips { 65781 mul } def%
10946      /BPToDvips{65781 mul}def%
10947      /HyperBorder { 1 PDFToDvips } def%
10948      /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.

```

10949      /BorderArrayPatch{%
10950      [exch{%
10951      dup dup type/integertype eq exch type/realtype eq or%
10952      {BPToDvips}if%
10953      }forall]%
10954      }def%
10955      /H.S {%
10956      currentpoint %
10957      HyperBorder add /pdf@lly exch def %
10958      dup DvipsToPDF 72 add /pdf@hoff exch def %
10959      HyperBorder sub /pdf@llx exch def%
10960      } def%
10961      /H.L {%
10962      2 sub %
10963      PDFToDvips /HyperBase exch def %
10964      currentpoint %
10965      HyperBase sub /pdf@ury exch def%
10966      /pdf@urx exch def%
10967      } def%
10968      /H.A {%
10969      H.L %
10970      currentpoint exch pop %
10971      HyperBase sub % baseline skip
10972      DvipsToPDF /pdf@voff exch def%

```

```

10973 } def%
10974 /H.R {%
10975   currentpoint %
10976   HyperBorder sub /pdf@ury exch def %
10977   HyperBorder add /pdf@urx exch def %
10978   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10979 } def%
10980 }%
10981 }
10982 </dvipsone>

```

46.13 TeX4ht

```

10983 < *tex4ht>
10984 \providecommand*{\XR@ext}{html}
10985 \def\Hy@raisedlink{}
10986 \ifpackageloaded{tex4ht}{%
10987   \typeout{hyperref tex4ht: tex4ht already loaded}%
10988 }{%
10989   \RequirePackage[hTeX4ht]{tex4ht}%
10990 }
10991 \hyperlinkfileprefix{}
10992 \def\PDF@FinishDoc{}
10993 \def\PDF@SetupDoc{%
10994   \ifx\@baseurl\@empty
10995   \else
10996     \special{t4ht=<base href="\@baseurl">}%
10997   \fi
10998 }
10999 \def\hyper@anchor#1{%
11000   \Hy@SaveLastskip
11001   \Hy@VerboseAnchor{#1}%
11002   \begingroup
11003     \let\protect=\string
11004     \special{t4ht=<a name=%
11005       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11006   \endgroup
11007   \Hy@activeanchortrue
11008   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11009   \special{t4ht=</a>}%
11010   \Hy@activeanchorfalse
11011   \Hy@RestoreLastskip
11012 }
11013 \def\hyper@anchorstart#1{%
11014   \Hy@SaveLastskip
11015   \Hy@VerboseAnchor{#1}%
11016   \begingroup
11017     \hyper@chars\special{t4ht=<a name=%
11018       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11019   \endgroup
11020   \Hy@activeanchortrue
11021 }
11022 \def\hyper@anchorend{%
11023   \special{t4ht=</a>}%
11024   \Hy@activeanchorfalse
11025   \Hy@RestoreLastskip
11026 }
11027 \def\@urltype{url}

```

```

11028 \def\hyper@linkstart#1#2{%
11029   \Hy@VerboseLinkStart{#1}{#2}%
11030   \expandafter\Hy@colorlink\csname @#1color\endcsname
11031   \def\Hy@tempa{#1}%
11032   \ifx\Hy@tempa\@urlltype
11033     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11034   \else
11035     \begingroup
11036       \hyper@chars
11037       \special{t4ht=<a href=%
11038         \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
11039     \endgroup
11040   \fi
11041 }
11042 \def\hyper@linkend{%
11043   \special{t4ht=</a>}%
11044   \Hy@endcolorlink
11045 }
11046 \def\hyper@linkfile#1#2#3{%
11047   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
11048 }
11049 \def\hyper@linkurl#1#2{%
11050   \leavevmode
11051   \ifHy@raiselinks
11052     \setbox\@tempboxa=\color@hbox #1\color@endbox
11053     \@linkdim\dp\@tempboxa
11054     \lower\@linkdim\hbox{%
11055       \begingroup
11056         \hyper@chars
11057         \special{%
11058           t4ht=<a href=\hyper@quote#2\hyper@quote>%
11059         }%
11060       \endgroup
11061     }%
11062     \Hy@colorlink\@urllcolor#1\Hy@endcolorlink
11063     \@linkdim\ht\@tempboxa
11064     \advance\@linkdim by -6.5\p@
11065     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
11066   \else
11067     \begingroup
11068       \hyper@chars
11069       \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11070       \Hy@colorlink\@urllcolor#1\Hy@endcolorlink
11071       \special{t4ht=</a>}%
11072     \endgroup
11073   \fi
11074 }

```

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

```

11075 \def\hyper@link#1#2#3{%
11076   \Hy@VerboseLinkStart{#1}{#2}%
11077   \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
11078 }
11079 \def\hyper@image#1#2{%
11080   \begingroup
11081     \hyper@chars
11082     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11083   \endgroup

```

```

11084 }
11085 \let\autoref\ref
11086 \ifx \rEfLiNK \UnDef
11087 \def\rEfLiNK #1#2{#2}%
11088 \fi
11089 \def\backref#1{}
11090 </tex4ht>
11091 <*tex4htcfg>
11092 \IfFileExists{\jobname.cfg}{\endinput}{}
11093 \Preamble{html}
11094 \begin{document}%
11095 \EndPreamble
11096 \def\TeX{TeX}
11097 \def\OMEGA{Omega}
11098 \def\LaTeX{LaTeX}
11099 \def\LaTeXe{LaTeX2e}
11100 \def\eTeX{e-TeX}
11101 \def\MF{Metafont}
11102 \def\MP{MetaPost}
11103 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11104 <*pdfmark>
11105 \long\def\@Form[#1]{%
11106 \g@addto@macro\Hy@FirstPageHook{%
11107 \headerps@out{%
11108 [%
11109 /__objdef{pdfDocEncoding}%
11110 /type/dict%
11111 /OBJ pdfmark%
11112 [%
11113 {pdfDocEncoding}%
11114 <<%
11115 /Type/Encoding%
11116 /Differences%
11117 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11118 /tilde %
11119 39/quotesingle %
11120 96/grave %
11121 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11122 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11123 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11124 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11125 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11126 164/currency %
11127 166/brokenbar %
11128 168/dieresis/copyright/ordfeminine %
11129 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11130 /twosuperior/threesuperior/acute/mu %
11131 183/periodcentered/cedilla/onesuperior/ordmasculine %
11132 188/onequarter/onehalf/threequarters %
11133 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11134 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11135 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11136 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%

```

```

11137      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11138      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11139      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11140      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
11141      /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11142      /ucircumflex/udieresis/yacute/thorn/ydieresis%
11143  ]%
11144  >>%
11145  /PUT pdfmark%
11146  [%
11147    /_objdef{ZaDb}%
11148    /type/dict%
11149  /OBJ pdfmark%
11150  [%
11151    {ZaDb}%
11152    <<%
11153      /Type/Font%
11154      /Subtype/Type1%
11155      /Name/ZaDb%
11156      /BaseFont/ZapfDingbats%
11157    >>%
11158  /PUT pdfmark%
11159  [%
11160    /_objdef{Helv}%
11161    /type/dict%
11162  /OBJ pdfmark%
11163  [%
11164    {Helv}%
11165    <<%
11166      /Type/Font%
11167      /Subtype/Type1%
11168      /Name/Helv%
11169      /BaseFont/Helvetica%
11170      /Encoding{pdfDocEncoding}%
11171    >>%
11172  /PUT pdfmark%
11173  [%
11174    /_objdef{aform}%
11175    /type/dict%
11176  /OBJ pdfmark%
11177  [%
11178    /_objdef{afields}%
11179    /type/array%
11180  /OBJ pdfmark%
11181  {%
11182    [%
11183      /BBox[0 0 100 100]%
11184      /_objdef{Check}%
11185    /BP pdfmark %
11186    1 0 0 setrgbcolor%
11187    /ZapfDingbats 80 selectfont %
11188    20 20 moveto%
11189    (4)show%
11190  [/EP pdfmark%
11191  [%
11192    /BBox[0 0 100 100]%
11193    /_objdef{Cross}%

```

```

11194 /BP pdfmark %
11195 1 0 0 setrgbcolor%
11196 /ZapfDingbats 80 selectfont %
11197 20 20 moveto%
11198 (8)show%
11199 [/EP pdfmark%
11200 [%
11201 /BBox[0 0 250 100]%
11202 /_objdef{Submit}%
11203 /BP pdfmark %
11204 0.6 setgray %
11205 0 0 250 100 rectfill %
11206 1 setgray %
11207 2 2 moveto %
11208 2 98 lineto %
11209 248 98 lineto %
11210 246 96 lineto %
11211 4 96 lineto %
11212 4 4 lineto %
11213 fill %
11214 0.34 setgray %
11215 248 98 moveto %
11216 248 2 lineto %
11217 2 2 lineto %
11218 4 4 lineto %
11219 246 4 lineto %
11220 246 96 lineto %
11221 fill%
11222 /Helvetica 76 selectfont %
11223 0 setgray %
11224 8 22.5 moveto%
11225 (Submit)show%
11226 [/EP pdfmark%
11227 [%
11228 /BBox[0 0 250 100]%
11229 /_objdef{SubmitP}%
11230 /BP pdfmark %
11231 0.6 setgray %
11232 0 0 250 100 rectfill %
11233 0.34 setgray %
11234 2 2 moveto %
11235 2 98 lineto %
11236 248 98 lineto %
11237 246 96 lineto %
11238 4 96 lineto %
11239 4 4 lineto %
11240 fill %
11241 1 setgray %
11242 248 98 moveto %
11243 248 2 lineto %
11244 2 2 lineto %
11245 4 4 lineto %
11246 246 4 lineto %
11247 246 96 lineto %
11248 fill%
11249 /Helvetica 76 selectfont %
11250 0 setgray %

```

```

11251 10 20.5 moveto%
11252 (Submit)show%
11253 [/EP pdfmark%
11254 } ?pdfmark%
11255 [%
11256 {aform}%
11257 <<%
11258 /Fields{afields}%
11259 /DR<<%
11260 /Font<<%
11261 /ZaDb{ZaDb}%
11262 /Helv{Helv}%
11263 >>%
11264 >>%
11265 /DA(/Helv 10 Tf 0 g)%
11266 /CO{corder}%
11267 \ifHy@pdfa
11268 \else
11269 /NeedAppearances true%
11270 \fi
11271 >>%
11272 /PUT pdfmark%
11273 [%
11274 {Catalog}%
11275 <<%
11276 /AcroForm{aform}%
11277 >>%
11278 /PUT pdfmark%
11279 [%
11280 /_objdef{corder}%
11281 /type/array%
11282 /OBJ pdfmark% dps
11283 }}%
11284 \setkeys{Form}{#1}%
11285 }
11286 \def\@endForm{}
11287 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11288 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11289 }
11290 \def\@TextField[#1]#2{% parameters, label
11291 \def\Fld@name{#2}%
11292 \def\Fld@default{}%
11293 \let\Fld@value\@empty
11294 \def\Fld@width{\DefaultWidthofText}%
11295 \def\Fld@height{%
11296 \ifFld@multiline
11297 \DefaultHeightofTextMultiline
11298 \else
11299 \DefaultHeightofText
11300 \fi
11301 }%
11302 \begingroup
11303 \Field@toks={}%
11304 \expandafter\HyField@SetKeys\expandafter{%
11305 \DefaultOptionsofText,#1%
11306 }%
11307 \HyField@FlagsText

```

```

11308 \ifFld@hidden\def\Fld@width{1sp}\fi
11309 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11310 \LayoutTextField{#2}{%
11311   \Hy@escapeform\PDFForm@Text
11312   \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11313     pdfmark=/ANN,Raw={\PDFForm@Text}%
11314   }%
11315 }%
11316 \endgroup
11317 }
11318 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11319   \def\Fld@name{#2}%
11320   \let\Fld@default\relax
11321   \let\Fld@value\relax
11322   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11323   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11324   \begingroup
11325     \Fld@menulength=0 %
11326     \@tempdima\z@
11327     \@for\@curropt:=#3\do{%
11328       \expandafter\Fld@checkequals\@curropt==\%
11329       \Hy@StepCount\Fld@menulength
11330       \settowidth{\@tempdimb}{\@currDisplay}%
11331       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11332     }%
11333     \advance\@tempdima by 15\p@
11334     \Field@toks={ }%
11335     \begingroup
11336       \HyField@SetKeys{#1}%
11337     \edef\x{\endgroup
11338       \noexpand\expandafter
11339       \noexpand\HyField@SetKeys
11340       \noexpand\expandafter{%
11341         \expandafter\noexpand\csname DefaultOptionsof%
11342           \ifFld@radio
11343             Radio%
11344           \else
11345             \ifFld@combo
11346               \ifFld@popdown
11347                 PopdownBox%
11348               \else
11349                 ComboBox%
11350             \fi
11351           \else
11352             ListBox%
11353           \fi
11354         \fi
11355       \endcsname
11356     }%
11357   }\x
11358   \HyField@SetKeys{#1}%
11359   \ifFld@hidden\def\Fld@width{1sp}\fi
11360   \ifx\Fld@value\relax
11361     \let\Fld@value\Fld@default
11362   \fi
11363   \LayoutChoiceField{#2}{%
11364     \ifFld@radio

```



```

11365 \HyField@FlagsRadioButton
11366 \@@Radio{#3}%
11367 \else
11368 \beginngroup
11369 \HyField@FlagsChoice
11370 \ifdim\Fld@width<\@tempdima
11371 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11372 \edef\Fld@width{\the\@tempdima}%
11373 \fi
11374 \ifFld@combo
11375 \else
11376 \@tempdima=\the\Fld@menulength\Fld@charsize
11377 \advance\@tempdima by \Fld@borderwidth bp %
11378 \advance\@tempdima by \Fld@borderwidth bp %
11379 \edef\Fld@height{\the\@tempdima}%
11380 \fi
11381 \@@ListBox{#3}%
11382 \endgroup
11383 \fi
11384 }%
11385 \endgroup
11386 }
11387 \def\@@Radio#1{%
11388 \Fld@listcount=0 %
11389 \for\@curropt:=#1\do{%
11390 \expandafter\Fld@checkequals\@curropt==\%
11391 \Hy@StepCount\Fld@listcount
11392 \@currDisplay\space
11393 \Hy@escapeform\PDFForm@Radio
11394 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11395 pdfmark=/ANN,%
11396 Raw={%
11397 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11398 }%
11399 } % deliberate space between radio buttons
11400 }%
11401 }
11402 \newcount\Fld@listcount
11403 \def\@@ListBox#1{%
11404 \HyField@PDFChoices{#1}%
11405 \Hy@escapeform\PDFForm@List
11406 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11407 pdfmark=/ANN,Raw={\PDFForm@List}%
11408 }%
11409 }
11410 \def\@PushButton[#1]#2{% parameters, label
11411 \def\Fld@name{#2}%
11412 \beginngroup
11413 \Field@toks={ }%
11414 \expandafter\HyField@SetKeys\expandafter{%
11415 \DefaultOptionsofPushButton,#1%
11416 }%
11417 \ifHy@pdfa
11418 \PackageError{hyperref}{%
11419 PDF/A: Push button with JavaScript is prohibited%
11420 }\@ehc
11421 \LayoutPushButtonField{%

```

```

11422     \leavevmode
11423     \MakeButtonField{#2}%
11424   }%
11425 \else
11426   \HyField@FlagsPushButton
11427   \ifFld@hidden\def\Fld@width{1sp}\fi
11428   \LayoutPushButtonField{%
11429     \leavevmode
11430     \Hy@escapeform\PDFForm@Push
11431     \pdfmark[\MakeButtonField{#2}]{%
11432       pdfmark=/ANN,Raw={\PDFForm@Push}%
11433     }%
11434   }%
11435 \fi
11436 \endgroup
11437 }
11438 \def\@Submit[#1]#2{%
11439   \Field@toks={ }%
11440   \def\Fld@width{\DefaultWidthofSubmit}%
11441   \def\Fld@height{\DefaultHeightofSubmit}%
11442   \begingroup
11443     \expandafter\HyField@SetKeys\expandafter{%
11444       \DefaultOptionsofSubmit,#1%
11445     }%
11446     \HyField@FlagsPushButton
11447     \HyField@FlagsSubmit
11448     \ifFld@hidden\def\Fld@width{1sp}\fi
11449     \Hy@escapeform\PDFForm@Submit
11450     \pdfmark[\MakeButtonField{#2}]{%
11451       pdfmark=/ANN,%
11452       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11453     }%
11454   \endgroup
11455 }
11456 \def\@Reset[#1]#2{%
11457   \Field@toks={ }%
11458   \def\Fld@width{\DefaultWidthofReset}%
11459   \def\Fld@height{\DefaultHeightofReset}%
11460   \begingroup
11461     \expandafter\HyField@SetKeys\expandafter{%
11462       \DefaultOptionsofReset,#1%
11463     }%
11464     \leavevmode
11465     \ifHy@pdfa
11466       \PackageError{hyperref}{%
11467         PDF/A: Reset action is prohibited%
11468       }\@ehc
11469       \MakeButtonField{#2}%
11470   \else
11471     \HyField@FlagsPushButton
11472     \ifFld@hidden\def\Fld@width{1sp}\fi
11473     \Hy@escapeform\PDFForm@Reset
11474     \pdfmark[\MakeButtonField{#2}]{%
11475       pdfmark=/ANN,Raw={\PDFForm@Reset}%
11476     }%
11477   \fi
11478 \endgroup

```

```

11479 }%
11480 \def\@CheckBox[#1]#2{% parameters, label
11481   \def\Fld@name{#2}%
11482   \def\Fld@default{0}%
11483   \begingroup
11484     \def\Fld@width{\DefaultWidthofCheckBox}%
11485     \def\Fld@height{\DefaultHeightofCheckBox}%
11486     \Field@toks={ }%
11487     \expandafter\HyField@SetKeys\expandafter{%
11488       \DefaultOptionsofCheckBox,#1%
11489     }%
11490     \HyField@FlagsCheckBox
11491     \ifFld@hidden\def\Fld@width{1sp}\fi
11492     \LayoutCheckField{#2}{%
11493       \Hy@escapeform\PDFForm@Check
11494       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11495         pdfmark=/ANN,Raw={\PDFForm@Check}%
11496       }%
11497     }%
11498   \endgroup
11499 }
11500 \</pdfmark>

```

47.2 HyperTeX

```

11501 \<hypertex>
11502 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11503 \def\@endForm{}
11504 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11505   \typeout{Sorry, HyperTeX does not support FORM gauges}%
11506 }
11507 \def\@TextField[#1]#2{% parameters, label
11508   \typeout{Sorry, HyperTeX does not support FORM text fields}%
11509 }
11510 \def\@CheckBox[#1]#2{% parameters, label
11511   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11512 }
11513 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11514   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11515 }
11516 \def\@PushButton[#1]#2{% parameters, label
11517   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11518 }
11519 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11520 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11521 \</hypertex>

```

47.3 TeX4ht

```

11522 \<tex4ht>
11523 \def\@Form[#1]{%
11524   \setkeys{Form}{#1}%
11525   \HCode{<form action="\Form@action" method="\Form@method">}%
11526 }
11527 \def\@endForm{\HCode{</form>}}
11528 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11529   \typeout{Sorry, TeX4ht does not support gauges}%
11530 }
11531 \def\@TextField[#1]#2{% parameters, label

```

```

11532 \let\Hy@reserved@a\@empty
11533 \def\Fld@name{#2}%
11534 \def\Fld@default{}%
11535 \bgroup
11536 \Field@toks={ }%
11537 \setkeys{Field}{#1}%
11538 \HCode{<label for="\Fld@name">#2</label>}%
11539 \ifFld@password
11540 \@@PasswordField
11541 \else
11542 \@@TextField
11543 \fi
11544 \egroup
11545 }
11546 \def\@@PasswordField{%
11547 \HCode{%
11548 <input type="password" %
11549 id="\Fld@name" %
11550 name="\Fld@name" %
11551 \ifFld@hidden type="hidden" \fi
11552 value="\Fld@default" %
11553 \the\Field@toks
11554 >%
11555 }%
11556 }
11557 \def\@@TextField{%
11558 \ifFld@multiline
11559 \HCode{<textarea %
11560 \ifFld@readonly readonly \fi
11561 id="\Fld@name" %
11562 name="\Fld@name" %
11563 \ifFld@hidden type="hidden" \fi
11564 \the\Field@toks>%
11565 }%
11566 \Fld@default
11567 \HCode{</textarea>}%
11568 \else
11569 \HCode{<input type="text" %
11570 \ifFld@readonly readonly \fi
11571 id="\Fld@name" %
11572 name="\Fld@name" %
11573 \ifFld@hidden type="hidden" \fi
11574 value="\Fld@default" %
11575 \the\Field@toks>%
11576 }%
11577 \fi
11578 }
11579 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11580 \def\Fld@name{#2}%
11581 \def\Fld@default{}%
11582 \let\Hy@reserved@a\relax
11583 \begingroup
11584 \expandafter\Fld@findlength#3\\%
11585 \Field@toks={ }%
11586 \setkeys{Field}{#1}%
11587 #2%
11588 \ifFld@radio

```

```

11589     \expandafter\@@Radio#3\\%
11590     \else
11591         \expandafter\@@Menu#3\\%
11592     \fi
11593 \endgroup
11594 }
11595 \def\Fld@findlength#1\\{%
11596     \Fld@menulength=0 %
11597     \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11598 }
11599 \def\@@Menu#1\\{%
11600     \HCode{<select size="\the\Fld@menulength" %
11601         name="\Fld@name" %
11602         \the\Field@toks>%
11603     }%
11604     \@for\@curropt:=#1\do{%
11605         \expandafter\Fld@checkequals\@curropt==\\%
11606         \HCode{<option %
11607             \ifx\@curropt\Fld@default selected \fi
11608             value="\@currValue">\@currDisplay</option>%
11609         }%
11610     }%
11611     \HCode{</select>}%
11612 }
11613 \def\@@Radio#1\\{%
11614     \@for\@curropt:=#1\do{%
11615         \expandafter\Fld@checkequals\@curropt==\\%
11616         \HCode{<input type="radio" %
11617             \ifx\@curropt\Fld@default checked \fi
11618             name="\Fld@name" %
11619             value="\@currValue" %
11620             \the\Field@toks>%
11621         }%
11622         \@currDisplay
11623     }%
11624 }
11625 \def\@PushButton[#1]#2{% parameters, label
11626     \def\Fld@name{#2}%
11627     \bgroup
11628     \Field@toks={ }%
11629     \setkeys{Field}{#1}%
11630     \HCode{<input type="button" %
11631         name="\Fld@name" %
11632         value="#2" %
11633         \the\Field@toks>%
11634     }%
11635     \HCode{</button>}%
11636 \egroup
11637 }
11638 \def\@Submit[#1]#2{%
11639     \HCode{<button type="submit">#2</button>}%
11640 }
11641 \def\@Reset[#1]#2{%
11642     \HCode{<button type="reset">#2</button>}%
11643 }
11644 \def\@CheckBox[#1]#2{% parameters, label
11645     \let\Hy@reserved@a\@empty

```

```

11646 \def\Fld@name{#2}%
11647 \def\Fld@default{0}%
11648 \bgroup
11649 \Field@toks={ }%
11650 \setkeys{Field}{#1}%
11651 \HCode{<input type="checkbox" %
11652 \ifFld@checked checked \fi
11653 \ifFld@disabled disabled \fi
11654 \ifFld@readonly readonly \fi
11655 name="\Fld@name" %
11656 \ifFld@hidden type="hidden" \fi
11657 value="\Fld@default" %
11658 \the\Field@toks>%
11659 #2%
11660 }%
11661 \egroup
11662 }
11663 </tex4ht>

```

47.4 pdfTeX

```

11664 <*pdfTeX>
11665 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11666 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11667 }
11668 \def\MakeFieldObject#1#2{\sbox0{#1}%
11669 \immediate\pdfxform0 %
11670 \expandafter\edef\csname #2Object\endcsname{%
11671 \the\pdfastxform\space 0 R%
11672 }%
11673 % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
11674 }%
11675 \def\HyField@afields{}
11676 \begingroup\expandafter\expandafter\expandafter\endgroup
11677 \expandafter\ifx\csname pdfastlink\endcsname\relax
11678 \let\HyField@AddToFields\relax
11679 \PackageInfo{hyperref}{%
11680 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11681 \MessageBreak
11682 Adobe Reader/Acrobat accepts an empty /Field array,%
11683 \MessageBreak
11684 but other PDF viewers might complain%
11685 }%
11686 \else
11687 \def\HyField@AuxAddToFields#1{%
11688 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
11689 \Hy@AtBeginDocument{%
11690 \if@filesw
11691 \immediate\write\@mainaux{%
11692 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11693 }%
11694 \fi
11695 \let\HyField@AfterAuxOpen\@firstofone
11696 \def\HyField@AuxAddToFields#1{%
11697 \xdef\HyField@afields{%
11698 \ifx\HyField@afields\@empty
11699 \else
11700 \HyField@afields

```

```

11701     \space
11702     \fi
11703     #1 0 R%
11704   }%
11705 }%
11706 }%
11707 \def\HyField@AddToFields{%
11708   \expandafter\HyField@@AddToFields\expandafter{%
11709     \the\pdfastlink
11710   }%
11711 }%
11712 \def\HyField@@AddToFields#1{%
11713   \HyField@AfterAuxOpen{%
11714     \if@filesw
11715       \write\@mainaux{%
11716         \string\HyField@AuxAddToFields{#1}%
11717       }%
11718     \fi
11719   }%
11720 }%
11721 \fi
11722 \def\@Form[#1]{%
11723   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11724   \setkeys{Form}{#1}%
11725   \Hy@FormObjects
11726   \ifnum\pdfTeXversion>13 %
11727     \pdfrefobj\OBJ@pdfdocencoding
11728     \pdfrefobj\OBJ@ZaDb
11729     \pdfrefobj\OBJ@Helv
11730   \fi
11731   \AtVeryEndDocument{%
11732     \immediate\pdfobj{%
11733       <<%
11734         /Fields[\HyField@afields]%
11735         /DR<<%
11736         /Font<<%
11737           /ZaDb \OBJ@ZaDb\space 0 R%
11738           /Helv \OBJ@Helv\space 0 R%
11739         >>%
11740       >>%
11741       /DA(/Helv 10 Tf 0 g)%
11742       \ifHy@pdfa
11743       \else
11744         /NeedAppearances true%
11745       \fi
11746     >>%
11747   }%
11748   \edef\OBJ@acroform{\the\pdfastobj}%
11749   \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11750 }%
11751 \MakeFieldObject{%

Same as \ding{123} of package pifont.
11752   \begingroup
11753   \fontfamily{pzd}%
11754   \fontencoding{U}%
11755   \fontseries{m}%
11756   \fontshape{n}%

```

```

11757 \selectfont
11758 \char123 %
11759 \endgroup
11760 }{Ding}%
11761 \MakeFieldObject{%
11762 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11763 }{Submit}%
11764 \MakeFieldObject{%
11765 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11766 }{SubmitP}%
11767 }
11768 \def\@endForm{}
11769 \def\@TextField[#1]#2{% parameters, label
11770 \def\Fld@name{#2}%
11771 \def\Fld@default{}%
11772 \let\Fld@value\@empty
11773 \def\Fld@width{\DefaultWidthofText}%
11774 \def\Fld@height{%
11775 \ifFld@multiline
11776 \DefaultHeightofTextMultiline
11777 \else
11778 \DefaultHeightofText
11779 \fi
11780 }%
11781 \begingroup
11782 \Field@toks={}%
11783 \expandafter\HyField@SetKeys\expandafter{%
11784 \DefaultOptionsofText,#1%
11785 }%
11786 \PDFForm@Name
11787 \HyField@FlagsText
11788 \ifFld@hidden\def\Fld@width{1sp}\fi
11789 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11790 \LayoutTextField{#2}{%
11791 \Hy@escapeform\PDFForm@Text
11792 \pdfstartlink user {\PDFForm@Text}\relax
11793 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11794 \HyField@AddToFields
11795 }%
11796 \endgroup
11797 }
11798 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11799 \def\Fld@name{#2}%
11800 \let\Fld@default\relax
11801 \let\Fld@value\relax
11802 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11803 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11804 \begingroup
11805 \Fld@menulength=0 %
11806 \@tempdima\z@
11807 \@for\@curropt:=#3\do{%
11808 \expandafter\Fld@checkequals\@curropt==\%
11809 \Hy@StepCount\Fld@menulength
11810 \settowidth{\@tempdimb}{\@currDisplay}%
11811 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11812 }%
11813 \advance\@tempdima by 15\p@

```



```

11814 \Field@toks={ }%
11815 \begingroup
11816 \HyField@SetKeys{#1}%
11817 \edef\x{\endgroup
11818 \noexpand\expandafter
11819 \noexpand\HyField@SetKeys
11820 \noexpand\expandafter{%
11821 \expandafter\noexpand\csname DefaultOptionsof%
11822 \ifFld@radio
11823 Radio%
11824 \else
11825 \ifFld@combo
11826 \ifFld@popdown
11827 PopdownBox%
11828 \else
11829 ComboBox%
11830 \fi
11831 \else
11832 ListBox%
11833 \fi
11834 \fi
11835 \endcsname
11836 }%
11837 }\x
11838 \HyField@SetKeys{#1}%
11839 \PDFForm@Name
11840 \ifFld@hidden\def\Fld@width{1sp}\fi
11841 \ifx\Fld@value\relax
11842 \let\Fld@value\Fld@default
11843 \fi
11844 \LayoutChoiceField{#2}{%
11845 \ifFld@radio
11846 \HyField@FlagsRadioButton
11847 \@@Radio{#3}%
11848 \else
11849 \begingroup
11850 \HyField@FlagsChoice
11851 \ifdim\Fld@width<\@tempdima
11852 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11853 \edef\Fld@width{\the\@tempdima}%
11854 \fi
11855 \ifFld@combo
11856 \else
11857 \@tempdima=\the\Fld@menulength\Fld@charsize
11858 \advance\@tempdima by \Fld@borderwidth bp %
11859 \advance\@tempdima by \Fld@borderwidth bp %
11860 \edef\Fld@height{\the\@tempdima}%
11861 \fi
11862 \@@ListBox{#3}%
11863 \endgroup
11864 \fi
11865 }%
11866 \endgroup
11867 }
11868 \def\@@Radio#1{%
11869 \Fld@listcount=0 %
11870 \@for\@curropt=#1\do{%

```

```

11871 \expandafter\Fld@checkequals\@curropt==\\%
11872 \Hy@StepCount\Fld@listcount
11873 \@currDisplay\space
11874 \leavevmode
11875 \Hy@escapeform\PDFForm@Radio
11876 \pdfstartlink user {%
11877 \PDFForm@Radio
11878 /AP<<%
11879 /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.

```

11880 \/\@currValue\space \DingObject
11881 >>%
11882 >>%
11883 }%
11884 \relax
11885 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11886 \ifnum\Fld@listcount=1 %
11887 \HyField@AddToFields
11888 \fi
11889 \space % deliberate space between radio buttons
11890 }%
11891 }
11892 \newcount\Fld@listcount
11893 \def\@@ListBox#1{%
11894 \HyField@PDFChoices{#1}%
11895 \leavevmode
11896 \Hy@escapeform\PDFForm@List
11897 \pdfstartlink user {\PDFForm@List}\relax
11898 \MakeChoiceField{\Fld@width}{\Fld@height}%
11899 \pdfendlink
11900 \HyField@AddToFields
11901 }
11902 \def\@PushButton[#1]#2{% parameters, label
11903 \def\Fld@name{#2}%
11904 \begingroup
11905 \Field@toks={ }%
11906 \expandafter\HyField@SetKeys\expandafter{%
11907 \DefaultOptionsofPushButton,#1%
11908 }%
11909 \PDFForm@Name
11910 \ifHy@pdfa
11911 \PackageError{hyperref}{%
11912 PDF/A: Push button with JavaScript is prohibited%
11913 }\@ehc
11914 \LayoutPushButtonField{%
11915 \leavevmode
11916 \MakeButtonField{#2}%
11917 }%
11918 \else
11919 \HyField@FlagsPushButton
11920 \ifFld@hidden\def\Fld@width{1sp}\fi
11921 \LayoutPushButtonField{%
11922 \leavevmode
11923 \Hy@escapeform\PDFForm@Push
11924 \pdfstartlink user {\PDFForm@Push}\relax

```

```

11925     \MakeButtonField{#2}%
11926     \pdfendlink
11927     \HyField@AddToFields
11928   }%
11929   \fi
11930 \endgroup
11931 }
11932 \def\@Submit[#1]#2{%
11933   \Field@toks={ }%
11934   \def\Fld@width{\DefaultWidthofSubmit}%
11935   \def\Fld@height{\DefaultHeightofSubmit}%
11936   \begingroup
11937     \expandafter\HyField@SetKeys\expandafter{%
11938       \DefaultOptionsofSubmit,#1%
11939     }%
11940     \HyField@FlagsPushButton
11941     \HyField@FlagsSubmit
11942     \ifFld@hidden\def\Fld@width{1sp}\fi
11943     \leavevmode
11944     \Hy@escapeform\PDFForm@Submit
11945     \pdfstartlink user {%
11946       \PDFForm@Submit
11947       /AP<</N \SubmitObject/D \SubmitPObject>>%
11948     }%
11949     \relax
11950     \MakeButtonField{#2}%
11951     \pdfendlink
11952     \HyField@AddToFields
11953 \endgroup
11954 }
11955 \def\@Reset[#1]#2{%
11956   \Field@toks={ }%
11957   \def\Fld@width{\DefaultWidthofReset}%
11958   \def\Fld@height{\DefaultHeightofReset}%
11959   \begingroup
11960     \expandafter\HyField@SetKeys\expandafter{%
11961       \DefaultOptionsofReset,#1%
11962     }%
11963     \leavevmode
11964     \ifHy@pdfa
11965       \PackageError{hyperref}{%
11966         PDF/A: Reset action is prohibited%
11967       }\@ehc
11968       \MakeButtonField{#2}%
11969     \else
11970       \HyField@FlagsPushButton
11971       \ifFld@hidden\def\Fld@width{1sp}\fi
11972       \Hy@escapeform\PDFForm@Reset
11973       \pdfstartlink user {\PDFForm@Reset}\relax
11974       \MakeButtonField{#2}%
11975       \pdfendlink
11976       \HyField@AddToFields
11977     \fi
11978 \endgroup
11979 }
11980 \def\@CheckBox[#1]#2{% parameters, label
11981   \def\Fld@name{#2}%

```

```

11982 \def\Fld@default{0}%
11983 \begingroup
11984 \def\Fld@width{\DefaultWidthofCheckBox}%
11985 \def\Fld@height{\DefaultHeightofCheckBox}%
11986 \Field@toks={ }%
11987 \expandafter\HyField@SetKeys\expandafter{%
11988   \DefaultOptionsofCheckBox,#1%
11989 }%
11990 \PDFForm@Name
11991 \HyField@FlagsCheckBox
11992 \ifFld@hidden\def\Fld@width{1sp}\fi
11993 \LayoutCheckField{#2}{%
11994   \Hy@escapeform\PDFForm@Check
11995   \pdfstartlink user {\PDFForm@Check}\relax
11996   \MakeCheckField{\Fld@width}{\Fld@height}%
11997   \pdfendlink
11998   \HyField@AddToFields
11999 }%
12000 \endgroup
12001 }
12002 \def\Hy@FormObjects{%
12003 \pdfobj {%
12004   <<%
12005     /Type/Encoding%
12006     /Differences%
12007     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12008     /ring/tilde %
12009     39/quotesingle %
12010     96/grave %
12011     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12012     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12013     /quotedblbase/quotedblleft/quotedblright/quoteleft%
12014     /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12015     /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12016     164/currency %
12017     166/brokenbar %
12018     168/dieresis/copyright/ordfeminine %
12019     172/logicalnot/.notdef/registered/macron/degree/plusminus%
12020     /twosuperior/threesuperior/acute/mu %
12021     183/periodcentered/cedilla/onesuperior/ordmasculine %
12022     188/onequarter/onehalf/threequarters %
12023     192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12024     /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12025     /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12026     /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12027     /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12028     /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
12029     /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12030     /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12031     /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12032     /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12033   ]%
12034   >>%
12035 }%
12036 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12037 \pdfobj{%
12038   <<%

```

```

12039 /Type/Font%
12040 /Subtype/Type1%
12041 /Name/ZaDb%
12042 /BaseFont/ZapfDingbats%
12043 >>%
12044 }%
12045 \xdef\OBJ@ZaDb{\the\pdfastobj}%
12046 \pdfobj{%
12047 <<%
12048 /Type/Font%
12049 /Subtype/Type1%
12050 /Name/Helv%
12051 /BaseFont/Helvetica%
12052 /Encoding \OBJ@pdfdocencoding\space 0 R%
12053 >>%
12054 }%
12055 \xdef\OBJ@Helv{\the\pdfastobj}%
12056 \global\let\Hy@FormObjects\relax
12057 }
12058 \pdfTeX

```

47.5 dvipdfm, xetex

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

```
12059 \*dvipdfm | xetex
```

\@Gauge

```

12060 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12061 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12062 }

```

\@Form

```

12063 \def\@Form[#1]{%
12064 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12065 \setkeys{Form}{#1}%
12066 \Hy@FormObjects
12067 \@pdfm@mark{obj @afields []}%
12068 \@pdfm@mark{obj @corder []}%
12069 \@pdfm@mark{%
12070 obj @aform <<%
12071 /Fields @afields%
12072 /DR<<%
12073 /Font<<%
12074 /ZaDb @OBJZaDb%
12075 /Helv @OBJHelv%
12076 >>%
12077 >>%
12078 /DA(/Helv 10 Tf 0 g)%
12079 /CO @corder%
12080 \ifHy@pdfa
12081 \else
12082 /NeedAppearances true%
12083 \fi
12084 >>%
12085 }%
12086 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
12087 }

```

\@endForm

12088 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

12089 \def\dvipdfm@setdim{%
12090 height \the\ht\pdfm@box\space
12091 width \the\wd\pdfm@box\space
12092 depth \the\dp\pdfm@box\space
12093 }

\HyField@AnnotCount

12094 \newcount\HyField@AnnotCount
12095 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount

12096 \def\HyField@AdvanceAnnotCount{%
12097 \global\advance\HyField@AnnotCount\@ne
12098 }

\HyField@TheAnnotCount

12099 \def\HyField@TheAnnotCount{%
12100 \the\HyField@AnnotCount
12101 }

\@TextField

12102 \def\@TextField[#1]#2{% parameters, label
12103 \def\Fld@name{#2}%
12104 \def\Fld@default{}%
12105 \let\Fld@value\@empty
12106 \def\Fld@width{\DefaultWidthofText}%
12107 \def\Fld@height{%
12108 \ifFld@multiline
12109 \DefaultHeightofTextMultiline
12110 \else
12111 \DefaultHeightofText
12112 \fi
12113 }%
12114 \begingroup
12115 \Field@toks={ }%
12116 \expandafter\HyField@SetKeys\expandafter{%
12117 \DefaultOptionsofText,#1%
12118 }%
12119 \PDFForm@Name
12120 \HyField@FlagsText
12121 \ifFld@hidden\def\Fld@width{1sp}\fi
12122 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12123 \setbox\pdfm@box=\hbox{%
12124 \MakeTextField{\Fld@width}{\Fld@height}%
12125 }%
12126 \HyField@AdvanceAnnotCount
12127 \LayoutTextField{#2}{%
12128 \Hy@escapeform\PDFForm@Text
12129 \@pdfm@mark{%
12130 ann @text\HyField@TheAnnotCount\space
12131 \dvipdfm@setdim << \PDFForm@Text >>%
12132 }%

```

12133 }%
12134 \unhbox\pdfm@box
12135 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12136 % record in @afields array
12137 \endgroup
12138 }

```

\@ChoiceMenu

```

12139 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12140 \def\Fld@name{#2}%
12141 \let\Fld@default\relax
12142 \let\Fld@value\relax
12143 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12144 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12145 \begingroup
12146 \Fld@menulength=0 %
12147 \@tempdima\z@
12148 \@for\@curropt:=#3\do{%
12149 \expandafter\Fld@checkequals\@curropt==\%
12150 \Hy@StepCount\Fld@menulength
12151 \settowidth{\@tempdimb}{\@currDisplay}%
12152 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12153 }%
12154 \advance\@tempdima by 15\p@
12155 \Field@toks={ }%
12156 \begingroup
12157 \HyField@SetKeys{#1}%
12158 \edef\x{\endgroup
12159 \noexpand\expandafter
12160 \noexpand\HyField@SetKeys
12161 \noexpand\expandafter{%
12162 \expandafter\noexpand\csname DefaultOptionsof%
12163 \ifFld@radio
12164 Radio%
12165 \else
12166 \ifFld@combo
12167 \ifFld@popdown
12168 PopdownBox%
12169 \else
12170 ComboBox%
12171 \fi
12172 \else
12173 ListBox%
12174 \fi
12175 \fi
12176 \endcsname
12177 }%
12178 }\x
12179 \HyField@SetKeys{#1}%
12180 \PDFForm@Name
12181 \ifFld@hidden\def\Fld@width{1sp}\fi
12182 \ifx\Fld@value\relax
12183 \let\Fld@value\Fld@default
12184 \fi
12185 \LayoutChoiceField{#2}{%
12186 \ifFld@radio
12187 \HyField@FlagsRadioButton

```

```

12188 \@@Radio{#3}%
12189 \else
12190 \beginingroup
12191 \HyField@FlagsChoice
12192 \ifdim\Fld@width<\@tempdima
12193 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12194 \edef\Fld@width{\the\@tempdima}%
12195 \fi
12196 \ifFld@combo
12197 \else
12198 \@tempdima=\the\Fld@menulength\Fld@charsize
12199 \advance\@tempdima by \Fld@borderwidth bp %
12200 \advance\@tempdima by \Fld@borderwidth bp %
12201 \edef\Fld@height{\the\@tempdima}%
12202 \fi
12203 \@@ListBox{#3}%
12204 \endgroup
12205 \fi
12206 }%
12207 \endgroup
12208 }

```

\@@Radio

```

12209 \def\@@Radio#1{%
12210 \Fld@listcount=0 %
12211 \setbox\pdfm@box=\hbox{%
12212 \MakeRadioField{\Fld@width}{\Fld@height}%
12213 }%
12214 \@for\@curropt:=#1\do{%
12215 \expandafter\Fld@checkequals\@curropt==\%
12216 \Hy@StepCount\Fld@listcount
12217 \@currDisplay\space
12218 \leavevmode
12219 \Hy@escapeform\PDFForm@Radio
12220 \ifnum\Fld@listcount=1 %
12221 \HyField@AdvanceAnnotCount
12222 \fi
12223 \@pdfm@mark{%
12224 ann %
12225 \ifnum\Fld@listcount=1 %
12226 @radio\HyField@TheAnnotCount%
12227 \space
12228 \fi
12229 \dvi pdfm@setdim
12230 <<%
12231 \PDFForm@Radio
12232 /AP<</N<</\@currValue /null>>>>%
12233 >>%
12234 }%
12235 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12236 \ifnum\Fld@listcount=1 %
12237 \@pdfm@mark{%
12238 put @aflds @radio\HyField@TheAnnotCount
12239 }%
12240 \fi
12241 }%
12242 }

```


\Fld@listcount

12243 \newcount\Fld@listcount

\@@Listbox

```
12244 \def\@@Listbox#1{%
12245   \HyField@PDFChoices{#1}%
12246   \setbox\pdfm@box=\hbox{%
12247     \MakeChoiceField{\Fld@width}{\Fld@height}%
12248   }%
12249   \leavevmode
12250   \Hy@escapeform\PDFForm@List
12251   \HyField@AdvanceAnnotCount
12252   \@pdfm@mark{%
12253     ann @list\HyField@TheAnnotCount\space
12254     \dvipdfm@setdim
12255     <<\PDFForm@List>>%
12256   }%
12257   \unhbox\pdfm@box
12258   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12259 }
```

\@PushButton

```
12260 \def\@PushButton[#1]#2{% parameters, label
12261   \def\Fld@name{#2}%
12262   \begingroup
12263     \Field@toks={ }%
12264     \expandafter\HyField@SetKeys\expandafter{%
12265       \DefaultOptionsofPushButton,#1%
12266     }%
12267     \PDFForm@Name
12268     \ifHy@pdfa
12269       \PackageError{hyperref}{%
12270         PDF/A: Push button with JavaScript is prohibited%
12271       }\@ehc
12272       \LayoutPushButtonField{%
12273         \leavevmode
12274         \MakeButtonField{#2}%
12275       }%
12276     \else
12277       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12278       \HyField@FlagsPushButton
12279       \ifFld@hidden\def\Fld@width{1sp}\fi
12280       \HyField@AdvanceAnnotCount
12281       \LayoutPushButtonField{%
12282         \leavevmode
12283         \Hy@escapeform\PDFForm@Push
12284         \@pdfm@mark{%
12285           ann @push\HyField@TheAnnotCount\space
12286           \dvipdfm@setdim
12287           <<\PDFForm@Push>>%
12288         }%
12289       }%
12290       \unhbox\pdfm@box
12291       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12292     \fi
12293   \endgroup
12294 }
```

\@Submit

```
12295 \def\@Submit[#1]#2{%
12296   \Field@toks={ }%
12297   \def\Fld@width{\DefaultWidthofSubmit}%
12298   \def\Fld@height{\DefaultHeightofSubmit}%
12299   \begingroup
12300     \expandafter\HyField@SetKeys\expandafter{%
12301       \DefaultOptionsofSubmit,#1%
12302     }%
12303     \HyField@FlagsPushButton
12304     \HyField@FlagsSubmit
12305     \ifFld@hidden\def\Fld@width{1sp}\fi
12306     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12307     \leavevmode
12308     \Hy@escapeform\PDFForm@Submit
12309     \HyField@AdvanceAnnotCount
12310     \@pdfm@mark{%
12311       ann @submit\HyField@TheAnnotCount\space
12312       \dvipdfm@setdim
12313       <<\PDFForm@Submit>>%
12314     }%
12315     \unhbox\pdfm@box%
12316     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12317   \endgroup
12318 }
```

\@Reset

```
12319 \def\@Reset[#1]#2{%
12320   \Field@toks={ }%
12321   \def\Fld@width{\DefaultWidthofReset}%
12322   \def\Fld@height{\DefaultHeightofReset}%
12323   \begingroup
12324     \expandafter\HyField@SetKeys\expandafter{%
12325       \DefaultOptionsofReset,#1%
12326     }%
12327     \leavevmode
12328     \ifHy@pdfa
12329       \PackageError{hyperref}{%
12330         PDF/A: Reset action is prohibited%
12331       }\@ehc
12332       \MakeButtonField{#2}%
12333     \else
12334       \HyField@FlagsPushButton
12335       \ifFld@hidden\def\Fld@width{1sp}\fi
12336       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12337       \Hy@escapeform\PDFForm@Reset
12338       \HyField@AdvanceAnnotCount
12339       \@pdfm@mark{%
12340         ann @reset\HyField@TheAnnotCount\space
12341         \dvipdfm@setdim
12342         <<\PDFForm@Reset>>%
12343       }%
12344       \unhbox\pdfm@box
12345       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12346     \fi
12347   \endgroup
12348 }
```

\@CheckBox

```
12349 \def\@CheckBox[#1]#2{% parameters, label
12350 \def\Fld@name{#2}%
12351 \def\Fld@default{0}%
12352 \begingroup
12353 \def\Fld@width{\DefaultWidthofCheckBox}%
12354 \def\Fld@height{\DefaultHeightofCheckBox}%
12355 \Field@toks={ }%
12356 \expandafter\HyField@SetKeys\expandafter{%
12357 \DefaultOptionsofCheckBox,#1%
12358 }%
12359 \PDFForm@Name
12360 \HyField@FlagsCheckBox
12361 \ifFld@hidden\def\Fld@width{1sp}\fi
12362 \setbox\pdfm@box=\hbox{%
12363 \MakeCheckField{\Fld@width}{\Fld@height}%
12364 }%
12365 \HyField@AdvanceAnnotCount
12366 \LayoutCheckField{#2}{%
12367 \Hy@escapeform\PDFForm@Check
12368 \@pdfm@mark{%
12369 ann @check\HyField@TheAnnotCount\space
12370 \dvipdfm@setdim
12371 <<\PDFForm@Check>>%
12372 }%
12373 \unhbox\pdfm@box
12374 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12375 }%
12376 \endgroup
12377 }

12378 \def\Hy@FormObjects{%
12379 \@pdfm@mark{obj @OBJpdfdocencoding%
12380 <<%
12381 /Type/Encoding%
12382 /Differences[%
12383 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12384 39/quotesingle %
12385 96/grave %
12386 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12387 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12388 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12389 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12390 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12391 164/currency %
12392 166/brokenbar %
12393 168/dieresis/copyright/ordfeminine %
12394 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12395 /twosuperior/threesuperior/acute/mu %
12396 183/periodcentered/cedilla/onesuperior/ordmasculine %
12397 188/onequarter/onehalf/threequarters %
12398 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12399 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12400 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12401 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12402 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12403 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
```

```

12404      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12405      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12406      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12407      /thorn/ydieresis%
12408      ]%
12409      >>%
12410    }%
12411    \@pdfm@mark{obj @OBJZaDb%
12412      <<%
12413      /Type/Font%
12414      /Subtype/Type1%
12415      /Name/ZaDb%
12416      /BaseFont/ZapfDingbats%
12417      >>%
12418    }%
12419    \@pdfm@mark{obj @OBJHelv%
12420      <<%
12421      /Type/Font%
12422      /Subtype/Type1%
12423      /Name/Helv%
12424      /BaseFont/Helvetica%
12425      /Encoding @OBJpdfdocencoding%
12426      >>%
12427    }%
12428    \global\let\Hy@FormObjects\relax
12429  }
12430 </dvipdfm | xetex>

```

47.6 Common forms part

```

12431 <*pdfmform>

```

\Hy@escapestring

```

12432 \begingroup\expandafter\expandafter\expandafter\endgroup
12433 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12434   \let\Hy@escapestring\@firstofone
12435   \def\Hy@escapeform#1{%
12436     \ifHy@escapeform
12437       \def\Hy@escapestring##1{%
12438         \noexpand\Hy@escapestring{\noexpand##1}%
12439       }%
12440       \edef\Hy@temp{#1}%
12441       \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
12442     \def\Hy@escapestring##1{%
12443       \ifundefined{Hy@esc@\string##1}{%
12444         ##1%
12445         \ThisShouldNotHappen
12446       }{%
12447         \csname Hy@esc@\string##1\endcsname
12448       }%
12449     }%
12450   \else
12451     \let\Hy@escapestring\@firstofone
12452   \fi
12453 }%
12454 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
12455   \ifx\#3\%

```

```

12456 \else
12457 \expandafter
12458 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12459 \Hy@ReturnAfterFi{%
12460 \Hy@@escapeform#3\@nil
12461 }%
12462 \fi
12463 }%
12464 \else
12465 \def\Hy@escapeform#1{%
12466 \ifHy@escapeform
12467 \let\Hy@escapestring\pdfescapestring
12468 \else
12469 \let\Hy@escapestring\@firstofone
12470 \fi
12471 }%
12472 \Hy@escapeform{}}%
12473 \fi

```

\PDFForm@Name

```

12474 \def\PDFForm@Name{%
12475 \begingroup
12476 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12477 \ifHy@unicode
12478 \Hy@unicodedefalse
12479 \fi
12480 \fi
12481 \HyPsd@XeTeXBigCharstrue
12482 \pdfstringdef\Hy@gtemp\Fld@name
12483 \endgroup
12484 \let\Fld@name\Hy@gtemp
12485 }

```

\PDFForm@Check

```

12486 \def\PDFForm@Check{%
12487 /Subtype/Widget%
12488 \Fld@annotflags
12489 /T(\Fld@name)%
12490 /FT/Btn%
12491 \Fld@flags
12492 /Q \Fld@align
12493 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12494 /MK<<%
12495 \ifnum\Fld@rotation=\z@
12496 \else
12497 /R \Fld@rotation
12498 \fi
12499 \ifx\Fld@bordercolor\relax
12500 \else
12501 /BC[\Fld@bordercolor]%
12502 \fi
12503 \ifx\Fld@bcolor\relax
12504 \else
12505 /BG[\Fld@bcolor]%
12506 \fi
12507 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12508 >>%

```

```

12509 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12510 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12511 /H/P%
12512 \ifFld@checked /V/Yes\else /V/Off\fi
12513 }

```

\PDFForm@Push

```

12514 \ifHy@pdfa
12515 \else
12516 \def\PDFForm@Push{%
12517 /Subtype/Widget%
12518 \Fld@annotflags
12519 /T(\Fld@name)%
12520 /FT/Btn%
12521 \Fld@flags
12522 /H/P%
12523 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12524 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12525 \ifx\Fld@bordercolor\relax\else 1\fi
12526 \space
12527 \else
12528 /MK<<%
12529 \ifnum\Fld@rotation=\z@
12530 \else
12531 /R \Fld@rotation
12532 \fi
12533 \ifx\Fld@bordercolor\relax
12534 \else
12535 /BC[\Fld@bordercolor]%
12536 \fi
12537 >>%
12538 \fi
12539 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12540 }%
12541 \fi

```

\Fld@additionalactions

```

12542 \def\Fld@@additionalactions{%
K input (keystroke) format
12543 \ifx\Fld@keystroke@code\@empty
12544 \else
12545 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12546 \fi
F display format
12547 \ifx\Fld@format@code\@empty
12548 \else
12549 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12550 \fi
V validation
12551 \ifx\Fld@validate@code\@empty
12552 \else
12553 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12554 \fi
C calculation
12555 \ifx\Fld@calculate@code\@empty

```

```

12556 \else
12557   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12558 \fi

Fo receiving the input focus
12559 \ifx\Fld@onfocus@code\@empty
12560 \else
12561   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12562 \fi

Bl loosing the input focus (blurred)
12563 \ifx\Fld@onblur@code\@empty
12564 \else
12565   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12566 \fi

D pressing the mouse button (down)
12567 \ifx\Fld@onmousedown@code\@empty
12568 \else
12569   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12570 \fi

U releasing the mouse button (up)
12571 \ifx\Fld@onmouseup@code\@empty
12572 \else
12573   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12574 \fi

E cursor enters the annotation's active area.
12575 \ifx\Fld@onenter@code\@empty
12576 \else
12577   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12578 \fi

X cursor exits the annotation's active area.
12579 \ifx\Fld@onexit@code\@empty
12580 \else
12581   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12582 \fi
12583 }

12584 \def\Fld@additionalactions{%
12585 \if\Fld@@additionalactions-%
12586 \else
12587   \ifHy@pdfa
12588   \else
12589     /AA<<\Fld@@additionalactions>>%
12590   \fi
12591 \fi
12592 }

\PDFForm@List
12593 \def\PDFForm@List{%
12594 /Subtype/Widget%
12595 \Fld@annotflags
12596 /T(\Fld@name)%
12597 /FT/Ch%
12598 \Fld@flags
12599 /Q \Fld@align
12600 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12601 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```

```

12602         \ifx\Fld@bordercolor\relax\else 1\fi
12603         \ifx\Fld@bcolor\relax    \else 1\fi
12604         \space
12605     \else
12606         /MK<<%
12607         \ifnum\Fld@rotation=\z@
12608         \else
12609             /R \Fld@rotation
12610         \fi
12611         \ifx\Fld@bordercolor\relax
12612         \else
12613             /BC[\Fld@bordercolor]%
12614         \fi
12615         \ifx\Fld@bcolor\relax
12616         \else
12617             /BG[\Fld@bcolor]%
12618         \fi
12619         >>%
12620     \fi
12621     /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12622         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12623     \Fld@choices
12624     \Fld@additionalactions
12625 }

```

\PDFForm@Radio

```

12626 \def\PDFForm@Radio{%
12627     /Subtype/Widget%
12628     \Fld@annotflags
12629     /T(\Fld@name)%
12630     /FT/Btn%
12631     \Fld@flags
12632     /H/P%
12633     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12634     /MK<<%
12635         \ifnum\Fld@rotation=\z@
12636         \else
12637             /R \Fld@rotation
12638         \fi
12639         \ifx\Fld@bordercolor\relax
12640         \else
12641             /BC[\Fld@bordercolor]%
12642         \fi
12643         \ifx\Fld@bcolor\relax
12644         \else
12645             /BG[\Fld@bcolor]%
12646         \fi
12647         /CA(\Fld@radiosymbol)%
12648     >>%
12649     /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12650         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12651     \ifx\@currValue\Fld@default
12652         /V/\Fld@default
12653     \else
12654         /V/Off%
12655     \fi
12656     \Fld@additionalactions

```


12657 }

\PDFForm@Text

```
12658 \def\PDFForm@Text{%
12659   /Subtype/Widget%
12660   \Fld@annotflags
12661   /T(\Fld@name)%
12662   /FT/Tx%
12663   \Fld@flags
12664   /Q \Fld@align
12665   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12666   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12667     \ifx\Fld@bordercolor\relax\else 1\fi
12668     \ifx\Fld@bcolor\relax \else 1\fi
12669     \space
12670   \else
12671     /MK<<%
12672     \ifnum\Fld@rotation=\z@
12673     \else
12674       /R \Fld@rotation
12675     \fi
12676     \ifx\Fld@bordercolor\relax
12677     \else
12678       /BC[\Fld@bordercolor]%
12679     \fi
12680     \ifx\Fld@bcolor\relax
12681     \else
12682       /BG[\Fld@bcolor]%
12683     \fi
12684     >>%
12685   \fi
12686   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12687     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12688   /DV(\Hy@escapestring{\Fld@default})%
12689   /V(\Hy@escapestring{\Fld@value})%
12690   \Fld@additionalactions
12691   \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12692 }
```

\PDFForm@Submit

```
12693 \def\PDFForm@Submit{%
12694   /Subtype/Widget%
12695   \Fld@annotflags
12696   /T(\Fld@name)%
12697   /FT/Btn%
12698   \Fld@flags
12699   /H/P%
12700   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12701   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12702     \ifx\Fld@bordercolor\relax\else 1\fi
12703     \space
12704   \else
12705     /MK<<%
12706     \ifnum\Fld@rotation=\z@
12707     \else
12708       /R \Fld@rotation
12709     \fi
```

```

12710 \ifx\Fld@bordercolor\relax
12711 \else
12712 /BC[\Fld@bordercolor]%
12713 \fi
12714 >>%
12715 \fi
12716 /A<<%
12717 /S/SubmitForm%
12718 /F<<%
12719 /FS/URL%
12720 /F(\Hy@escapestring{\Form@action})%
12721 >>%
12722 \Fld@submitflags
12723 >>%
12724 }

```

\PDFForm@Reset

```

12725 \ifHy@pdfa
12726 \else
12727 \def\PDFForm@Reset{%
12728 /Subtype/Widget%
12729 \Fld@annotflags
12730 /T(\Fld@name)%
12731 /FT/Btn%
12732 \Fld@flags
12733 /H/P%
12734 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12735 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12736 \ifx\Fld@bordercolor\relax\else 1\fi
12737 \space
12738 \else
12739 /MK<<%
12740 \ifnum\Fld@rotation=\z@
12741 \else
12742 /R \Fld@rotation
12743 \fi
12744 \ifx\Fld@bordercolor\relax
12745 \else
12746 /BC[\Fld@bordercolor]%
12747 \fi
12748 % /CA (Clear)
12749 % /AC (Done)
12750 >>%
12751 \fi
12752 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12753 /A<</S/ResetForm>>%
12754 }%
12755 \fi

12756 </pdfform>
12757 <*package>

```

48 Bookmarks in the PDF file

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

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

```

12758 \def\phantomsection{%
12759   \Hy@MakeCurrentHrefAuto{section*}%
12760   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12761 }
12762 \end{package}

```

48.1 Bookmarks

12763 `*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.

```

12764 \def\Hy@writebookmark#1#2#3#4#5{%
12765   % section number, text, label, level, file
12766   \ifx\WriteBookmarks\relax%
12767   \else
12768     \ifnum#4>\Hy@bookmarksdepth\relax
12769     \else
12770       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12771     \fi
12772   \fi
12773 }
12774 \def\Hy@currentbookmarklevel{0}
12775 \def\Hy@numberline#1{#1 }
12776 \def\@@@writetorep#1#2#3#4#5{%
12777   \begingroup
12778     \edef\Hy@tempa{#5}%
12779     \ifx\Hy@tempa\Hy@bookmarkstype
12780       \edef\Hy@level{#4}%
12781       \ifx\Hy@levelcheck Y%
12782         \@tempcnta\Hy@level\relax
12783         \advance\@tempcnta by -1 %
12784         \ifnum\Hy@currentbookmarklevel<\@tempcnta
12785           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12786           \advance\@tempcnta by 1 %
12787         \Hy@Warning{%
12788           Difference (\the\@tempcnta) between bookmark levels is %
12789           greater \MessageBreak than one, level fixed%
12790         }%
12791         \@tempcnta\Hy@currentbookmarklevel

```

```

12792     \advance\@tempcnta by 1 %
12793     \edef\Hy@level{\the\@tempcnta}%
12794     \fi
12795     \else
12796     \global\let\Hy@levelcheck Y%
12797     \fi
12798     \global\let\Hy@currentbookmarklevel\Hy@level
12799     \@tempcnta\Hy@level\relax
12800     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12801     \advance\@tempcnta by -1 %
12802     \edef\Hy@tempa{#3}%
12803     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12804     \ifx\Hy@tempa\Hy@tempb
12805     \Hy@Warning{%
12806     The anchor of a bookmark and its parent's must not%
12807     \MessageBreak be the same. Added a new anchor%
12808     }%
12809     \phantomsection
12810     \fi
12811     \ifHy@bookmarksnumbered
12812     \let\numberline\Hy@numberline
12813     \let\partnumberline\Hy@numberline
12814     \let\chapternumberline\Hy@numberline
12815     \else
12816     \let\numberline\@gobble
12817     \let\partnumberline\@gobble
12818     \let\chapternumberline\@gobble
12819     \fi
12820     \HyPsd@XeTeXBigCharstrue
12821     \pdfstringdef\Hy@tempa{#2}%
12822     \HyPsd@SanitizeForOutFile\Hy@tempa
12823     \if@filesw
12824     \stepcounter{bookmark@seq@number}%
12825     \@ifundefined{@outlinefile}{%
12826     }{%
12827     \protected@write\@outlinefile}{%
12828     \protect\BOOKMARK
12829     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12830     {\Hy@tempa}{\Hy@tempb}%
12831     \@percentchar\space\thebookmark@seq@number
12832     }%
12833     }%
12834     \fi
12835     \fi
12836     \endgroup
12837 }
12838 \newcounter{bookmark@seq@number}
12839 \begingroup
12840 \lccode'('= '{%
12841 \lccode'='}%
12842 \lccode'1=\z@
12843 \lccode'2=\z@
12844 \lccode'3=\z@
12845 \lccode'5=\z@
12846 \lccode'7=\z@
12847 \lccode'#= \z@
12848 \lccode'\=' \z@

```

```

12849 \lccode'\{=\z@
12850 \lccode'\}=\z@
12851 \lowercase{%
12852 \endgroup
12853 \def\HyPsd@SanitizeForOutFile#1{%
12854   \@onelevel@sanitize\Hy@tempa
12855   \escapechar'\%
12856   \edef\Hy@tempa{%
12857     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
12858   }%
12859   \edef\Hy@tempa{%
12860     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
12861   }%
12862 }%
12863 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
12864   #1%
12865   \ifx\#2\%
12866     \expandafter\ltx@gobble
12867   \else
12868     \expandafter\ltx@firstofone
12869   \fi
12870   {%
12871     \string\173%
12872     \HyPsd@SanitizeOut@BraceLeft#2\@nil
12873   }%
12874 }%
12875 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
12876   #1%
12877   \ifx\#2\%
12878     \expandafter\ltx@gobble
12879   \else
12880     \expandafter\ltx@firstofone
12881   \fi
12882   {%
12883     \string\175%
12884     \HyPsd@SanitizeOut@BraceRight#2\@nil
12885   }%
12886 }%
12887 }

```

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

```

12888 \newcommand{\currentpdfbookmark}{%
12889   \pdfbookmark[\Hy@currentbookmarklevel]%
12890 }
12891 \newcommand{\subpdfbookmark}{%
12892   \@tempcnta\Hy@currentbookmarklevel
12893   \Hy@StepCount\@tempcnta
12894   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12895 }
12896 \newcommand{\belowpdfbookmark}[2]{%
12897   \@tempcnta\Hy@currentbookmarklevel
12898   \Hy@StepCount\@tempcnta
12899   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12900   \advance\@tempcnta by -1 %
12901   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12902 }

```

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.

```

12903 \renewcommand\pdfbookmark[3][0]{%
12904   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12905   \hyper@anchorstart{#3.#1}\hyper@anchorend
12906 }
12907 \def\BOOKMARK{%
12908   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
12909 }
12910 \def\@BOOKMARK[#1]{%
12911   \@ifnextchar[{\@@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
12912 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

12913 \RequirePackage{rerunfilecheck}[2009/12/10]
12914 \def\Hy@OutlineRerunCheck{%
12915   \RerunFileCheck{\jobname.out}{%
12916     \immediate\closeout\@outlinefile
12917   }{%
12918     Rerun to get outlines right\MessageBreak
12919     or use package 'bookmark'%
12920   }%
12921 }

```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

12922 < *vtex >
12923 \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.

```

12924 \begingroup
12925   \catcode'\'=12 %
12926   \ifnum\Hy@VTeXversion<650 %
12927     \catcode'\ "=12 %
12928     \gdef\hv@pdf@char#1#2#3{%
12929       \char
12930       \ifcase'#1#2#3 %
12931         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12932         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12933         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12934         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12935         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12936         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12937         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12938         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12939         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%

```

```

12940 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12941 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12942 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12943 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12944 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12945 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12946 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12947 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12948 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12949 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12950 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12951 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12952 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12953 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12954 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12955 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12956 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12957 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12958 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12959 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12960 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12961 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12962 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12963 \fi
12964 }%
12965 \else
12966 \gdef\hv@pdf@char{\char'}%
12967 \fi
12968 \endgroup

```

\@@BOOKMARK

```

12969 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12970 \expandafter\edef\csname @count@#3\endcsname{%
12971 \the\@serial@counter
12972 }%
12973 \edef\@mycount{\the\@serial@counter}%
12974 \Hy@StepCount\@serial@counter
12975 \edef\@parcount{%
12976 \expandafter\ifx\csname @count@#5\endcsname\relax
12977 0%
12978 \else
12979 \csname @count@#5\endcsname
12980 \fi
12981 }%
12982 \immediate\special{%
12983 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12984 s=\ifx#2-c\else o\fi,t=#4%
12985 }%
12986 }%

```

\ReadBookmarks

```

12987 \def\ReadBookmarks{%
12988 \begingroup
12989 \def\0{\hv@pdf@char 0}%
12990 \def\1{\hv@pdf@char 1}%
12991 \def\2{\hv@pdf@char 2}%
12992 \def\3{\hv@pdf@char 3}%

```

```

12993 \def\{(){}%
12994 \def\}(){}%
12995 \def\do###1{%
12996   \ifnum\catcode'###1=\active
12997     \@makeother###1%
12998   \else
12999     \ifnum\catcode'###1=6 %
13000       \@makeother###1%
13001     \fi
13002   \fi
13003 }%
13004 \dospecials
13005 \Hy@safe@activetrue
13006 \InputIfFileExists{\jobname.out}{-}{-}%
13007 \endgroup
13008 \ifx\WriteBookmarks\relax
13009 \else
13010   \if@filesw
13011     \newwrite\@outlinefile
13012     \Hy@OutlineRerunCheck
13013     \immediate\openout\@outlinefile=\jobname.out\relax
13014     \ifHy@typexml
13015       \immediate\write\@outlinefile{<relaxxml>\relax}%
13016     \fi
13017   \fi
13018 \fi
13019 }

13020 </vtex>
13021 <!*vtex>
13022 \def\ReadBookmarks{%
13023   \begingroup
13024     \def\do###1{%
13025       \ifnum\catcode'###1=\active
13026         \@makeother###1%
13027       \else
13028         \ifnum\catcode'###1=6 %
13029           \@makeother###1%
13030         \fi
13031       \fi
13032     }%
13033     \dospecials
13034     \Hy@safe@activetrue
13035     \escapechar='\\%
13036     \let\escapechar\@gobble %
13037     \def\@@BOOKMARK[##1][##2]##3##4##5{%
13038       \calc@bm@number{##5}%
13039     }%
13040     \InputIfFileExists{\jobname.out}{-}{-}%
13041     \ifx\WriteBookmarks\relax
13042       \global\let\WriteBookmarks\relax
13043     \fi
13044     \def\@@BOOKMARK[##1][##2]##3##4##5{%
13045       \def\Hy@temp{##4}%
13046     }%
13047     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13048     \Hy@OutlineName{}\Hy@pstringName{%
13049       ##2\check@bm@number{##3}%

```



```

13050 }{ %
13051 \expandafter\strip@prefix\meaning\Hy@temp
13052 } %
13053 </pdfTex>
13054 <*pdfmark>
13055 \pdfmark{ %
13056 pdfmark=/OUT, %
13057 Count={###2\check@bm@number{###3}}, %
13058 Dest={###3}, %
13059 Title=\expandafter\strip@prefix\meaning\Hy@temp
13060 } %
13061 </pdfmark>
13062 <*dvipdfm | xetex>
13063 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{###3}} %
13064 \@pdfm@mark{ %
13065 outline \ifHy@DvipdfmxOutlineOpen
13066 [ %
13067 \ifnum##21>\z@
13068 \else
13069 - %
13070 \fi
13071 ] %
13072 \fi
13073 ###1<< %
13074 /Title(\expandafter\strip@prefix\meaning\Hy@temp) %
13075 /A<< %
13076 /S/GoTo %
13077 /D(\Hy@pstringName) %
13078 >> %
13079 >> %
13080 } %
13081 </dvipdfm | xetex>
13082 } %
13083 { %
13084 \def\WriteBookmarks{0} %
13085 \InputIfFileExists{\jobname.out}{-}{-} %
13086 } %
13087 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}} %
13088 \ifx\WriteBookmarks\relax
13089 \else
13090 \if@filesw
13091 \newwrite\@outlinefile
13092 \Hy@OutlineRerunCheck
13093 \immediate\openout\@outlinefile=\jobname.out\relax
13094 \ifHy@typexml
13095 \immediate\write\@outlinefile{<relaxxml>\relax} %
13096 \fi
13097 \fi
13098 \fi
13099 \endgroup
13100 }
13101 <*pdfTex>
13102 \def\Hy@OutlineName#1#2#3#4{ %
13103 \pdfoutline goto name{#2}count#3{#4} %
13104 }
13105 </pdfTex>
13106 \def\check@bm@number#1{ %

```

```

13107 \expandafter\ifx\csname B_#1\endcsname\relax
13108 0%
13109 \else
13110 \csname B_#1\endcsname
13111 \fi
13112 }
13113 \def\calc@bm@number#1{%
13114 \@tempcnta=\check@bm@number{#1}\relax
13115 \advance\@tempcnta by 1 %
13116 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13117 }
13118 </!vtex>

13119 \ifHy@implicit
13120 \else
13121 \expandafter\endinput
13122 \fi

13123 </outlines>
13124 <*outlines | hypertex>

13125 \newlength\Hy@SectionHShift
13126 \def\Hy@SectionAnchorHref#1{%
13127 \ifx\protect\@typeset@protect
13128 \Hy@@@SectionAnchor{#1}%
13129 \fi
13130 }
13131 \DeclareRobustCommand*\Hy@@@SectionAnchor{1}{%
13132 \leavevmode
13133 \hbox to 0pt{%
13134 \kern-\Hy@SectionHShift
13135 \Hy@raisedlink{%
13136 \hyper@anchorstart{#1}\hyper@anchorend
13137 }%
13138 \hss
13139 }%
13140 }
13141 \let\H@old@ssect\@ssect
13142 \def\@ssect#1#2#3#4#5{%
13143 \Hy@MakeCurrentHrefAuto{section*}%
13144 \setlength{\Hy@SectionHShift}{#1}%
13145 \begingroup
13146 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13147 \toks\tw@\expandafter{%
13148 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13149 #5%
13150 }%
13151 \edef\x{\endgroup
13152 \the\toks@\the\toks\tw@}%
13153 }\x
13154 }
13155 \let\H@old@schapter\@schapter
13156 \def\@schapter#1{%
13157 \begingroup
13158 \let\@mkboth\@gobbletwo
13159 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13160 \Hy@raisedlink{%
13161 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13162 }%

```

```

13163 \endgroup
13164 \H@old@schapter{#1}%
13165 }

```

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:

```

13166 \ltx@ifundefined{@chapter}{}{%
13167   \let\Hy@org@chapter \@chapter
13168   \def \@chapter{%
13169     \def\Hy@next{%
13170       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13171       \Hy@raisedlink{%
13172         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13173       }%
13174     }%
13175     \ifnum\c@secnumdepth>\m@ne
13176       \ltx@ifundefined{if@mainmatter}{%
13177         \iftrue{\csname if@mainmatter\endcsname}%
13178         \let\Hy@next\relax
13179       }%
13180       \fi
13181       \Hy@next
13182       \Hy@org@chapter
13183     }%
13184   }

13185 \let\H@old@part \@part
13186 \begingroup\expandafter\expandafter\expandafter\endgroup
13187 \expandafter\ifx\csname chapter\endcsname\relax
13188   \let\Hy@secnum@part\z@
13189 \else
13190   \let\Hy@secnum@part\m@ne
13191 \fi
13192 \def \@part{%
13193   \ifnum\Hy@secnum@part>\c@secnumdepth
13194     \phantomsection
13195   \fi
13196   \H@old@part
13197 }

13198 \let\H@old@spart \@spart
13199 \def \@spart#1{%
13200   \Hy@MakeCurrentHrefAuto{part*}%
13201   \Hy@raisedlink{%
13202     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13203   }%
13204   \H@old@spart{#1}%
13205 }

13206 \let\H@old@sect \@sect
13207 \def \@sect#1#2#3#4#5#6[#7]#8{%
13208   \ifnum #2>\c@secnumdepth
13209     \expandafter \@firstoftwo
13210   \else
13211     \expandafter \@secondoftwo
13212   \fi
13213   {%
13214     \Hy@MakeCurrentHrefAuto{section*}%
13215     \setlength{\Hy@SectionHShift}{#3}%

```

```

13216 \begingroup
13217 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}}%
13218 \toks\tw@\expandafter{%
13219 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13220 #8%
13221 }%
13222 \edef\x{\endgroup
13223 \the\toks@{\the\toks\tw@}}%
13224 }\x
13225 }{%
13226 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13227 }%
13228 }

13229 </outlines | hypertex>
13230 <*outlines>

13231 \expandafter\def\csname Parent-4\endcsname{}
13232 \expandafter\def\csname Parent-3\endcsname{}
13233 \expandafter\def\csname Parent-2\endcsname{}
13234 \expandafter\def\csname Parent-1\endcsname{}
13235 \expandafter\def\csname Parent0\endcsname{}
13236 \expandafter\def\csname Parent1\endcsname{}
13237 \expandafter\def\csname Parent2\endcsname{}
13238 \expandafter\def\csname Parent3\endcsname{}
13239 \expandafter\def\csname Parent4\endcsname{}

13240 </outlines>

```

49 Compatibility with koma-script classes

```

13241 <*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.

```

13242 \def\Hy@tempa{%
13243 \def\@addchap[##1]##2{%
13244 \typeout{##2}%
13245 \if@twoside
13246 \@mkboth{##1}{}%
13247 \else
13248 \@mkboth{}{##1}%
13249 \fi
13250 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13251 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13252 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13253 \Hy@raisedlink{%
13254 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13255 }%
13256 \if@twocolumn
13257 \@topnewpage[\@makeschapterhead{##2}]%
13258 \else
13259 \@makeschapterhead{##2}%
13260 \@afterheading
13261 \fi
13262 \addcontentsline{toc}{chapter}{##1}%

```

```

13263 }%
13264 }
13265 \@ifclassloaded{scrbook}{%
13266   \@ifclasslater{scrbook}{2001/01/01}{%
13267     \let\Hy@tempa\@empty
13268   }{}%
13269 }{%
13270   \@ifclassloaded{scrreprt}{%
13271     \@ifclasslater{scrreprt}{2001/01/01}{%
13272       \let\Hy@tempa\@empty
13273     }{}%
13274   }{%
13275     \let\Hy@tempa\@empty
13276   }%
13277 }%
13278 \Hy@tempa
13279 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13280 <*pdlenc>
13281 \DeclareFontEncoding{PD1}{-}{}

Accents
13282 \DeclareTextAccent{'}{PD1}{\textasciigrave}
13283 \DeclareTextAccent{'}{PD1}{\textacute}
13284 \DeclareTextAccent{^}{PD1}{\textasciicircum}
13285 \DeclareTextAccent{~}{PD1}{\texttilde}
13286 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
13287 \DeclareTextAccent{r}{PD1}{\textring}
13288 \DeclareTextAccent{v}{PD1}{\textasciicaron}
13289 \DeclareTextAccent{.}{PD1}{\textdotaccent}
13290 \DeclareTextAccent{c}{PD1}{\textcedilla}
13291 \DeclareTextAccent{=}{PD1}{\textasciimacron}
13292 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
13293 \DeclareTextAccent{d}{PD1}{\textdotbelow}
13294 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
13295 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
13296 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
13297 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
13298 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
13299 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}
13300 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
13301 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
13302 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
13303 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
13304 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
13305 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
13306 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}
13307 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}
13308 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
13309 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
13310 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}

```

```

13311 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13312 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13313 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13314 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13315 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13316 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13317 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13318 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13319 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13320 \DeclareTextCommand{\newtie}{PD1}[1]{%
13321   \TextSymbolUnavailable{\newtie{#1}}#1%
13322 }

```

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

```

13323 % U+0009 (CHARACTER TABULATION)
13324 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
13325 % U+000A (LINE FEED)
13326 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
13327 % U+000D (CARRIAGE RETURN)
13328 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

13329 % U+02D8 BREVE; breve
13330 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
13331 % U+02C7 CARON; caron
13332 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
13333 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
13334 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
13335 % U+02D9 DOT ABOVE; dotaccent
13336 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
13337 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13338 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
13339 % U+02DB OGONEK; ogonek
13340 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
13341 % U+02DA RING ABOVE; ring
13342 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
13343 % U+02DC SMALL TILDE; ilde, *tilde
13344 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

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

\041: U+0021 EXCLAMATION MARK; exclam

```

13345 % U+0022 QUOTATION MARK; quotedbl
13346 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
13347 % U+0023 NUMBER SIGN; numbersign
13348 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
13349 % U+0024 DOLLAR SIGN; dollar
13350 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
13351 % U+0025 PERCENT SIGN; percent
13352 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
13353 % U+0026 AMPERSAND; ampersand
13354 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

```

13355 % U+0028 LEFT PARENTHESIS; parenleft

13356 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028

13357 % U+0029 RIGHT PARENTHESIS; parenright

13358 \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
 13359 % U+002E FULL STOP; period
 13360 \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
 13361 % U+003C LESS-THAN SIGN; less
 13362 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13363 % U+003E GREATER-THAN SIGN; greater
 13364 \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
 13365 % U+005C REVERSE SOLIDUS; backslash
 13366 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13367 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13368 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13369 % U+005F LOW LINE; underscore
 13370 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13371 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13372 % U+0060 GRAVE ACCENT; grave
 13373 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13374 % U+0069 LATIN SMALL LETTER I; i
 13375 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13376 % U+007B LEFT CURLY BRACKET; braceleft
 13377 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13378 % U+007C VERTICAL LINE; *bar, verticalbar
 13379 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13380 % U+007D RIGHT CURLY BRACKET; braceright
 13381 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13382 % U+007E TILDE; asciitilde
 13383 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13384 % U+2022 BULLET; bullet
 13385 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13386 % U+2020 DAGGER; dagger
 13387 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13388 % U+2021 DOUBLE DAGGER; daggerdbl

13389 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
13390 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
13391 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
13392 % U+2014 EM DASH; emdash
13393 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
13394 % U+2013 EN DASH; endash
13395 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
13396 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
13397 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
13398 % U+2044 FRACTION SLASH; fraction
13399 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
13400 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
13401 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
13402 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
13403 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
13404 % U+2212 MINUS SIGN; minus
13405 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
13406 % U+2030 PER MILLE SIGN; perthousand
13407 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
13408 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
13409 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13410 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13411 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13412 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13413 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13414 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13415 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13416 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13417 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13418 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13419 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13420 % U+2122 TRADE MARK SIGN; trademark
13421 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13422 % U+FB01 LATIN SMALL LIGATURE FI; fi
13423 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13424 % U+FB02 LATIN SMALL LIGATURE FL; fl
13425 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13426 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13427 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13428 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13429 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13430 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13431 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13432 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13433 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
13434 \DeclareTextCommand{\IJ}{PD1}{\230}
13435 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13436 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13437 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13438 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13439 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13440 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13441 % U+0153 LATIN SMALL LIGATURE OE; oe
13442 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13443 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron

13444 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 13445 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13446 \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.

13447 % U+20AC EURO SIGN; *Euro, euro
 13448 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 13449 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13450 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 13451 % U+00A2 CENT SIGN; cent
 13452 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 13453 % U+00A3 POUND SIGN; sterling
 13454 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 13455 % U+00A4 CURRENCY SIGN; currency
 13456 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 13457 % U+00A5 YEN SIGN; yen
 13458 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 13459 % U+00A6 BROKEN BAR; brokenbar
 13460 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 13461 % U+00A7 SECTION SIGN; section
 13462 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 13463 % U+00A8 DIAERESIS; dieresis
 13464 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 13465 % U+00A9 COPYRIGHT SIGN; copyright
 13466 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 13467 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13468 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 13469 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13470 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 13471 % U+00AC NOT SIGN; logicalnot
 13472 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 13473 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

13474 % U+00AE REGISTERED SIGN; registered
 13475 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 13476 % U+00AF MACRON; *macron, overscore
 13477 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 13478 % U+00B0 DEGREE SIGN; degree
 13479 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 13480 % U+00B1 PLUS-MINUS SIGN; plusminus
 13481 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 13482 % U+00B2 SUPERScript TWO; twosuperior
 13483 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 13484 % U+00B3 SUPERScript THREE; threesuperior
 13485 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 13486 % U+00B4 ACUTE ACCENT; acute
 13487 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 13488 % U+00B5 MICRO SIGN; mu, mu1
 13489 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 13490 % U+00B6 PILCROW SIGN; paragraph
 13491 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 13492 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13493 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 13494 % U+00B8 CEDILLA; cedilla
 13495 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 13496 % U+00B9 SUPERScript ONE; onesuperior

13497 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13498 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13499 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13500 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13501 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13502 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13503 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13504 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13505 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13506 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13507 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13508 % U+00BF INVERTED QUESTION MARK; questiondown
13509 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13510 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13511 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13512 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13513 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13514 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13515 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13516 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13517 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13518 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13519 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
13520 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13521 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13522 % U+00C6 LATIN CAPITAL LETTER AE; AE
13523 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13524 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13525 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13526 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13527 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13528 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13529 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13530 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13531 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13532 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13533 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
13534 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13535 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13536 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13537 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13538 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13539 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13540 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13541 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
13542 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13543 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13544 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13545 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13546 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13547 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13548 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13549 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13550 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13551 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13552 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4

13553 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13554 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13555 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13556 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13557 % U+00D7 MULTIPLICATION SIGN; multiply
13558 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13559 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13560 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13561 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13562 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13563 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13564 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13565 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13566 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13567 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13568 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13569 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13570 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13571 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13572 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13573 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13574 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13575 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13576 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13577 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13578 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13579 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13580 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13581 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13582 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13583 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13584 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13585 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13586 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13587 % U+00E6 LATIN SMALL LETTER AE; ae
13588 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13589 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13590 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13591 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13592 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13593 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13594 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13595 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13596 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13597 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13598 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13599 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13600 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13601 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13602 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13603 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13604 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13605 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13606 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13607 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13608 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13609 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF

13610 \DeclareTextCompositeCommand{"}{PD1}{\i}{\357}% U+00EF
 13611 % U+00F0 LATIN SMALL LETTER ETH; eth
 13612 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
 13613 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 13614 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
 13615 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 13616 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
 13617 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 13618 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
 13619 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 13620 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
 13621 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 13622 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
 13623 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13624 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 13625 % U+00F7 DIVISION SIGN; divide
 13626 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 13627 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13628 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13629 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13630 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
 13631 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13632 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
 13633 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13634 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
 13635 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13636 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 13637 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13638 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
 13639 % U+00FE LATIN SMALL LETTER THORN; thorn
 13640 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13641 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13642 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 13643 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13644 \DeclareTextCommand{\SS}{PD1}{SS}
 13645 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13646 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13647 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13648 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13649 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13650 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13651 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13652 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13653 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13654 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13655 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13656 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13657 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13658 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13659 \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).

```

13660 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13661 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
13662 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13663 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13664 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13665 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13666 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13667 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13668 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13669 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13670 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13671 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13672 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13673 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13674 \end{pdllenc}

```

50.2 PU encoding

```

13675 \newcommand{*puenc}
13676 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

```

13677 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13678 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
13679 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13680 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
13681 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13682 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
13683 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
13684 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
13685 % U+0304 COMBINING MACRON; macroncmb
13686 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
13687 % U+0306 COMBINING BREVE; brevecmb
13688 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
13689 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
13690 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13691 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
13692 % U+0308 COMBINING DIAERESIS; dieresiscmb
13693 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
13694 % U+030A COMBINING RING ABOVE; ringcmb
13695 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13696 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13697 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13698 % U+030C COMBINING CARON; caroncmb
13699 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13700 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13701 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13702 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13703 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13704 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13705 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
13706 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13707 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13708 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13709 % U+0327 COMBINING CEDILLA; cedillacmb
13710 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13711 % U+0328 COMBINING OGONEK; ogonekcmb

```

```

13712 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13713 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13714 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13715 % U+20DD COMBINING ENCLOSING CIRCLE
13716 \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.

```

13717 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
13718 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13719 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
13720 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
13721 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13722 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13723 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13724 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13725 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13726 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13727 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13728 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13729 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13730 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13731 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13732 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13733 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13734 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13735 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13736 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13737 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13738 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13739 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13740 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13741 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13742 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13743 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13744 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13745 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13746 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13747 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13748 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13749 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13750 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13751 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13752 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13753 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13754 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13755 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13756 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13757 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'\{#1}}
13758 \DeclareTextCommand{\capitalacute}{PU}[1]{\'\{#1}}
13759 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\~{#1}}
13760 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13761 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\">{#1}}
13762 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13763 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13764 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}

```

```

13765 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13766 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13767 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13768 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13769 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

13770 % U+0009 (CHARACTER TABULATION)
13771 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13772 % U+000A (LINE FEED)
13773 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13774 % U+000D (CARRIAGE RETURN)
13775 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

13776 % U+0022 QUOTATION MARK; quotedbl
13777 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
13778 % U+0023 NUMBER SIGN; numbersign
13779 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
13780 % U+0024 DOLLAR SIGN; dollar
13781 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
13782 % U+0025 PERCENT SIGN; percent
13783 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
13784 % U+0026 AMPERSAND; ampersand
13785 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
13786 % U+0027 APOSTROPHE; quotesingle
13787 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
13788 % U+0028 LEFT PARENTHESIS; parenleft
13789 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
13790 % U+0029 RIGHT PARENTHESIS; parenright
13791 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
13792 % U+002A ASTERISK; asterisk
13793 \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

13794 % U+003C LESS-THAN SIGN; less
13795 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

\80\075: U+003D EQUALS SIGN; equal

13796 % U+003E GREATER-THAN SIGN; greater
13797 \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
 13798 % U+005C REVERSE SOLIDUS; backslash
 13799 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13800 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13801 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13802 % U+005F LOW LINE; underscore
 13803 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13804 % U+0060 GRAVE ACCENT; grave
 13805 \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
 13806 % U+0069 LATIN SMALL LETTER I; i
 13807 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 13808 \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
 13809 % U+007B LEFT CURLY BRACKET; braceleft
 13810 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13811 % U+007C VERTICAL LINE; *bar, verticalbar
 13812 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13813 % U+007D RIGHT CURLY BRACKET; braceright
 13814 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13815 % U+007E TILDE; asciitilde
 13816 \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
 13817 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13818 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13819 % U+00A2 CENT SIGN; cent
 13820 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13821 % U+00A3 POUND SIGN; sterling
 13822 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13823 % U+00A4 CURRENCY SIGN; currency
 13824 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13825 % U+00A5 YEN SIGN; yen
 13826 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13827 % U+00A6 BROKEN BAR; brokenbar
 13828 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13829 % U+00A7 SECTION SIGN; section
 13830 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13831 % U+00A8 DIAERESIS; diaeresis
 13832 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13833 % U+00A9 COPYRIGHT SIGN; copyright
 13834 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13835 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13836 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13837 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 13838 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB

13839 % U+00AC NOT SIGN; logicalnot
 13840 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13841 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 13842 % U+00AE REGISTERED SIGN; registered
 13843 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13844 % U+00AF MACRON; *macron, overscore
 13845 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13846 % U+00B0 DEGREE SIGN; degree
 13847 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13848 % U+00B1 PLUS-MINUS SIGN; plusminus
 13849 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13850 % U+00B2 SUPERSCRIPT TWO; twosuperior
 13851 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13852 % U+00B3 SUPERSCRIPT THREE; threesuperior
 13853 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 13854 % U+00B4 ACUTE ACCENT; acute
 13855 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 13856 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 13857 % U+00B5 MICRO SIGN; mu, mul
 13858 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 13859 % U+00B6 PILCROW SIGN; paragraph
 13860 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 13861 % U+00B7 MIDDLE DOT; middot, *periodcentered
 13862 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 13863 % U+00B8 CEDILLA; cedilla
 13864 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 13865 % U+00B9 SUPERSCRIPT ONE; onesuperior
 13866 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 13867 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 13868 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 13869 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 13870 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 13871 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 13872 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 13873 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 13874 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 13875 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 13876 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
 13877 % U+00BF INVERTED QUESTION MARK; questiondown
 13878 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
 13879 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 13880 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
 13881 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 13882 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
 13883 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 13884 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
 13885 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 13886 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
 13887 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 13888 \DeclareTextCompositeCommand{\\"}{PU}{A}{\80\304}% U+00C4
 13889 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 13890 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
 13891 % U+00C6 LATIN CAPITAL LETTER AE; AE
 13892 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
 13893 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

13894 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
13895 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13896 \DeclareTextCompositeCommand{\' }{PU}{E}{\80\310}% U+00C8
13897 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13898 \DeclareTextCompositeCommand{\' }{PU}{E}{\80\311}% U+00C9
13899 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13900 \DeclareTextCompositeCommand{\^ }{PU}{E}{\80\312}% U+00CA
13901 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13902 \DeclareTextCompositeCommand{\" }{PU}{E}{\80\313}% U+00CB
13903 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13904 \DeclareTextCompositeCommand{\' }{PU}{I}{\80\314}% U+00CC
13905 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13906 \DeclareTextCompositeCommand{\' }{PU}{I}{\80\315}% U+00CD
13907 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13908 \DeclareTextCompositeCommand{\^ }{PU}{I}{\80\316}% U+00CE
13909 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13910 \DeclareTextCompositeCommand{\" }{PU}{I}{\80\317}% U+00CF
13911 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13912 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
13913 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13914 \DeclareTextCompositeCommand{\~ }{PU}{N}{\80\321}% U+00D1
13915 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13916 \DeclareTextCompositeCommand{\' }{PU}{O}{\80\322}% U+00D2
13917 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13918 \DeclareTextCompositeCommand{\' }{PU}{O}{\80\323}% U+00D3
13919 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13920 \DeclareTextCompositeCommand{\^ }{PU}{O}{\80\324}% U+00D4
13921 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13922 \DeclareTextCompositeCommand{\~ }{PU}{O}{\80\325}% U+00D5
13923 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13924 \DeclareTextCompositeCommand{\" }{PU}{O}{\80\326}% U+00D6
13925 % U+00D7 MULTIPLICATION SIGN; multiply
13926 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13927 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13928 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13929 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13930 \DeclareTextCompositeCommand{\' }{PU}{U}{\80\331}% U+00D9
13931 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13932 \DeclareTextCompositeCommand{\' }{PU}{U}{\80\332}% U+00DA
13933 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13934 \DeclareTextCompositeCommand{\^ }{PU}{U}{\80\333}% U+00DB
13935 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13936 \DeclareTextCompositeCommand{\" }{PU}{U}{\80\334}% U+00DC
13937 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13938 \DeclareTextCompositeCommand{\' }{PU}{Y}{\80\335}% U+00DD
13939 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13940 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13941 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13942 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13943 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13944 \DeclareTextCompositeCommand{\' }{PU}{a}{\80\340}% U+00E0
13945 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13946 \DeclareTextCompositeCommand{\' }{PU}{a}{\80\341}% U+00E1
13947 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13948 \DeclareTextCompositeCommand{\^ }{PU}{a}{\80\342}% U+00E2
13949 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13950 \DeclareTextCompositeCommand{\~ }{PU}{a}{\80\343}% U+00E3

13951 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13952 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
13953 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13954 \DeclareTextCompositeCommand{r}{PU}{a}{\80\345}% U+00E5
13955 % U+00E6 LATIN SMALL LETTER AE; ae
13956 \DeclareTextCommand{ae}{PU}{\80\346}% U+00E6
13957 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13958 \DeclareTextCompositeCommand{c}{PU}{c}{\80\347}% U+00E7
13959 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13960 \DeclareTextCompositeCommand{'}{PU}{e}{\80\350}% U+00E8
13961 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13962 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}% U+00E9
13963 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13964 \DeclareTextCompositeCommand{^}{PU}{e}{\80\352}% U+00EA
13965 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13966 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
13967 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13968 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
13969 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
13970 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13971 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
13972 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
13973 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13974 \DeclareTextCompositeCommand{^}{PU}{i}{\80\356}% U+00EE
13975 \DeclareTextCompositeCommand{^}{PU}{i}{\80\356}% U+00EE
13976 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13977 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
13978 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
13979 % U+00F0 LATIN SMALL LETTER ETH; eth
13980 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
13981 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13982 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
13983 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13984 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
13985 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13986 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
13987 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13988 \DeclareTextCompositeCommand{^}{PU}{o}{\80\364}% U+00F4
13989 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13990 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
13991 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13992 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
13993 % U+00F7 DIVISION SIGN; divide
13994 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
13995 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13996 \DeclareTextCommand{o}{PU}{\80\370}% U+00F8
13997 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13998 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
13999 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14000 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
14001 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14002 \DeclareTextCompositeCommand{^}{PU}{u}{\80\373}% U+00FB
14003 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14004 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
14005 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14006 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
14007 % U+00FE LATIN SMALL LETTER THORN; thorn

14008 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14009 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14010 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

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

14011 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14012 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14013 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14014 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14015 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14016 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14017 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14018 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14019 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14020 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14021 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14022 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14023 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14024 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 14025 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14026 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 14027 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 14028 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 14029 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 14030 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 14031 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 14032 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 14033 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 14034 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 14035 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 14036 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 14037 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 14038 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 14039 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 14040 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 14041 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 14042 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 14043 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 14044 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 14045 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
 14046 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 14047 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 14048 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 14049 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 14050 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 14051 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 14052 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 14053 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 14054 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 14055 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
 14056 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
 14057 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
 14058 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
 14059 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
 14060 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
 14061 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek

14062 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14063 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14064 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14065 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14066 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14067 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14068 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14069 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14070 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14071 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14072 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14073 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14074 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14075 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14076 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14077 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14078 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14079 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14080 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14081 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14082 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14083 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14084 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
14085 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14086 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14087 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14088 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14089 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14090 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14091 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14092 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14093 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14094 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14095 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14096 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14097 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14098 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14099 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14100 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14101 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14102 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14103 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14104 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14105 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14106 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14107 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14108 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14109 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14110 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
14111 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
14112 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
14113 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
14114 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
14115 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
14116 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
14117 % U+0133 LATIN SMALL LIGATURE IJ; ij

14118 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
14119 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
14120 \DeclareTextCompositeCommand{\~}{PU}{J}{\81\064}% U+0134
14121 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
14122 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14123 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
14124 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
14125 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
14126 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
14127 \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.

14128 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
14129 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
14130 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
14131 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
14132 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
14133 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
14134 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
14135 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
14136 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
14137 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
14138 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
14139 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
14140 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
14141 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

There seems to be no variants of letters 'L' and 'l' with a dot above (reasonable). Therefore the \. accent is reused instead of making a separate accent macro \textmiddledot.

14142 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
14143 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
14144 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
14145 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
14146 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14147 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
14148 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14149 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
14150 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
14151 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
14152 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
14153 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
14154 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
14155 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
14156 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
14157 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
14158 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
14159 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
14160 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
14161 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
14162 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
14163 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
14164 % U+014A LATIN CAPITAL LETTER ENG; Eng

14165 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
14166 % U+014B LATIN SMALL LETTER ENG; eng
14167 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
14168 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
14169 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
14170 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
14171 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
14172 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
14173 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
14174 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
14175 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
14176 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
14177 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
14178 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
14179 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
14180 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14181 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
14182 % U+0153 LATIN SMALL LIGATURE OE; oe
14183 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
14184 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
14185 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
14186 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
14187 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14188 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14189 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14190 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14191 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14192 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14193 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14194 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14195 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14196 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14197 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\132}% U+015A
14198 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14199 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\133}% U+015B
14200 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14201 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14202 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14203 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14204 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14205 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14206 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14207 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14208 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14209 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14210 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14211 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14212 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14213 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14214 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14215 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14216 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14217 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164

14218 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 14219 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 14220 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 14221 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 14222 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 14223 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 14224 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 14225 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 14226 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 14227 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 14228 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 14229 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 14230 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 14231 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 14232 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 14233 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 14234 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 14235 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 14236 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 14237 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 14238 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 14239 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 14240 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 14241 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14242 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 14243 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14244 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14245 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14246 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14247 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14248 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14249 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14250 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14251 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14252 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14253 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14254 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14255 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14256 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14257 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14258 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14259 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14260 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14261 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14262 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14263 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14264 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14265 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14266 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14267 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14268 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14269 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14270 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14271 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

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

14272 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14273 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
14274 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
14275 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
14276 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
14277 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
14278 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
14279 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
14280 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
14281 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14282 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
14283 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
14284 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
14285 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
14286 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
14287 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
14288 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
14289 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
14290 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
14291 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
14292 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
14293 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
14294 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
14295 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14296 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14297 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14298 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14299 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14300 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14301 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14302 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14303 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14304 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14305 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14306 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14307 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14308 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14309 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14310 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14311 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14312 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14313 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14314 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14315 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
14316 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14317 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
14318 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14319 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
14320 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14321 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
14322 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
14323 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
14324 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
14325 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF

14326 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 14327 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 14328 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 14329 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 14330 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 14331 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 14332 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 14333 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 14334 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 14335 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 14336 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 14337 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14338 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 14339 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 14340 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 14341 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 14342 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 14343 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 14344 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 14345 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 14346 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 14347 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 14348 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 14349 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 14350 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14351 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14352 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14353 % U+021F LATIN SMALL LETTER H WITH CARON
 14354 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14355 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14356 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14357 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14358 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14359 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14360 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14361 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14362 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14363 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14364 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14365 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14366 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14367 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14368 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14369 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14370 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14371 % U+0237 LATIN SMALL LETTER DOTLESS J
 14372 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

14373 % U+02C7 CARON; caron
 14374 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14375 % U+02D8 BREVE; breve
 14376 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14377 % U+02D9 DOT ABOVE; dotaccent
 14378 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14379 % U+02DA RING ABOVE; ring
 14380 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA

14381 % U+02DB OGONEK; ogonek
 14382 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14383 % U+02DC SMALL TILDE; ilde, *tilde
 14384 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14385 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14386 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14387 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14388 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14389 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14390 % U+02F7 MODIFIER LETTER LOW TILDE
 14391 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

14392 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14393 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14394 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 14395 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 14396 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 14397 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 14398 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14399 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 14400 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14401 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

14402 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14403 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14404 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14405 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14406 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 14407 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14408 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14409 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14410 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14411 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14412 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14413 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 14414 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 14415 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 14416 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 14417 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 14418 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14419 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 14420 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadieresis
 14421 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 14422 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14423 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14424 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14425 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14426 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14427 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 14428 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 14429 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 14430 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 14431 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395

14432 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
14433 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
14434 % U+0397 GREEK CAPITAL LETTER ETA; Eta
14435 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
14436 % U+0398 GREEK CAPITAL LETTER THETA; Theta
14437 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
14438 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
14439 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
14440 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
14441 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
14442 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
14443 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
14444 % U+039C GREEK CAPITAL LETTER MU; Mu
14445 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
14446 % U+039D GREEK CAPITAL LETTER NU; Nu
14447 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
14448 % U+039E GREEK CAPITAL LETTER XI; Xi
14449 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
14450 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
14451 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
14452 % U+03A0 GREEK CAPITAL LETTER PI; Pi
14453 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
14454 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
14455 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
14456 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
14457 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
14458 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
14459 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
14460 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
14461 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
14462 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
14463 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
14464 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
14465 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
14466 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
14467 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14468 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14469 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14470 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14471 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14472 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14473 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
silonudieresis
14474 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14475 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos
14476 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14477 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon
14478 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14479 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
14480 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14481 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
14482 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14483 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
silonudieresis
14484 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
14485 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14486 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1

14487 % U+03B2 GREEK SMALL LETTER BETA; beta
 14488 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 14489 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 14490 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 14491 % U+03B4 GREEK SMALL LETTER DELTA; delta
 14492 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 14493 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 14494 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 14495 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 14496 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 14497 % U+03B7 GREEK SMALL LETTER ETA; eta
 14498 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 14499 % U+03B8 GREEK SMALL LETTER THETA; theta
 14500 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 14501 % U+03B9 GREEK SMALL LETTER IOTA; iota
 14502 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
 14503 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 14504 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 14505 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 14506 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 14507 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 14508 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 14509 % U+03BD GREEK SMALL LETTER NU; nu
 14510 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
 14511 % U+03BE GREEK SMALL LETTER XI; xi
 14512 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 14513 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 14514 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 14515 % U+03C0 GREEK SMALL LETTER PI; pi
 14516 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 14517 % U+03C1 GREEK SMALL LETTER RHO; rho
 14518 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 14519 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 14520 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 14521 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 14522 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 14523 % U+03C4 GREEK SMALL LETTER TAU; tau
 14524 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 14525 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 14526 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 14527 % U+03C6 GREEK SMALL LETTER PHI; phi
 14528 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 14529 % U+03C7 GREEK SMALL LETTER CHI; chi
 14530 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 14531 % U+03C8 GREEK SMALL LETTER PSI; psi
 14532 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 14533 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 14534 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 14535 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 14536 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 14537 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 14538 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 14539 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 14540 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 14541 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 14542 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD

14543 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
 14544 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 14545 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
 14546 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 14547 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 14548 % U+03DB GREEK SMALL LETTER STIGMA
 14549 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14550 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14551 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14552 % U+03DD GREEK SMALL LETTER DIGAMMA
 14553 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14554 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14555 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14556 % U+03DF GREEK SMALL LETTER KOPPA
 14557 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14558 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 14559 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 14560 % U+03E1 GREEK SMALL LETTER SAMPI
 14561 \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.

14562 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 14563 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
 14564 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 14565 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 14566 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\001}% ???
 14567 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 14568 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 14569 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 14570 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
 14571 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 14572 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 14573 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 14574 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 14575 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyril-
 lic, *afii10055
 14576 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 14577 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 14578 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 14579 \DeclareTextCompositeCommand{\'}{PU}{\CYRII}{\84\007}% U+0407
 14580 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 14581 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 14582 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 14583 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 14584 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 14585 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 14586 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 14587 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 14588 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 14589 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 14590 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 14591 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
 14592 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
 14593 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 14594 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E

14595 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14596 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14597 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14598 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14599 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14600 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14601 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14602 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14603 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14604 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14605 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14606 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14607 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14608 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14609 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14610 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14611 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14612 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14613 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14614 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14615 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14616 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14617 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14618 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14619 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14620 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14621 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14622 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14623 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14624 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14625 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14626 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14627 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14628 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14629 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14630 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14631 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14632 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14633 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14634 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14635 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14636 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14637 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14638 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14639 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14640 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14641 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14642 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14643 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14644 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14645 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14646 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14647 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14648 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14649 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14650 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14651 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A

14652 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14653 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14654 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14655 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14656 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14657 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14658 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14659 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14660 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14661 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14662 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14663 \DeclareTextCommand{\cyr a}{PU}{\84\060}% U+0430
14664 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14665 \DeclareTextCommand{\cyr b}{PU}{\84\061}% U+0431
14666 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14667 \DeclareTextCommand{\cyr v}{PU}{\84\062}% U+0432
14668 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14669 \DeclareTextCommand{\cyr g}{PU}{\84\063}% U+0433
14670 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14671 \DeclareTextCommand{\cyr d}{PU}{\84\064}% U+0434
14672 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14673 \DeclareTextCommand{\cyr e}{PU}{\84\065}% U+0435
14674 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14675 \DeclareTextCommand{\cyr zh}{PU}{\84\066}% U+0436
14676 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14677 \DeclareTextCommand{\cyr z}{PU}{\84\067}% U+0437
14678 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14679 \DeclareTextCommand{\cyr i}{PU}{\84\070}% U+0438
14680 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14681 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14682 \DeclareTextCompositeCommand{\U}{PU}{\cyr i}{\84\071}% U+0439
14683 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14684 \DeclareTextCommand{\cyr k}{PU}{\84\072}% U+043A
14685 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14686 \DeclareTextCommand{\cyr l}{PU}{\84\073}% U+043B
14687 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14688 \DeclareTextCommand{\cyr m}{PU}{\84\074}% U+043C
14689 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14690 \DeclareTextCommand{\cyr n}{PU}{\84\075}% U+043D
14691 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14692 \DeclareTextCommand{\cyr o}{PU}{\84\076}% U+043E
14693 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14694 \DeclareTextCommand{\cyr p}{PU}{\84\077}% U+043F
14695 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14696 \DeclareTextCommand{\cyr r}{PU}{\84\100}% U+0440
14697 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14698 \DeclareTextCommand{\cyr s}{PU}{\84\101}% U+0441
14699 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14700 \DeclareTextCommand{\cyr t}{PU}{\84\102}% U+0442
14701 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14702 \DeclareTextCommand{\cyr u}{PU}{\84\103}% U+0443
14703 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14704 \DeclareTextCommand{\cyr f}{PU}{\84\104}% U+0444
14705 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14706 \DeclareTextCommand{\cyr h}{PU}{\84\105}% U+0445
14707 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14708 \DeclareTextCommand{\cyr c}{PU}{\84\106}% U+0446

14709 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14710 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
14711 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14712 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14713 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14714 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14715 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14716 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14717 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14718 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14719 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14720 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
14721 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14722 \DeclareTextCommand{\cyrev}{PU}{\84\115}% U+044D
14723 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14724 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
14725 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14726 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
14727 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14728 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14729 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14730 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
14731 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14732 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14733 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14734 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14735 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14736 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14737 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14738 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14739 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14740 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14741 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14742 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14743 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14744 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
14745 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14746 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14747 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14748 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14749 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14750 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14751 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14752 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14753 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14754 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14755 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14756 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14757 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14758 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14759 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14760 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14761 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14762 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14763 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14764 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic

14765 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14766 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afi10146
14767 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14768 % U+0463 CYRILLIC SMALL LETTER YAT; *afi10194, yatcyrillic
14769 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14770 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14771 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14772 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14773 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14774 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14775 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14776 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14777 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14778 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14779 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14780 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
fiedcyrillic
14781 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14782 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14783 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14784 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14785 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
14786 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
14787 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
14788 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
lic
14789 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
14790 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
14791 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
14792 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
14793 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
14794 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
14795 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
14796 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
14797 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
14798 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afi10147
14799 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
14800 % U+0473 CYRILLIC SMALL LETTER FITA; *afi10195, fitacyrillic
14801 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
14802 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afi10148
14803 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
14804 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afi10196, izhitsacyrillic
14805 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
14806 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; Izhitsadblgravecyrillic
14807 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
14808 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; izhitsadblgravecyrillic
14809 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
14810 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
14811 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
14812 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
14813 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
14814 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic

14815 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14816 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14817 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14818 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-cyrillic
 14819 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14820 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-cyrillic
 14821 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14822 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14823 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14824 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14825 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14826 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14827 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14828 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 14829 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14830 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14831 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 14832 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14833 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14834 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14835 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14836 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14837 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14838 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14839 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14840 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14841 \DeclareTextCommand{\CYRRRTICK}{PU}{\84\216}% U+048E
 14842 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14843 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14844 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-cyrillic, *afii10050
 14845 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14846 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14847 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14848 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 14849 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14850 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14851 \DeclareTextCommand{\cyrgghcrs}{PU}{\84\223}% U+0493
 14852 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14853 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494

14854 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemid-
 dlehookcyrillic
 14855 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14856 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescen-
 dercyrillic
 14857 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14858 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescen-
 dercyrillic
 14859 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14860 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescen-
 dercyrillic
 14861 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14862 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14863 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescender-
 cyrillic
 14864 \DeclareTextCommand{\cyrzdesc}{PU}{\84\231}% U+0499
 14865 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 14866 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescen-
 dercyrillic
 14867 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14868 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescender-
 cyrillic
 14869 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 14870 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-
 ticalstrokecyrillic
 14871 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 14872 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-
 ticalstrokecyrillic
 14873 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 14874 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 14875 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 14876 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 14877 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 14878 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 14879 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 14880 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 14881 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 14882 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescen-
 dercyrillic
 14883 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 14884 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescender-
 cyrillic
 14885 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 14886 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 14887 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 14888 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 14889 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 14890 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-
 dlehookcyrillic
 14891 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 14892 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddle-
 hookcyrillic
 14893 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 14894 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyril-
 lic
 14895 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 14896 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic

14897 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14898 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
14899 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14900 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14901 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
14902 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
14903 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
14904 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
14905 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14906 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
14907 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
14908 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14909 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14910 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14911 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
14912 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
14913 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14914 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
14915 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
14916 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
14917 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
14918 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
14919 \DeclareTextCommand{\cyrh dsc}{PU}{\84\263}% U+04B3
14920 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
14921 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
14922 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
14923 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
14924 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
14925 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
14926 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
14927 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
14928 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
verticalstrokecyrillic
14929 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
14930 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
verticalstrokecyrillic
14931 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
14932 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
14933 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
14934 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
14935 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
14936 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-
cyrillic
14937 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
14938 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
14939 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD

14940 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; Chedescenderabkhasiancyrillic
 14941 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 14942 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 14943 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
 DER; chedescenderabkhasiancyrillic
 14944 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 14945 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 14946 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 14947 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 14948 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 14949 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 14950 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 14951 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 14952 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 14953 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 14954 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 14955 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 14956 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 14957 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 14958 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 14959 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 14960 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 14961 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 14962 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 14963 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 14964 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-
 cyrillic
 14965 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 14966 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
 cyrillic
 14967 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 14968 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 14969 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 14970 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 14971 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 14972 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 14973 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 14974 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 14975 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 14976 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyril-
 lic
 14977 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 14978 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 14979 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 14980 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 14981 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 14982 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
 14983 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
 14984 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
 14985 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
 14986 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
 14987 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
 14988 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
 14989 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
 14990 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic

14991 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
14992 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
siscyrillic
14993 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
14994 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
siscyrillic
14995 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
14996 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
14997 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
14998 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
14999 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
15000 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
15001 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
15002 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
15003 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
15004 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
cyrillic
15005 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
15006 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
15007 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
15008 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
15009 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
15010 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15011 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
15012 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
15013 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15014 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
15015 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
15016 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
15017 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15018 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
15019 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15020 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
15021 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
15022 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
15023 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
15024 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
15025 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
15026 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
15027 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
15028 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
15029 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
15030 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
15031 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
15032 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
15033 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
15034 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
15035 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
15036 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
15037 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
15038 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic

15039 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15040 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15041 \DeclareTextCompositeCommand{H}{PU}{\CYRU}{\84\362}% U+04F2
 15042 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15043 \DeclareTextCompositeCommand{H}{PU}{\cyru}{\84\363}% U+04F3
 15044 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15045 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 15046 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 15047 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 15048 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15049 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15050 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15051 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15052 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15053 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 15054 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15055 \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
 15056 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15057 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15058 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15059 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15060 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15061 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

15062 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15063 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 15064 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15065 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 15066 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15067 \DeclareTextCompositeCommand{b}{PU}{B}{\9036\006}% U+1E06
 15068 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15069 \DeclareTextCompositeCommand{b}{PU}{b}{\9036\007}% U+1E07
 15070 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15071 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 15072 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 15073 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
 15074 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 15075 \DeclareTextCompositeCommand{b}{PU}{D}{\9036\016}% U+1E0E
 15076 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 15077 \DeclareTextCompositeCommand{b}{PU}{d}{\9036\017}% U+1E0F
 15078 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 15079 \DeclareTextCompositeCommand{c}{PU}{D}{\9036\020}% U+1E10

15080 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
15081 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
15082 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
15083 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
15084 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15085 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
15086 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15087 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15088 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15089 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15090 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15091 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
15092 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15093 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
15094 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15095 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
15096 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15097 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
15098 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15099 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15100 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15101 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15102 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15103 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15104 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15105 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15106 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15107 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15108 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15109 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15110 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15111 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15112 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15113 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15114 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15115 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15116 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15117 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15118 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15119 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
15120 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15121 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
15122 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15123 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
15124 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15125 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
15126 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15127 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15128 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
15129 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15130 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15131 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15132 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15133 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15134 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15135 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15136 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent

15137 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15138 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15139 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15140 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15141 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15142 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15143 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15144 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15145 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15146 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15147 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15148 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15149 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15150 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15151 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15152 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15153 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15154 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15155 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15156 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15157 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15158 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15159 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
15160 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15161 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
15162 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15163 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
15164 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15165 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
15166 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15167 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
15168 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15169 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
15170 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15171 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
15172 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15173 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
15174 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15175 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
15176 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15177 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
15178 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15179 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
15180 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15181 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
15182 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15183 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
15184 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15185 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
15186 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
15187 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
15188 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
15189 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
15190 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
15191 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
15192 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
15193 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95

15194 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15195 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15196 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15197 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
 15198 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15199 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15200 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15201 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15202 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15203 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15204 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15205 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 15206 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15207 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 15208 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15209 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 15210 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15211 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 15212 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15213 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15214 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15215 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

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

15216 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 15217 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15218 % U+2013 EN DASH; endash
 15219 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15220 % U+2014 EM DASH; emdash
 15221 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15222 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15223 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15224 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15225 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15226 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15227 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15228 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15229 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15230 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbleft
 15231 \DeclareTextCommand{\textquotedbleft}{PU}{\9040\034}% U+201C
 15232 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15233 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15234 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15235 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15236 % U+2020 DAGGER; dagger
 15237 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15238 % U+2021 DOUBLE DAGGER; daggerdbl
 15239 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15240 % U+2022 BULLET; bullet
 15241 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15242 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15243 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15244 % U+2030 PER MILLE SIGN; perthousand
 15245 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15246 % U+2031 PER TEN THOUSAND SIGN
 15247 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031

15248 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 ingleft
 15249 \DeclareTextCommand{\guilssingleft}{PU}{\9040\071}% U+2039
 15250 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
 ingright
 15251 \DeclareTextCommand{\guilssingright}{PU}{\9040\072}% U+203A
 15252 % U+203B REFERENCE MARK; referencemark
 15253 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15254 % U+203D INTERROBANG
 15255 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15256 % U+2044 FRACTION SLASH; fraction
 15257 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15258 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15259 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15260 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15261 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15262 % U+2052 COMMERCIAL MINUS SIGN
 15263 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

15264 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 15265 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 15266 % U+2074 SUPERSCRIPT FOUR; foursuperior
 15267 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 15268 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 15269 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 15270 % U+2076 SUPERSCRIPT SIX; sixsuperior
 15271 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 15272 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 15273 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 15274 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 15275 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 15276 % U+2079 SUPERSCRIPT NINE; ninesuperior
 15277 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 15278 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 15279 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 15280 % U+207B SUPERSCRIPT MINUS
 15281 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 15282 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 15283 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 15284 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 15285 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 15286 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 15287 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 15288 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 15289 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 15290 % U+2080 SUBSCRIPT ZERO; zeroinferior
 15291 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 15292 % U+2081 SUBSCRIPT ONE; oneinferior
 15293 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 15294 % U+2082 SUBSCRIPT TWO; twoinferior
 15295 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 15296 % U+2083 SUBSCRIPT THREE; threeinferior
 15297 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 15298 % U+2084 SUBSCRIPT FOUR; fourinferior
 15299 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 15300 % U+2085 SUBSCRIPT FIVE; fiveinferior

15301 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 15302 % U+2086 SUBSCRIPT SIX; sixinferior
 15303 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 15304 % U+2087 SUBSCRIPT SEVEN; seveninferior
 15305 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 15306 % U+2088 SUBSCRIPT EIGHT; eightinferior
 15307 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 15308 % U+2089 SUBSCRIPT NINE; nineinferior
 15309 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 15310 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 15311 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 15312 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 15313 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

15314 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 15315 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 15316 % U+20A4 LIRA SIGN; afii08941, *lira
 15317 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15318 % U+20A6 NAIRA SIGN
 15319 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15320 % U+20A7 PESETA SIGN; peseta
 15321 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15322 % U+20A9 WON SIGN; won
 15323 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15324 % U+20AB DONG SIGN; dong
 15325 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15326 % U+20AC EURO SIGN; *Euro, euro
 15327 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15328 % U+20B1 PESO SIGN
 15329 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15330 % U+20B2 GUARANI SIGN
 15331 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

15332 % U+2103 DEGREE CELSIUS; centigrade
 15333 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15334 % U+2116 NUMERO SIGN; *afii61352, numero
 15335 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15336 % U+2117 SOUND RECORDING COPYRIGHT
 15337 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15338 % U+211E PRESCRIPTION TAKE; prescription
 15339 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15340 % U+2120 SERVICE MARK
 15341 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15342 % U+2122 TRADE MARK SIGN; trademark
 15343 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15344 % U+2126 OHM SIGN; Ohm, Omega
 15345 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15346 % U+2127 INVERTED OHM SIGN
 15347 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15348 % U+212B ANGSTROM SIGN; angstrom
 15349 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15350 % U+212E ESTIMATED SYMBOL; estimated
 15351 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15352 % U+2135 ALEF SYMBOL; aleph
 15353 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15354 % U+2190 LEFTWARDS ARROW; arrowleft
15355 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
15356 % U+2191 UPWARDS ARROW; arrowup
15357 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
15358 % U+2192 RIGHTWARDS ARROW; arrowright
15359 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
15360 % U+2193 DOWNWARDS ARROW; arrowdown
15361 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

15362 % U+2212 MINUS SIGN; minus
15363 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
15364 % U+221A SQUARE ROOT; radical
15365 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

15366 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
15367 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
15368 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
15369 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

15370 % U+2422 BLANK SYMBOL
15371 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
15372 % U+2423 OPEN BOX; blank
15373 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

15374 % U+2460 CIRCLED DIGIT ONE; onecircle
15375 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
15376 % U+2461 CIRCLED DIGIT TWO; twocircle
15377 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
15378 % U+2462 CIRCLED DIGIT THREE; threecircle
15379 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
15380 % U+2463 CIRCLED DIGIT FOUR; fourcircle
15381 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
15382 % U+2464 CIRCLED DIGIT FIVE; fivecircle
15383 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
15384 % U+2465 CIRCLED DIGIT SIX; sixcircle
15385 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
15386 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
15387 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
15388 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
15389 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
15390 % U+2468 CIRCLED DIGIT NINE; ninecircle
15391 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
15392 % U+2469 CIRCLED NUMBER TEN; tencircle
15393 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
15394 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
15395 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
15396 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
15397 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
15398 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
15399 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
15400 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle

15401 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 15402 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 15403 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 15404 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 15405 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 15406 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 15407 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 15408 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 15409 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 15410 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 15411 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 15412 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 15413 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 15414 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 15415 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 15416 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 15417 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 15418 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15419 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15420 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15421 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15422 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15423 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15424 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15425 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15426 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 15427 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 15428 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 15429 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 15430 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 15431 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 15432 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 15433 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 15434 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 15435 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 15436 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 15437 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 15438 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 15439 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 15440 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 15441 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 15442 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 15443 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 15444 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 15445 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 15446 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 15447 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 15448 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 15449 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 15450 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 15451 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 15452 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 15453 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 15454 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 15455 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 15456 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 15457 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB

15458 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
15459 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
15460 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
15461 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
15462 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
15463 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
15464 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
15465 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
15466 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
15467 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15468 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15469 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15470 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15471 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15472 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15473 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15474 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15475 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15476 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15477 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15478 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15479 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15480 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15481 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15482 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15483 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
15484 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
15485 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
15486 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
15487 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
15488 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
15489 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
15490 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
15491 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
15492 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
15493 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
15494 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
15495 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
15496 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
15497 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
15498 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
15499 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
15500 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
15501 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
15502 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
15503 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
15504 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
15505 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
15506 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
15507 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
15508 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
15509 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
15510 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
15511 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
15512 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
15513 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
15514 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle

15515 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15516 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15517 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15518 % U+24EA CIRCLED DIGIT ZERO
 15519 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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

15520 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15521 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15522 % U+25EF LARGE CIRCLE; largecircle
 15523 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

15524 % U+266A EIGHTH NOTE; musicalnote
 15525 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15526 % U+26AD MARRIAGE SYMBOL
 15527 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 15528 % U+26AE DIVORCE SYMBOL
 15529 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

15530 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15531 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15532 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15533 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

15534 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15535 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15536 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15537 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15538 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15539 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 15540 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 15541 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 15542 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 15543 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 15544 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 15545 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 15546 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15547 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15548 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15549 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15550 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15551 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 15552 \puenc

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
15553 \(*puvnc)

15554 \DeclareTextCommand{\abreve}{PU}{\81\003}
15555 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15556 \DeclareTextCommand{\dj}{PU}{\81\021}
15557 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15558 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15559 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15560 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15561 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15562 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15563 \DeclareTextCommand{\DJ}{PU}{\81\020}
15564 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15565 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15566 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15567 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15568 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15569 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15570 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15571 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15572 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
15573 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15574 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15575 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15576 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
15577 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
15578 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15579 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15580 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15581 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15582 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
15583 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15584 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15585 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15586 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15587 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
15588 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15589 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15590 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15591 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15592 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
15593 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15594 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15595 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15596 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15597 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
15598 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15599 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15600 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15601 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15602 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
15603 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15604 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15605 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15606 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
```

15607 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
15608 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15609 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15610 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
15611 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15612 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
15613 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15614 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15615 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15616 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15617 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
15618 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15619 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15620 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15621 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15622 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
15623 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15624 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15625 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15626 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15627 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
15628 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15629 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15630 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15631 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15632 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
15633 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
15634 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15635 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15636 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15637 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
15638 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15639 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15640 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15641 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15642 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
15643 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15644 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15645 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15646 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15647 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
15648 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15649 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15650 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15651 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15652 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
15653 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15654 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15655 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15656 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15657 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
15658 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15659 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15660 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15661 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15662 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
15663 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}

```

15664 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15665 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15666 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15667 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
15668 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15669 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15670 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15671 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15672 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15673 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15674 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15675 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15676 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15677 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15678 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15679 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15680 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15681 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
15682 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15683 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15684 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15685 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15686 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15687 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15688 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

15689 <*puarenc>
15690 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
    TER HAMZA
15691 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
    TER ALEF WITH MADDA ABOVE
15692 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
    TER ALEF WITH HAMZA ABOVE
15693 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
    TER WAW WITH HAMZA ABOVE
15694 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
    TER ALEF WITH HAMZA BELOW
15695 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
    TER YEH WITH HAMZA ABOVE
15696 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15697 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15698 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15699 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15700 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
    TER THEH
15701 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
    TER JEEM
15702 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15703 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15704 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15705 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15706 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15707 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN

```

15708 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15709 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
15710 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD
15711 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
15712 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
15713 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
15714 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
15715 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
15716 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
15717 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
15718 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
15719 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
15720 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
15721 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
TER MEEM
15722 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON
15723 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
15724 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
15725 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
15726 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15727 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15728 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15729 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15730 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15731 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15732 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15733 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15734 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi
15735 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15736 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
TER TCHEH
15737 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15738 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
15739 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15740 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

15741 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15742 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15743 </puarenc>

51 End of file hycheck.tex

15744 < *check>
15745 \typeout{}
15746 \begin{document}
15747 \end{document}
15748 </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	14407, 14409, 14411, 14413, 14415, 14417, 14419, 14421, 14476, 14478, 14480, 14482, 14540, 14543, 14545, 14570, 14589, 14735, 14754, 15103, 15105, 15115, 15117, 15131, 15133, 15163, 15165, 15568, 15573, 15578, 15583, 15588, 15593, 15598, 15603, 15608, 15613, 15618, 15623, 15628, 15633, 15638, 15643, 15648, 15653, 15658, 15663, 15668, 15673, 15678, 15683	\@@Menu 11591, 11599	\@@Menu 11591, 11599
\"	202, 227, 2904, 12927, 13286, 13298, 13310, 13433, 13519, 13533, 13541, 13556, 13568, 13584, 13598, 13609, 13610, 13624, 13636, 13642, 13693, 13721, 13740, 13761, 13888, 13902, 13910, 13924, 13936, 13952, 13966, 13977, 13978, 13992, 14004, 14010, 14257, 14472, 14474, 14484, 14536, 14538, 14566, 14579, 14731, 14744, 14977, 14979, 14993, 14995, 14997, 14999, 15001, 15003, 15013, 15015, 15017, 15019, 15025, 15027, 15029, 15031, 15037, 15039, 15045, 15047, 15053, 15055, 15095, 15097, 15167, 15169, 15179, 15181, 15197	\(. . 190, 215, 627, 630, 632, 12993, 13356	\@@PasswordField . 11540, 11546	\@@PasswordField . 11540, 11546
\#	427, 1999, 2000, 4129, 4140, 4142, 4158, 4190, 4248, 7757, 7759, 8512, 8521, 8549, 9274, 10767, 10778, 10807, 11038, 11047, 11077, 12847	\) . . 191, 216, 599, 605, 608, 12994, 13358	\@@Radio . . 11366, 11387, 11589, 11613, 11847, 11868, 12188, 12209	\@@Radio . . 11366, 11387, 11589, 11613, 11847, 11868, 12188, 12209
\\$	184, 209, 428, 4131, 4247	\+ 200, 225	\@@TextField 11542, 11557	\@@TextField 11542, 11557
\%	429, 1974, 1975, 4128, 4137, 4139, 4191, 7759	\- 201, 226	\@@commahyperpage . 7266, 7267	\@@commahyperpage . 7266, 7267
\&	185, 210, 430, 4132, 4143, 4145, 10817	\. . . . 198, 223, 1094, 13289, 13301, 13313, 13375, 13666, 13673, 13691, 13724, 13743, 13767, 13807, 13808, 14032, 14034, 14056, 14058, 14076, 14078, 14112, 14143, 14145, 14263, 14265, 14356, 14358, 14364, 14366, 15063, 15065, 15071, 15073, 15083, 15085, 15091, 15093, 15119, 15121, 15123, 15125, 15135, 15137, 15139, 15141, 15147, 15149, 15171, 15173, 15175, 15177, 15183, 15185, 15203	\@Alpha . . . 5950, 5951, 5954, 5955	\@@hyperref 4282, 4283
\'	203, 228, 2844, 2858, 2899, 2901, 2902, 2903, 2904, 2909, 2910, 2912, 2917, 2923, 2927, 2928, 2931, 2974, 2975, 2980, 2981, 2982, 2983, 2984, 2985, 2986, 2987, 2989, 2993, 3006, 12925, 13283, 13295, 13307, 13513, 13529, 13537, 13550, 13564, 13570, 13578, 13594, 13603, 13604, 13618, 13632, 13638, 13661, 13663, 13664, 13665, 13668, 13670, 13671, 13672, 13680, 13718, 13737, 13758, 13882, 13898, 13906, 13918, 13932, 13938, 13946, 13962, 13971, 13972, 13986, 14000, 14006, 14024, 14026, 14131, 14133, 14151, 14153, 14185, 14187, 14197, 14199, 14259, 14261, 14311, 14313, 14319, 14321, 14323, 14325,	\@Alpha@bul 5954	\@@latextohtmlX 2737, 4487	\@@latextohtmlX 2737, 4487
		\@BIBLABEL . . 6689, 6695, 6701	\@@wrindex 7194, 7195	\@@wrindex 7194, 7195
		\@BOOKMARK . 12908, 12911, 12969, 13037, 13044	\@@writetorep 12770, 12776	\@@writetorep 12770, 12776
		\@@Listbox . 11381, 11403, 11862, 11893, 12203, 12244	\@CITE 6766, 6774	\@CITE 6766, 6774
			\@CITEX 6768	\@CITEX 6768
			\@CheckBox . . 5174, 9339, 11480, 11510, 11644, 11980, 12349	\@CheckBox . . 5174, 9339, 11480, 11510, 11644, 11980, 12349
			\@ChoiceMenu . 5171, 9342, 11318, 11513, 11579, 11798, 12139	\@ChoiceMenu . 5171, 9342, 11318, 11513, 11579, 11798, 12139
			\@Form . 4945, 9329, 11105, 11502, 11523, 11722, 12063	\@Form . 4945, 9329, 11105, 11502, 11523, 11722, 12063
			\@Gauge 5180, 9333, 11287, 11504, 11528, 11665, 12060	\@Gauge 5180, 9333, 11287, 11504, 11528, 11665, 12060
			\@Localurifalse 9282	\@Localurifalse 9282
			\@Localurltrue 9279	\@Localurltrue 9279
			\@M 1000, 2261, 4236, 6324	\@M 1000, 2261, 4236, 6324
			\@MM 6452	\@MM 6452
			\@PushButton . 5177, 9345, 11410, 11516, 11625, 11902, 12260	\@PushButton . 5177, 9345, 11410, 11516, 11625, 11902, 12260
			\@Refstar 7566, 7573	\@Refstar 7566, 7573
			\@Reset . 5186, 9348, 11456, 11519, 11641, 11955, 12319	\@Reset . 5186, 9348, 11456, 11519, 11641, 11955, 12319
			\@Roman 503	\@Roman 503
			\@SCTR 7313, 7365	\@SCTR 7313, 7365
			\@SetMaxRnhefLabel 6763	\@SetMaxRnhefLabel 6763
			\@Submit 5183, 9351, 11438, 11520, 11638, 11932, 12295	\@Submit 5183, 9351, 11438, 11520, 11638, 11932, 12295
			\@TextField . . . 5168, 9336, 11290, 11507, 11531, 11769, 12102	\@TextField . . . 5168, 9336, 11290, 11507, 11531, 11769, 12102
			\@addchap 13243	\@addchap 13243
			\@addtoreset . . 7088, 7089, 7103, 7310	\@addtoreset . . 7088, 7089, 7103, 7310
			\@afterheading 13260	\@afterheading 13260
			\@alph 5957, 5958	\@alph 5957, 5958
			\@alph@bul 5957	\@alph@bul 5957
			\@anchorcolor . 8481, 8569, 9396, 10735, 11008	\@anchorcolor . 8481, 8569, 9396, 10735, 11008
			\@arabic 970, 975, 979, 5951, 5955, 5958	\@arabic 970, 975, 979, 5951, 5955, 5958

<code>\@auxout</code> . 2216, 4327, 5396, 5398, 6041, 6069, 6709, 6724, 6740, 6750, 6780, 6803, 6829, 6835, 6859	6095, 6132, 6142, 6144, 6183, 6194, 6198, 6205, 6229, 6293, 6317, 6381, 6391, 6393, 6394, 6437, 6465, 6563, 6589, 6593, 6608, 6610, 6838, 6964, 6987, 7000, 7007, 7058, 7082, 7084, 12760, 13148, 13161, 13172, 13202, 13219, 13254	<code>\@footnotetext</code> . 6333, 6340, 6369, 6487, 6489, 6503, 6504, 6524
<code>\@backslashchar</code> 721, 724, 727, 1224, 1894, 1898, 1901, 2021, 2038, 2044, 2048, 2056, 4153, 7772, 7782	<code>\@currentlabel</code> . 6455, 6831, 6838, 7063, 7070, 7319, 7371	<code>\@for</code> 3219, 4553, 6775, 6798, 11327, 11389, 11597, 11604, 11614, 11807, 11870, 12148, 12214
<code>\@baseurl</code> 3200, 3202, 4421, 8204, 8207, 8466, 8468, 8719, 8721, 9187, 9197, 9247, 9249, 9761, 9763, 10126, 10140, 10720, 10722, 10914, 10928, 10994, 10996	<code>\@currentlabelname</code> . . 2214, 6382, 6438, 6466, 6568	<code>\@fourthoffive</code> . 4081, 4315, 7630, 7637
<code>\@begintheorem</code> 6288, 6295	<code>\@currentlabstr</code> 2213, 2221	<code>\@gobble</code> 49, 56, 117, 445, 446, 447, 448, 485, 486, 487, 488, 515, 516, 517, 526, 528, 685, 798, 834, 845, 986, 990, 993, 1363, 1424, 1443, 1456, 1460, 1522, 1585, 1586, 1593, 1598, 1612, 1617, 2251, 2483, 2495, 3532, 3685, 3687, 3739, 4119, 4896, 5076, 5330, 5334, 5352, 5354, 5370, 5371, 5372, 5374, 5375, 5377, 5816, 5831, 5835, 6277, 6545, 6634, 6963, 7695, 8378, 9641, 9644, 11723, 12064, 12816, 12817, 12818, 13036
<code>\@bibitem</code> 6716, 6747	<code>\@curropt</code> . . 11327, 11328, 11389, 11390, 11597, 11604, 11605, 11607, 11614, 11615, 11617, 11807, 11808, 11870, 11871, 12148, 12149, 12214, 12215	<code>\@gobblefour</code> 451, 551, 1120, 1121, 1122, 3351, 7434
<code>\@biblabel</code> 6689, 6736	<code>\@dblarg</code> 2314, 6558, 6639	<code>\@gobbleopt</code> 5377, 5379
<code>\@bookmarkopenstatus</code> . . . 3967, 3984, 12829	<code>\@definecounter</code> 7043, 7044	<code>\@gobbletwo</code> 449, 519, 544, 552, 553, 698, 1119, 1540, 1617, 1621, 2368, 3349, 3350, 3689, 4842, 5356, 5365, 5373, 5377, 7618, 13158
<code>\@bookmarksopenlevel</code> 3163, 3165, 3970	<code>\@ehc</code> 2543, 3737, 4385, 4657, 4781, 4977, 5123, 5159, 11420, 11468, 11913, 11967, 12271, 12331	<code>\@harvarditem</code> 6848, 6850
<code>\@bsphack</code> 2209, 4320, 6833	<code>\@ehd</code> 63, 6544, 6633	<code>\@hyper@anchor</code> . . . 4448, 4449
<code>\@capstartfalse</code> 6583	<code>\@endForm</code> . . . 4946, 9332, 11286, 11503, 11527, 11768, 12088	<code>\@hyper@itemfalse</code> . . . 5867, 5883, 5897
<code>\@caption</code> 6548, 6560, 6603, 6639, 6641	<code>\@endpary</code> 6284	<code>\@hyper@itemtrue</code> 5868
<code>\@capter</code> 2218, 6543, 6547, 6551, 6558, 6565, 6607, 6632, 6636, 6639	<code>\@eqncr</code> 6213	<code>\@hyper@launch</code> 4391, 4400, 8097, 9539, 10456
<code>\@car</code> 1505, 1521, 1539, 1559, 3142, 4563, 8156, 8167	<code>\@eqnstarfalse</code> 6189, 6216	<code>\@hyper@linkfile</code> 4372, 4375, 4379, 4411
<code>\@cdr</code> 8157, 8168	<code>\@eqnstartrue</code> 6213	<code>\@hyper@readexternallink</code> . 4366, 4370
<code>\@chapter</code> 13167, 13168	<code>\@eqnswtrue</code> 6159, 6168	<code>\@hyperdef</code> 4290, 4291
<code>\@cite</code> 6766, 6797, 6894, 6900	<code>\@esphack</code> . 2230, 4331, 6843, 7206	<code>\@hyperpage</code> 7258, 7259
<code>\@cite@opt</code> . 6895, 6901, 6905, 6915	<code>\@extra@b@citeb</code> 6674, 6677, 6694, 6699, 6719, 6767, 6789, 6805, 6812	<code>\@hyperref</code> 4271, 4282
<code>\@citea</code> . . 6769, 6776, 6777, 6796, 6799, 6800	<code>\@extra@b@info</code> . . 6673, 6676, 6680	<code>\@ifclasslater</code> 13266, 13271
<code>\@citeb</code> . . 6775, 6778, 6780, 6782, 6786, 6789, 6798, 6801, 6803, 6805, 6809, 6812	<code>\@fifthoffive</code> 3697, 4082, 4314, 7520, 7635	<code>\@ifclassloaded</code> 2201, 6013, 6050, 6758, 7294, 7298, 8381, 13265, 13270
<code>\@citebordercolor</code> 3624	<code>\@filebordercolor</code> 3622, 8073, 8075, 9043, 9045, 9475, 9477, 10444	<code>\@ifnextchar</code> 12, 88, 103, 123, 545, 4241, 4271, 4290, 4339, 4945, 5168, 5171, 5174, 5177, 5180, 5183, 5186, 5377, 5449, 5458, 6490, 6508, 6848, 6906, 10151, 10382, 10396, 12908, 12911
<code>\@citedata@opt</code> . 6896, 6902, 6904	<code>\@filecolor</code> 3192, 8093, 8667, 8679, 9055, 9481	<code>\@ifpackagelater</code> . 856, 2232, 6004, 7113
<code>\@citedatax</code> 6911, 6916	<code>\@firstoffive</code> 4078, 4087, 7559, 7640	
<code>\@citedatax@opt</code> 6908, 6914	<code>\@firstofone</code> 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 492, 681, 836, 847, 1080, 1084, 1088, 1426, 3544, 3969, 4911, 4917, 5086, 5837, 5948, 5961, 6028, 6556, 6637, 6778, 6801, 6927, 7149, 8376, 11695, 12434, 12451, 12469	
<code>\@citeseppen</code> 6893, 6899	<code>\@firstoftwo</code> . . 512, 791, 962, 1633, 5366, 13209	
<code>\@citex</code> 6795	<code>\@footnotemark</code> 6334, 6387, 6474, 6486, 6488, 6500, 6501, 6531, 6533	
<code>\@clubpenalty</code> 6326		
<code>\@commahyperpage</code> . . 7261, 7266		
<code>\@currDisplay</code> 5000, 11330, 11392, 11608, 11622, 11810, 11873, 12151, 12217		
<code>\@currValue</code> . . . 5002, 5004, 11397, 11608, 11619, 11880, 12232, 12651		
<code>\@currentHlabel</code> 6002		
<code>\@currentHref</code> 2224, 5276, 5921, 5982, 5984, 5993, 5995, 6002, 6083, 6085,		

<code>\@ifpackageloaded</code> . 381, 751, 855, 2204, 2595, 3119, 3123, 3676, 3819, 5905, 6003, 6016, 6078, 6111, 6115, 6123, 6155, 6269, 6330, 6401, 6444, 6604, 6818, 6891, 7055, 7112, 7154, 7155, 7156, 7303, 7565, 7708, 7712, 10986	<code>\@makeschapterhead</code> 13257, 13259	<code>\@pdfauthor</code> 3367, 3627, 8263, 8701, 9134, 9802, 10052, 10845
<code>\@ifpackagewith</code> 3677, 7078	<code>\@menubordercolor</code> . . 3621, 8436, 8438, 9098, 9100, 9573, 9575	<code>\@pdfborder</code> 2741, 3245, 3248, 3250, 4050, 7959, 8855, 9384, 9921, 10013, 10374, 10386, 10401, 10422, 10441, 10466, 10494, 10581, 10669, 10822
<code>\@ifstar</code> 66, 4103, 4105, 5311, 5315, 5383, 5387, 7573, 7599, 7618	<code>\@menucolor</code> . . . 8449, 9104, 9579	<code>\@pdfborderstyle</code> 3246, 3252, 3254, 4051, 7960, 8856, 9385, 9922, 10014, 10375, 10387, 10402, 10423, 10442, 10467, 10495, 10582, 10670, 10823
<code>\@ifundefined</code> 34, 244, 770, 778, 794, 797, 2345, 2457, 2525, 2608, 3064, 3072, 3079, 3092, 3140, 3647, 4652, 4972, 5769, 5909, 5914, 5949, 6117, 6126, 6178, 6200, 6224, 6261, 6549, 6567, 6683, 6766, 6782, 6805, 7052, 7093, 7101, 7102, 7115, 7116, 7123, 7812, 9223, 9829, 9830, 10550, 11723, 12064, 12443, 12825	<code>\@minipagefalse</code> 6301	<code>\@pdfcreationdate</code> 3384, 3630, 8267, 8269, 8693, 8695, 9126, 9128, 10027, 10029, 10837, 10839
<code>\@indexfile</code> 7198, 7213, 7221, 7225, 7230	<code>\@mkboth</code> 519, 7416, 13158, 13246, 13248	<code>\@pdfcreator</code> 3379, 3629, 8266, 8692, 9125, 9805, 10051, 10836
<code>\@inlabelfalse</code> 6305	<code>\@mpfn</code> 6337, 6509, 6521	<code>\@pdfdirection</code> . 8227, 8757, 9167, 9773, 10106, 10894
<code>\@inmathwarn</code> 421, 422	<code>\@mpfootnotetext</code> 6340, 6353, 6354	<code>\@pdfduplex</code> . . 8233, 8763, 9173, 9779, 10112, 10900
<code>\@inpenc@undefined@</code> 2076	<code>\@mycount</code> 12973, 12983	<code>\@pdfhighlight</code> 3238, 3625, 7979, 7981, 8040, 8069, 8071, 8105, 8107, 8432, 8434, 9920, 10012, 10373, 10421, 10440, 10465
<code>\@labels</code> 6321	<code>\@namedef</code> 1100, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 4663, 4664, 4665, 4666, 4988, 4989, 6014, 6212, 6215, 6823, 6824, 6825, 6826	<code>\@pdfhighlight</code> 8038
<code>\@latex@</code> 5480, 5481	<code>\@nameuse</code> . 2218, 2615, 4669, 4980	<code>\@pdfkeywords</code> 3403, 3633, 8279, 8690, 9139, 9810, 10053, 10834
<code>\@latex@error</code> . 2678, 2696, 2706, 2713, 6544, 6633	<code>\@one</code> . 969, 2562, 2657, 8980, 8985, 9740, 10575, 12097	<code>\@pdflang</code> 3611, 3639, 8253, 8255, 8785, 8787, 9207, 9209, 10136, 10138, 10924, 10926
<code>\@latex@warning</code> 4309, 6785, 6808, 7495, 7515, 7532, 7646	<code>\@newctr</code> 7048, 7049	<code>\@pdfm@dest</code> . . . 8799, 8858, 8862
<code>\@lbibitem</code> 6690, 6735	<code>\@newl@bel</code> 5443, 6676	<code>\@pdfm@mark</code> 5787, 8798, 8850, 8870, 8884, 8886, 8900, 8902, 8907, 8908, 8938, 8962, 8964, 8969, 8987, 9009, 9037, 9064, 9088, 9121, 9188, 9215, 12067, 12068, 12069, 12086, 12129, 12135, 12223, 12237, 12252, 12258, 12284, 12291, 12310, 12316, 12339, 12345, 12368, 12374, 12379, 12411, 12419, 13064
<code>\@linkbordercolor</code> 3619, 8029, 9386	<code>\@newlistfalse</code> 6302	<code>\@pdfmoddate</code> . 3390, 3631, 8271, 8273, 8697, 8699, 9130, 9132, 10031, 10035, 10841, 10843
<code>\@linkcolor</code> 10173	<code>\@nil</code> 367, 371, 376, 380, 395, 1418, 1421, 1429, 1505, 1523, 1541, 1557, 1559, 1562, 1565, 1568, 2085, 2087, 2103, 2105, 3142, 4175, 4179, 4184, 4438, 4446, 4563, 5067, 5070, 5089, 5468, 5471, 5478, 5480, 5481, 5566, 5613, 5614, 5616, 5639, 5656, 5704, 5706, 6127, 6136, 6138, 6150, 7245, 7247, 7254, 7277, 7280, 7290, 7499, 7502, 7654, 7685, 7768, 7774, 7778, 7784, 8156, 8157, 8167, 8168, 9606, 9608, 12441, 12454, 12460, 12857, 12860, 12863, 12872, 12875, 12884	<code>\@pdfnonfullscreenpagemode</code> 8226, 8756, 9166, 9772, 10105, 10893
<code>\@linkdim</code> 348, 8527, 8528, 8533, 8534, 8535, 8600, 8601, 8610, 8611, 8612, 8629, 8630, 8639, 8640, 8641, 8659, 8660, 8669, 8670, 8671, 10785, 10786, 10791, 10792, 10793, 11053, 11054, 11063, 11064, 11065	<code>\@nobreakfalse</code> 5440, 6324	<code>\@pdfnumcopies</code> 8242, 8244, 8772, 8774, 9182, 9184, 9788, 9790, 10121, 10123, 10909, 10911
<code>\@listctr</code> 6725, 6751	<code>\@nocnterr</code> 7102, 7116	
<code>\@m</code> 983, 6777, 6800, 9688	<code>\@nocounterr</code> 7101, 7115	
<code>\@mainaux</code> 5394, 5395, 5799, 5807, 11691, 11715	<code>\@noparitemfalse</code> 6303	
<code>\@makecaption</code> . 6584, 6586, 6652	<code>\@number</code> 5948, 6028, 6927	
<code>\@makefnmark</code> 6396, 6536	<code>\@onx</code> 7105, 7119, 7122, 7124	
<code>\@makefnmark</code> 6456	<code>\@onelevel@sanitize</code> . . 2361, 2365, 2577, 3141, 3714, 3744, 4209, 4433, 4436, 4653, 4889, 4973, 5666, 5668, 5989, 6993, 7545, 8837, 12854	
<code>\@makeother</code> 166, 167, 179, 180, 182, 183, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 4143, 7744, 12997, 13000, 13026, 13029	<code>\@oparg</code> 6288, 6295	
	<code>\@outlinefile</code> . 12827, 12916, 13011, 13013, 13015, 13091, 13093, 13095	
	<code>\@pagerefstar</code> . . . 4105, 7561, 7589	
	<code>\@pagesetref</code> 7511	
	<code>\@parboxrestore</code> . 6454, 6576, 6647	
	<code>\@parcount</code> 12975, 12983	
	<code>\@part</code> 13185, 13192	

\@pdfpageduration . . . 3208, 8322,
8326, 8331, 9697, 9699, 9702,
9957, 9959, 9967
\@pdfpagelayout 8252, 8784, 9206,
9793, 9795, 10135, 10923
\@pdfpagemode 3807, 3808, 3980,
3981, 3990, 3991, 8206, 8740,
9201, 9760, 10089, 10877
\@pdfpagescrop 3565, 3635,
8191, 8195, 8723, 8724, 8745,
8747, 9213, 9215, 9749, 9751,
10094, 10096, 10882, 10884
\@pdfpagetransition . . 3206, 8298,
8302, 8307, 9586, 9588, 9590,
9940, 9942, 9950
\@pdfpicktraybypdfsize
. 8234, 8236, 8764,
8766, 9174, 9176, 9780, 9782,
10113, 10115, 10901, 10903
\@pdfprintarea . 8230, 8760, 9170,
9776, 10109, 10897
\@pdfprintclip . 8231, 8761, 9171,
9777, 10110, 10898
\@pdfprintpagerange
3319, 3638, 8238, 8240, 8768,
8770, 9178, 9180, 9784, 9786,
10117, 10119, 10905, 10907
\@pdfprintscaling 8232, 8762, 9172,
9778, 10111, 10899
\@pdfproducer 3373,
3628, 8132, 8275, 8277, 8683,
8684, 8702, 8704, 9110, 9111,
9115, 9135, 9137, 9717, 9718,
9722, 9725, 9726, 9806, 9808,
10038, 10042, 10491, 10492,
10574, 10576, 10578, 10666,
10667, 10827, 10828, 10846,
10848
\@pdfstartpage 3553,
3555, 3637, 8212, 8216, 8727,
8732, 9190, 9194, 9753, 9757,
10076, 10081, 10864, 10869
\@pdfstartview 3560, 3562,
3636, 8086, 8214, 8216, 8729,
8733, 9050, 9192, 9194, 9755,
10078, 10082, 10450, 10866,
10870
\@pdfsubject 3397,
3632, 8265, 8706, 9124, 9804,
10050, 10850
\@pdftempa 4377, 4378, 4381
\@pdftempwordfile . . . 4368, 4378
\@pdftempwordrun . . 4369, 4381
\@pdftitle 3361, 3626, 8264, 8691,
9123, 9803, 10049, 10835
\@pdftrapped . . 3408, 3411, 3414,
3423, 3432, 3634, 8280, 8282,
9140, 9142, 10054
\@pdfview 3534,
7947, 7952, 8805, 8809, 8813,
8817, 8821, 8825, 8826, 8829,
8830, 8833, 8837, 8839, 8854,
9383, 9393, 9405, 9867, 9887,
10496, 10583, 10671, 10936
\@pdfviewarea . 8228, 8758, 9168,
9774, 10107, 10895
\@pdfviewclip . 8229, 8759, 9169,
9775, 10108, 10896
\@pdfviewparams
. . . . 3536, 3538, 9867, 9887,
10497, 10584, 10672, 10937
\@percentchar . 4138, 4139, 4191,
12831
\@processme . . 4996, 4997, 8304,
8310, 8328, 8334, 8350, 8356,
10154, 10155, 10224, 10225,
10228, 10229
\@protected@testopt 548
\@protected@testopt@xargs . 549
\@refstar 4103, 7558
\@runbordercolor 3623, 8109, 8111,
9557, 9559, 10469
\@runcolor 8128, 9563
\@safe@activesfalse 501, 4084
\@safe@activetrue 500, 4083
\@chapter 13155, 13156
\@secondoffive . 3698, 4079, 4092,
7521, 7522, 7562
\@secondoftwo . 489, 518, 789, 965,
1631, 3697, 3698, 13211
\@sect 13206, 13207
\@seqncr 6213
\@serial@counter . . 12923, 12971,
12973, 12974
\@seteqlabel 7079, 7080
\@setminipage 6578, 6649
\@setref . . 4087, 4092, 7490, 7491,
7528
\@sharp 6127, 6133
\@skiphyperreffalse . . 5884, 6705,
6717
\@skiphyperreftrue . . 6691, 6717
\@spart 13198, 13199
\@ssect 13141, 13142
\@startlos 7428, 7435, 7484
\@starttoc 5428
\@tempa . 6287, 6294, 6298, 6403,
6407, 6410, 6425
\@tempb 6241, 6245
\@tempboxa 8526, 8527, 8533, 8597,
8600, 8603, 8604, 8610, 8615,
8616, 8627, 8629, 8632, 8633,
8639, 8644, 8645, 8657, 8659,
8662, 8663, 8669, 8674, 8675,
10784, 10785, 10791, 11052,
11053, 11063
\@tempcnta . 12782, 12783, 12784,
12785, 12786, 12788, 12791,
12792, 12793, 12799, 12801,
12803, 12892, 12893, 12894,
12897, 12898, 12899, 12900,
12901, 13114, 13115, 13116
\@tempdima
2264, 5208, 5209, 5210, 5211,
5212, 5213, 5214, 5215, 7940,
11326, 11331, 11333, 11370,
11371, 11372, 11376, 11377,
11378, 11379, 11806, 11811,
11813, 11851, 11852, 11853,
11857, 11858, 11859, 11860,
12147, 12152, 12154, 12192,
12193, 12194, 12198, 12199,
12200, 12201
\@tempdimb 11330, 11331, 11810,
11811, 12151, 12152
\@tempswafalse 6910
\@tempswattrue 6880, 6883, 6886,
6907
\@temptokena . 3011, 3016, 3019,
3021
\@tfor 6242
\@the@H@page 6929, 6931
\@thefnmark . . 6338, 6349, 6415,
6416, 6455, 6472, 6479, 6510,
6522, 6529
\@thirdoffive 4080
\@thm 6270
\@topnewpage 13257
\@topsep 6283
\@topsepadd 6284
\@typeset@protect 13127
\@undefined . . 257, 260, 554, 3015,
5367, 5402, 5415, 5427, 5628,
5646, 5685, 6543, 6606, 6618,
6623, 6632, 7553, 7938, 8136,
8145, 9356, 9728, 9742
\@undottedtocline 7480
\@unprocessedoptions 3929
\@urlbordercolor 3620, 8042, 8044,
9070, 9072, 9494, 9496, 10424
\@urlcolor 8057, 8532,
8541, 8637, 8649, 9080, 9500,
10790, 10799, 11062, 11070
\@urltype 8501,
8506, 9252, 9278, 9413, 9427,
10755, 10760, 11027, 11032
\@vpageref 7583
\@whilenum 1136
\@wrindex 7162, 7163, 7194
\@writefile 6836
\@x@sf 6389, 6398, 6535, 6537

<code>\@xfootnote</code>	6508	15642, 15647, 15652, 15657,	14555, 14557, 14559, 14561,
<code>\@xfootnotemark</code>	6346, 6526	15662, 15667, 15672, 15677,	14947, 14949, 14951, 14953,
<code>\@xfootnotenext</code>	6335, 6519	15682, 15687	14955, 14957, 14959, 14961,
<code>\@xp</code> 7069, 7104, 7105, 7118, 7119,			14963, 14965, 14967, 14969,
7121, 7122			14971, 14973, 14975, 14977,
<code>\l</code>	192, 217	Numbers	14979, 14981, 14983, 14985,
<code>\{</code>	424, 12849	<code>\3</code>	14987, 14989, 14991, 14993,
<code>\}</code>	425, 12850	409, 1182, 1183,	14995, 14997, 14999, 15001,
<code>\j</code>	193, 218	1184, 1185, 1186, 1187, 1188,	15003, 15005, 15007, 15009,
<code>\^</code>	186, 211, 2014,	1189, 1298, 1299, 1300, 1301,	15011, 15013, 15015, 15017,
2015, 2922, 4126, 4127, 4135,		1302, 1303, 1304, 1305, 2178,	15019, 15021, 15023, 15025,
13284, 13296, 13308, 13515,		12992, 13511, 13513, 13515,	15027, 15029, 15031, 15033,
13531, 13539, 13552, 13566,		13517, 13519, 13521, 13523,	15035, 15037, 15039, 15041,
13580, 13596, 13606, 13607,		13525, 13527, 13529, 13531,	15043, 15045, 15047, 15049,
13620, 13634, 13682, 13719,		13533, 13535, 13537, 13539,	15051, 15053, 15055, 15057,
13738, 13759, 13884, 13900,		13541, 13543, 13544, 13546,	15059, 15209, 15211, 15213,
13908, 13920, 13934, 13948,		13548, 13550, 13552, 13554,	15215, 15435, 15437, 15439,
13964, 13974, 13975, 13988,		13556, 13558, 13560, 13562,	15441, 15443, 15445, 15447,
14002, 14028, 14030, 14068,		13564, 13566, 13568, 13570,	15449, 15451, 15453, 15455,
14070, 14084, 14086, 14120,		13572, 13574, 13576, 13578,	15457, 15459, 15461, 15463,
14122, 14123, 14201, 14203,		13580, 13582, 13584, 13586,	15465, 15467, 15469, 15471,
14249, 14251, 14253, 14255,		13588, 13590, 13592, 13594,	15473, 15475, 15477, 15479,
15187, 15189		13596, 13598, 13600, 13601,	15481, 15483, 15485, 15487,
<code>_</code> . 187, 212, 432, 4130, 4147, 4148		13603, 13604, 13606, 13607,	15489, 15491, 15493, 15495,
<code>\'</code>	166, 172, 179, 182,	13609, 13610, 13612, 13614,	15497, 15499, 15501, 15503,
2858, 2992, 2995, 2997, 3005,		13616, 13618, 13620, 13622,	15505, 15507, 15509, 15511,
12848, 13282, 13294, 13306,		13624, 13626, 13628, 13630,	15513, 15515, 15517, 15519,
13511, 13527, 13535, 13548,		13632, 13634, 13636, 13638,	15521, 15523, 15531, 15533,
13562, 13576, 13592, 13600,		13640, 13642, 13643, 13716,	15555, 15557, 15558, 15562,
13601, 13616, 13630, 13678,		13880, 13882, 13884, 13886,	15564, 15565, 15568, 15570,
13717, 13736, 13757, 13880,		13888, 13890, 13892, 13894,	15572, 15583, 15585, 15589,
13896, 13904, 13916, 13930,		13896, 13898, 13900, 13902,	15590, 15591, 15592, 15593,
13944, 13960, 13968, 13969,		13904, 13906, 13908, 13910,	15594, 15595, 15596, 15598,
13984, 13998, 14315, 14317,		13912, 13914, 13916, 13918,	15599, 15600, 15601, 15602,
14563, 14591, 14728, 14756,		13920, 13922, 13924, 13926,	15603, 15604, 15605, 15606,
15159, 15161, 15209, 15211,		13928, 13930, 13932, 13934,	15607, 15608, 15609, 15610,
15570, 15575, 15580, 15585,		13936, 13938, 13940, 13942,	15611, 15612, 15613, 15614,
15590, 15595, 15600, 15605,		13944, 13946, 13948, 13950,	15615, 15616, 15618, 15619,
15610, 15615, 15620, 15625,		13952, 13954, 13956, 13958,	15620, 15621, 15622, 15623,
15630, 15635, 15640, 15645,		13960, 13962, 13964, 13966,	15624, 15625, 15626, 15627,
15650, 15655, 15660, 15665,		13968, 13969, 13971, 13972,	15628, 15630, 15632, 15643,
15670, 15675, 15680, 15685		13974, 13975, 13977, 13978,	15645, 15649, 15650, 15651,
<code>\l</code> 188, 213, 1840, 1956, 2804, 3662,		13980, 13982, 13984, 13986,	15652, 15653, 15654, 15655,
7158, 7743, 7753		13988, 13990, 13992, 13994,	15656, 15658, 15659, 15660,
<code>\~</code>	431, 1138, 2064, 2916,	13996, 13998, 14000, 14002,	15661, 15662, 15663, 15664,
2924, 2925, 2926, 3758, 4151,		14004, 14006, 14008, 14010,	15665, 15666, 15667, 15668,
13285, 13297, 13309, 13517,		14275, 14277, 14279, 14281,	15669, 15670, 15671, 15672,
13546, 13554, 13582, 13614,		14282, 14284, 14286, 14288,	15673, 15674, 15675, 15676,
13622, 13684, 13720, 13739,		14290, 14292, 14294, 14296,	15678, 15679, 15680, 15681,
13760, 13886, 13914, 13922,		14298, 14300, 14302, 14304,	15682, 15683, 15684, 15685,
13950, 13982, 13990, 14092,		14306, 14308, 14309, 14311,	15686, 15687, 15740, 15742
14094, 14095, 14225, 14227,		14313, 14315, 14317, 14319,	
15155, 15157, 15205, 15207,		14321, 14323, 14325, 14374,	
15213, 15215, 15572, 15577,		14376, 14378, 14380, 14382,	
15582, 15587, 15592, 15597,		14384, 14386, 14389, 14391,	<code>\9</code>
15602, 15607, 15612, 15617,		14516, 14518, 14520, 14522,	412, 1202, 1205, 1236,
15622, 15627, 15632, 15637,		14524, 14526, 14528, 14530,	2106, 2121, 2130, 2158, 2178,
		14532, 14534, 14536, 14538,	13716, 15061, 15063, 15065,
		14540, 14542, 14543, 14545,	15067, 15069, 15071, 15073,
		14547, 14549, 14551, 14553,	15075, 15077, 15079, 15081,
			15083, 15085, 15087, 15089,

15091, 15093, 15095, 15097, 15099, 15101, 15103, 15105, 15107, 15109, 15111, 15113, 15115, 15117, 15119, 15121, 15123, 15125, 15127, 15129, 15131, 15133, 15135, 15137, 15139, 15141, 15143, 15145, 15147, 15149, 15151, 15153, 15155, 15157, 15159, 15161, 15163, 15165, 15167, 15169, 15171, 15173, 15175, 15177, 15179, 15181, 15183, 15185, 15187, 15189, 15191, 15193, 15195, 15197, 15199, 15201, 15203, 15205, 15207, 15209, 15211, 15213, 15215, 15217, 15219, 15221, 15223, 15225, 15227, 15229, 15231, 15233, 15235, 15237, 15239, 15241, 15243, 15245, 15247, 15249, 15251, 15253, 15255, 15257, 15259, 15261, 15263, 15265, 15267, 15269, 15271, 15273, 15275, 15277, 15279, 15281, 15283, 15285, 15287, 15289, 15291, 15293, 15295, 15297, 15299, 15301, 15303, 15305, 15307, 15309, 15311, 15313, 15315, 15317, 15319, 15321, 15323, 15325, 15327, 15329, 15331, 15333, 15335, 15337, 15339, 15341, 15343, 15345, 15347, 15349, 15351, 15353, 15355, 15357, 15359, 15361, 15363, 15365, 15367, 15369, 15371, 15373, 15375, 15377, 15379, 15381, 15383, 15385, 15387, 15389, 15391, 15393, 15395, 15397, 15399, 15401, 15403, 15405, 15407, 15409, 15411, 15413, 15415, 15417, 15419, 15421, 15423, 15425, 15427, 15429, 15431, 15433, 15435, 15437, 15439, 15441, 15443, 15445, 15447, 15449, 15451, 15453, 15455, 15457, 15459, 15461, 15463, 15465, 15467, 15469, 15471, 15473, 15475, 15477, 15479, 15481, 15483, 15485, 15487, 15489, 15491, 15493, 15495, 15497, 15499, 15501, 15503, 15505, 15507, 15509, 15511, 15513, 15515, 15517, 15519, 15521, 15523, 15525, 15527, 15529, 15531, 15533, 15535, 15537, 15569, 15571, 15573, 15574,	15575, 15576, 15577, 15578, 15579, 15580, 15581, 15582, 15584, 15586, 15587, 15588, 15589, 15590, 15591, 15592, 15594, 15596, 15599, 15601, 15603, 15604, 15605, 15606, 15607, 15608, 15609, 15610, 15611, 15612, 15614, 15616, 15618, 15619, 15620, 15621, 15622, 15624, 15625, 15626, 15627, 15629, 15631, 15633, 15634, 15635, 15636, 15637, 15638, 15639, 15640, 15641, 15642, 15644, 15646, 15647, 15648, 15649, 15650, 15651, 15652, 15654, 15656, 15659, 15661, 15663, 15664, 15665, 15666, 15667, 15668, 15669, 15670, 15671, 15672, 15674, 15676, 15678, 15679, 15680, 15681, 15682, 15684, 15685, 15686, 15687, 15741 A \ABREVE . . 15561, 15633, 15634, 15635, 15636, 15637 \abreve 15554, 15573, 15574, 15575, 15576, 15577 \AccFancyVerbLineautorefname 2966 \Accfootnoteautorefname . . 2946 \Acctheoremautorefname . . 2970 \ACIRCUMFLEX . 15562, 15638, 15639, 15640, 15641, 15642 \acircumflex . . 2997, 15555, 15578, 15579, 15580, 15581, 15582 \Acrobatmenu . 2253, 3694, 5364, 8427, 9085, 9566, 10368 \active 1116, 1123, 4127, 4128, 4129, 4130, 4131, 4132, 4135, 4137, 4140, 4148, 12996, 13025 \add@accent 423 \addcontentsline 6572, 6643, 6961, 6966, 7037, 13262 \addtocontents 7006, 7038, 7311, 7363, 13250, 13251	\addtocounter . 6025, 6048, 6057, 6068, 6072, 6263, 8989 \addvspace 13250, 13251 \advance 346, 347, 1137, 4513, 4841, 4887, 5209, 5210, 5213, 5214, 5583, 8181, 8534, 8611, 8640, 8670, 9724, 10792, 11064, 11333, 11377, 11378, 11813, 11858, 11859, 12097, 12154, 12199, 12200, 12783, 12785, 12786, 12792, 12801, 12900, 13115 \AE 13523, 13892, 14319 \ae 13588, 13956, 14321 \afterassignment 1729, 1735, 1741 \AfterBeginDocument . . 244, 258 \aftergroup 6459 \alef 15696 \alefhamza 15692 \aleflowerhamza 15694 \alefmadda 15691 \alefmaqsura 15725 \Alph 5632, 5936, 5937 \alph 5633, 6234, 6265 \AMSautorefname 7717 \anchor@spot . . 4453, 4466, 4473, 4479, 7999, 8481, 8569, 9324, 9396, 9864, 10735, 11008 \appendix 5933, 5934 \appendixautorefname 2814, 2832, 2850, 2868, 2886, 2904, 2922, 2954, 2955, 2980, 2998, 7727 \arabic . . . 5629, 5842, 5845, 5848, 5849, 5850, 5852, 5853, 5854, 5855, 5857, 5858, 5859, 5860, 5861, 5862, 5865, 5875, 5876, 5915, 6032, 7046, 7052, 7100, 7114, 7299, 7304, 7306 \AtBeginDocument . . . 245, 5400 \AtBeginShipout 5512, 8460, 8935 \AtBeginShipoutBox . 5516, 5519, 8455, 8456, 8936, 8937 \AtBeginShipoutFirst 5523, 9220, 10547, 10662 \AtEndDocument 5414 \AtEndOfPackage 255 \AtVeryEndDocument 5725, 11731 \author 5448, 5458 \autopageref 3806, 7598 \autoref . . . 523, 3805, 7617, 11085 \ayn 15714 B \b . . . 752, 756, 762, 13292, 13304, 13316, 13708, 13731, 13750, 15067, 15069, 15075, 15077, 15107, 15109, 15111, 15113,
---	--	---

15127, 15129, 15143, 15145,
15151, 15153, 15191, 15193,
15195
\baa 15697
\back@none 2749, 2759, 2772
\back@page 2751, 2764
\back@section 2750, 2756, 2762,
2768
\back@slide 2752, 2761
\backcite 6837
\backref 6868, 11089
\baselineskip 2256, 5222, 5223,
5224, 5225, 5226, 5227, 8588,
9883, 9906, 10530
\bbl@cite@choice 6684
\BeforeTeXIVht 2631
\begin 11094, 15746
\belowpdfbookmark 12896
\bfseries 467, 6783, 6806, 7494,
7514, 7531, 7645
\bgroup 542,
4241, 6446, 6458, 9324, 9897,
11535, 11627, 11648
\bibcite 6675, 6681, 6685, 6710,
6725, 6741, 6751
\bitsetGetDec 4565, 4698, 4716,
4730, 4743, 4759, 4791, 4816
\bitsetGetHex 4566
\bitsetGetSetBitList 4554
\bitsetIsEmpty 4695, 4713, 4727,
4740, 4756, 4788, 4813
\bitsetReset 4668, 4702, 4721,
4735, 4748, 4764, 4796
\bitsetSetValue 4534, 4544
\BOOKMARK 12828, 12907
\box 5216, 5519, 7926, 8967, 10207
\bullet 7446, 7454, 7464, 7472

C
\C 13702, 14807, 14809
\c 753, 757, 763, 2916,
2924, 2925, 2926, 5471, 5478,
13290, 13302, 13314, 13525,
13590, 13710, 13725, 13744,
13755, 13894, 13958, 14080,
14082, 14125, 14127, 14135,
14137, 14155, 14157, 14189,
14191, 14205, 14207, 14213,
14215, 14360, 14362, 14862,
14865, 15079, 15081, 15099,
15101
\c@footnote 6348, 6405, 6413, 6528
\c@page 5565, 5583, 5584, 5588,
5600, 5602, 5607, 5614, 5616,
5618, 5647, 6924
\c@secnumdepth 13175, 13193,
13208
\c@slidesection 7312, 7440, 7441
\c@slidesubsection 7364
\c@tocdepth 3133, 3138
\calc@bm@number 13038, 13113
\calculate@pdfview 3530, 3533
\capitalacute 13758
\capitalbreve 13765
\capitalcaron 13764
\capitalcedilla 13755
\capitalcircumflex 13759
\capitaldieresis 13761
\capitaldotaccent 13767
\capitalgrave 13757
\capitalhungarumlaut 13762
\capitalmacron 13766
\capitalnewtie 13769
\capitalogonek 13756
\capitalring 13763
\capitaltie 13768
\capitaltilde 13760
\caption 6542, 6544, 6631, 6633
\catcode 172, 173,
184, 185, 186, 187, 206, 678,
679, 815, 1116, 1123, 1840,
1841, 1956, 1957, 2013, 2014,
2015, 4000, 4002, 4126, 4127,
4128, 4129, 4130, 4131, 4132,
4135, 4137, 4140, 4148, 4158,
4247, 4248, 7743, 9933, 9934,
12925, 12927, 12996, 12999,
13025, 13028
\cf@encoding 1441
\chapterautorefname 2815, 2833,
2851, 2869, 2887, 2905, 2923,
2952, 2981, 2999, 7728
\chapternumberline 12814, 12818
\char 11758, 12929, 12966
\chardef 2447, 2448, 2449, 2450,
2657, 2659
\check@bm@number 13049, 13057,
13106, 13114
\CheckBox 5173
\CheckCommand 6402
\checkcommand 42, 6067, 6519,
6526, 6533, 6631, 6641, 6735,
6747, 7037, 7040, 7100, 7528
\checklatex 4, 6518, 6630, 6734,
7036, 7527
\checkpackage 9, 6066, 7099
\ChoiceBox 4891
\ChoiceMenu 5170
\citation 6780, 6803, 6829
\citeauthoryear 6895, 6901
\citeN 6892
\CJK@char 1119
\CJK@charx 1120
\CJK@CJK 1108
\CJK@eight 1319, 1322, 1436
\CJK@five 1319, 1321, 1436
\CJK@four 1318, 1321, 1435
\CJK@hundred 1385
\CJK@hundredmillion 1348
\CJK@ignorespaces 1118
\CJK@kern 1106
\CJK@minus 1310
\CJK@nine 1319, 1323, 1436
\CJK@null 1412
\CJK@one 1318, 1320, 1435
\CJK@punctchar 1121
\CJK@punctcharx 1122
\CJK@seven 1319, 1322, 1436
\CJK@six 1319, 1322, 1436
\CJK@ten 1320, 1321, 1322, 1323,
1400
\CJK@tenthousand 1333, 1354
\CJK@thousand 1370
\CJK@three 1318, 1321, 1435
\CJK@two 1318, 1320, 1435
\CJK@zero 1318, 1336, 1353, 1357,
1373, 1388, 1410
\CJKdigits 1195
\CJKkern 1107
\CJKnumber 1194
\close@pdfink 7993, 8018, 8027,
8058, 8094, 8129, 8450
\closeout 5394, 12916
\clubpenalty 6324, 6326
\codeof 6859
\color@endbox 7919,
8526, 8597, 8627, 8657, 8960,
10784, 11052
\color@hbox 7912, 8526, 8597, 8627,
8657, 8953, 10784, 11052
\columnwidth 6453
\comma@entry 4882, 4889, 4891
\comma@parse 4881
\contentsline 5403, 5404, 5416,
7007, 7011, 7038, 7040
\copy 6138, 6146, 7922, 8456, 8937,
8963
\count@ 717, 719,
720, 723, 726, 729, 732, 1135,
1136, 1137, 1138, 1730, 3149,
3150, 3155, 3156, 4512, 4513,
4528, 4824, 4839, 4841, 4865,
4887, 4903, 8176, 8177, 8178,
8179, 8180, 8181, 8184, 9720,
9721, 9722, 9723, 9724, 9727
\CurrentBorderColor 7983, 7985,
8012, 8014, 8022, 8024, 8029,
9386, 9420, 9422, 9433, 9435,
9454, 9456, 9507, 9509, 9526,
9528
\currentpdfbookmark 12888

\curu	14759	\cyrfita	14801	\CYRКСI	14791
\cyr ..	502, 2934, 2936, 2939, 2942, 2945, 2946, 2947, 2948, 2949, 2950, 2951, 2952, 2953, 2954, 2956, 2958, 2959, 2960, 2961, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 2971	\CYRG	14570, 14604	\cyrksi	14793
\CYRA	14598, 14973, 14977	\cyrgh	2952, 14669, 14735	\CYRKVCRS	14871
\cyra	2936, 2943, 2945, 2950, 2953, 2958, 2959, 2965, 2969, 14663, 14975, 14979	\CYRGDSC	15049	\cyrkvcrs	14873
\CYRABHCH	14937, 14942	\cyrgdsc	15051	\CYRL	14621
\cyrabhch	14939, 14945	\CYRGHCRS	14849	\cyrl 2950, 2952, 2954, 2956,	14686
\CYRABHCHDSC	14941	\cyrghcrs	14851	\CYRLDSC	14957
\cyrabhchdsc	14944	\CYRGHK	14853	\cyrldsc	14959
\CYRABHDZE	15005	\cyrghk	14855	\CYRLJE	14583
\cyrabhdze	15007	\CYRGUP	14845	\cyrlje	14748
\CYRABHHA	14895	\cyrgup	14847	\CYRLYUS	14775
\cyrabhha	14897	\CYRH	14641	\cyrlyus	14777
\CYRAE	14981	\cyrh	14706	\CYRM	14623
\cyrae	14983	\CYRHDSC	14917	\cyrm 2939, 2943, 2969, 2970,	14688
\CYRB	14600	\cyrhdsdsc	14919	\CYRMDSC	14969
\cyrb	2950, 14665	\CYRHHK	15057	\cyrmdsc	14971
\CYRBYUS	14783	\cyrhhk	15059	\CYRN	14625
\cyrbyus	14785	\CYRHRDSN	14651	\cyrn 2936, 2942, 2943, 2945, 2946, 2948, 2956, 2962, 2963, 14690	
\CYRC	14643	\cyrhrdsn	14716	\CYRNDSC	14883
\cyrc	14708	\CYRI 14591, 14614, 14617, 15009, 15013		\cyrndsc	14885
\CYRCH	14645, 15045	\cyri	2936, 2939, 2943, 2949, 2954, 2956, 14679, 14682, 14756, 15011, 15015	\CYRNG	14887
\cyrch ..	2942, 2943, 2951, 14710, 15047	\cyrie	14572	\cyrng	14889
\CYRCHLDSC	14965	\cyrie	14737	\CYRNHK	14961
\cyrchldsc	14967	\CYRII	14576, 14579	\cyrnhk	14963
\CYRCHRDSC	14925	\cyrii	14741, 14744	\CYRNJE	14585
\cyrchrdsc	14927	\CYRIOTBYUS	14787	\cyrnje	14750
\CYRCHVCRS	14929	\cyriotbyus	14789	\CYRO	14627, 15017
\cyrchvcrs	14931	\CYRIOTE	14771	\cyro 2939, 2942, 2945, 2946, 2956, 2965, 2966, 2968, 2969, 2970, 14692, 15019	
\CYRD	14606	\cyriote	14773	\CYROMEGA	14763
\cyrd 2939, 2942, 2953, 2958, 2959, 14671		\CYRIOTLYUS	14779	\cyromega	14765
\CYRDJE	14568	\cyriotlyus	14781	\CYROMEGARND	14815
\cyrdje	14733	\CYRISHRT	14616	\cyromegarnd	14817
\CYRDZE	14574	\cyrishrt	14681	\CYROMEGATITLO ...	14819
\cyrdze	14739	\CYRISHRTDSC	14833	\cyromegatitlo	14821
\CYRDZHE	14596	\cyrishrtdsc	14835	\CYROT	14823
\cyrdzhe	14761	\CYRIZH	14803, 14807	\cyrot	14825
\CYRE 14563, 14566, 14608, 14985		\cyrizh	14805, 14809	\CYROTLD	15021, 15025
\cyre	2936, 2942, 2943, 2956, 2968, 2969, 2970, 14673, 14728, 14731, 14987	\CYRJE	14581	\cyrotld	15023, 15027
\cyreref	15031	\cyrje	14746	\CYRP	14629
\CYREREV	14657, 15029	\CYRK	14589, 14619	\cyrp 2939, 2942, 2943, 2947, 2948, 2954, 2956, 2960, 2961, 2962, 2963, 14694	
\cyrerev	14722	\cyrk	2945, 2946, 2948, 2962, 2963, 2965, 2966, 2967, 14684, 14754	\CYRpalachka	14947
\CYRERY	14653, 15053	\CYRKBEAK	14879	\CYRPHK	14891
\cyrery ..	2934, 2936, 14718, 15055	\cyrkbeak	14881	\cyrphk	14893
\CYRF	14639	\CYRKDSC	14867	\CYRPSI	14795
\cyrf	14704	\cyrkdsc	14869	\cyrpsi	14797
\CYRFITA	14799	\CYRKHCERS	14875	\CYRR	14631
		\cyrkhcrs	14877	\cyrr 2934, 2936, 2939, 2942, 2943, 2949, 2953, 2954, 2956, 2958, 2959, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 14696	
		\CYRKHK	14953	\CYRRTICK	14841
		\cyrkhk	14955	\cyrrtick	14843
		\CYRKOPPA	14827		
		\cyrkoppa	14829		

\CYRS	14633, 14900	\CYRZDSC	14861	\DefaultOptionsofCheckBox	5232, 11488, 11988, 12357
\cyr	2939, 2942, 2945, 2946, 2949, 2964, 2965, 2966, 2967, 2971, 14698, 14903	\cyrz	14864	\DefaultOptionsofComboBox	5235
\CYRSCHWA	14989, 14993	\CYRZH	14610, 14949, 14997	\DefaultOptionsofListBox	5234
\cyrschwa	14991, 14995	\cyrzh	2936, 2956, 14675, 14951, 14999	\DefaultOptionsofPopdownBox	5236
\CYRSDSC	14899, 14900	\CYRZHDSC	14857	\DefaultOptionsofPushButton	5231, 11415, 11907, 12265
\cyrsdsc	14902	\cyrzhdsc	14859	\DefaultOptionsofRadio	5237
\CYRSEMISFTSN	14837			\DefaultOptionsofReset	5230, 11462, 11961, 12325
\cyrsemisftsn	14839			\DefaultOptionsofSubmit	5229, 11444, 11938, 12301
\CYRSFTSN	14655			\DefaultOptionsofText	5233, 11305, 11784, 12117
\cyrstsn	14720			\DefaultWidthofCheckBox	5223, 11484, 11984, 12353
\CYRSH	14647			\DefaultWidthofChoiceMenu	5225, 11322, 11802, 12143
\cyrsh	14712			\DefaultWidthofReset	5221, 11458, 11957, 12321
\CYRSHCH	14649			\DefaultWidthofSubmit	5219, 11440, 11934, 12297
\cyrshch	14714			\DefaultWidthofText	5228, 11294, 11773, 12106
\CYRSHHA	14933			\define@key	2346, 2348, 2391, 2406, 2409, 2412, 2420, 2423, 2433, 2436, 2439, 2456, 2468, 2470, 2473, 2476, 2493, 2497, 2500, 2503, 2506, 2509, 2512, 2515, 2550, 2607, 2627, 2628, 2642, 2645, 2648, 2651, 2654, 2662, 2665, 2668, 2671, 2675, 2703, 2719, 2730, 2733, 2736, 2739, 2743, 2746, 2753, 2782, 2801, 2804, 3030, 3061, 3069, 3077, 3084, 3087, 3102, 3127, 3130, 3134, 3162, 3167, 3171, 3174, 3181, 3193, 3201, 3204, 3207, 3209, 3212, 3221, 3231, 3238, 3245, 3246, 3318, 3327, 3357, 3363, 3369, 3375, 3381, 3387, 3393, 3399, 3405, 3438, 3445, 3479, 3530, 3531, 3551, 3558, 3565, 3566, 3569, 3572, 3575, 3578, 3581, 3584, 3587, 3610, 3613, 3616, 4506, 4594, 4650, 4952, 4957, 4970, 5007, 5010, 5013, 5016, 5019, 5022, 5025, 5029, 5032, 5035, 5038, 5041, 5044, 5047, 5050, 5053, 5056, 5059, 5062, 5092, 5095, 5098, 5101, 5120, 5126, 5140, 5156, 5162, 5738, 5749, 10235, 10237, 10240, 10242, 10244, 10253, 10261, 10268, 10270, 10272, 10274, 10276,
\cyrshha	14935				
\CYRT	14635				
\cyr	2939, 2942, 2948, 2950, 2962, 2963, 2964, 2965, 2966, 2967, 2968, 2969, 2970, 14700				
\CYRTDSC	14905				
\cyrtdsc	14907				
\CYRTETSE	14921				
\cyr	14923				
\cyrthousands	14831				
\CYRTSHE	14587				
\cyrtshe	14752				
\CYRU	14594, 14637, 15033, 15037, 15041				
\cyr	2946, 2948, 2962, 2963, 2966, 2970, 14702, 15035, 15039, 15043				
\CYRUK	14811				
\cyr	14813				
\CYRUSHRT	14593				
\cyrushrt	14758				
\CYRV	14602				
\cyr	2934, 2936, 14667				
\CYRY	14909				
\cyr	14911				
\CYRYA	14661				
\cyr	14726				
\CYRYAT	14767				
\cyr	14769				
\CYRYHC	14913				
\cyr	14915				
\CYRYI	14578				
\cyr	14743				
\CYRYO	14565				
\cyr	14730				
\CYRYU	14659				
\cyr	14724				
\CYRZ	14612, 14862, 15001				
\cyr	2953, 2958, 2959, 14677, 14865, 15003				

10278, 10287, 10297, 10299,
10301, 10302, 10308, 10317,
10319, 10321, 10323, 10325,
10327, 10329, 10331, 10333,
10335, 10337, 10339, 10341,
10343, 10345, 10347, 10348,
10349, 10350, 10351, 10352,
10353, 10354, 10355, 10356,
10357, 10358

\df@tag 7061, 7067

\DH 13543, 13912

\dh 13612, 13980

\dhal 15705

\dimen@ 387, 388, 392, 1736, 1804,
1805, 1808, 1810, 3648, 3649,
3651, 3658, 3659, 9687, 9688,
9690, 10198, 10210, 10213

\dimexpr . . 399, 2082, 2084, 2092,
2097, 2100, 2102, 2116, 2118,
2121, 2122, 2129, 2132, 2135,
2136, 2137, 2138, 2148, 2153,
2161, 2165, 2170, 2180, 2183,
2188, 2191, 2196, 2197

\ding 5067, 5070

\DingObject 11880

\discretionary 544

\divide 8177, 9721

\DJ . . . 3006, 13544, 14044, 15563

\dj 3003, 3004, 14046, 15556

\do 1136, 2363, 2368, 2373,
3219, 3240, 3241, 3242, 3243,
3258, 3259, 3260, 3261, 3262,
3263, 3266, 3267, 3268, 3269,
3270, 3271, 3274, 3275, 3278,
3279, 3280, 3281, 3282, 3285,
3286, 3287, 3288, 3289, 3292,
3293, 3294, 3295, 3296, 3299,
3300, 3301, 3302, 3303, 3306,
3307, 3310, 3311, 3312, 3315,
3316, 3322, 3323, 3324, 3325,
3603, 3604, 3605, 3606, 3607,
3608, 4554, 6245, 6775, 6798,
11327, 11389, 11597, 11604,
11614, 11807, 11870, 12148,
12214, 12995, 13024

\documentclass 2

\dospecials 13004, 13033

\dots 435

\dp 5212, 5215,
6451, 8527, 8600, 8629, 8659,
10199, 10202, 10785, 11053,
12092

\dth@counter . . . 6285, 6286, 6312

\dth@everypar 6300

\dvipdfm@setdim . . 12089, 12131,
12229, 12254, 12286, 12312,
12341, 12370

E

\ECIRCUMFLEX . 15564, 15648,
15649, 15650, 15651, 15652

\ecircumflex . 15557, 15588, 15589,
15590, 15591, 15592

\EdefEscapeHex 697

\EdefEscapeName . . . 3469, 3513

\EdefEscapeString 653, 662

\EdefUnescapeName 3470

\EdefUnescapeString 648

\egroup . . 543, 9324, 9929, 11544,
11636, 11661

\em 473

\emph 452

\empty 1118, 3137

\enc@html 4956, 4959

\enc@update 420

\END 1466, 1467, 1492, 1493, 1508,
1509, 1526, 1527, 1544, 1545,
1913, 1919, 1924, 2008, 2010,
8301, 8314, 8318, 8325, 8338,
8342, 8348, 8360, 8364

\end 15747

\endeqnarray . . . 6191, 6209, 6216

\endequation 6154, 6186

\endForm 4946

\endingput . . 64, 2639, 2679, 2680,
2693, 2697, 2698, 2707, 2708,
2714, 2715, 3802, 3902, 7488,
9873, 11092, 13121

\endlinechar 4125

\endNoHyper 5346

\EndPreamble 11095

\endsubeqnarray 6220, 6231

\eqnarray 6190, 6192, 6213

\equal 6856

\equation . . 6153, 6162, 6166, 6175

\equationautorefname 2808, 2826,
2844, 2862, 2880, 2898, 2916,
2934, 2935, 2974, 2992, 7717,
7721

\errmessage 3027

\es@roman 503

\es@save@dot 1094

\escapechar 405, 702, 6238, 12855,
13035, 13036, 13087

\eTeX 441, 11100

\etex@unexpanded . . . 1668, 1675

\eTeXversion . . . 8136, 8138, 8140

\evensidemargin 6948

\everypar 6326

\ExecuteOptions 3664, 3665, 3669

\ext@figure 7296

\ext@table 7295

\extra@b@citeb 6782

\extravietnam 3070

\extravietnamese 3062

F

\fa 15717

\FancyVerbLineautorefname 2821,
2839, 2857, 2875, 2893, 2911,
2929, 2964, 2967, 2987, 3005,
7734

\farsikaf 15738

\farsiya 15740

\fatha 15730

\fbox 11762, 11765

\Field@addtoks 4995, 5017, 5020,
5141, 5164

\Field@boolkey 4507, 4595, 4990,
5011, 5014

\Field@toks . . . 4993, 4994, 4996,
11303, 11334, 11413, 11439,
11457, 11486, 11536, 11553,
11564, 11575, 11585, 11602,
11620, 11628, 11633, 11649,
11658, 11782, 11814, 11905,
11933, 11956, 11986, 12115,
12155, 12263, 12296, 12320,
12355

\Field@Width 4931, 5027

\figureautorefname . . . 2811, 2829,
2847, 2865, 2883, 2901, 2919,
2949, 2977, 2995, 7724

\filename@area 4417

\filename@base 4417

\filename@ext . . 4414, 4415, 4417,
4418

\filename@parse 4413

\find@pdfink . . . 7962, 8016, 8026

\Fld@@@additionalactions . 12542,
12585, 12589

\Fld@@@DingDef . 5067, 5070, 5089

\Fld@additionalactions . . . 12542,
12624, 12656, 12690

\Fld@align 4935, 5054, 12492,
12599, 12664

\Fld@annotflags 4714, 4716, 12488,
12518, 12595, 12628, 12660,
12695, 12729

\Fld@bcolor . . . 4937, 5096, 12503,
12505, 12615, 12617, 12643,
12645, 12668, 12680, 12682

\fid@bcolor 12603

\Fld@bordercolor 4938, 5099,
12499, 12501, 12525, 12533,
12535, 12602, 12611, 12613,
12639, 12641, 12667, 12676,
12678, 12702, 12710, 12712,
12736, 12744, 12746

\Fld@bordersep 4939, 5048

\Fld@borderstyle 4941, 5045,
12493, 12523, 12600, 12633,
12665, 12700, 12752

\Fld@borderwidth . . . 4940, 5042, 5206, 5209, 5210, 5213, 5214, 11377, 11378, 11858, 11859, 12199, 12200, 12493, 12523, 12600, 12633, 12665, 12700, 12752	\Fld@listcount 11388, 11391, 11402, 11869, 11872, 11886, 11892, 12210, 12216, 12220, 12225, 12236, 12243	\Fld@value 4847, 4854, 4856, 5057, 11293, 11309, 11321, 11360, 11361, 11772, 11789, 11801, 11841, 11842, 12105, 12122, 12142, 12182, 12183, 12689
\Fld@calculate@code 5107, 12555, 12557	\Fld@loc 5008	\Fld@width . . 5026, 11294, 11308, 11312, 11322, 11359, 11370, 11372, 11394, 11406, 11427, 11440, 11448, 11458, 11472, 11484, 11491, 11494, 11773, 11788, 11793, 11802, 11840, 11851, 11853, 11885, 11898, 11920, 11934, 11942, 11957, 11971, 11984, 11992, 11996, 12106, 12121, 12124, 12143, 12181, 12192, 12194, 12212, 12247, 12279, 12297, 12305, 12321, 12335, 12353, 12361, 12363
\Fld@cbsymbol 4942, 5060, 12507	\Fld@maxlen . . 4934, 5030, 12691	\float@caption 6552, 6612
\Fld@charsize . . 4932, 4933, 5039, 11376, 11857, 12198, 12509, 12621, 12649, 12686, 12734	\Fld@menulength 4930, 5033, 11325, 11329, 11376, 11596, 11597, 11600, 11805, 11809, 11857, 12146, 12150, 12198	\float@makebox 6614, 6615
\Fld@checkedfalse 4928	\Fld@name . . 5023, 11291, 11319, 11411, 11481, 11533, 11538, 11549, 11550, 11561, 11562, 11571, 11572, 11580, 11601, 11618, 11626, 11631, 11646, 11655, 11770, 11799, 11903, 11981, 12103, 12140, 12261, 12350, 12482, 12484, 12489, 12519, 12596, 12629, 12661, 12696, 12730	\floatingpenalty 6452
\Fld@checkequals . . . 4999, 11328, 11390, 11605, 11615, 11808, 11871, 12149, 12215	\Fld@norotatefalse 4630	\flq 510
\Fld@choices . . 4821, 4829, 4831, 4835, 4844, 4852, 4857, 4905, 4907, 4915, 4916, 12623	\Fld@norotatetrue 4629	\flqq 508
\Fld@color 4936, 5102, 12510, 12622, 12650, 12687	\Fld@noviewfalse 4633	\fmtname 7
\Fld@default 4846, 4849, 4851, 5051, 11292, 11309, 11320, 11361, 11482, 11534, 11552, 11566, 11574, 11581, 11607, 11617, 11647, 11657, 11771, 11789, 11800, 11842, 11982, 12104, 12122, 12141, 12183, 12351, 12651, 12652, 12688	\Fld@noviewtrue 4634	\fmtversion 7
\Fld@DingDef . . 5060, 5063, 5065	\Fld@nozoomfalse 4626	\fontencoding 413, 417, 445, 11754
\Fld@disabledfalse 4929	\Fld@nozoomtrue 4625	\fontfamily 446, 11753
\Fld@export 4659, 4662, 4669, 4961	\Fld@onblur@code . . 5110, 12563, 12565	\fontseries 447, 6278, 11755
\Fld@findlength . . . 11584, 11595	\Fld@onclick@code . . . 5104, 5163, 12539	\fontshape 448, 4066, 11756
\Fld@flags 4728, 4730, 4741, 4743, 4757, 4759, 4789, 4791, 4814, 4816, 12491, 12521, 12598, 12631, 12663, 12698, 12732	\Fld@onenter@code . 5113, 12575, 12577	\fontsize 449
\Fld@format@code . . 5105, 12547, 12549	\Fld@onexit@code . . 5114, 12579, 12581	\fonttins 6446
\Fld@getmethodfalse 4981	\Fld@onfocus@code . 5109, 12559, 12561	\footnote 4483
\Fld@getmethodtrue 4983	\Fld@onmousedown@code . 5111, 12567, 12569	\footnoteautorefname 2809, 2827, 2845, 2863, 2881, 2899, 2917, 2938, 2941, 2975, 2993, 7718, 7722
\Fld@height . . 5036, 11295, 11312, 11323, 11379, 11394, 11406, 11441, 11459, 11485, 11494, 11774, 11793, 11803, 11860, 11885, 11898, 11935, 11958, 11985, 11996, 12107, 12124, 12144, 12201, 12212, 12247, 12298, 12322, 12354, 12363	\Fld@onmouseup@code . . . 5112, 12571, 12573	\footnotesep 6450, 6457
\Fld@hiddenfalse 4617	\Fld@printfalse 4622	\footnotesize 478, 6448
\Fld@hiddentrue 4618	\Fld@printtrue 4621	\footnotetext 6405
\Fld@invisiblefalse 4613	\Fld@radiosymbol . . . 4943, 5063, 12647	\footref 6476, 6477
\Fld@invisibletrue 4614	\Fld@rotation . 4944, 5093, 12495, 12497, 12524, 12529, 12531, 12601, 12607, 12609, 12635, 12637, 12666, 12672, 12674, 12701, 12706, 12708, 12735, 12740, 12742	\Form 4945
\Fld@keystroke@code 5108, 12543, 12545	\Fld@submitflags 4696, 4698, 12722	\Form@action 4955, 11525, 12720
	\Fld@temp 5066, 5068, 5071, 5072, 5081, 5082	\Form@boolkey 4949
	\Fld@validate@code . 5106, 12551, 12553	\Form@htmlfalse 4948, 4967
		\Form@htmltrue 4960
		\Form@method 4979, 4987, 11525
		\frq 511
		\frqq 509
		\futurelet 563, 1460
		\FV@SetLineNo 6006
		\FV@StepLineNo 6005, 6007, 6008

G

\G . . . 13701, 13727, 13746, 14327, 14329, 14331, 14333, 14335, 14337, 14338, 14340, 14342, 14344, 14346, 14348, 14350

<code>\g@addto@macro</code>	5526, 5677, 6684, 6958, 8367, 9711, 9984, 10499, 10585, 10647, 10942, 11106
<code>\G@refundefinedtrue</code> .	4308, 6784, 6807, 7493, 7513, 7530, 7644
<code>\gaf</code>	15739
<code>\Gauge</code>	5179
<code>\GenericError</code>	551, 3351
<code>\GenericInfo</code>	553, 3349
<code>\GenericWarning</code>	552, 3350
<code>\getpagerefnumber</code>	6120
<code>\getrefbykeydefault</code> . .	6076, 6077
<code>\gexmode</code>	9742, 9743, 9831
<code>\ghayn</code>	15715
<code>\Gin@setfile</code>	7138, 7139
<code>\glossary</code>	517
<code>\glq</code>	506
<code>\glqq</code>	504
<code>\greek@Alph</code>	5950
<code>\Greeknumeral</code>	958
<code>\greeknumeral</code>	957
<code>\grq</code>	507
<code>\grqq</code>	505
<code>\guill@spacing</code>	887
<code>\guillemotleft</code>	927, 13470, 13650, 13838, 15543
<code>\guillemotright</code>	928, 13501, 13651, 13870, 15544
<code>\guilsinglleft</code>	13401, 13652, 15249, 15545
<code>\guilsinglright</code>	13403, 13653, 15251, 15546
H	
<code>\H</code>	13697, 13729, 13748, 13762, 14177, 14179, 14241, 14243, 15041, 15043
<code>\h</code>	2996, 15571, 15576, 15581, 15586, 15591, 15596, 15601, 15606, 15611, 15616, 15621, 15626, 15631, 15636, 15641, 15646, 15651, 15656, 15661, 15666, 15671, 15676, 15681, 15686
<code>\H@@footnotemark</code>	6334, 6351, 6481, 6488, 6500, 6511
<code>\H@@footnotetext</code>	6333, 6343, 6370, 6430, 6489, 6503, 6511
<code>\H@cmpfootnotetext</code>	6341, 6353, 6355
<code>\H@definecounter</code>	7043, 7045
<code>\H@endeqnarray</code>	6191, 6210
<code>\H@endequation</code>	6154, 6186
<code>\H@endsubeqnarray</code>	6220, 6232
<code>\H@eqnarray</code>	6190, 6195
<code>\H@equation</code>	6153, 6177
<code>\H@item</code>	5863, 5869, 6692, 6717
<code>\H@newctr</code>	7048, 7050
<code>\H@old@part</code>	13185, 13196
<code>\H@old@schapter</code>	13155, 13164
<code>\H@old@ssect</code>	13206, 13217, 13226
<code>\H@old@spart</code>	13198, 13204
<code>\H@old@ssect</code>	13141, 13146
<code>\H@refstepcounter</code>	5878, 5888, 6007, 6130, 6176, 6291, 6547, 7309, 7362
<code>\H@seteqlabel</code>	7079, 7081
<code>\H@subeqnarray</code>	6219, 6223
<code>\ha</code>	15723
<code>\Haa</code>	15702
<code>\halign</code>	526
<code>\hamza</code>	15690
<code>\HAR@checkcitations</code>	6872
<code>\HAR@citetoaux</code>	6828
<code>\HAR@tempa</code>	6873, 6874, 6875, 6876, 6877, 6878
<code>\harvardcite</code>	6822, 6859
<code>\harvarditem</code>	6847
<code>\hbox</code>	1728, 1734, 1740, 2268, 3148, 3154, 5027, 5200, 5201, 5202, 5203, 6812, 6943, 8455, 8528, 8535, 8601, 8612, 8630, 8641, 8660, 8671, 8936, 9897, 10202, 10213, 10786, 10793, 11054, 11065, 11673, 12123, 12211, 12246, 12277, 12306, 12336, 12362, 13133
<code>\hc@currentHref</code>	6563
<code>\HCode</code>	11525, 11527, 11538, 11547, 11559, 11567, 11569, 11600, 11606, 11611, 11616, 11630, 11635, 11639, 11642, 11651
<code>\headerps@out</code>	5772, 10489, 10500, 10572, 10586, 10639, 10648, 10661, 10675, 10714, 10825, 10943, 11107
<code>\hfill</code>	5200, 5201, 5202, 5203, 6703, 6736
<code>\Hfootnoteautorefname</code>	7718
<code>\hhyperref</code>	4488
<code>\hoffset</code>	6944
<code>\hphantom</code>	488
<code>\href</code>	518, 4240, 4482, 4483, 5372
<code>\href@</code>	4241, 4244, 4249
<code>\href@split</code>	4249, 4250
<code>\hsize</code>	6453
<code>\hskip</code>	1739, 1817, 2304, 2305, 4237, 5206, 11673
<code>\hspace</code>	514, 6862, 6863
<code>\hss</code>	6952, 13138
<code>\ht</code>	5208, 5211, 8533, 8604, 8610, 8616, 8633, 8639, 8645, 8663, 8669, 8675, 10198, 10791, 11063, 12090
<code>\htmladding</code>	4481
<code>\htmladdnormallink</code>	4482
<code>\htmladdnormallinkfoot</code>	4483
<code>\htmlref</code>	4484
<code>\Huge</code>	475
<code>\huge</code>	479
<code>\Hurl</code>	4256, 4258, 4260
<code>\hv@pdf@char</code>	12924, 12989, 12990, 12991, 12992
<code>\hvtex@buffer</code>	9606, 9610, 9618, 9621, 9630, 9634, 9650
<code>\hvtex@gettoken</code>	9605, 9619, 9623, 9632, 9636
<code>\hvtex@gettoken@</code>	9606, 9608
<code>\hvtex@par@dimension</code>	9601, 9642
<code>\hvtex@par@direction</code>	9602, 9645
<code>\hvtex@par@duration</code>	9603, 9637
<code>\hvtex@par@motion</code>	9604, 9639
<code>\hvtex@param@dimension</code>	9614, 9643, 9661, 9664
<code>\hvtex@param@direction</code>	9615, 9646, 9672, 9680
<code>\hvtex@param@duration</code>	9616, 9638, 9685, 9687
<code>\hvtex@param@motion</code>	9617, 9640, 9661, 9668
<code>\hvtex@parse@trans</code>	9590, 9612
<code>\hvtex@produce@trans</code>	9651, 9657
<code>\hvtex@token</code>	9609, 9620, 9626, 9633, 9638, 9641, 9644, 9646
<code>\hvtex@trans@code</code>	9594, 9595, 9596, 9597, 9598, 9599, 9600, 9613, 9659, 9660, 9662, 9664, 9666, 9668, 9670, 9672, 9674, 9675, 9676, 9677, 9678, 9680
<code>\hvtex@trans@effect@Blinds</code>	9594
<code>\hvtex@trans@effect@Box</code>	9595
<code>\hvtex@trans@effect@Dissolve</code>	9596
<code>\hvtex@trans@effect@Glitter</code>	9597
<code>\hvtex@trans@effect@R</code>	9600
<code>\hvtex@trans@effect@Split</code>	9598
<code>\hvtex@trans@effect@Wipe</code>	9599
<code>\hvtex@trans@par</code>	9633, 9637, 9639, 9642, 9645
<code>\hvtex@trans@params</code>	9627, 9629, 9653
<code>\Hy@@boolkey</code>	2314, 2315
<code>\Hy@@DefNameKey</code>	2388, 2390
<code>\Hy@@escapeform</code>	12441, 12454, 12460
<code>\Hy@@SectionAnchor</code>	13128, 13131
<code>\Hy@@temp</code>	3178, 3180, 5116, 5118
<code>\Hy@abspage</code>	5546, 5611, 5721, 5798
<code>\Hy@Acrobatmenu</code>	3710, 3751, 8428, 9086, 9567, 10369

\Hy@activeanchorfalse	4123, 8007, 8483, 8498, 8570, 8580, 8865, 9309, 9326, 9397, 9410, 9890, 10737, 10752, 11010, 11024	\Hy@BorderArrayPatch	.. 10248, 10251, 10498, 10941	8290, 8291, 8292, 8293, 8294, 8295, 8423, 8707, 8708, 8709, 8710, 8711, 8712, 8713, 8714, 8715, 8716, 8976, 9147, 9148, 9149, 9150, 9151, 9152, 9153, 9154, 9155, 9156, 9238, 9380, 9811, 9812, 9813, 9814, 9815, 9816, 9817, 9818, 9819, 9820, 10063, 10064, 10065, 10066, 10067, 10068, 10069, 10070, 10071, 10072, 10565, 10851, 10852, 10853, 10854, 10855, 10856, 10857, 10858, 10859, 10860	
\Hy@activeanchortrue	... 8003, 8480, 8494, 8568, 8577, 8861, 9305, 9323, 9395, 9407, 9880, 10734, 10748, 11007, 11020	\Hy@breaklinksfalse	... 313	\Hy@displaydoctitlefalse	... 344
\Hy@ActiveCarriageReturn	4159, 4162	\Hy@breaklinksunhbox	.. 10189, 10205	\Hy@DistillerDestFix	. 6920, 9824, 9826
\Hy@AllowHyphens	.. 4233, 9878, 9901, 10194	\Hy@CatcodeWrapper	3995, 4054, 4098, 4111	\Hy@draftfalse	... 274
\Hy@AnchorName	... 4293, 4295, 4298, 4300, 4322, 4324, 4328, 4333, 4335	\Hy@centerwindowfalse	... 314	\Hy@drafttrue	... 275
\Hy@appendixstring	. 5931, 5938	\Hy@chapapp	.. 5932, 5938, 5945, 13159, 13170, 13252	\Hy@driver	349, 2487, 2632, 2643, 2646, 2649, 2652, 2663, 2666, 2669, 2672, 2683, 2686, 2711, 2720, 2731, 2734, 2740, 3820, 3823, 3827, 3830, 3834, 3837, 3839, 3843, 3847, 3851, 3854, 3858, 3862, 3866, 3869, 3873, 3876, 3878, 3882, 3886, 3889, 3892, 3895, 3906, 3909, 3911, 3917, 3919, 3924, 3926, 3928
\Hy@AtBeginDocument	... 247, 866, 2534, 2594, 2635, 2689, 2737, 3090, 3645, 3683, 3798, 3804, 3898, 4034, 4108, 5278, 5391, 5805, 6012, 6819, 7564, 7711, 7907, 8374, 8948, 9378, 10674, 10712, 11688, 11689	\Hy@chapterstring	... 5927, 5929, 5932, 5944	\Hy@dth@currentHref	6293, 6317
\Hy@AtBeginDocumentHook	248, 253, 259, 260	\Hy@CheckOptionValue	... 2358, 2395	\Hy@DvipdfmxOutlineOpentru	... 3936, 3943
\Hy@AtEndOfPackage	. 250, 760, 2202, 3063, 3071, 3078, 3786, 3812, 3818, 3963, 3986	\Hy@CJKbookmarksfalse	... 315	\Hy@EndAnnot	8984, 9028, 9058, 9083, 9107
\Hy@AtEndOfPackageHook	. 251, 254, 256, 257	\Hy@cjkpu	... 1129, 1131, 1152	\Hy@endcolorlink	... 4062, 4067, 4071, 7917, 7994, 8481, 8518, 8536, 8543, 8569, 8593, 8608, 8620, 8637, 8649, 8667, 8679, 8958, 8986, 9396, 9464, 9481, 9500, 9533, 9563, 9579, 9926, 10182, 10735, 10774, 10794, 10801, 11008, 11044, 11062, 11070
\Hy@author	... 5460, 5464	\Hy@colorlink	... 4058, 4066, 4070, 7908, 7988, 8057, 8093, 8128, 8449, 8481, 8504, 8532, 8541, 8569, 8585, 8607, 8619, 8637, 8649, 8667, 8679, 8949, 9025, 9055, 9080, 9104, 9396, 9418, 9481, 9500, 9533, 9563, 9579, 9899, 10173, 10175, 10735, 10758, 10790, 10799, 11008, 11030, 11062, 11070	\Hy@EndWrap	. 3996, 3998, 3999, 4032
\Hy@babelnormalise	. 4271, 4273	\Hy@ColorList	... 3218, 3219	\Hy@escapeform	.. 11311, 11393, 11405, 11430, 11449, 11473, 11493, 11791, 11875, 11896, 11923, 11944, 11972, 11994, 12128, 12219, 12250, 12283, 12308, 12337, 12367, 12435, 12465, 12472
\Hy@backout	.. 4119, 5330, 5334, 6658	\Hy@CounterExists	.. 5828, 5841, 5844	\Hy@escapeformfalse	... 316
\Hy@backreffalse	309, 2773, 2795, 3810	\Hy@currentbookmarklevel	12774, 12784, 12785, 12791, 12798, 12889, 12892, 12897, 12901	\Hy@escapestring	.. 12432, 12507, 12539, 12545, 12549, 12553, 12557, 12561, 12565, 12569, 12573, 12577, 12581, 12688,
\Hy@backreftrue	2766, 2770, 2792	\Hy@defaultdriver	3887, 3911, 3917		
\Hy@BeginAnnot	8978, 8994, 9034, 9062, 9087	\Hy@DefFormAction	. 4953, 4955		
\Hy@bibcite	... 6681, 6685	\Hy@DefNameKey	... 2387, 3239, 3257, 3265, 3273, 3277, 3284, 3291, 3298, 3305, 3309, 3314, 3321, 3602		
\Hy@bookmarksdepth	3133, 3138, 3150, 3156, 12768	\Hy@DEST	... 10190, 10215		
\Hy@bookmarksnumberedfalse	... 310	\Hy@DestName	... 7952, 7956		
\Hy@bookmarksopenfalse	... 311	\Hy@DisableOption	.. 2344, 3703, 3704, 3705, 3707, 3791, 3817, 3946, 3947, 3948, 3949, 3950, 3951, 3952, 3953, 3954, 3955, 3956, 3957, 3958, 3959, 3960, 3961, 3962, 3964, 3994, 4047, 4075, 4076, 4121, 4122, 5282, 5283, 5284, 5285, 5286, 5287, 5288, 5289, 5290, 5291, 5292, 5293, 5294, 5295, 5296, 5297, 5298, 5299, 5300, 5301, 5302, 5303, 5304, 5305, 5484, 5679, 6515, 7143, 7241, 7242, 7834, 7935, 8286, 8287, 8288, 8289,		
\Hy@bookmarkstrue	... 312				
\Hy@bookmarkstype	. 3168, 3170, 6974, 12779				
\Hy@boolkey	.. 2314, 2407, 2410, 2413, 2434, 2437, 2440, 2471, 2474, 2477, 2494, 2498, 2501, 2504, 2507, 2510, 2513, 2516, 2744, 2747, 2802, 3085, 3088, 3103, 3128, 3131, 3172, 3175, 3213, 3328, 3567, 3570, 3573, 3576, 3579, 3582, 3585, 3593, 3614, 3617, 5739				

12689, 12720
\Hy@EveryPageAnchor 6919, 6959
\Hy@EveryPageBoxHook . . 5510,
5514, 5518, 6958, 9711, 9984
\Hy@EveryPageHook . 5509, 5513,
5677, 8367
\Hy@ExchangeLeftParenthesis . .
. 7768, 7774
\Hy@ExchangeRightParenthesis .
. 7778, 7784
\Hy@false . . 2250, 2325, 2758, 2794
\Hy@figuresfalse 317
\Hy@finalfalse 275
\Hy@finaltrue 274
\Hy@FirstPage 3721
\Hy@FirstPageHook
5511, 5524, 5526, 5770, 5771,
10499, 10585, 10647, 10942,
11106
\Hy@fitwindowfalse 318
\Hy@FixNotFirstPage 8453, 8454,
8460
\Hy@float@caption . . . 6553, 6603,
6605
\Hy@float@currentHref 6606, 6608,
6610, 6618, 6621, 6623
\Hy@footnote@currentHref . 5277,
6358, 6363, 6373, 6378, 6381,
6393, 6395, 6421, 6462, 6465
\Hy@FormObjects . 11725, 12002,
12056, 12066, 12378, 12428
\Hy@Gin@setfile 7138, 7140
\Hy@GlobalStepCount 347, 5611,
5976, 5999, 6934, 7351, 7402
\Hy@gtemp . 675, 676, 4851, 4852,
4856, 4857, 4868, 4882, 7792,
7794, 12482, 12484
\Hy@href 4241, 4243
\Hy@hyperfootnotesfalse . . 6330
\Hy@hyperfootnotestrue . . . 319
\Hy@hyperindextrue 320
\Hy@hypertextnamesfalse . . 2206
\Hy@hypertextnamestrue . . . 321
\Hy@IfStringEndsWith 4418, 4430
\Hy@implicittrue 322
\Hy@Info . . 243, 2333, 3761, 3763,
3766, 3768, 3771, 3773, 3776,
3778, 3781, 3783, 3979, 3985,
4063, 4068, 4072, 4202, 4229,
4561, 5239, 5241, 5244, 5246,
5249, 5251, 5254, 5256, 5259,
5261, 5264, 5266, 5269, 5271,
6759, 6820, 6979, 6996
\Hy@LastPage 3724
\Hy@level . . 12780, 12782, 12793,
12798, 12799, 12800, 12829
\Hy@levelcheck . . . 12781, 12796
\Hy@linkcounter . 351, 353, 5976,
5977, 5999, 6000, 7082, 7351,
7352, 7356, 7402, 7403, 7407
\Hy@linkfileprefix 3203, 4402, 4423,
8521, 9274, 10778, 11047
\Hy@linktoc . . . 2442, 2444, 2452,
2454, 2464, 7015
\Hy@linktoc@all 2450
\Hy@linktoc@none 2447
\Hy@linktoc@page . . . 2442, 2449,
2452
\Hy@linktoc@section . 2444, 2448,
2454
\Hy@linktocpagefalse 323
\Hy@localanchornametrue . . 324
\Hy@LT@currentHref . 6132, 6142
\Hy@LT@footnotetext 6419, 6429
\Hy@make@anchor . . . 7056, 7062,
7068
\Hy@make@df@tag@@ 7060, 7075
\Hy@make@df@tag@@@ 7066, 7076
\Hy@MakeCurrentHref 5987, 6000
\Hy@MakeCurrentHrefAuto
. . . 5998, 6080, 7057, 12759,
13143, 13159, 13170, 13200,
13214, 13252
\Hy@maketitle@end . . 6492, 6497,
6499
\Hy@maketitle@optarg 6490, 6495
\Hy@MaybeStopNow . 2674, 2679,
2697, 2707, 2714, 3670
\Hy@menubartrue 325
\Hy@naturalnamesfalse 326
\Hy@nestingfalse 327
\Hy@newline@author 5503
\Hy@newline@title 5502
\Hy@newwindowfalse 329
\Hy@newwindowsetfalse 328, 3590
\Hy@newwindowsettrue . . . 3592
\Hy@next 5627, 5637, 5642, 13169,
13178, 13181
\Hy@nextfalse 3753, 7153
\Hy@NextPage 3715
\Hy@nexttrue . . . 3754, 3755, 3756,
7154, 7155, 7156
\Hy@number . . . 3543, 3547, 3555
\Hy@numberline . . 12775, 12812,
12813, 12814
\Hy@ObsoletePaperOption 2416,
2424
\Hy@ocgcolor . . 7911, 7925, 8952,
8966
\Hy@ocgcolorlinksfalse 4042
\Hy@org@chapter . . 13167, 13182
\Hy@OutlineName . 13048, 13102
\Hy@OutlineRerunCheck . 12913,
13012, 13092
\Hy@pageanchortrue 330
\Hy@pagecounter . 352, 354, 6038,
6934, 6936
\Hy@pageheight 3659, 10587,
10676
\Hy@pagelabelsfalse 5533
\Hy@pagelabelstrue 331
\Hy@param 5943, 5944, 5945, 5973,
5977
\Hy@pdfafalse 345
\Hy@pdfencoding@pdfdoc . 2589
\Hy@pdfmarkerrortrue . . 10153
\Hy@pdfmarkerrortrue . . . 10281,
10290
\Hy@pdfminorversion 7801, 7807,
7810, 7818, 7823, 7825, 7828,
7832
\Hy@pdfpagehiddenfalse . . . 332
\Hy@pdfstringdef . 674, 4826, 4834
\Hy@pdfstringfalse 333, 5307
\Hy@pdfstringtrue 530, 5279
\Hy@pdfversion 2615, 2626, 4828,
7823, 7825, 7829, 7832, 12476
\Hy@plainpagesfalse 334
\Hy@PrevPage 3718
\Hy@ps@CR 10629, 10636, 10641,
10642, 10659, 10680, 10681,
10682, 10688, 10695, 10702,
10709
\Hy@pstringB
. . . . 8204, 8209, 9187, 9199,
10126, 10142, 10914, 10930
\Hy@pstringD . 8064, 8088, 9036,
9050, 10434, 10450
\Hy@pstringdef
. . . . 7738, 7951, 7972, 8032,
8063, 8064, 8099, 8100, 8204,
8803, 9003, 9035, 9036, 9063,
9187, 9417, 9486, 9540, 9541,
10126, 10279, 10288, 10415,
10433, 10434, 10458, 10459,
10914, 12458, 13047, 13063
\Hy@pstringDest
. . . . 7951, 7952, 8803, 8850,
10279, 10280, 10284, 10288,
10289, 10293
\Hy@pstringF
. . . . 8063, 8082, 8099, 8118, 8123,
9035, 9049, 9540, 9547, 9551,
10433, 10449, 10458, 10474,
10477
\Hy@pstringName . 13047, 13048,
13063, 13077
\Hy@pstringP . 8100, 8123, 9541,
9551, 10459, 10477
\Hy@pstringURI 8032, 8053, 9063,
9076, 9417, 9429, 9486, 9490,

10415, 10425
 \Hy@PutCatalog 5673, 5681, 5787
 \Hy@raisedlink 2257, 5920,
 6082, 6103, 6104, 6105, 6108,
 6143, 6183, 6186, 6314, 6361,
 6376, 6434, 6460, 6591, 6669,
 6693, 6698, 6718, 7058, 7083,
 10487, 10570, 10821, 10985,
 12760, 13135, 13160, 13171,
 13201, 13253
 \Hy@raiselinksfalse . . . 335, 6821
 \Hy@RemoveDurPageAttr . 8325,
 8338
 \Hy@RemoveHidPageAttr . 8348,
 8360
 \Hy@RemovePercentCr . . . 4175,
 4179, 4184
 \Hy@RemoveTransPageAttr 8300,
 8314
 \Hy@Reserved@a 4338, 6193, 6222,
 11532, 11582, 11645
 \Hy@RestoreCatcodes 205, 3666,
 3930
 \Hy@RestoreLastskip
 2272, 7953, 8484,
 8499, 8571, 8581, 8852, 9310,
 9327, 9398, 9411, 9871, 9891,
 10738, 10753, 11011, 11025
 \Hy@ReturnAfterElseFi 355, 4163
 \Hy@ReturnAfterElseFiFiEnd . .
 359, 1702
 \Hy@ReturnAfterFi 355, 375, 1880,
 4167, 4183, 7253, 7289, 7773,
 7783, 12459
 \Hy@ReturnAfterFiFiFiEnd . . 358,
 1694, 1708, 1786, 1793
 \Hy@ReturnEnd . . 357, 358, 359,
 1714, 1798
 \Hy@safe@activesfalse 360, 4088,
 4093, 4352, 7633
 \Hy@safe@activestrue 360,
 4086, 4091, 4155, 4192, 4200,
 4228, 4275, 4344, 7543, 7622,
 13005, 13034
 \Hy@samed@currentHref . . . 6391,
 6394
 \Hy@samed@footnotemark . 6486,
 6501
 \Hy@samed@footnotetext . . 6487,
 6504
 \Hy@samed@hook 5488, 5498
 \Hy@SaveLastskip
 2272, 7949, 8472,
 8487, 8562, 8574, 8800, 9297,
 9313, 9388, 9401, 9861, 9875,
 10727, 10741, 11000, 11014
 \Hy@scanauthor 5458, 5463
 \Hy@scanoptauthor . . . 5458, 5459
 \Hy@scanopttitle 5449, 5450
 \Hy@scantitle 5449, 5454
 \Hy@secnum@part . 13188, 13190,
 13193
 \Hy@SectionAnchorHref 528,
 13126, 13148, 13219
 \Hy@SectionHShift 13125, 13134,
 13144, 13215
 \Hy@seminarslidesfalse . . . 7301
 \Hy@seminarstrue 7299
 \Hy@setbreaklinks . . . 2479, 2483,
 2495, 7800, 8796
 \Hy@SetCatcodes 181, 231, 3668
 \Hy@SetNewWindow
 3596, 8084, 8120, 9051, 9548,
 10448, 10473
 \Hy@setouterhbox . 10188, 10194
 \Hy@setpagesizetrue 336
 \Hy@setpdfborder . . . 3247, 7978,
 8037, 8068, 8104, 8431, 9014,
 9042, 9069, 9097, 9432, 9453,
 9474, 9493, 9525, 9556, 9572
 \Hy@setpdfversiontrue 2614
 \Hy@setref@link 7499, 7502
 \Hy@slidetitle . 7328, 7330, 7337,
 7345, 7355, 7379, 7381, 7388,
 7396, 7406
 \Hy@StartlinkName . . 7976, 7990
 \Hy@StepCount 346, 5588, 11329,
 11391, 11597, 11809, 11872,
 12150, 12216, 12893, 12898,
 12974
 \Hy@temp 558, 565, 678,
 750, 854, 857, 865, 866, 2422,
 2427, 2428, 2429, 2430, 2431,
 2432, 3177, 3186, 3187, 3188,
 3189, 3190, 3191, 3192, 3219,
 3220, 3221, 3224, 3226, 3229,
 3406, 3407, 3410, 3413, 3416,
 3441, 3449, 3450, 3451, 3452,
 3453, 3454, 3455, 3456, 3457,
 3588, 3589, 3742, 3746, 3747,
 3748, 3749, 3825, 3827, 3832,
 3834, 3837, 3849, 3851, 3856,
 3858, 3864, 3866, 3871, 3873,
 3876, 3918, 3919, 4551, 4555,
 4556, 4567, 4651, 4652, 4653,
 4655, 4659, 4971, 4972, 4973,
 4975, 4979, 4980, 5115, 5131,
 5132, 5133, 5134, 5135, 5136,
 5137, 5138, 5139, 5144, 5145,
 5146, 5147, 5148, 5149, 5150,
 5151, 5152, 5153, 5154, 5568,
 5571, 5580, 5582, 5586, 5590,
 5634, 5636, 6032, 6035, 6038,
 6044, 6156, 6162, 6470, 6476,
 7250, 7251, 8219, 8248, 8250,
 8726, 8731, 8737, 8741, 8744,
 8749, 8780, 8782, 9159, 9202,
 9204, 10026, 10029, 10033,
 10034, 10040, 10041, 10047,
 10075, 10080, 10086, 10090,
 10093, 10098, 10131, 10133,
 10245, 10246, 10254, 10255,
 10359, 10360, 10863, 10868,
 10874, 10878, 10881, 10886,
 10919, 10921, 12440, 12441,
 13045, 13051, 13059, 13074
 \Hy@temp@a 589, 590, 1686, 1688,
 1699, 1701, 1706, 1707, 1710,
 3442, 3444, 7172, 7173, 7174,
 7181, 7209, 7210, 7211, 7220
 \Hy@temp@b 1687, 1688
 \Hy@tempa 2316, 2318,
 2320, 2321, 2323, 2325, 2327,
 2330, 2333, 2334, 2754, 2755,
 2756, 2758, 2759, 2761, 2762,
 2764, 2768, 2772, 2783, 2785,
 2787, 2788, 2790, 2794, 4161,
 4162, 4173, 4177, 4276, 4280,
 4343, 4346, 4355, 4357, 4958,
 4959, 5617, 5619, 5657, 5659,
 5798, 5800, 6240, 6242, 6243,
 6246, 6247, 6248, 6548, 6553,
 6558, 6973, 6974, 6992, 6993,
 6999, 7315, 7316, 7367, 7368,
 8505, 8506, 9278, 9426, 9427,
 10759, 10760, 11031, 11032,
 12778, 12779, 12802, 12804,
 12821, 12822, 12830, 12854,
 12856, 12857, 12859, 12860,
 13242, 13267, 13272, 13275,
 13278
 \Hy@tempb 5618, 5619, 5658, 5659,
 12803, 12804, 12830
 \Hy@tempcolor 9908, 9910, 9923,
 9996, 9998, 10010
 \Hy@TempPageAnchor . . . 6924,
 6931, 6935, 6951
 \Hy@testname
 7964, 7965, 7970, 7972, 7973,
 7987, 8995, 8996, 9001, 9003,
 9005, 9021, 9440, 9441, 9446,
 9450, 9512, 9513, 9518, 9522,
 10001, 10002, 10007, 10018
 \Hy@texhtfalse 337
 \Hy@texhttrue 2629, 3821
 \Hy@title 5451, 5455
 \Hy@toclevel . . . 6984, 6988, 7001
 \Hy@toolbartrue 338
 \Hy@true . 2249, 2321, 2323, 2788,
 2790
 \Hy@typexmlfalse 339

\Hy@undefinedname . 7961, 7968, 7970, 8991, 8999, 9001, 9414, 9444, 9446, 9516, 9518, 9992, 10005, 10007
\Hy@unicodedefalse . . 340, 655, 664, 2545, 2546, 2554, 3383, 3389, 6034, 6928, 12478
\Hy@unicodetrue 2546, 5732, 5746
\Hy@usehidkeyfalse 3211
\Hy@usehidkeytrue 3215
\Hy@usemaketitleinfos 5504, 8260, 8688, 9119, 9800, 10024, 10832
\Hy@usemaketitlestring . . 5485, 5505, 5506
\Hy@useNameKey 2400, 8226, 8227, 8228, 8229, 8230, 8231, 8232, 8233, 8252, 8756, 8757, 8758, 8759, 8760, 8761, 8762, 8763, 8784, 9166, 9167, 9168, 9169, 9170, 9171, 9172, 9173, 9206, 9772, 9773, 9774, 9775, 9776, 9777, 9778, 9779, 10105, 10106, 10107, 10108, 10109, 10110, 10111, 10112, 10135, 10893, 10894, 10895, 10896, 10897, 10898, 10899, 10900, 10923
\Hy@usetitlefalse 341
\Hy@varioref@undefined . . . 6114, 6118, 7628
\Hy@verboseAnchor 4225, 7950, 8473, 8488, 8563, 8575, 8801, 9298, 9314, 9389, 9402, 9862, 9876, 10728, 10742, 11001, 11015
\Hy@verbosefalse 342
\Hy@verboseGlobalTemp . . 4201, 4202, 4203, 4204, 4208
\Hy@verboseLinkInfo 4208, 4209, 4212, 4219
\Hy@verboseLinkStart 4197, 8010, 8020, 8503, 8548, 8584, 8596, 8993, 9254, 9277, 9416, 9505, 9894, 9994, 10757, 10806, 11029, 11076
\Hy@verboseLinkStop 4213, 7995
\Hy@vt@PutCatalog . 5704, 5706
\Hy@VTeXversion . . . 5684, 5696, 9470, 9583, 9719, 12926
\Hy@Warning 241, 382, 1626, 2338, 2353, 2378, 2458, 2573, 2578, 3094, 3146, 3418, 3465, 3473, 4038, 4358, 4451, 4608, 4963, 5742, 5757, 6965, 7609, 7658, 7966, 8834, 8838, 8997, 9442, 9514, 10003, 10282, 10291, 12787, 12805
\Hy@WarningNoLine . 242, 2417, 2485, 2599, 3197, 3235, 3334, 3434, 3652, 3701, 3829, 3838, 3853, 3868, 3877, 5432, 5534, 5698, 5812, 6019, 6975, 7130, 10161
\Hy@WarningPageBorderColor 3232, 3234, 3236
\Hy@WarningPageColor . . . 3194, 3196, 3198
\Hy@WarnOptionDisabled . 2350, 2352
\Hy@WarnOptionValue . . . 2331, 2337, 2775, 2797
\Hy@windowuitrue 343
\Hy@writebookmark . 2254, 6985, 7335, 7343, 7353, 7386, 7394, 7404, 12764, 12904
\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 376, 380
\HyCal@scan 367, 371, 395
\HyColor@FieldBColor 5096, 5099
\HyColor@FieldColor 5102
\HyColor@HyperrefBorderColor 3222
\HyColor@HyperrefColor . . 3182
\HyColor@UseColor . . 4060, 7914, 7925, 8955, 8966
\HyField@@AddToFields . 11708, 11712
\HyField@@PDFChoices . . 4846, 4847, 4862
\HyField@@SetFlag . . 4541, 4543
\HyField@@UseFlag . . 4531, 4533
\HyField@AddToFields . . 11678, 11707, 11794, 11887, 11900, 11927, 11952, 11976, 11998
\HyField@AdvanceAnnotCount . . 12096, 12126, 12221, 12251, 12280, 12309, 12338, 12365
\HyField@afields . . 11675, 11697, 11698, 11700, 11734
\HyField@AfterAuxOpen . 11688, 11695, 11713
\HyField@AnnotCount . . . 12094, 12097, 12100
\HyField@AuxAddToFields 11687, 11692, 11696, 11716
\HyField@FlagsAnnot 4701, 4720, 4734, 4747, 4763, 4795
\HyField@FlagsCheckBox . 4733, 11490, 11991, 12360
\HyField@FlagsChoice . . . 4794, 11369, 11850, 12191
\HyField@FlagsPushButton 4719, 11426, 11446, 11471, 11919, 11940, 11970, 12278, 12303, 12334
\HyField@FlagsRadioButton 4746, 11365, 11846, 12187
\HyField@FlagsSubmit . . . 4667, 11447, 11941, 12304
\HyField@FlagsText 4762, 11307, 11787, 12120
\HyField@NewBitsetFlag . . 4499, 4502, 4510
\HyField@NewFlag . . 4497, 4573, 4574, 4575, 4576, 4577, 4578, 4579, 4580, 4581, 4582, 4583, 4584, 4585, 4586, 4587, 4588, 4589, 4590, 4591, 4592, 4597, 4598, 4599, 4600, 4601, 4602, 4603, 4604, 4605, 4638, 4640, 4641, 4643, 4644, 4646, 4647, 4648, 4649

\HyField@NewFlagOnly . . . 4501 , 4639 , 4642 , 4645	\HyInfo@AddonList . . . 3487 , 3488 , 3522 , 3529	\HyOrg@maketitle . . . 6484 , 6491 , 6496
\HyField@NewOption 4498 , 4504	\HyInfo@Addons 3508 , 3524 , 8284 , 9144 , 10056 , 10060	\HyOrg@subequations 6257 , 6264
\HyField@PDFAFlagWarning . . . 4607 , 4615 , 4619 , 4623 , 4627 , 4631 , 4635	\HyInfo@AddonUnsupportedtrue 8686 , 9798 , 10830	\HyOrg@title 5447 , 5452 , 5456
\HyField@PDFChoices 4819 , 11404 , 11894 , 12245	\HyInfo@do 3462 , 3489 , 3512	\HyOrg@url 4255
\HyField@PrintFlags . 4548 , 4694 , 4712 , 4726 , 4739 , 4755 , 4787 , 4812	\HyInfo@GenerateAddons . 3506 , 8261 , 9120 , 10025	\hyper@C@anchor 3685 , 4265 , 4267 , 4298 , 4300 , 4333 , 4335 , 4448 , 5319 , 5335 , 5352 , 6357 , 6362 , 6372 , 6377 , 6432 , 6435 , 6461 , 6589 , 6592 , 6620 , 6924 , 6931 , 6936 , 7334 , 7342 , 7352 , 7385 , 7393 , 7403
\HyField@SetFlag 4540 , 4680 , 4686 , 4691 , 4725 , 4753	\HyInfo@Key 3470 , 3471 , 3479 , 3484 , 3489 , 3492 , 3499 , 3513 , 3517	\hyper@C@link 4195 , 4251 , 4288 , 4312 , 4314 , 4338 , 6677 , 6823 , 6824 , 6825 , 6873 , 6875 , 6877 , 7504 , 7519 , 7618
\HyField@SetKeys 4923 , 11304 , 11336 , 11339 , 11358 , 11414 , 11443 , 11461 , 11487 , 11783 , 11816 , 11819 , 11838 , 11906 , 11937 , 11960 , 11987 , 12116 , 12157 , 12160 , 12179 , 12264 , 12300 , 12324 , 12356	\HyInfo@KeyEscaped . 3469 , 3470	\hyper@C@normalise 4164 , 4168 , 4172
\HyField@TheAnnotCount 12099 , 12130 , 12135 , 12226 , 12238 , 12253 , 12258 , 12285 , 12291 , 12311 , 12316 , 12340 , 12345 , 12369 , 12374	\HyInfo@trapped@false 3410 , 3429	\hyper@C@anchor 4475 , 5322 , 5337 , 5402 , 5415 , 7998 , 8471 , 8561 , 8857 , 9312 , 9387 , 9860 , 10726 , 10999
\HyField@UseFlag 4530 , 4671 , 4672 , 4673 , 4674 , 4675 , 4676 , 4677 , 4678 , 4681 , 4682 , 4683 , 4684 , 4687 , 4688 , 4689 , 4692 , 4703 , 4704 , 4705 , 4706 , 4707 , 4708 , 4709 , 4710 , 4711 , 4722 , 4723 , 4724 , 4736 , 4737 , 4738 , 4749 , 4750 , 4751 , 4752 , 4754 , 4765 , 4766 , 4767 , 4768 , 4769 , 4770 , 4771 , 4772 , 4783 , 4786 , 4797 , 4798 , 4799 , 4800 , 4802 , 4804 , 4805 , 4808 , 4811	\HyInfo@trapped@true 3407 , 3428	\hyper@C@anchorend 3688 , 5306 , 5324 , 5339 , 5355 , 5921 , 6084 , 6144 , 6186 , 6205 , 6229 , 6318 , 6671 , 6696 , 6699 , 6719 , 6852 , 7058 , 7084 , 8005 , 8496 , 8579 , 8864 , 9307 , 9409 , 9882 , 10750 , 11022 , 12760 , 12905 , 13136 , 13161 , 13172 , 13202 , 13254
\HyInd@@@wrindex 7168 , 7171 , 7202 , 7208	\HyInfo@TrappedUnsupported 3431 , 3435 , 8689 , 9801 , 10833	\hyper@C@anchorstart 3687 , 5306 , 5323 , 5338 , 5354 , 5921 , 6083 , 6144 , 6183 , 6205 , 6229 , 6315 , 6669 , 6694 , 6699 , 6719 , 6852 , 7058 , 7084 , 8001 , 8486 , 8573 , 8860 , 9296 , 9400 , 9874 , 10740 , 11013 , 12760 , 12905 , 13136 , 13161 , 13172 , 13202 , 13254
\HyInd@@hyperpage 7248 , 7258	\HyInfo@Value 3483 , 3485	\hyper@C@chars 4189 , 8033 , 8476 , 8490 , 8510 , 8529 , 8539 , 8553 , 8625 , 8655 , 9263 , 9284 , 9300 , 9317 , 9392 , 9404 , 9487 , 10416 , 10744 , 10764 , 10787 , 10797 , 10811 , 11017 , 11036 , 11056 , 11068 , 11081
\HyInd@@wrindex 7163 , 7164	\HyLang@addto 3009 , 3031 , 3062 , 3070	\hyper@C@currentanchor 9879 , 9888 , 9902 , 9919
\HyInd@EncapChar 2805 , 3662 , 7158	\HyLang@afrikaans 2807	\hyper@C@currentlinktype 9903 , 9907 , 9911
\HyInd@hyperpage 7245 , 7247 , 7254	\HyLang@DeclareLang 3023 , 3038 , 3039 , 3040 , 3041 , 3042 , 3043 , 3044 , 3045 , 3046 , 3047 , 3048 , 3049 , 3050 , 3051 , 3052 , 3053 , 3054 , 3055 , 3056 , 3057 , 3058 , 3059 , 3060	\hyper@C@hash 4141 , 4142 , 4190 , 4394 , 4406 , 4423 , 4426 , 5273 , 9257
\HyInd@org@wrindex 7162 , 7166 , 7176 , 7182 , 7184 , 7187	\HyLang@english 2825	\hyper@C@image 4261 , 4262 , 8551 , 9536 , 9989 , 10809 , 11079
\HyInd@pagelink 7263 , 7269 , 7271 , 7274	\HyLang@french 2843	\hyper@C@last 5422 , 5427
\HyInd@ParenLeft 7145 , 7173 , 7210	\HyLang@german 2861	
\HyInd@ParenRight 7146 , 7174 , 7181 , 7211 , 7220	\HyLang@italian 2879	
\HyInd@removespaces 7277 , 7280 , 7290	\HyLang@magyar 2897	
\HyInfo@AddonHandler 3460 , 3463	\HyLang@portuges 2915	
	\HyLang@portuges 2915	
	\HyLang@russian 2933	
	\HyLang@spanish 2973	
	\HyLang@vietnamese 2991 , 3062 , 3070	
	\HyLinguex@OrgB 752 , 756	
	\HyLinguex@OrgC 753 , 757	
	\HyLinguex@OrgD 754 , 758	
	\HyLinguex@Restore 755 , 768 , 772 , 780 , 2527	
	\HyOrg@addtoreset 7088 , 7090 , 7117	
	\HyOrg@appendix 5933 , 5939	
	\HyOrg@author 5448 , 5461 , 5465	
	\HyOrg@float@makebox 6614 , 6616	
	\HyOrg@hyperpage 7148 , 7150 , 7151	
	\HyOrg@languageshorthands 824 , 839 , 850 , 860	
	\HyOrg@make@df@tag@@ 7073	
	\HyOrg@make@df@tag@@@ 7074	

\hyper@link 3686, 4347, 5320, 5321, 5336, 5347, 5353, 8019, 8547, 8595, 9029, 9253, 9504, 9993, 10805, 11075	\hyper@crefststepcounter 5896, 5899, 5906	\HyPL@Format 5629, 5630, 5631, 5632, 5633, 5645
\hyper@link@ . . . 3693, 4339, 4341, 5318, 5329, 5333, 5344, 5360	\hyper@tilde 4150, 4151, 4152, 5274	\HyPL@found . 5628, 5635, 5639, 5646, 5656, 5658
\hyper@linkend 3690, 5326, 5341, 5357, 6397, 6663, 6666, 7019, 7023, 7027, 7029, 8018, 8516, 8592, 9028, 9030, 9289, 9462, 9905, 10772, 11042	\hypercalcbp 362, 362	\HyPL@Labels . 5545, 5668, 5669, 5671, 5673, 5718, 5719, 5811, 5819, 5820
\hyper@linkfile 3692, 4419, 5328, 5343, 5359, 8061, 8520, 8653, 9032, 9273, 9466, 10431, 10776, 11046	\hypercalcbpdef . . . 364, 401, 3562	\HyPL@LastNumber . 5549, 5584, 5607
\hyper@linkstart 3689, 5325, 5340, 5356, 6395, 6659, 6666, 7019, 7023, 7027, 7029, 8009, 8502, 8583, 8992, 9030, 9276, 9415, 9893, 10756, 11028	\hyperdef 4290, 5373	\HyPL@LastPrefix . . . 5550, 5578, 5609
\hyper@linkurl 3691, 4260, 4394, 4401, 4422, 4426, 5327, 5342, 5358, 8030, 8521, 8523, 8549, 8623, 9060, 9261, 9274, 9484, 9537, 9990, 10413, 10777, 10781, 10807, 11047, 11049, 11077	\HyperDestNameFilter 3644, 4229, 7951, 7973, 8478, 8492, 8512, 8549, 8803, 9004, 9257, 9267, 9285, 9303, 9321, 9393, 9405, 9449, 9521, 10279, 10288, 10732, 10746, 10767, 10807, 11005, 11018, 11038, 11077, 12983, 13047, 13063	\HyPL@LastType 5548, 5569, 5608
\hyper@livelink 5320, 5347	\HyperFirstAtBeginDocument 5399, 5401, 5423, 5426	\HyPL@page . . 5559, 5561, 5566, 5574
\hyper@makecurrent . 5917, 5941, 6131, 6182, 6204, 6228, 6292, 6392, 6565, 6607	\hypergetpageref 6077	\HyPL@Prefix . 5574, 5576, 5578, 5592, 5595, 5597, 5609, 5623, 5661
\hyper@n@rmalise . . . 4156, 4160	\hypergetref 6076	\HyPL@Roman 5552
\hyper@nat@current 6660	\HyperGlobalCurrentHref . 5962, 5964, 5972, 5973, 5977, 5980, 5984, 5990, 5991, 5995	\HyPL@roman 5553
\hyper@nat@anchorend 6671	\hyperimage . . . 4261, 4481, 7140	\HyPL@SetPageLabels 5667, 5726, 5814
\hyper@nat@anchorstart 6668	\hyperindexformat 7147	\HyPL@storePageLabel . . . 5592, 5594, 5664, 5716, 5795
\hyper@nat@linkbreak 6665	\hyperlink 4194, 5374, 7286, 7424, 7432, 7447, 7455, 7465, 7473, 7480	\HyPL@thisLabel 5542, 5544, 5558, 5561, 5562
\hyper@nat@linkend 6662	\hyperlinkfileprefix . . 3203, 3204, 3205, 10991	\HyPL@Type . . 5564, 5569, 5573, 5591, 5599, 5608, 5622, 5660
\hyper@nat@linkstart 6657	\HyperLocalCurrentHref . . 5980, 5982, 5988, 5989, 5990, 5991, 5993	\HyPL@Useless 5665, 5671
\hyper@normalise . . . 3664, 3669, 4133, 4241, 4244, 4257, 4259, 4261, 4282, 4953	\hyperpage 5380, 7148, 7149, 7151, 7244	\HyPsd@@@autoref . . 1547, 1549, 1552
\hyper@pageduration . 8321, 8369, 9696, 9713, 9956, 9986	\HyperRaiseLinkDefault . . 2256, 2265	\HyPsd@@@CJKdigits 1418, 1421, 1429
\hyper@pagehidden . . 8345, 8370, 9706, 9714, 9973, 9987	\HyperRaiseLinkHook 2255, 2266	\HyPsd@@@nameref . . 1529, 1531, 1534
\hyper@pagetransition 8297, 8368, 9585, 9712, 9939, 9985	\HyperRaiseLinkLength . . 2264, 2265, 2268	\HyPsd@@@pageref . . 1511, 1513, 1516
\hyper@quote . 5275, 8478, 8492, 8507, 8512, 8530, 8540, 8554, 9257, 9267, 9280, 9303, 9321, 10732, 10746, 10761, 10767, 10788, 10798, 10812, 11005, 11018, 11033, 11038, 11058, 11069, 11082	\hyperref . 4270, 4488, 4489, 5376, 7576, 7580, 7590, 7604	\HyPsd@@@ref . . 1495, 1497, 1500
\hyper@readexternallink . . 4349, 4365	\hypersetup 2566, 3047, 3446, 3663, 3665, 5370	\HyPsd@@@UTFviii@four . . 2131, 2134
	\hypertarget 4263, 5375	\HyPsd@@@AppendItalcorr . 1716
	\HyPL@@@CheckThePage . 5638, 5656	\HyPsd@@@autoref . . . 1544, 1545
	\HyPL@@CheckThePage . . 5614, 5616	\HyPsd@@@autorefname 1565, 1568
	\HyPL@Alph 5554	\HyPsd@@@CJKdigits . 1410, 1412, 1415
	\HyPL@alph 5555	\HyPsd@@@CJKNumber 1311, 1313, 1316, 1369, 1384, 1397, 1399, 1403
	\HyPL@arabic 5551	\HyPsd@@@ConvertToUnicode 2010
	\HyPL@CheckThePage 5566, 5613	\HyPsd@@@GetNextTwoTokens 2008
	\HyPL@Entry . 5800, 5808, 5816, 5818	\HyPsd@@@GlyphProcessWarning 1886, 1889
	\HyPL@EveryPage . . . 5556, 5677	\HyPsd@@@GreekNum . . 973, 982, 1081, 1085, 1089
		\HyPsd@@@hspace 1466, 1467

\HyPsd@@LetCommand . . 1589, 1610
\HyPsd@@nameref . . . 1526, 1527
\HyPsd@@pageref . . . 1508, 1509
\HyPsd@@ProtectSpacesFi . 1638, 1642, 1660, 1666, 1671
\HyPsd@@ref 1492, 1493
\HyPsd@@RemoveBraces . . 1684
\HyPsd@@RemoveBracesFi 1681, 1684
\HyPsd@@RemoveCmdPrefix 1843, 1846
\HyPsd@@ReplaceFi . 1913, 1919, 1924
\HyPsd@@UTFviii@four . . . 2115, 2120
\HyPsd@add@accent . . 423, 1455
\HyPsd@AfterCountRemove 1729, 1800
\HyPsd@AfterDimenRemove 1735, 1803
\HyPsd@AfterSkipRemove . 1741, 1815
\HyPsd@AMSclassfix . 513, 1476, 1478
\HyPsd@AppendItalcrr . . 1700, 1707, 1716
\HyPsd@autoref 523, 1544
\HyPsd@autorefname . 1556, 1562
\HyPsd@babel@danish 869
\HyPsd@babel@dutch 875
\HyPsd@babel@finnish 881
\HyPsd@babel@frenchb 886
\HyPsd@babel@german 891
\HyPsd@babel@macedonian . 898
\HyPsd@babel@ngerman . . . 904
\HyPsd@babel@portuges . . . 910
\HyPsd@babel@russian 915
\HyPsd@babel@slovene 921
\HyPsd@babel@spanish 926
\HyPsd@babel@swedish 936
\HyPsd@babel@ukrainian . . . 942
\HyPsd@babel@usorbian . . . 948
\HyPsd@BabelPatch 499, 823, 859
\HyPsd@CatcodeWarning . 1745, 1762, 1765, 1768, 1771, 1827
\HyPsd@Char 2012
\HyPsd@CharOctByte 2032, 2034, 2037, 2046, 2051
\HyPsd@CharSurrogate . . . 2026, 2043
\HyPsd@CharTwoByte 2024, 2031
\HyPsd@CheckCatcodes 576, 1722
\HyPsd@CJK@Unicode 1193, 1197
\HyPsd@CJKActiveChars . 1133, 1148
\HyPsd@CJKdigit . . . 1422, 1432
\HyPsd@CJKdigits . . 1195, 1408
\HyPsd@CJKhook 529, 1104, 1115
\HyPsd@CJKhook@bookmarks 1110, 1144
\HyPsd@CJKhook@unicode 1112, 1192
\HyPsd@CJKnumber . 1194, 1308
\HyPsd@CJKnumberFour . 1326, 1330, 1334, 1347, 1351, 1355, 1361
\HyPsd@CJKnumberLarge . 1339, 1346
\HyPsd@CJKnumberThree 1367, 1371, 1377
\HyPsd@CJKnumberTwo . . 1382, 1386, 1392
\HyPsd@ConvertToUnicode . 644, 1958
\HyPsd@DecimalToOctal . . 1125, 1156
\HyPsd@DecimalToOctalFirst 1199, 1235
\HyPsd@DecimalToOctalSecond 1200, 1209, 1272
\HyPsd@DefCommand . 559, 560, 561, 562, 1578
\HyPsd@DisableCommands . 803, 805
\HyPsd@DoConvert . . 1960, 1970
\HyPsd@DoEscape 1984
\HyPsd@doxspace 616, 1931
\HyPsd@empty 601, 603, 607, 608, 610, 618, 625
\HyPsd@End 576, 580, 1639, 1642, 1645, 1648, 1651, 1664, 1674, 1681, 1684, 1722, 1730, 1736, 1742, 1787, 1794, 1800, 1803, 1815
\HyPsd@EndWithElse 1445, 1454
\HyPsd@fi . 1656, 1662, 1666, 1672
\HyPsd@GetNextTwoTokens 2008
\HyPsd@GetOneBye 2003
\HyPsd@GetTwoBytes 1999
\HyPsd@GLYPHERR 581, 1442, 1456, 1463
\HyPsd@GlyphProcess 583, 1874, 1887
\HyPsd@GlyphProcessWarning 1881, 1885
\HyPsd@GobbleFiFi . 1447, 1453
\HyPsd@GreekNum 962, 965, 967
\HyPsd@greeknumeral . 958, 964
\HyPsd@greeknumeral . . 957, 961
\HyPsd@GreekNumI . 985, 1011, 1054, 1080
\HyPsd@GreekNumII . 989, 1033, 1077, 1084
\HyPsd@GreekNumIII 992, 1056, 1088
\HyPsd@GreekNumIV 1001, 1079
\HyPsd@GreekNumV . 1004, 1083
\HyPsd@GreekNumVI 1006, 1087
\HyPsd@GreekPatch 496, 954, 956
\HyPsd@HighA 1203, 1212
\HyPsd@HighB 1213, 1218
\HyPsd@HighC 1219, 1222
\HyPsd@HighD 1215, 1227
\HyPsd@hspace 514, 1466
\HyPsd@hspacetest . . 1469, 1471, 1474
\HyPsd@ifnextchar 545, 546, 547, 1615
\HyPsd@ignorespaces . . . 527, 814
\HyPsd@InitUnicode 777
\HyPsd@inmathwarn . . 422, 1439
\HyPsd@ITALCORR . . 537, 541, 1463
\HyPsd@langshort@system . . 830, 833
\HyPsd@LanguageShorthands 825, 831, 843
\HyPsd@LetCommand . 563, 564, 1578
\HyPsd@LetUnexpandableSpace 532, 533, 534, 535, 1459, 1462
\HyPsd@LoadStringEnc . . . 2570, 2590, 2592, 2596, 2598, 5737
\HyPsd@LoadUnicode 2519, 2524, 2532, 2535, 2537, 2544, 5731
\HyPsd@nameref 522, 1526
\HyPsd@pageref 521, 1508
\HyPsd@pdfencoding . 645, 2518, 2521, 2553, 2565, 2568, 2569, 2574, 2589, 5733, 5735, 5752, 5755
\HyPsd@pdfencoding@auto . 645, 2559, 2569, 2586, 5735, 5754
\HyPsd@pdfencoding@pdfdoc 2552, 2574, 2587
\HyPsd@pdfencoding@unicode 2556, 2588, 5733, 5751
\HyPsd@PrerenderUnicode 3344, 3360, 3366, 3372, 3378, 3396, 3402, 3482
\HyPsd@protected@testopt . 548, 549, 1619
\HyPsd@ProtectSpaces 569, 1636, 1657, 1706
\HyPsd@ref 520, 1492
\HyPsd@RemoveBraces 571, 1678, 1695, 1703, 1709
\HyPsd@RemoveCmdPrefix 1836, 1842

\HyPsd@RemoveMask	579, 1645, 1651, 1664, 1674	\HyPsd@UTFviii	414, 2061, 2066	13978, 14095, 14100, 14105, 14110, 14114, 14281, 14337
\HyPsd@RemoveSpaceWarning	1810, 1822, 1848	\HyPsd@UTFviii@@three	2096, 2105	\if
\HyPsd@ReplaceSpaceWarning	1805, 1817, 1861	\HyPsd@UTFviii@@two	2081, 2087	1488, 2243, 5582, 5590, 6246, 6247, 9659, 9662, 9666, 9670, 9674, 9676, 9678, 12585
\HyPsd@Rest	1723, 1783, 1791, 1794, 1801, 1806, 1812, 1818, 1824	\HyPsd@UTFviii@ccxliv@def	2071, 2077	\if@eqnstar
\HyPsd@RussianPatch	498, 1097	\HyPsd@UTFviii@ccxliv@undef	2070, 2076	6188, 6196
\HyPsd@SanitizeForOutFile	12822, 12853	\HyPsd@UTFviii@four	2069, 2114	\if@filesw
\HyPsd@SanitizeOut@BraceLeft	12857, 12863, 12872	\HyPsd@UTFviii@three	2068, 2095	2211, 4326, 5392, 5436, 5796, 5806, 6026, 6706, 6721, 6737, 6749, 6779, 6802, 6829, 6834, 6853, 7196, 11690, 11714, 12823, 13010, 13090
\HyPsd@SanitizeOut@BraceRight	12860, 12875, 12884	\HyPsd@UTFviii@two	2067, 2080	\if@hyper@item
\HyPsd@SPACEOPTI	573, 588, 589, 591, 593, 595, 596, 635, 637, 1758, 1942	\HyPsd@Warning	1623, 1828, 1849, 1862, 1891, 1897	5881, 5894
\HyPsd@spaceopti	637, 1905	\HyPsd@XeTeXBigCharsfalse	670, 684, 689	\if@inlabel
\HyPsd@SpanishPatch	497, 1091	\HyPsd@XeTeXBigCharstrue	683, 692, 3359, 3365, 3371, 3377, 3395, 3401, 3481, 12481, 12820	6304
\HyPsd@String	570, 572, 575, 577, 582, 584, 1689, 1690, 1700, 1752, 1753, 1757, 1758, 1773, 1774, 1804, 1816, 1875, 1876	\HyPsd@XSPACE	539, 615, 1463	\if@Localurl
\HyPsd@StringSubst	585, 587, 593, 599, 602, 605, 608, 627, 630, 632, 1928	\HyPsd@xspace	613, 615, 616	9244, 9290
\HyPsd@Subst	581, 590, 594, 600, 606, 610, 614, 619, 620, 621, 622, 623, 624, 628, 631, 1912, 1929	\HyRef@@StarSetRef	7547, 7552	\if@mid@expandable
\HyPsd@temp	648, 650, 651, 653, 654, 660, 662, 663, 2551, 2552, 2553, 2556, 2559, 2565, 2577, 2581, 5750, 5751, 5752, 5754, 5755, 5760	\HyRef@autopageref	7601, 7603	512
\HyPsd@ToBigChar	703, 704, 713	\HyRef@autopagerefname	7600, 7604, 7606	\if@minipage
\HyPsd@ToBigChars	657, 695	\HyRef@autoref	7618, 7620	6577, 6648
\HyPsd@tocsection	1479, 1480, 1481, 1482, 1483, 1484, 1485, 1487	\HyRef@autosetref	7623, 7626	\if@nmbrrlist
\HyPsd@UnescapedString	650, 697, 698, 704	\HyRef@CaseStar	7687, 7693	5868
\HyPsd@UnexpandableSpace	1462, 1647, 1671, 1806, 1818	\HyRef@currentHtag	7639, 7657, 7660, 7666, 7673, 7679, 7694	\if@nobreak
\HyPsd@unichar	2073, 2140, 2146, 2151	\HyRef@MakeUppercaseFirstOfFive	7567, 7569	6323
\HyPsd@unichar@first@byte	2159, 2179	\HyRef@name	7655, 7656, 7661, 7668, 7686, 7687, 7688, 7690	\if@skiphyperref
\HyPsd@unichar@octtwo	2181, 2189, 2195	\HyRef@Ref	7573, 7575	5882, 5892
\HyPsd@unichar@second@byte	2167, 2187	\HyRef@ShowKeysInit	7696, 7709, 7713	\if@twocolumn
\HyPsd@UnicodeReplacementCharacter	13438, 13601, 13604, 13607, 13610, 2143, 2178	\HyRef@ShowKeysRef	7627, 7695	13256
		\HyRef@StarSetRef	7541, 7559, 7562, 7567	\if@twoside
		\HyRef@StripStar	7654, 7685	13245
		\HyRef@testreftype	7632, 7651	\ifcase
		\HyRef@thisref	7629, 7632	1018, 1040, 1063, 1157, 1206, 1228, 1231, 1237, 1273, 1317, 1433, 2109, 2556, 3143, 4669, 4774, 4903, 4980, 7015, 7173, 7210, 7439, 7628, 9732, 12524, 12601, 12666, 12701, 12735, 12930
		\HyTmp@found	4873, 4883, 4886	\ifcat
		\HyTmp@key	4867, 4868	1724, 1751, 1756, 1761, 1764, 1767, 1770, 4459, 4461
		\HyTmp@optitem	4823, 4839, 4866, 4871, 4877, 4898, 4909	\ifdim
		\HyTmp@optlist	4822, 4837, 4838, 4869, 4870, 4875, 4876, 4884, 4885, 4905, 4907, 4914, 4917	1474, 1804, 1808, 1816, 1820, 2275, 2294, 3649, 3934, 8387, 8391, 8396, 8400, 8407, 8410, 8414, 8417, 9224, 9225, 9230, 9231, 9363, 9366, 9370, 9373, 10199, 10210, 10551, 10552, 10557, 10558, 11331, 11370, 11371, 11811, 11851, 11852, 12152, 12192, 12193
		\HyXeTeX@CheckUnicode	3330, 3341, 3358, 3364, 3370, 3376, 3394, 3400, 3480, 5765	\ifetex@unexpanded
				1630
				\iffalse
				690
				\IfFileExists
				5431, 11092
				\ifFld@checked
				4926, 11652, 12512
				\ifFld@comb
				4773
				\ifFld@combo
				4801, 4806, 11345, 11374, 11825, 11855, 12166, 12196
				\ifFld@disabled
				4927, 11653
				\ifFld@edit
				4807
				\ifFld@fileselect
				4776
				\ifFld@hidden
				11308, 11359, 11427, 11448, 11472, 11491, 11551, 11563, 11573, 11656, 11788, 11840, 11920, 11942, 11971, 11992, 12121, 12181, 12279, 12305, 12335, 12361

<code>\ifFld@multiline</code>	4774, 11296, 11558, 11775, 12108	
<code>\ifFld@multiselect</code>	4845	
<code>\ifFld@password</code>	4775, 11539	
<code>\ifFld@popdown</code>	4593, 11346, 11826, 12167	
<code>\ifFld@radio</code>	11342, 11364, 11588, 11822, 11845, 12163, 12186	
<code>\ifFld@readonly</code>	11560, 11570, 11654	
<code>\ifForm@html</code>	4947	
<code>\ifhmode</code>	2293, 2302, 4235, 6271, 6389, 6398, 6535, 6537	
<code>\ifHy@activeanchor</code>	264, 4472	
<code>\ifHy@backref</code>	265, 3780, 4116, 5253, 6830, 6866	
<code>\ifHy@bookmarks</code>	266, 3978	
<code>\ifHy@bookmarksnumbered</code>	267, 7327, 7378, 12811	
<code>\ifHy@bookmarksopen</code>	268, 3968	
<code>\ifHy@breaklinks</code>	269, 2484, 9895, 9927, 10193, 10204	
<code>\ifHy@centerwindow</code>	270, 8224, 8754, 9164, 9770, 10103, 10891	
<code>\ifHy@CJKbookmarks</code>	271, 1109	
<code>\ifHy@colorlinks</code>	272, 4049, 5258, 10713	
<code>\ifHy@displaydoctitle</code>	307, 8225, 8755, 9165, 9771, 10104, 10892	
<code>\ifHy@draft</code>	273, 3684	
<code>\ifHy@DvipdfmxOutlineOpen</code>	3932, 13065	
<code>\ifHy@escapeform</code>	276, 12436, 12466	
<code>\ifHy@figures</code>	277, 3760, 5238, 7137	
<code>\ifHy@fitwindow</code>	278, 8223, 8753, 9163, 9769, 10102, 10890	
<code>\ifHy@frenchlinks</code>	279, 4065	
<code>\ifHy@hyperfootnotes</code>	280, 6331	
<code>\ifHy@hyperindex</code>	281, 3770, 5248, 7144	
<code>\ifHy@hypertextnames</code>	282, 5947, 6030, 6922, 7332, 7383	
<code>\ifHy@implicit</code>	283, 3792, 13119	
<code>\ifHy@linktocpage</code>	284, 2441, 2451	
<code>\ifHy@localanchorname</code>	285, 5981, 5992	
<code>\ifHy@menubar</code>	286, 8221, 8751, 9161, 9767, 10100, 10888	
<code>\ifHy@naturalnames</code>	287, 5960, 7333, 7384	
<code>\ifHy@nesting</code>	288, 3765, 4264, 4297, 4332, 4457, 5243, 6356, 6371, 6431, 6588	
<code>\ifHy@newwindow</code>	290, 3599, 9470	
<code>\ifHy@newwindowset</code>	289, 3597	
<code>\ifHy@next</code>	867, 3757, 7161	
<code>\ifHy@ocgcolorlinks</code>	291, 3093, 4035, 4045, 5263, 7817, 7835, 7910, 7918, 8868, 8951, 8959	
<code>\ifHy@pageanchor</code>	292, 6017, 6029, 6044, 6921	
<code>\ifHy@pagelabels</code>	293, 5530, 5716, 5794	
<code>\ifHy@pdfa</code>	308, 3708, 4037, 4382, 4606, 5119, 5155, 5268, 7977, 8049, 8080, 8116, 8443, 9013, 9041, 9068, 9092, 9431, 9452, 9473, 9492, 9524, 9555, 9571, 10303, 11267, 11417, 11465, 11742, 11910, 11964, 12080, 12268, 12328, 12514, 12587, 12725	
<code>\ifHy@pdfmarkerror</code>	10150, 10158	
<code>\ifHy@pdfpagehidden</code>	294, 3214, 8349, 9708, 9979	
<code>\ifHy@pdfstring</code>	295, 788, 5886	
<code>\ifHy@plainpages</code>	296, 3775, 6031, 6923	
<code>\ifHy@psize</code>	297	
<code>\ifHy@raiselinks</code>	298, 8525, 8599, 8628, 8658, 10783, 11051	
<code>\ifHy@seminarslides</code>	299	
<code>\ifHy@setpagesize</code>	300, 8375, 9221, 9360, 10548	
<code>\ifHy@setpdfversion</code>	2606, 7822	
<code>\ifHy@texht</code>	301, 4077, 4109, 5306, 7487	
<code>\ifHy@toolbar</code>	302, 8220, 8750, 9160, 9766, 10099, 10887	
<code>\ifHy@typexml</code>	263, 3785, 4052, 4096, 5393, 13014, 13094	
<code>\ifHy@unicode</code>	303, 410, 586, 598, 626, 634, 643, 968, 1128, 1830, 1851, 1864, 1893, 1899, 2141, 2517, 2567, 3332, 5740, 12477	
<code>\ifHy@useHidKey</code>	3210, 8346, 9707, 9974	
<code>\ifHy@usetitle</code>	304, 5446	
<code>\ifHy@verbose</code>	305, 4198, 4214, 4226, 4549, 6990	
<code>\ifHy>windowui</code>	306, 8222, 8752, 9162, 9768, 10101, 10889	
<code>\ifHyInfo@AddonUnsupported</code>	3458, 3472, 3507	
<code>\ifHyPsd@XeTeXBigChars</code>	688, 690, 693, 696	
<code>\ifmeasuring@</code>	5905, 5918	
<code>\ifnum</code>	720, 723, 726, 729, 732, 844, 969, 972, 983, 984, 988, 996, 1000, 1003, 1013, 1035, 1058, 1198, 1309, 1325, 1329, 1349, 1362, 1365, 1378, 1380, 1393, 1395, 1401, 2020, 2023, 2099, 2142, 2145, 2157, 2682, 2685, 2710, 3144, 3145, 3942, 3969, 4828, 4899, 4910, 5565, 5584, 5600, 5696, 7441, 7479, 7818, 7823, 8140, 8147, 8153, 8161, 8980, 8985, 9470, 9583, 9719, 9727, 9729, 9730, 9740, 9743, 9829, 9831, 9936, 10575, 11726, 11886, 12220, 12225, 12236, 12476, 12495, 12524, 12529, 12601, 12607, 12635, 12666, 12672, 12691, 12701, 12706, 12735, 12740, 12768, 12784, 12926, 12996, 12999, 13025, 13028, 13067, 13175, 13193, 13208	
<code>\ifodd</code>	2123, 2128, 6945	
<code>\ifpdf</code>	2722, 3826, 3888	
<code>\ifpdfstringunicode</code>	415, 418	
<code>\ifportrait</code>	8386	
<code>\ifthenelse</code>	6856	
<code>\iftrue</code>	693, 1637, 1659, 1923, 13177	
<code>\ifvmode</code>	2258, 2274, 2283	
<code>\ifvoid</code>	6138, 6146, 6308	
<code>\ifvtexhtml</code>	3865, 3894	
<code>\ifvtexpdf</code>	3905	
<code>\ifvtexps</code>	3908	
<code>\ifxetex</code>	649, 680, 2724, 3331, 3850, 3891, 3933	
<code>\ignorespaces</code>	527, 6112, 6266, 6467, 6573, 6584, 6587, 6644, 6652, 6714, 6729, 6745, 6754, 6864, 7312, 7364	
<code>\IJ</code>	13434, 14116	
<code>\ij</code>	13643, 14118	
<code>\immediate</code>	5394, 5395, 5396, 5398, 5438, 5709, 5799, 5807, 6041, 6069, 6709, 6724, 6740, 6750, 6780, 6803, 6829, 6859, 7836, 7851, 7866, 9834, 10572, 11669, 11691, 11732, 12916, 12982, 13013, 13015, 13093, 13095	
<code>\incr@eqnum</code>	6157, 6170	
<code>\index</code>	516	
<code>\indexentry</code>	7199, 7214, 7222, 7226, 7231	
<code>\input</code>	771, 779, 2526, 3065, 3073, 3080, 3928, 10490, 10573, 10664, 10826	
<code>\InputIfFileExists</code>	3667, 13006, 13040, 13085, 13087	
<code>\inputlineno</code>	4205, 4464	
<code>\insert</code>	6446	

`\IntCalcAdd` 2049
`\IntCalcDec` 1220
`\IntCalcDiv` 1214, 1223, 1228, 1331,
 1340, 1352, 1369, 1384, 1399,
 2033, 2039, 2045
`\intcalcDiv` . 1204, 2040, 2047, 2050
`\IntCalcMod` . . 1216, 1225, 1231,
 1335, 1341, 1356, 1372, 1387,
 1401, 1403, 2035, 2040, 2041,
 2047, 2050, 2052
`\intcalcMod` 1206
`\intcalcSub` 2027
`\interfootnotelinepenalty` . . 6449
`\interlinepenalty` 6449
`\item` 5863, 5866, 6736, 6748, 6851
`\itemautorefname` 7719
`\itemautorefname` . . . 2810, 2828,
 2846, 2864, 2882, 2900, 2918,
 2947, 2948, 2976, 2994, 7719,
 7720, 7723
`\itemindent` 6309
`\itshape` 469

J

`\j` 14123, 14308, 14372
`\jarr` 15729
`\jeem` 15701
`\jeh` 15737
`\jobname` 5395, 5431, 5438, 11092,
 12915, 13006, 13013, 13040,
 13085, 13087, 13093

K

`\k` 13318, 13660, 13662, 13667,
 13669, 13712, 13730, 13749,
 13756, 14020, 14022, 14060,
 14062, 14107, 14109, 14110,
 14245, 14247, 14304, 14306,
 14903, 14942, 14945
`\kaf` 15719
`\kasra` 15732
`\keepPDF@SetupDoc` 10717, 10724
`\kern` 1733, 1805, 1810, 1822, 6309,
 6940, 6941, 6942, 6944, 6945,
 6950, 13134
`\kernel@ifnextchar` 546
`\kha` 15703
`\KV@Hyp@draft` 2415
`\KV@Hyp@nolinks` 2415
`\kv@key` . . 3466, 3469, 3476, 4826,
 4829, 4831, 4835, 4839
`\kv@parse` 4825
`\kv@parse@normalized` 3491, 3498
`\kv@processor@default` 3494, 3501
`\kv@set@family@handler` . . 3459
`\kv@value` . 3464, 4827, 4834, 4835
`\kvsetkeys` 3439

L

`\L` 13427, 14147
`\l` 13440, 14149
`\l@slide` . . 7312, 7422, 7427, 7431,
 7438
`\l@subslide` . 7364, 7427, 7434, 7478
`\label` 515, 6963
`\label@hyperref` 4304, 4306
`\label@hyperdef` 4290, 4318
`\label@hyperref` . 4271, 4303, 4485
`\labelsep` 6863
`\labelwidth` 6862
`\lam` 15720
`\language@group` 494
`\languageshorthands` 824, 825, 860
`\LARGE` 476
`\Large` 477
`\large` . 480, 7444, 7452, 7462, 7470
`\lastbox` 6307
`\lastpage@putlabel` 6012
`\lastskip` . 2275, 2279, 2286, 2294,
 2298, 2305
`\LaTeX` . . . 439, 440, 11098, 11099
`\LaTeXe` 440, 11099
`\LayoutCheckField` . 5194, 11492,
 11993, 12366
`\LayoutChoiceField` . 5191, 11363,
 11844, 12185
`\LayoutPushButtonField` . . 5197,
 11421, 11428, 11914, 11921,
 12272, 12281
`\LayoutTextField` . . . 5188, 11310,
 11790, 12127
`\lccode` 719,
 1138, 2064, 5079, 7158, 7159,
 12840, 12841, 12842, 12843,
 12844, 12845, 12846, 12847,
 12848, 12849, 12850
`\ldots` 434
`\leavevmode` 524, 2253, 3694, 3711, 3751,
 4387, 5364, 6388, 6534, 6770,
 7579, 7587, 7963, 8034, 8065,
 8101, 8524, 8598, 8626, 8656,
 9033, 9061, 9255, 9264, 9318,
 9467, 9488, 9511, 9542, 9897,
 10192, 10417, 10435, 10460,
 10782, 11050, 11422, 11429,
 11464, 11874, 11895, 11915,
 11922, 11943, 11963, 12218,
 12249, 12273, 12282, 12307,
 12327, 13132
`\LetLtxMacro` . 5309, 5313, 5381,
 5385
`\limits` 4181
`\listofslides` 7413

`\listslidenam` . 7412, 7415, 7417,
 7419
`\literalps@out` 2251, 9823,
 9828, 9877, 9883, 9900, 9906,
 10168, 10179, 10200, 10202,
 10211, 10213, 10488, 10571,
 10634, 10824
`\lower` . . . 8528, 8601, 8630, 8660,
 10202, 10786, 11054
`\lowercase` . 739, 1139, 2065, 2317,
 2754, 2784, 3406, 3442, 4498,
 4499, 4502, 4507, 4531, 4541,
 4595, 4651, 4971, 5011, 5014,
 5080, 7160, 9935, 12851
`\lslide@flag` 7439, 7442, 7460, 7479,
 7483
`\LT@array` 6125
`\LT@firsthead` 6138, 6146
`\LT@p@ftn` . 6404, 6407, 6411, 6424
`\LT@p@ftntext` 6402, 6409
`\LT@start` 6140, 6150
`\ltx@firstofone` 12868, 12880
`\ltx@firstoftwo` 4443
`\ltx@gobble` 12866, 12878
`\ltx@ifpackageloaded` 1105
`\ltx@ifUndefined` . . 493, 536, 611,
 646, 762, 763, 764, 868, 874,
 880, 885, 890, 897, 903, 909,
 914, 920, 925, 935, 941, 947,
 953, 1092, 1098, 1475, 1569,
 1570, 2205, 2238, 3754, 3755,
 3756, 5486, 5847, 5935, 6218,
 6672, 7607, 7608, 7652, 7653,
 7655, 7656, 8011, 8021, 8406,
 9362, 9419, 9506, 9873, 9907,
 9995, 10172, 13166, 13176
`\ltx@ifundefined` 6316
`\ltx@LocalAppendToMacro` . 248,
 251
`\ltx@secondoftwo` 4441
`\ltx@space` 3924, 3926
`\luatexrevision` 8184
`\luatexversion` 8176, 8181

M

`\m@ne` . . . 4217, 4513, 6057, 6238,
 8989, 13087, 13175, 13190
`\make@df@tag@@` 7073, 7075
`\make@df@tag@@@` . . . 7074, 7076
`\make@stripped@name` 5910, 6179,
 6201, 6225, 6236
`\makeatletter` 3, 802, 5430
`\MakeButtonField` . . 5204, 11423,
 11431, 11450, 11469, 11474,
 11916, 11925, 11950, 11968,
 11974, 12274, 12277, 12306,
 12332, 12336

\MakeCheckField . . . 5201, 11494, 11996, 12363	\MP 444, 11102	\nobreak . 2276, 2284, 2295, 2303, 6389, 6535
\MakeChoiceField . . 5203, 11406, 11898, 12247	\multiply 8180, 9688, 9723	\nobreakspace . . 535, 7582, 7611, 7614
\MakeFieldObject . 11668, 11751, 11761, 11764	N	\noexpand 22,
\MakeLowercase 491	\n 730	93, 95, 108, 116, 169, 171, 172,
\MakeLowercaseUnsupportedInPdfStrings 491	\name@of@eq 5879, 5908	173, 176, 206, 708, 812, 1152,
\MakeRadioField . . . 5200, 11394, 11885, 12212	\name@of@slide 5880, 5890	1584, 1601, 1724, 2078, 2282,
\makeslideheading 7322	\nameref 522	2283, 2284, 2287, 2301, 2302,
\makeslidesubheading 7374	\nasb 15727	2303, 2306, 3026, 3028, 3030,
\maketag@@@ 7062	\netscape 8560	3031, 3047, 3221, 3222, 3224,
\MakeTextField 5202, 11312, 11793, 12124	\new@ifnextchar 547	3524, 4175, 4278, 4358, 4459,
\maketitle 6484, 6485	\new@pdfink . . . 7948, 7999, 8002	4461, 4561, 5638, 5639, 5648,
\MakeUppercase 490, 7417, 7419, 7570	\new@refstepcounter . 6152, 6184	5650, 5653, 5772, 6054, 6055,
\MakeUppercaseUnsupportedInPdfStrings 490	\newblock 6867	6057, 6082, 6083, 6084, 6085,
\MathBSuppress 9265, 9269	\newcommand 4, 9, 42, 2252, 5368, 5842, 5845, 5848, 5849, 5850,	6086, 6094, 6095, 6096, 6242,
\mathdisplay 6160, 6169	5852, 5853, 5854, 5855, 5857,	6405, 6413, 6414, 6415, 6416,
\mathdisplay@push . . 6158, 6167	5858, 5859, 5860, 5861, 5862,	6417, 6419, 6544, 6633, 6708,
\mathversion 485	5871, 5872, 5873, 5874, 5875,	6723, 6739, 7092, 7094, 7547,
\maxdimen 3165, 11673	5876, 6234, 7100, 7299, 7304,	7548, 7661, 7662, 7667, 7669,
\MaybeStopEarly 350, 2633, 2687, 3796, 3896, 5827	7305, 12888, 12891, 12896	7674, 7675, 7680, 7681, 8183,
\mbox 525, 6783, 6806, 7920, 8961	\newcount . . 351, 352, 4930, 5546, 11402, 11892, 12094, 12243, 12923	8738, 10087, 10154, 10631,
\mddefault 6278	\newcounter . . . 5864, 6332, 8867, 12838	10875, 11338, 11339, 11340,
\mdseries 468	\newdimen 348, 4931, 4932	11341, 11818, 11819, 11820,
\meaning 62, 153, 159, 2214, 5470, 5973, 6243, 13051, 13059, 13074	\newif . . . 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 688, 867, 2606, 3210, 3458, 3932, 4505, 4593, 4926, 4927, 4947, 5881, 5882, 5905, 6188, 9244, 10150	11821, 12159, 12160, 12161, 12162, 12438
\measuring@false 5905	\newlabel . 2217, 4328, 5408, 5409, 5417, 5443, 6042, 6070	\nofrenchguillemets 554, 556
\mediaheight . . 9356, 9358, 9364, 9371	\newlabelxx 5410, 5411	\NoHy@OrgPageRef . . 5313, 5315, 5385, 5387
\mediawidth 9367, 9374	\newlength 13125	\NoHy@OrgRef 5309, 5311, 5381, 5383
\meem 15721	\newline 437, 5491	\NoHyper 5317
\message 7440	\newname 5911, 6180, 6202, 6226, 6239, 6248	\nohyperpage . . 5363, 7243, 7245, 7247
\MessageBreak 383, 1836, 1857, 1870, 1893, 1898, 1900, 2339, 2340, 2354, 2376, 2379, 2381, 2459, 2460, 2486, 2487, 2539, 2540, 2541, 2579, 2580, 2600, 2610, 2776, 3095, 3335, 3419, 3474, 3475, 3654, 3830, 3831, 3839, 3840, 3854, 3855, 3869, 3870, 3878, 3879, 4039, 4552, 4557, 4566, 4609, 4655, 4779, 4892, 4964, 4975, 5535, 5743, 5758, 5759, 6020, 6967, 6997, 6998, 6999, 7000, 7001, 7132, 7967, 8998, 9443, 9515, 10004, 11681, 11683, 12789, 12807, 12918	\newsavebox 8797, 10187	\nolinkurl 4257
\MF 443, 11101	\newtie 13320, 13321, 13704, 13734, 13753, 13769	\nolinkurl@ 4257, 4258
	\newtoks . 90, 4993, 10022, 10220, 10221	\NomFancyVerbLineautorefname 2965
	\newwrite . . . 5437, 13011, 13091	\Nomfootnoteautorefname . 2945
	\next 6857, 6858, 6859, 9651, 9653, 9655	\Nomtheoremautorefname . 2969
	\nfss@text . 7494, 7514, 7531, 7645	\nonumber 6213, 6216
	\NG 14165	\normalfont 463, 6274
	\ng 14167	\normalsize 481, 6580, 6651
	\noboundary 15742	\NR@gettitle 6570
		\null 6848, 6856, 7536, 7641
		\number 986, 990, 993, 1001, 1004, 1006, 1311, 1313, 1340, 1341, 2024, 2082, 2083, 2084, 2085, 2089, 2090, 2091, 2092, 2093, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2107, 2108, 2109, 2110, 2111, 2112, 2115, 2117, 2121, 2122, 2124, 2126, 2128, 2131, 2135, 2136, 2137, 2138, 2147, 2148, 2152, 2153, 2160, 2161, 2165, 2168, 2169, 2170, 2180, 2182, 2183, 2188, 2190,

2191, 2196, 2197, 3544, 3934,
3970, 4519, 7829, 7832, 8588,
8603, 8604, 8615, 8616, 8632,
8633, 8644, 8645, 8662, 8663,
8674, 8675

\numberline . . . 6573, 6644, 12812,
12816

\numberwithin 7097

\numexpr . 2089, 2090, 2091, 2093,
2099, 2107, 2108, 2109, 2110,
2111, 2112, 2116, 2118, 2122,
2124, 2126, 2128, 2132, 2135,
2136, 2138, 2147, 2152, 2169,
2183, 2191, 2197, 3548

\nun 15722

O

\O 13560, 13928, 14323

\o 13628, 13996, 14325

\obeylines 10630

\OBJ@acroform . . . 11748, 11749

\OBJ@Helv . 11729, 11738, 12055

\OBJ@OCG@print . . . 7865, 7868,
7876, 7902, 8885, 8887, 8900,
8904, 8913, 8942

\OBJ@OCG@view . . . 7850, 7868,
7901, 8869, 8871, 8884, 8904,
8941

\OBJ@OCGs . . 7871, 7874, 7880,
7885, 7890, 8901, 8903, 8907,
8911, 8917, 8922, 8927

\OBJ@pdfdocencoding . . . 11727,
12036, 12052

\OBJ@ZaDb 11728, 11737, 12045

\OCIRCUMFLEX . 15565, 15663,
15664, 15665, 15666, 15667

\ocircumflex 15558, 15603, 15604,
15605, 15606, 15607

\oddsidemargin 6946

\OE 13429, 14181

\oe 13442, 14183

\offinterlineskip 5517

\OHORN . . . 15566, 15668, 15669,
15670, 15671, 15672

\ohorn . . 2992, 2999, 15559, 15608,
15609, 15610, 15611, 15612

\oldb 762

\oldc 763

\oldcontentsline . 5403, 5406, 5416

\oldd 764

\oldnewlabel . . . 5408, 5413, 5417

\OMEGA 11097

\on@line 6994, 6995

\openout 5395, 5438, 13013, 13093

\OpMode . 2682, 2685, 2696, 2710,
2713, 9740, 9831, 10575

\or 1020, 1021, 1022,
1023, 1024, 1025, 1026, 1027,

1028, 1042, 1043, 1044, 1045,
1046, 1047, 1048, 1049, 1050,
1065, 1066, 1067, 1068, 1069,
1070, 1071, 1072, 1073, 1158,
1159, 1160, 1161, 1162, 1163,
1164, 1165, 1166, 1167, 1168,
1169, 1170, 1171, 1172, 1173,
1174, 1175, 1176, 1177, 1178,
1179, 1180, 1181, 1182, 1183,
1184, 1185, 1186, 1187, 1188,
1189, 1207, 1229, 1232, 1238,
1239, 1240, 1241, 1242, 1243,
1244, 1245, 1246, 1247, 1248,
1249, 1250, 1251, 1252, 1253,
1254, 1255, 1256, 1257, 1258,
1259, 1260, 1261, 1262, 1263,
1264, 1265, 1266, 1267, 1268,
1269, 1274, 1275, 1276, 1277,
1278, 1279, 1280, 1281, 1282,
1283, 1284, 1285, 1286, 1287,
1288, 1289, 1290, 1291, 1292,
1293, 1294, 1295, 1296, 1297,
1298, 1299, 1300, 1301, 1302,
1303, 1304, 1305, 1318, 1319,
1320, 1321, 1322, 1434, 1435,
1436, 4679, 4685, 4690, 4904,
7017, 7021, 7459, 7468, 9733,
12931, 12932, 12933, 12934,
12935, 12936, 12937, 12938,
12939, 12940, 12941, 12942,
12943, 12944, 12945, 12946,
12947, 12948, 12949, 12950,
12951, 12952, 12953, 12954,
12955, 12956, 12957, 12958,
12959, 12960, 12961, 12962

P

\P 433

\p@ . 2148, 2153, 4933, 4939, 6280,
8534, 8611, 8640, 8670, 9687,
10792, 11064, 11333, 11813,
12154, 13250, 13251

\p@equation 7069

\PackageError 61, 2538, 3735, 4383,
4654, 4778, 4974, 5121, 5157,
11418, 11466, 11911, 11965,
12269, 12329

\PackageInfo . . . 243, 7813, 7827,
11679

\PackageWarning . 241, 2609, 4890

\PackageWarningNoLine . . . 242

\pageautorefname . . . 2823, 2841,
2859, 2877, 2895, 2913, 2931,
2971, 2989, 3007, 7614, 7736

\pagename 7611

\pageref . . . 521, 3806, 4104, 5313,
5314, 5385, 5386, 6020, 7600,
7604

\paperheight 3647, 8391,
8393, 8396, 8398, 8410, 8411,
9225, 9226, 9363, 9364, 9366,
10552, 10553

\paperwidth . . . 8387, 8389, 8400,
8402, 8407, 8408, 9224, 9226,
9367, 10551, 10553

\par . 6272, 6572, 6600, 6642, 6652,
6850, 6870

\paragraphautorefname . . . 2819,
2837, 2855, 2873, 2891, 2909,
2927, 2960, 2962, 2985, 3003,
7732

\partautorefname 2813, 2831, 2849,
2867, 2885, 2903, 2921, 2951,
2979, 2997, 7726

\partnumberline . . . 12813, 12817

\PassOptionsToPackage . . . 2726,
2765, 2769, 2791, 3678, 3921

\pdf@addtoks 10223, 10242, 10248,
10257, 10264, 10268, 10270,
10272, 10274, 10276, 10284,
10293, 10297, 10299, 10301,
10304, 10313, 10317, 10319,
10321, 10323, 10325, 10327,
10329, 10331, 10333, 10335,
10337, 10339, 10341, 10343,
10345, 10347, 10348, 10349,
10350, 10351, 10352, 10353,
10354, 10355, 10356, 10357,
10362

\pdf@addtoksx 10217, 10227, 10240

\pdf@box . . . 10187, 10194, 10196,
10198, 10199, 10202, 10209

\pdf@defaulttoks . . 10154, 10221,
10222, 10232

\pdf@docset 10022

\pdf@endanchor . 7955, 7999, 8006

\pdf@escapestring 7792

\PDF@FinishDoc 2636, 2637, 2690,
2691, 3641, 3696, 3799, 3800,
3899, 3900, 5362, 5527, 5528,
8259, 8464, 8687, 9118, 9245,
9799, 10023, 10831, 10992

\pdf@linktype 10172, 10176, 10237,
10238

\pdf@rect . . . 10164, 10178, 10191

\PDF@SetupDoc 3640,
3695, 5280, 5281, 5361, 8190,
8465, 8718, 9158, 9246, 9748,
10074, 10719, 10862, 10993

\PDF@SetupDox 8190

\pdf@strcmp 844

\pdf@toks . . 10154, 10169, 10180,
10220, 10224, 10228

\pdf@type . . 10156, 10160, 10169,
10180, 10215, 10235

\pdfannotlink	7939		
\pdfbookmark	2252, 5367, 5368, 12889, 12894, 12899, 12903		
\pdfcatalog 5681, 7872, 8205, 8247, 11749			
\PDFdefaults	10231		
\pdfdest	7957		
\pdfendlink	7996, 11793, 11885, 11899, 11926, 11951, 11975, 11997		
\pdfescapestring	12467		
\pdfform	7941		
\PDFForm@Check	11493, 11495, 11994, 11995, 12367, 12371, 12486		
\PDFForm@List	11405, 11407, 11896, 11897, 12250, 12255, 12593		
\PDFForm@Name	11786, 11839, 11909, 11990, 12119, 12180, 12267, 12359, 12474		
\PDFForm@Push	11430, 11432, 11923, 11924, 12283, 12287, 12514		
\PDFForm@Radio	11393, 11397, 11875, 11877, 12219, 12231, 12626		
\PDFForm@Reset	11473, 11475, 11972, 11973, 12337, 12342, 12725		
\PDFForm@Submit 11449, 11452, 11944, 11946, 12308, 12313, 12693			
\PDFForm@Text	11311, 11313, 11791, 11792, 12128, 12131, 12658		
\pdfhorigin	8383		
\pdfinfo	8262		
\pdflastform	7942		
\pdflastlink	11709		
\pdflastobj 7850, 7865, 7871, 11748, 12036, 12045, 12055			
\pdflastxform	7942, 11671, 11673		
\pdflinkmargin	7937, 7940, 7945		
\pdfliteral	7921, 7923, 7928		
\pdfm@box	8797, 12090, 12091, 12092, 12123, 12134, 12211, 12235, 12246, 12257, 12277, 12290, 12306, 12315, 12336, 12344, 12362, 12373		
\pdfmark	5790, 8738, 8747, 8777, 9864, 9884, 9914, 9946, 9963, 9975, 10009, 10046, 10058, 10087, 10096, 10127, 10151, 10370, 10384, 10399, 10411, 10418, 10436, 10461, 10875, 10884, 10915, 11312, 11394, 11406, 11431, 11450, 11474, 11494, 13055		
\pdfmark@	10151, 10152		
\pdfminorversion	7810		
\PDFNextPage	10382		
\PDFNextPage@	10382, 10383		
\pdfobj	7836, 7851, 7866, 11732, 12003, 12037, 12046		
\PDFOpen	10410		
\pdfoptionpdfminorversion 7807			
\pdfoutline	13103		
\pdfpageattr	8301, 8305, 8306, 8316, 8325, 8329, 8330, 8340, 8348, 8351, 8352, 8362		
\pdfpageheight 8393, 8402, 8411, 8418			
\pdfpageresources	7899		
\pdfpagesattr	8194, 8196, 8198		
\pdfpagewidth	8389, 8398, 8408, 8415		
\PDFPreviousPage	10395		
\PDFPreviousPage@ 10396, 10398			
\pdfreform	7943		
\pdfrefobj	11727, 11728, 11729		
\pdfrefxform	7943, 11673		
\pdfstartlink	7938, 7939, 7991, 8035, 8066, 8102, 8429, 11792, 11876, 11897, 11924, 11945, 11973, 11995		
\pdfstringdef 403, 675, 3361, 3367, 3373, 3379, 3384, 3390, 3397, 3403, 3483, 4851, 4856, 4882, 5494, 5574, 5576, 6035, 6929, 12482, 12821			
\pdfstringdefDisableCommands	761, 800, 5365, 5489		
\pdfstringdefPostHook	671, 794		
\pdfstringdefPreHook	531, 794, 806, 808, 5488, 5498		
\pdfstringdefWarn	436, 437, 526, 811, 1592, 1597, 1616, 1620		
\pdftexrevision	8150, 8158, 8169		
\pdftexversion	8145, 8147, 8150, 8153, 8156, 8157, 8161, 8167, 8168, 11726		
\pdfvorigin	8384		
\pdfxform	7941, 11669		
\peh	15735		
\penalty	1727, 2261, 4236, 6777, 6800		
\phantom	486		
\phantomsection 3642, 5369, 6969, 12758, 12809, 13194			
\Preamble	11093		
\PrerenderUnicode	3352		
\process@me	5468, 5480, 5481, 8193, 8202		
\ProcessKeyvalOptions	3682		
\protect	1725, 4308, 6573, 6644, 6708, 6723, 6739, 6855, 6862, 6863, 7007, 7038, 7312, 7364, 7493, 7513, 7519, 7530, 7644, 8475, 8565, 9316, 9391, 10730, 11003, 12828, 13127, 13250, 13251		
\protected@edef 4343, 5634, 6240, 6260, 7964, 8995, 9440, 9512, 10001			
\protected@write 2216, 4327, 6835, 7198, 7213, 7221, 7225, 7230, 12827			
\protected@xdef	6414, 6416, 6510		
\providecommand	2233, 2234, 2741, 3120, 3121, 3124, 3125, 3887, 4083, 4084, 4189, 4262, 5399, 5664, 5683, 5808, 6673, 6674, 6689, 6767, 7295, 7296, 7412, 7717, 7718, 7719, 7720, 7721, 7722, 7723, 7724, 7725, 7726, 7727, 7728, 7729, 7730, 7731, 7732, 7733, 7734, 7735, 7736, 7799, 7947, 7959, 7960, 8463, 8559, 8560, 8795, 8854, 8855, 8856, 9242, 9361, 9383, 9384, 9385, 9824, 10188, 10189, 10486, 10494, 10495, 10496, 10497, 10569, 10581, 10582, 10583, 10584, 10628, 10669, 10670, 10671, 10672, 10820, 10822, 10823, 10936, 10937, 10984, 11692		
\PushButton	5176		
\put@me@back	4454, 4467, 4477		
Q			
\qaf	15718		
\quotedblbase 13409, 13646, 15235, 15539			
\quotesinglbase	13419, 13648, 15229, 15541		
R			
\r	733, 13287, 13299, 13311, 13521, 13586, 13695, 13722, 13741, 13763, 13890, 13954, 14237, 14239, 15199, 15201		
\ra	15706		
\raff	15728		
\raise 2268, 8535, 8612, 8641, 8671, 10213, 10793, 11065			
\ReadBookmarks 3681, 3699, 3813, 3987, 4112, 12987, 13022			
\real@setref	7490, 7556		

<code>\realfootnote</code>	6507		
<code>\Ref</code>	7572, 7576, 7581		
<code>\ref</code>	520, 3805, 4103, 4493, 5309, 5310, 5381, 5382, 6472, 6479, 7591, 11085		
<code>\ref@one</code>	4284, 4285		
<code>\rEfLiNK</code>	11086, 11087		
<code>\refstepcounter</code>	5878, 5885, 6107, 6127, 6152, 6176, 6184, 6636		
<code>\rem@ptetc</code>	9936, 9938		
<code>\renewcommand</code>	2208, 6615, 7114, 12903		
<code>\RequirePackage</code>			
.	22, 232, 233, 234, 235, 236, 237, 238, 239, 240, 827, 1103, 1629, 2202, 2591, 3671, 3787, 3788, 4055, 4099, 4117, 4254, 4496, 5351, 5508, 5724, 7739, 9243, 10989, 12913		
<code>\RerunFileCheck</code>	12915		
<code>\Reset</code>	5185		
<code>\reset@font</code>	6783, 6806, 7494, 7514, 7531, 7645		
<code>\revtex@checking</code>	6760		
<code>\Rightarrow</code>	7446		
<code>\rlap</code>	7922, 8963		
<code>\rm</code>	474		
<code>\rmfamily</code>	464		
<code>\Roman</code>	5630		
<code>\roman</code>	5631		
<code>\romannumeral</code>	818, 819		
<code>\rule</code>	6457		
S			
<code>\sad</code>	15710		
<code>\sbox</code>	3348, 5205, 10188, 10196, 11668		
<code>\scr@LT@array</code>	6126		
<code>\scriptsize</code>	482		
<code>\scriptstyle</code>	6773		
<code>\scrollmode</code>	1644, 1669, 1679, 1692, 1784, 1916		
<code>\scshape</code>	470		
<code>\section</code>	7414		
<code>\sectionautorefname</code>	2816, 2834, 2852, 2870, 2888, 2906, 2924, 2953, 2982, 3000, 7729		
<code>\seen</code>	15708		
<code>\selectfont</code>	450, 4066, 11757		
<code>\setbox</code>	1728, 1734, 1740, 3148, 3154, 5027, 5516, 6307, 7912, 8455, 8526, 8597, 8627, 8657, 8936, 8953, 10784, 11052, 12123, 12211, 12246, 12277, 12306, 12336, 12362		
<code>\setkeys</code>	2630, 2721, 3338, 3663, 3709, 3920, 4036, 4924, 7819, 10157, 11284, 11524, 11537, 11586, 11629, 11650, 11724, 12065		
<code>\setlength</code>	387, 388, 2265, 8383, 8384, 8389, 8393, 8398, 8402, 8408, 8411, 8415, 8418, 9364, 9367, 9371, 9374, 9687, 13144, 13215		
<code>\setpdflinkmargin</code>	3531, 3532, 7937		
<code>\settowidth</code>	11330, 11810, 12151		
<code>\SetupKeyvalOptions</code>	3672		
<code>\sffamily</code>	465		
<code>\shadda</code>	15733		
<code>\sheen</code>	15709		
<code>\shortciteN</code>	6898		
<code>\SK@</code>	7703		
<code>\SK@ref</code>	7703		
<code>\SK@ref</code>	7700		
<code>\skip@</code>	1742, 1816, 1817, 1820, 1822, 2279, 2285, 2298, 2304		
<code>\slide@cline</code>	7432, 7445, 7453, 7463, 7471		
<code>\Slide@contents</code>	7437		
<code>\slide@contents</code>	7430		
<code>\slide@heading</code>	7308		
<code>\slide@subheading</code>	7361		
<code>\slide@undottedcline</code>	7423		
<code>\slidenumberline</code>	7424, 7432, 7446, 7454, 7464, 7472		
<code>\SliTeX</code>	442		
<code>\slshape</code>	471		
<code>\small</code>	483		
<code>\smash</code>	2262		
<code>\spacefactor</code>	6389, 6398, 6535, 6537		
<code>\special@paper</code>	3643		
<code>\SpecialDvipdfmxOutlineOpen</code>	2657, 2659, 3942		
<code>\splitmaxdepth</code>	6451		
<code>\splittopskip</code>	6450		
<code>\SS</code>	13644, 15538		
<code>\ss</code>	2863, 13574, 13659, 13942		
<code>\st@rredfalse</code>	6159, 6168		
<code>\stepcounter</code>	5895, 6055, 6259, 6390, 6509, 8979, 12824		
<code>\stockheight</code>	3647, 8417, 8418, 9231, 9232, 9370, 9371, 10558, 10559		
<code>\stockwidth</code>	8414, 8415, 9230, 9232, 9373, 9374, 10557, 10559		
<code>\stop@hyper</code>	5332		
<code>\StringEncodingConvertTest</code>	651, 660		
<code>\strip@period</code>	2221		
<code>\strip@prefix</code>	62, 2214, 5470, 5973, 6243, 13051, 13059, 13074		
<code>\strip@pt</code>	392, 399, 3659, 8389, 8393, 8398, 8402, 9690, 12509, 12621, 12649, 12686, 12734		
<code>\strip@pt@and@otherjunk</code>	9883, 9906, 9938		
<code>\strutbox</code>	6451		
<code>\sub@label</code>	2208		
<code>\subeqnarray</code>	6219, 6221		
<code>\subequations</code>	6257, 6258		
<code>\subfig@oldlabel</code>	2210		
<code>\Submit</code>	5182		
<code>\SubmitObject</code>	11947		
<code>\SubmitPObject</code>	11947		
<code>\subparagraphautorefname</code>	2820, 2838, 2856, 2874, 2892, 2910, 2928, 2961, 2963, 2986, 3004, 7733		
<code>\subpdfbookmark</code>	12891		
<code>\subsection</code>	10816		
<code>\subsectionautorefname</code>	2817, 2835, 2853, 2871, 2889, 2907, 2925, 2958, 2983, 3001, 7730		
<code>\subsubsectionautorefname</code>	2818, 2836, 2854, 2872, 2890, 2908, 2926, 2959, 2984, 3002, 7731		
<code>\sukun</code>	15734		
<code>\surd</code>	7454		
T			
<code>\T</code>	15698		
<code>\t</code>	13319, 13714, 13733, 13752, 13768		
<code>\T@pageref</code>	4090, 4105, 7589		
<code>\T@ref</code>	4085, 4103		
<code>\T@temp</code>	6761, 6764		
<code>\Ta</code>	15712		
<code>\taa</code>	15699		
<code>\tableautorefname</code>	2812, 2830, 2848, 2866, 2884, 2902, 2920, 2950, 2978, 2996, 7725		
<code>\tagform@</code>	7068		
<code>\tatweel</code>	15716		
<code>\tcheh</code>	15736		
<code>\temp@online</code>	6994, 6997		
<code>\TeX</code>	438, 439, 441, 442, 11096, 11098, 11100		
<code>\texorpdfstring</code>	787, 5366		
<code>\textacute</code>	13283, 13295, 13307, 13487, 13718, 13737, 13855		
<code>\textacutedbl</code>	14387		
<code>\textaleph</code>	15353		
<code>\textAlpha</code>	1020, 14407, 14423		
<code>\textalpha</code>	1020, 14476, 14486		
<code>\textampersand</code>	430, 13354, 13785		
<code>\textangstrom</code>	15349		
<code>\textasciicute</code>	13856		
<code>\textasciibreve</code>	13330, 13726, 13745, 14376		

<code>\textasciicaron</code>	13288, 13300, 13312, 13332, 13723, 13742, 14374	<code>\textcircledP</code>	15511, 15513, 15515, 15517, 15519	<code>\textfrq</code>	511, 13653, 15546
<code>\textasciicircum</code>	13284, 13296, 13308, 13368, 13719, 13738, 13801	<code>\textcircledcirc</code>	15337	<code>\textfrqq</code>	509, 13651, 15544
<code>\textasciidieresis</code>	13286, 13298, 13310, 13464, 13721, 13740, 13832	<code>\textcircledflex</code>	13334	<code>\textGamma</code>	1022, 14427
<code>\textasciigrave</code>	13282, 13294, 13306, 13373, 13717, 13736, 13805	<code>\textcolonmonetary</code>	15315	<code>\textglsq</code>	1022, 14490
<code>\textasciimacron</code>	13291, 13303, 13315, 13477, 13728, 13747, 13845	<code>\textcolor</code>	489, 11723, 11762, 11765, 12064	<code>\textglq</code>	506, 13648, 15541
<code>\textasciitilde</code>	431, 4152, 13383, 13816	<code>\textcompwordmark</code>	15217	<code>\textglqq</code>	504, 13646, 15539
<code>\textasteriskcentered</code>	13793	<code>\textcopyright</code>	13466, 13834	<code>\textgravedbl</code>	14389
<code>\textbackslash</code>	426, 585, 13366, 13799	<code>\textCR</code>	13328, 13775	<code>\textgreater</code>	13364, 13797
<code>\textbaht</code>	15061	<code>\textcurrency</code>	13456, 13824	<code>\textgrq</code>	507, 13649, 15542
<code>\textbar</code>	13379, 13812	<code>\textdagger</code>	13387, 15237	<code>\textgrqq</code>	505, 13647, 15540
<code>\textbardbl</code>	15223	<code>\textdaggerdbl</code>	13389, 15239	<code>\textGslash</code>	14292
<code>\textBeta</code>	1021, 14425	<code>\textdegree</code>	13479, 13645, 13847	<code>\textgslash</code>	14294
<code>\textbeta</code>	1021, 13659, 14488	<code>\textDelta</code>	1023, 14429	<code>\textguarani</code>	15331
<code>\textbf</code>	457	<code>\textdelta</code>	1023, 14492	<code>\textHslash</code>	14088
<code>\textbigcircle</code>	13735, 13754, 15523	<code>\textDigammagreek</code>	14551	<code>\textthslash</code>	14090
<code>\textblank</code>	15371	<code>\textdigammagreek</code>	14553	<code>\textHT</code>	13324, 13771
<code>\textbraceleft</code>	424, 13377, 13810	<code>\textdiscount</code>	15263	<code>\texthungarumlaut</code>	13338, 13729, 13748, 14386, 14387
<code>\textbraceright</code>	425, 13381, 13814	<code>\textdiv</code>	13656, 15549	<code>\textinterrobang</code>	15255
<code>\textbrokenbar</code>	13460, 13828	<code>\textdivide</code>	13626, 13656, 13994, 15549	<code>\textIota</code>	1042, 14413, 14439, 14472
<code>\textbullet</code>	13385, 15241	<code>\textdivorced</code>	15529	<code>\textiota</code>	1042, 14482, 14502, 14536
<code>\textcdot</code>	13658, 15551	<code>\textdollar</code>	428, 13350, 13781	<code>\textlotadieresis</code>	14421, 14471
<code>\textcedilla</code>	13290, 13302, 13314, 13495, 13725, 13744, 13864	<code>\textdong</code>	15325	<code>\textit</code>	459
<code>\textcelsius</code>	13645, 15333	<code>\textdotaccent</code>	13289, 13301, 13313, 13336, 13724, 13743, 14378	<code>\textKappa</code>	1043, 14441
<code>\textcent</code>	13452, 13820	<code>\textdotbelow</code>	13293, 13305, 13317, 13360, 13732, 13751, 14397	<code>\textkappa</code>	1043, 14504
<code>\textChi</code>	1070, 14465	<code>\textdoublegrave</code>	13727, 13746, 14393	<code>\textKoppagreek</code>	1050, 14555
<code>\textchi</code>	1070, 14530	<code>\textdownarrow</code>	15361	<code>\textkoppagreek</code>	1050, 14557
<code>\textcircled</code>	13716, 13735, 13754, 15375, 15377, 15379, 15381, 15383, 15385, 15387, 15389, 15391, 15393, 15395, 15397, 15399, 15401, 15403, 15405, 15407, 15409, 15411, 15413, 15415, 15417, 15419, 15421, 15423, 15425, 15427, 15429, 15431, 15433, 15435, 15437, 15439, 15441, 15443, 15445, 15447, 15449, 15451, 15453, 15455, 15457, 15459, 15461, 15463, 15465, 15467, 15469, 15471, 15473, 15475, 15477, 15479, 15481, 15483, 15485, 15487, 15489, 15491, 15493, 15495, 15497, 15499, 15501, 15503, 15505, 15507, 15509,	<code>\textdotted</code>	15307	<code>\textkra</code>	14129
		<code>\texteightinferior</code>	15275	<code>\textLambda</code>	1044, 14443
		<code>\texteightsuperior</code>	15243	<code>\textlambda</code>	1044, 14506
		<code>\textellipsis</code>	434, 435, 13391, 15243	<code>\textlangl</code>	15367
		<code>\textemdash</code>	619, 13393, 15221	<code>\textlatin</code>	492, 5961
		<code>\textendash</code>	620, 13395, 15219	<code>\textlbrackdbl</code>	15531
		<code>\textEpsilon</code>	1024, 14409, 14431	<code>\textleftarrow</code>	15355
		<code>\textepsilon</code>	1024, 14478, 14494	<code>\textless</code>	13362, 13795
		<code>\textequalsuperior</code>	15283	<code>\textLF</code>	13326, 13773
		<code>\textestimated</code>	15351	<code>\textlira</code>	15317
		<code>\textEta</code>	1027, 14411, 14435	<code>\textlnot</code>	13473, 13841
		<code>\texteta</code>	1027, 14480, 14498	<code>\textlogicalnot</code>	13472, 13654, 13840, 15547
		<code>\texteuro</code>	13448, 15327	<code>\textlongs</code>	14271, 15203
		<code>\textexclamdown</code>	623, 931, 13450, 13818	<code>\textlquill</code>	15259
		<code>\textfi</code>	621, 13423, 15535	<code>\textmacronbelow</code>	13292, 13304, 13316, 13371, 13731, 13750, 14399
		<code>\TextField</code>	5167	<code>\textmarried</code>	15527
		<code>\textfiveinferior</code>	15301	<code>\textmd</code>	458
		<code>\textfivesuperior</code>	15269	<code>\textmho</code>	15347
		<code>\textfl</code>	622, 13425, 15537	<code>\textminus</code>	13405, 15363
		<code>\textflorin</code>	13397, 14273	<code>\textminussuperior</code>	15281
		<code>\textflq</code>	510, 13652, 15545	<code>\textMu</code>	1045, 14445
		<code>\textflqq</code>	508, 13650, 15543	<code>\textmu</code>	1045, 13489, 13858
		<code>\textfourinferior</code>	15299	<code>\textmugreek</code>	14508
		<code>\textfoursuperior</code>	15267	<code>\textmultiply</code>	13558, 13655, 13926, 15548
		<code>\textfractionsolidus</code>	13399, 15257	<code>\textmusicalnote</code>	15525
				<code>\textnaira</code>	15319

<code>\textnapostrophe</code>	14163	<code>\textquotedblleft</code> . .	13411, 13647, 15231, 15540	<code>\textunderscore</code> .	432, 4146, 4147, 4149, 13370, 13803
<code>\textneg</code>	13654, 15547	<code>\textquotedblright</code> .	13413, 15233	<code>\textup</code>	462
<code>\textnewtie</code> .	13734, 13753, 14395	<code>\textquoteleft</code> 13415, 13649, 15225, 15542		<code>\textuparrow</code>	15357
<code>\textnineinferior</code>	15309	<code>\textquoteright</code> . . .	13417, 15227	<code>\textUpsilon</code> .	1068, 14417, 14461, 14474
<code>\textninesuperior</code>	15277	<code>\textquotesingle</code>	13787	<code>\textupsilon</code> . .	1068, 14526, 14538, 14543
<code>\textnormal</code>	453	<code>\texttriangle</code>	15369	<code>\textupsilonacute</code> . .	14484, 14542
<code>\textnsuperior</code>	15289	<code>\texttrbrackdbl</code>	15533	<code>\textvarsigma</code>	14520
<code>\textNu</code>	1046, 14447	<code>\textrecipe</code>	15339	<code>\textvisiblespace</code>	15373
<code>\textnu</code>	1046, 14510	<code>\textreferencemark</code>	15253	<code>\textwon</code>	15323
<code>\textnumbersign</code> 427, 13348, 13779		<code>\textregistered</code>	13475, 13843	<code>\textXi</code>	1047, 14449
<code>\textnumeralsigngreek</code> 997, 14403		<code>\textRho</code>	1065, 14455	<code>\textxi</code>	1047, 14512
<code>\textnumeralsignlowergreek</code> 1014, 1036, 1059, 14405		<code>\textrho</code>	1065, 14518	<code>\textyen</code>	13458, 13826
<code>\textnumero</code>	15335	<code>\textrightarrow</code>	15359	<code>\textzeroinferior</code>	15291
<code>\textogonek</code> .	13340, 13730, 13749, 14382	<code>\textring</code> . . .	13287, 13299, 13311, 13342, 13722, 13741, 14380	<code>\textzerosuperior</code>	15265
<code>\textohm</code>	15345	<code>\textrm</code>	454	<code>\textZeta</code>	1026, 14433
<code>\textOmega</code> . .	1072, 14419, 14469	<code>\textrquill</code>	15261	<code>\textzeta</code>	1026, 14496
<code>\textomega</code> . .	1072, 14534, 14545	<code>\textSampigreek</code> . . .	1073, 14559	<code>\TH</code>	13572, 13940
<code>\textOmicron</code> .	1048, 14415, 14451	<code>\textsampigreek</code> . . .	1073, 14561	<code>\th</code>	13640, 14008
<code>\textomicron</code> .	1048, 14514, 14540	<code>\textsc</code>	460	<code>\thaa</code>	15700
<code>\textonehalf</code>	13505, 13874	<code>\textsection</code>	13462, 13830	<code>\thebookmark@seq@number</code> 12831	
<code>\textoneinferior</code>	15293	<code>\textservicemark</code>	15341	<code>\theequation</code> . .	5910, 6179, 6201, 6225, 6261
<code>\textonequarter</code> . . .	13503, 13872	<code>\textseveninferior</code>	15305	<code>\thefootnote</code>	6349, 6529
<code>\textonesuperior</code> . .	13497, 13866	<code>\textsevensuperior</code>	15273	<code>\theHchapter</code> . .	5852, 5853, 5854, 5855, 5937
<code>\textopenbullet</code>	15521	<code>\textsf</code>	455, 11762, 11765	<code>\theHenumi</code>	5871
<code>\textordfeminine</code> . .	13468, 13836	<code>\textSigma</code>	1066, 14457	<code>\theHenumii</code>	5872
<code>\textordmasculine</code> .	13499, 13868	<code>\textsigma</code>	1066, 14522	<code>\theHenumiii</code>	5873
<code>\textparagraph</code> 433, 13491, 13860		<code>\textsixinferior</code>	15303	<code>\theHenumiv</code>	5874
<code>\textparenleft</code> . .	627, 628, 13356, 13789	<code>\textsixsuperior</code>	15271	<code>\theHequation</code> .	5842, 5911, 6180, 6202, 6226, 6234, 6261, 6265
<code>\textparenleftinferior</code>	15311	<code>\textsl</code>	461	<code>\theHfigure</code>	5849, 5853
<code>\textparenleftsuperior</code> . . .	15285	<code>\textsterling</code>	13454, 13822	<code>\theHHfootnote</code>	5875, 5877
<code>\textparenright</code> . .	13358, 13791	<code>\textStigmagreek</code> . . .	1025, 14547	<code>\theHHmpfootnote</code>	5877
<code>\textparenrightinferior</code> . . .	15313	<code>\textstigmagreek</code> . . .	1025, 14549	<code>\theHItem</code> 5865, 5871, 5872, 5873, 5874	
<code>\textparenrightsuperior</code> . .	15287	<code>\textsurd</code>	15365	<code>\theHlisting</code>	3124
<code>\textpercent</code> . .	429, 13352, 13783	<code>\TextSymbolUnavailable</code> .	13318, 13319, 13321	<code>\theHlstlisting</code>	3120
<code>\textperiodcentered</code> 13493, 13658, 13862, 15551		<code>\textTau</code>	1067, 14459	<code>\theHmpfootnote</code>	5876
<code>\textpertenthousand</code>	15247	<code>\texttau</code>	1067, 14524	<code>\theHparagraph</code>	5859, 5860
<code>\textperthousand</code> . .	13407, 15245	<code>\textTheta</code>	1028, 14437	<code>\theHparentequation</code> .	6260, 6265
<code>\textpeseta</code>	15321	<code>\texttheta</code>	1028, 14500	<code>\theHpart</code>	5845
<code>\textpeso</code>	15329	<code>\textthreeinferior</code>	15297	<code>\theHsection</code> . .	5842, 5848, 5855, 5857, 5861, 5862, 5936
<code>\textPhi</code>	1069, 14463	<code>\textthreequarters</code> .	13507, 13876	<code>\theHslide</code>	7299
<code>\textphi</code>	1069, 14528	<code>\textthreesuperior</code> .	13485, 13853	<code>\theHslidesection</code> 7304, 7306, 7342, 7346	
<code>\textPi</code>	1049, 14453	<code>\texttie</code> . . .	13733, 13752, 14401	<code>\theHslidesubsection</code> .	7305, 7393, 7397
<code>\textpi</code>	1049, 14516	<code>\texttilde</code> . . .	3758, 13285, 13297, 13309, 13344, 13720, 13739, 14384	<code>\theHsubequation</code>	6234
<code>\textplusminus</code> . .	13481, 13657, 13849, 15550	<code>\texttildelow</code>	14391	<code>\theHsubparagraph</code>	5860
<code>\textplussuperior</code>	15279	<code>\texttimes</code>	13655, 15548	<code>\theHsubsection</code>	5857, 5858
<code>\textpm</code>	13657, 15550	<code>\texttrademark</code> . . .	13421, 15343	<code>\theHsubsubsection</code> . .	5858, 5859
<code>\textPsi</code>	1071, 14467	<code>\textTslash</code>	14221	<code>\theHtable</code>	5850, 5854
<code>\textpsi</code>	1071, 14532	<code>\texttslash</code>	14223		
<code>\textquestiondown</code>	624, 932, 13509, 13878	<code>\texttt</code>	456		
<code>\textquotedbl</code>	13346, 13777	<code>\texttwoinferior</code>	15295		
		<code>\texttwosuperior</code> . .	13483, 13851		

`\wd` . 8603, 8615, 8632, 8644, 8662,
 8674, 12091
`\write` 4217, 5396, 5398, 5799, 5807,
 6041, 6069, 6709, 6724, 6740,
 6750, 6780, 6803, 6829, 6859,
 11691, 11715, 13015, 13095
`\WriteBookmarks`
 3700, 3814, 3966, 3988,
 12766, 13008, 13041, 13042,
 13084, 13088
`\wwwbrowser` . . . 8560, 8634, 8646

X

`\x` 21, 25, 92, 98, 168, 169,
 176, 178, 206, 209, 210, 211,
 212, 213, 214, 215, 216, 217,
 218, 219, 220, 221, 222, 223,
 224, 225, 226, 227, 228, 389,
 394, 703, 706, 710, 715, 747,
 816, 822, 1579, 1607, 2016,
 2018, 2280, 2290, 2299, 2309,
 2360, 2361, 2366, 2382, 3025,
 3035, 3136, 3137, 3140, 3141,
 3142, 3146, 3149, 3155, 3514,
 3520, 3523, 3526, 3647, 3648,
 3653, 3654, 3713, 3714, 3715,
 3718, 3721, 3724, 4216, 4222,
 4345, 4356, 4360, 4363, 4432,
 4433, 4434, 4446, 4514, 4528,
 4553, 4557, 4560, 4570, 5469,
 5470, 5475, 6053, 6060, 6093,

6100, 6127, 6136, 6138, 6150,
 7283, 7284, 7506, 7509, 7544,
 7545, 7546, 7548, 7550, 7898,
 7906, 8178, 8179, 8182, 8184,
 8187, 8804, 8805, 8806, 8808,
 8809, 8810, 8812, 8813, 8814,
 8816, 8817, 8818, 8820, 8821,
 8822, 8824, 8825, 8826, 8828,
 8829, 8830, 8832, 8833, 8835,
 8841, 8850, 9828, 9833, 9837,
 10310, 10311, 11337, 11357,
 11817, 11837, 12158, 12178,
 13151, 13153, 13222, 13224

`\XeTeXrevision` 3934, 9115
`\XeTeXversion` 3934, 9115
`\XR@dURL` 2240, 2241
`\XR@addURL` 2240
`\XR@ext`
 2468, 2469, 4415, 4418, 5683,
 7799, 8463, 8559, 8795, 9242,
 10486, 10569, 10628, 10820,
 10984
`\XR@URL` 2245
`\xspace` 537, 539

Y

`\y` 718, 721, 724, 727, 730, 733, 742,
 2362, 2367, 2372, 3142, 3143,
 3144, 3145, 3716, 3719, 3722,
 3725, 3727, 3733, 4435, 4436,

4437, 4438, 4446, 5470
 6125, 6126, 6129, 6136

`\ya`
`\yahamza`

Z

`\z` . . 2364, 2365, 2366, 4438
`\z@` 679, 719, 844, 996
 1035, 1058, 1309, 1349
 1378, 1393, 1401, 1474
 1734, 1740, 1804, 1808
 1820, 2275, 2294, 2557
 2659, 3148, 3154, 3649
 5686, 5689, 6307, 6308
 8387, 8391, 8396, 8400
 8410, 8414, 8417, 9224
 9230, 9231, 9719, 9743
 10199, 10210, 10551,
 10557, 10558, 11326,
 12095, 12147, 12495,
 12529, 12601, 12607,
 12666, 12672, 12691,
 12706, 12735, 12740,
 12843, 12844, 12845,
 12847, 12848, 12849,
 13067, 13188

`\z@skip`
`\za`
`\zay`
`\ZWNJ`