

Hypertext marks in L^AT_EX

Sebastian Rahtz

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

Heiko Oberdiek

Email: `heiko.oberdiek at gmail.com`

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1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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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 L^AT_EX definition (number of arguments).

```

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

```

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

```

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

```

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

```

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

```

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

```

\HyC@edef
125 \def\HyC@def#1#{%
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{keyval}[1997/11/10]
233 \RequirePackage{kvsetkeys}[2007/09/29]
234 \RequirePackage{pdfescape}[2007/11/11]
235 \RequirePackage{ifpdf}[2006/02/20]
236 \RequirePackage{ifvtex}
237 \RequirePackage{ifxetex}[2006/08/21]
238 \RequirePackage{hycolor}
239 \RequirePackage{letltxmacro}[2008/06/13]
240 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
241 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
242 \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`.

```

243 \@ifundefined{AfterBeginDocument}{%
244   \def\AfterBeginDocument{\AtBeginDocument}%
245 }{}%

```

4.3 Switches

```

246 \newif\ifHy@typexml
247 \newif\ifHy@activeanchor
248 \newif\ifHy@backref
249 \newif\ifHy@bookmarks
250 \newif\ifHy@bookmarksnumbered
251 \newif\ifHy@bookmarksopen
252 \newif\ifHy@breaklinks
253 \newif\ifHy@centerwindow
254 \newif\ifHy@CJKbookmarks
255 \newif\ifHy@colorlinks

```

```

256 \newif\ifHy@draft
257 \let\Hy@finaltrue\Hy@draftfalse
258 \let\Hy@finalfalse\Hy@drafttrue
259 \newif\ifHy@escapeform
260 \newif\ifHy@figures
261 \newif\ifHy@fitwindow
262 \newif\ifHy@frenchlinks
263 \newif\ifHy@hyperfootnotes
264 \newif\ifHy@hyperindex
265 \newif\ifHy@hypertextnames
266 \newif\ifHy@implicit
267 \newif\ifHy@linktopage
268 \newif\ifHy@menubar
269 \newif\ifHy@naturalnames
270 \newif\ifHy@nesting
271 \newif\ifHy@newwindowset
272 \newif\ifHy@newwindow
273 \newif\ifHy@ocgcolorlinks
274 \newif\ifHy@pageanchor
275 \newif\ifHy@pagelabels
276 \newif\ifHy@pdfpagehidden
277 \newif\ifHy@pdfstring
278 \newif\ifHy@plainpages
279 \newif\ifHy@psize
280 \newif\ifHy@raiselinks
281 \newif\ifHy@seminarslides
282 \newif\ifHy@setpagesize
283 \newif\ifHy@texht
284 \newif\ifHy@toolbar
285 \newif\ifHy@unicode
286 \newif\ifHy@usetitle
287 \newif\ifHy@verbose
288 \newif\ifHy@windowui
289 \newif\ifHy@displaydoctitle
290 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

291 \Hy@backreffalse
292 \Hy@bookmarksnumberedfalse
293 \Hy@bookmarksopenfalse
294 \Hy@bookmarkstrue
295 \Hy@breaklinksfalse
296 \Hy@centerwindowfalse
297 \Hy@CJKbookmarksfalse
298 \Hy@escapeformfalse
299 \Hy@figuresfalse
300 \Hy@fitwindowfalse
301 \Hy@hyperfootnotetrue
302 \Hy@hyperindextrue
303 \Hy@hypertextnametrue
304 \Hy@implicittrue
305 \Hy@linktopagefalse
306 \Hy@menubartrue
307 \Hy@naturalnamesfalse
308 \Hy@nestingfalse
309 \Hy@newwindowsetfalse
310 \Hy@newwindowfalse
311 \Hy@pageanchortrue

```

```

312 \Hy@pagelabelstrue
313 \Hy@pdfpagehiddenfalse
314 \Hy@pdfstringfalse
315 \Hy@plainpagesfalse
316 \Hy@raiselinksfalse
317 \Hy@setpagesizetrue
318 \Hy@texhtfalse
319 \Hy@toolbartrue
320 \Hy@typexmlfalse
321 \Hy@unicodedefalse
322 \Hy@usetitlefalse
323 \Hy@verbosefalse
324 \Hy>windowuitrue
325 \Hy@displaydoctitlefalse
326 \Hy@pdfafalse

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

329 \newdimen\@linkdim
330 \let\Hy@driver\@empty
331 \let\MaybeStopEarly\relax
332 \newcount\Hy@linkcounter
333 \newcount\Hy@pagecounter
334 \Hy@linkcounter0
335 \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.

```

336 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
337 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

338 \let\Hy@ReturnEnd\@empty
339 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
340 \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 used directly, because they can be undefined if
 \Hy@safe@activesfalse babel is not loaded.

```

341 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
342 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

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

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

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

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

Example (TeX):

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

`\hypercalsbp`

```
343 \begingroup\expandafter\expandafter\expandafter\endgroup
344 \expandafter\ifx\csname dimexpr\endcsname\relax
345   \def\hypercalsbpdef#1#2{%
346     \begingroup
347       \toks@{}%
348       \HyCal@scan#2\hypercalsbp\@nil
349     \expandafter\endgroup
350     \expandafter\def\expandafter#1\expandafter{\the\toks@}%
351   }%
352 \def\HyCal@scan#1\hypercalsbp#2\@nil{%
353   \toks@\expandafter{\the\toks@ #1}%
354   \ifx\#2\%
355     \else
356       \Hy@ReturnAfterFi{%
357         \HyCal@do#2\@nil
358       }%
359     \fi
360   }%
361 \def\HyCal@do#1#2\@nil{%
362   \ifpackageloaded{calc}{}%
363   \Hy@Warning{%
364     For calculations \string\hypercalsbp\space needs\MessageBreak
365     package calc or e-TeX%
366   }%
367 }%
368 \setlength{\dimen@}{#1}%
369 \setlength{\dimen@}{0.99626401\dimen@}%
370 \edef\x{%
371   \toks@{%
372     \the\toks@
373     \strip@pt\dimen@
```

```

374   }%
375   }\x
376   \HyCal@scan#2\@nil
377   }%
378 \else
379 \def\hypercalcbp#1{%
380   \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
381   }%
382 \def\hypercalcbpdef{\def}%
383 \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`.

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

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

```
385 \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.

```
386 \escapechar'\%
```

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

```
387 \edef\0{\string\0}%
388 \edef\1{\string\1}%
389 \edef\2{\string\2}%
390 \edef\3{\string\3}%
```

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

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

```
391 \ifHy@unicode
392 \edef\8{\string\8}%
393 \edef\9{\string\9}%
394 \fontencoding{PU}%
395 \HyPsd@UTFviii
396 \def\ifpdfstringunicode##1##2{##1}%
397 \else
398 \fontencoding{PD1}%
399 \def\ifpdfstringunicode##1##2{##2}%
400 \fi
401 \enc@update
```

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

```
402 \@inmathwarn\pdfstringdef
```

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

```
403 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
404 \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.

```
405 \let\{\textbraceleft
406 \let\}\textbraceright
407 \let\\textbackslash
408 \let\#\textnumbersign
409 \let\$\textdollar
410 \let\%\textpercent
411 \let\&\textampersand
412 % \let\~\textasciitilde
413 \let\_ \textunderscore
414 \let\textparagraph
415 \let\ldots\textellipsis
416 \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.

```
417 \def\{\pdfstringdefWarn\\}%
418 \def\newline{\pdfstringdefWarn\newline}%
```

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

```
419 \def\TeX{\TeX}%
420 \def\LaTeX{\LaTeX}%
421 \def\LaTeXe{\LaTeX2e}%
422 \def\eTeX{e-TeX}%
423 \def\SliTeX{SliTeX}%
424 \def\MF{Metafont}%
425 \def\MP{Metapost}%
```

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

```

426 \let\fontencoding\@gobble
427 \let\fontfamily\@gobble
428 \let\fontseries\@gobble
429 \let\fontshape\@gobble
430 \let\fontsize\@gobbletwo
431 \let\selectfont\@empty
432 \let\usefont\@gobblefour
433 \let\emph\@firstofone
434 \let\textnormal\@firstofone
435 \let\textrm\@firstofone
436 \let\textsf\@firstofone
437 \let\texttt\@firstofone
438 \let\textbf\@firstofone
439 \let\textmd\@firstofone
440 \let\textit\@firstofone
441 \let\textsc\@firstofone
442 \let\textsl\@firstofone
443 \let\textup\@firstofone
444 \let\normalfont\@empty
445 \let\rmfamily\@empty
446 \let\sffamily\@empty
447 \let\ttfamily\@empty
448 \let\bfseries\@empty
449 \let\mdseries\@empty
450 \let\itshape\@empty
451 \let\scshape\@empty
452 \let\slshape\@empty
453 \let\upshape\@empty
454 \let\em\@empty
455 \let\rm\@empty
456 \let\Huge\@empty
457 \let\LARGE\@empty
458 \let\Large\@empty
459 \let\footnotesize\@empty
460 \let\huge\@empty
461 \let\large\@empty
462 \let\normalsize\@empty
463 \let\scriptsize\@empty
464 \let\small\@empty
465 \let\tiny\@empty
466 \let\mathversion\@gobble
467 \let\phantom\@gobble
468 \let\vphantom\@gobble
469 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

471 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
472 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

473 \let\textlatin\@firstofone
474 \@ifundefined{language@group}{-}{%
475   \csname HyPsd@babel@\language@group\endcsname
476 }%
477 \HyPsd@GreekPatch
478 \HyPsd@SpanishPatch
479 \HyPsd@BabelPatch
480 \let\@safe@activestrue\relax
481 \let\@safe@activesfalse\relax

```

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

```

482 \let\cyr\relax

```

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

```

483 \let\es@roman\@Roman

```

Package german.

```

484 \let\glqq\textglqq
485 \let\grqq\textgrqq
486 \let\glq\textglq
487 \let\grq\textgrq
488 \let\flqq\textflqq
489 \let\frqq\textfrqq
490 \let\flq\textflq
491 \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}

```

```

492 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

493 \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.

```

494 \let\hspace\HyPsd@hspace

```

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

```

495 \let\label\@gobble
496 \let\index\@gobble
497 \let\glossary\@gobble
498 \let\href\@secondoftwo
499 \let\@mkboth\@gobbletwo

```

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

```
500 \let\ref\HyPsd@ref
501 \let\pageref\HyPsd@pageref
502 \let\nameref\HyPsd@nameref
503 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
504 \let\leavevmode\@empty
505 \let\mbox\@empty
```

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

```
506 \def\halign{\pdfstringdefWarn\halign\@gobble}%
507 \let\ignorespaces\HyPsd@ignorespaces
508 \let\Hy@SectionAnchorHref\@gobble
```

Patch for cjk bookmarks.

```
509 \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`).

```
510 \Hy@pdfstringtrue
511 \pdfstringdefPreHook
```

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

```
512 \HyPsd@LetUnexpandableSpace\space
513 \HyPsd@LetUnexpandableSpace\ %
514 \HyPsd@LetUnexpandableSpace~%
515 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
516 \@ifundefined{@xspace}{%
517 \let\xspace\HyPsd@ITALCORR
518 }{%
519 \let\xspace\HyPsd@XSPACE
520 }%
521 \let\/\HyPsd@ITALCORR
522 \let\bgroup\/%
523 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
524 \let\discretionary\@gobbletwo
```

`\@ifstar` is defined in \LaTeX as follows:

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

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

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

```
525 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
526 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
527 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
528 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
529 \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).

```
530 \begingroup
531 \let\GenericError\@gobblefour
532 \let\GenericWarning\@gobbletwo
```

```
533 \let\GenericInfo\@gobbletwo
```

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

```
534 \ifx\nofrenchguillemets\@undefined
535 \else
536 \nofrenchguillemets
537 \fi
```

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

```
538 \let\Hy@temp\xdef
539 \let\def\HyPsd@DefCommand
540 \let\gdef\HyPsd@DefCommand
541 \let\edef\HyPsd@DefCommand
542 \let\xdef\HyPsd@DefCommand
543 \let\futurelet\HyPsd@LetCommand
544 \let\let\HyPsd@LetCommand
545 \Hy@temp#1{#2}%
546 \endgroup
```

6.2.3 Postprocessing

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

```
547 \ifx#1\@empty
548 \else
```

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

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

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

```
549 \HyPsd@ProtectSpaces#1%
550 \let\HyPsd@String\@empty
551 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
552 \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.

```

553 \let\HyPsd@SPACEOPTI\relax
554 {%
555 \let\HyPsd@String\@empty
556 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
557 \global\let#1\HyPsd@String
558 }%
559 \expandafter\HyPsd@RemoveMask\expandafter
560 | \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.

```

561 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
562 \let\HyPsd@String\@empty
563 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
564 \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.

```
565 \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.

```

566 \ifHy@unicode
567 \expandafter\HyPsd@StringSubst\curname 80\040\endcurname
568 \HyPsd@SPACEOPTI#1%
569 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
```



```

570 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
571 {\HyPsd@SPACEOPTI\80\273}#1%
572 \else
573 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
574 \expandafter\HyPsd@Subst\expandafter{%
575 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
576 \string\273}{\HyPsd@SPACEOPTI\273}#1%
577 \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.

```

578 \ifHy@unicode
579 \HyPsd@StringSubst{\)}{\80\051}#1%
580 \HyPsd@Subst){\80\051}#1%
581 \let\HyPsd@empty\relax
582 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
583 {\HyPsd@empty\80\051}#1%
584 \else
585 \HyPsd@StringSubst{\)}{\051}#1%
586 \HyPsd@Subst){\051}#1%
587 \let\HyPsd@empty\relax
588 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
589 \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`.

```

590 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
591 \@ifundefined{@xspace}{%
592 }{%
593 \let\HyPsd@xspace\relax
594 \expandafter\HyPsd@Subst\expandafter
595 {\HyPsd@XSPACE}\HyPsd@xspace#1%
596 \let\HyPsd@xspace\HyPsd@doxspace
597 }%
598 \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 6.78l.

```
599 \HyPsd@Subst{---}\textemdash#1%
600 \HyPsd@Subst{--}\textendash#1%
601 % \HyPsd@Subst{fi}\textfi#1%
602 % \HyPsd@Subst{fl}\textfl#1%
603 \HyPsd@Subst{!'}\textexclamdown#1%
604 \HyPsd@Subst{?'}\textquestiondown#1%
```

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

```
605 \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.

```
606 \ifHy@unicode
607 \HyPsd@StringSubst{\textparenleft#1%
608 \HyPsd@Subst{\textparenleft#1%
609 \else
610 \HyPsd@StringSubst\({\050}#1%
611 \HyPsd@Subst({\050}#1%
612 \HyPsd@StringSubst{\050}{\string\{ }#1%
613 \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.

```
614 \ifHy@unicode
615 \edef\HyPsd@SPACEOPTI{\80\040}%
616 \else
617 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
618 \fi
619 \xdef#1{#1\@empty}%
620 \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.

```
621 \endgroup
622 \begingroup
623 \ifHy@unicode
624 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
625 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
626 \@ifundefined{StringEncodingConvertTest}{%
627 }{%
628 \EdefUnescapeString\HyPsd@temp#1%
```

```

629 \ifxetex
630 \let\HyPsd@UnescapedString\HyPsd@temp
631 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
632 {utf16be}{ascii-print}{-%
633 \EdefEscapeString\HyPsd@temp\HyPsd@temp
634 \global\let#1\HyPsd@temp
635 \Hy@unicodfalse
636 }{-%
637 \HyPsd@ToBigChars#1%
638 }%
639 \else
640 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
641 {utf16be}{pdfdoc}{-%
642 \EdefEscapeString\HyPsd@temp\HyPsd@temp
643 \global\let#1\HyPsd@temp
644 \Hy@unicodfalse
645 }{ }%
646 \fi
647 }%
648 \fi
649 \fi
650 \HyPsd@XeTeXBigCharsfalse

```

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

```

651 \pdfstringdefPostHook#1%
652 \endgroup
653 }

```

`\Hy@pdfstringdef`

```

654 \def\Hy@pdfstringdef#1#2{%
655 \pdfstringdef\Hy@gtemp{#2}%
656 \let#1\Hy@gtemp
657 }

```

6.3 Encodings

6.3.1 XeTeX

```

658 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
659 \catcode\z@=12 %
660 \ifxetex
661 \expandafter\@firstofone
662 \else
663 \let\HyPsd@XeTeXBigCharstrue\@empty
664 \let\HyPsd@XeTeXBigCharsfalse\@empty
665 \expandafter\@gobble
666 \fi
667 {%
668 \newif\ifHyPsd@XeTeXBigChars
669 \def\HyPsd@XeTeXBigCharsfalse{%
670 \global\let\ifHyPsd@XeTeXBigChars\iffalse
671 }%
672 \def\HyPsd@XeTeXBigCharstrue{%
673 \global\let\ifHyPsd@XeTeXBigChars\ifftrue
674 }%
675 \def\HyPsd@ToBigChars#1{%

```

```

676 \ifHyPsd@XeTeXBigChars
677 \edefEscapeHex\HyPsd@UnescapedString{%
678 \expandafter\@gobbletwo\HyPsd@UnescapedString
679 }%
680 \begingroup
681 \toks@{}%
682 \escapechar=92\relax
683 \let\x\HyPsd@ToBigChar
684 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
685 \relax\relax\relax\relax\relax\relax\relax
686 \edef\x{%
687 \endgroup
688 \gdef\noexpand#1{\the\toks@}%
689 }%
690 \x
691 \fi
692 }%
693 \def\HyPsd@ToBigChar#1#2#3#4{%
694 \ifx\relax#1\relax
695 \let\x\relax
696 \else
697 \count@=#1#2#3#4\relax
698 \let\y\@empty
699 \lccode\z@=\count@
700 \ifnum\count@=40 % (
701 \let\y\@backslashchar
702 \else
703 \ifnum\count@=41 % )
704 \let\y\@backslashchar
705 \else
706 \ifnum\count@=92 % backslash
707 \let\y\@backslashchar
708 \else
709 \ifnum\count@=10 % newline
710 \edef\y##1{\string\n}%
711 \else
712 \ifnum\count@=13 % carriage return
713 \edef\y##1{\string\r}%
714 \fi
715 \fi
716 \fi
717 \fi
718 \fi
719 \lowercase{%
720 \toks@\expandafter{%
721 \the\expandafter\toks@
722 \y
723 ^^@%
724 }%
725 }%
726 \fi
727 \x
728 }%
729 }
730 \Hy@temp

```

6.3.2 Workaround for package linguex

```

731 \@ifpackageloaded{linguex}{%
732   \let\HyLinguex@OrgB\b
733   \let\HyLinguex@OrgC\c
734   \let\HyLinguex@OrgD\d
735   \def\HyLinguex@Restore{%
736     \let\b\HyLinguex@OrgB
737     \let\c\HyLinguex@OrgC
738     \let\d\HyLinguex@OrgD
739   }%
740   \AtEndOfPackage{%
741     \pdfstringdefDisableCommands{%
742       \@ifundefined{oldb}{\let\b\oldb}%
743       \@ifundefined{oldc}{\let\c\oldc}%
744       \@ifundefined{oldd}{\let\d\oldd}%
745     }%
746   }%
747 }{%
748   \let\HyLinguex@Restore\relax
749 }%

```

6.3.3 PD1 encoding

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

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

```

750 \@ifundefined{T@PD1}{%
751   \input{pd1enc.def}%
752   \HyLinguex@Restore
753 }{}
754 \DeclareFontFamily{PD1}{pdf}{}
755 \DeclareFontShape{PD1}{pdf}{m}{n}{<-> cmr10 }{}
756 \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`.

```

757 \def\HyPsd@InitUnicode{%
758   \@ifundefined{T@PU}{%
759     \input{puenc.def}%
760     \HyLinguex@Restore
761   }{}%
762   \DeclareFontFamily{PU}{pdf}{}%
763   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
764   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
765   \let\HyPsd@InitUnicode\relax
766 }

```

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 expandible macro `\texorpdfstring`. It expects two arguments, the first contains the string that will be set and processed by \TeX 's stomach, the second contains the replacement for PDF strings.

```

767 \def\texorpdfstring{%
768   \ifHy@pdfstring
769     \expandafter\@secondoftwo
770   \else
771     \expandafter\@firstoftwo
772   \fi
773 }
```

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`.

```

774 \@ifundefined{pdfstringdefPreHook}{%
775   \let\pdfstringdefPreHook\empty
776 }{}
777 \@ifundefined{pdfstringdefPostHook}{%
778   \let\pdfstringdefPostHook\@gobble
779 }{}
```

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

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

```

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

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

```

780 \def\pdfstringdefDisableCommands{%
781   \begingroup
782     \makeatletter
783     \HyPsd@DisableCommands
784 }
```

`\HyPsd@DisableCommands`

```

785 \long\def\HyPsd@DisableCommands#1{%
786   \toks0=\expandafter{\pdfstringdefPreHook}%
787   \toks1={#1}%
788   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
789 \endgroup
790 }
```

`\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`.

```
791 \def\pdfstringdefWarn#1{%
792   \expandafter\noexpand\csname<>-string#1\endcsname
793 }
```

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.

```
794 \begingroup
795   \catcode0=12 %
796   \def\x{\endgroup
797     \def\HyPsd@ignorespaces{%
798       \romannumeral\expandafter'\expandafter^^@%
799       \romannumeral'^^@%
800     }%
801   }%
802 \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`.

```
803 \def\HyPsd@BabelPatch{%
804   \let\HyOrg@languageshorthands\languageshorthands
805   \let\languageshorthands\HyPsd@LanguageShorthands
806 }
807 \RequirePackage{pdftexcmds}[2009/04/10]
808 \begingroup\expandafter\expandafter\expandafter\endgroup
809 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
810   \let\HyPsd@langshort@system\@empty
811   \def\HyPsd@LanguageShorthands#1{%
812     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
813       \HyPsd@langshort@system
814     \expandafter\@gobble
815   \else
```

```

816 \expandafter\@firstofone
817 \fi
818 {%
819 \HyOrg@languageshorthands{#1}%
820 }%
821 }%
822 \else
823 \def\HyPsd@LanguageShorthands#1{%
824 \ifnum\pdf@strcmp{#1}{system}=\z@
825 \expandafter\@gobble
826 \else
827 \expandafter\@firstofone
828 \fi
829 {%
830 \HyOrg@languageshorthands{#1}%
831 }%
832 }%
833 \fi
834 \def\Hy@temp{%
835 \@ifpackageloaded{babel}{%
836 \@ifpackagelater{babel}{2008/03/16}{%
837 \let\Hy@temp\@empty
838 }{%
839 \def\HyPsd@BabelPatch{%
840 \let\HyOrg@languageshorthands\languageshorthands
841 }%
842 }%
843 }{}%
844 }
845 \Hy@temp
846 \expandafter\AtBeginDocument\expandafter{\Hy@temp}
847 \newif\ifHy@next

Nothing to do for english.
848 \@ifundefined{danish@sh@.}{%sel}{%}{%
849 \def\HyPsd@babel@danish{%
850 \declare@shorthand{danish}{"}{|}{%}{%
851 \declare@shorthand{danish}{"}{~}{-}{%}{%
852 }%
853 }
854 \@ifundefined{dutch@sh@.}{%sel}{%}{%
855 \def\HyPsd@babel@dutch{%
856 \declare@shorthand{dutch}{"}{|}{%}{%
857 \declare@shorthand{dutch}{"}{~}{-}{%}{%
858 }%
859 }
860 \@ifundefined{finnish@sh@.}{%sel}{%}{%
861 \def\HyPsd@babel@finnish{%
862 \declare@shorthand{finnish}{"}{|}{%}{%
863 }%
864 }
865 \@ifundefined{french@sh@.}{%sel}{%}{%
866 \def\HyPsd@babel@frenchb{%
867 \def\guill@spacing{ }%
868 }%
869 }
870 \@ifundefined{german@sh@.}{%sel}{%}{%

```



```

871 \def\HyPsd@babel@german{%
872   \declare@shorthand{german}{f}{f}%
873   \declare@shorthand{german}{"}{|}%
874   \declare@shorthand{german}{"}{~}{-}%
875 }%
876 }
877 \@ifundefined{macedonian@sh@"@sel}{}{%
878 \def\HyPsd@babel@macedonian{%
879   \declare@shorthand{macedonian}{"}{|}%
880   \declare@shorthand{macedonian}{"}{~}{-}%
881 }%
882 }{}
883 \@ifundefined{ngerman@sh@"@sel}{}{%
884 \def\HyPsd@babel@ngerman{%
885   \declare@shorthand{ngerman}{"}{|}%
886   \declare@shorthand{ngerman}{"}{~}{-}%
887 }%
888 }
889 \@ifundefined{portuges@sh@"@sel}{}{%
890 \def\HyPsd@babel@portuges{%
891   \declare@shorthand{portuges}{"}{|}%
892 }%
893 }
894 \@ifundefined{russian@sh@"@sel}{}{%
895 \def\HyPsd@babel@russian{%
896   \declare@shorthand{russian}{"}{|}%
897   \declare@shorthand{russian}{"}{~}{-}%
898 }%
899 }
900 \@ifundefined{slovene@sh@"@sel}{}{%
901 \def\HyPsd@babel@slovene{%
902   \declare@shorthand{slovene}{"}{|}%
903 }%
904 }

```

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

```

905 \@ifundefined{spanish@sh@>@sel}{}{%
906 \def\HyPsd@babel@spanish{%
907   \declare@shorthand{spanish}{<<}{\guillemotleft}%
908   \declare@shorthand{spanish}{>>}{\guillemotright}%
909   \declare@shorthand{spanish}{=}{-}%
910   \declare@shorthand{spanish}{"}{~}{-}%
911   \declare@shorthand{spanish}{!}{\textexclamdown}%
912   \declare@shorthand{spanish}{?}{\textquestiondown}%
913 }%
914 }
915 \@ifundefined{swedish@sh@"@sel}{}{%
916 \def\HyPsd@babel@swedish{%
917   \declare@shorthand{swedish}{"}{|}%
918   \declare@shorthand{swedish}{"}{~}{-}%
919 }%
920 }
921 \@ifundefined{ukrainian@sh@"@sel}{}{%
922 \def\HyPsd@babel@ukrainian{%
923   \declare@shorthand{ukrainian}{"}{|}%
924   \declare@shorthand{ukrainian}{"}{~}{-}%
925 }%
926 }

```

```

927 \@ifundefined{usorbian@sh@{sel}}{}{}%
928 \def\HyPsd@babel@usorbian{%
929 \declare@shorthand{usorbian}{f}{f}%
930 \declare@shorthand{usorbian}{|}{|}%
931 }%
932 }

933 \@ifundefined{greek@sh@\string~@sel}{}{}%
934 \let\HyPsd@GreekPatch\@empty
935 }{}%
936 \def\HyPsd@GreekPatch{%
937 \let\greeknumeral\HyPsd@greeknumeral
938 \let\Greeknnumeral\HyPsd@Greeknnumeral
939 }%
940 }

941 \def\HyPsd@greeknumeral#1{%
942 \HyPsd@GreekNum\@firstoftwo{#1}%
943 }

944 \def\HyPsd@Greeknnumeral#1{%
945 \HyPsd@GreekNum\@secondoftwo{#1}%
946 }

947 \def\HyPsd@GreekNum#1#2{%
948 \ifHy@unicode
949 \ifnum#2<\@ne
950 \@arabic{#2}%
951 \else
952 \ifnum#2<1000000 %
953 \HyPsd@@GreekNum#1{#2}%
954 \else
955 \@arabic{#2}%
956 \fi
957 \fi
958 \else
959 \@arabic{#2}%
960 \fi
961 }

962 \def\HyPsd@@GreekNum#1#2{%
963 \ifnum#2<\@m
964 \ifnum#2<10 %
965 \expandafter\HyPsd@GreekNumI
966 \expandafter\@gobble\expandafter#1\number#2%
967 \else
968 \ifnum#2<100 %
969 \expandafter\HyPsd@GreekNumII
970 \expandafter\@gobble\expandafter#1\number#2%
971 \else
972 \expandafter\HyPsd@GreekNumIII
973 \expandafter\@gobble\expandafter#1\number#2%
974 \fi
975 \fi
976 \ifnum#2>\z@
977 \textnumeralsigngreek
978 \fi
979 \else
980 \ifnum#2<\@M
981 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
982 \else
983 \ifnum#2<100000 %

```

```

984     \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
985     \else
986     \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
987     \fi
988     \fi
989     \fi
990 }
991 \def\HyPsd@GreekNumI#1#2#3{%
992   #1{%
993     \ifnum#3>\z@
994       \textnumeralsignlowergreek
995       \fi
996     }%
997     \expandafter#2%
998     \ifcase#3 %
999       {}{}%
1000     \or\textalpha\textAlpha
1001     \or\textbeta\textBeta
1002     \or\textgamma\textGamma
1003     \or\textdelta\textDelta
1004     \or\textepsilon\textEpsilon
1005     \or\textstigmagreek\textStigmagreek
1006     \or\textzeta\textZeta
1007     \or\texteta\textEta
1008     \or\texttheta\textTheta
1009     \else
1010       {}{}%
1011     \fi
1012 }
1013 \def\HyPsd@GreekNumII#1#2#3#4{%
1014   #1{%
1015     \ifnum#3>\z@
1016       \textnumeralsignlowergreek
1017       \fi
1018     }%
1019     \expandafter#2%
1020     \ifcase#3 %
1021       {}{}%
1022     \or\textiota\textIota
1023     \or\textkappa\textKappa
1024     \or\textlambda\textLambda
1025     \or\textmu\textMu
1026     \or\textnu\textNu
1027     \or\textxi\textXi
1028     \or\textomicron\textOmicron
1029     \or\textpi\textPi
1030     \or\textkoppagreek\textKoppagreek
1031     \else
1032       {}{}%
1033     \fi
1034     \HyPsd@GreekNumI#1#2#4%
1035 }
1036 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1037   #1{%
1038     \ifnum#3>\z@
1039       \textnumeralsignlowergreek
1040       \fi

```

```

1041 }%
1042 \expandafter#2%
1043 \ifcase#3 %
1044 {}{}%
1045 \or\textrho\textRho
1046 \or\textsigma\textSigma
1047 \or\texttau\textTau
1048 \or\textupsilon\textUpsilon
1049 \or\textphi\textPhi
1050 \or\textchi\textChi
1051 \or\textpsi\textPsi
1052 \or\textomega\textOmega
1053 \or\textsampigreek\textSampigreek
1054 \else
1055 {}{}%
1056 \fi
1057 \HyPsd@GreekNumII#1#2#4#5%
1058 }
1059 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1060 \HyPsd@GreekNumI\@firstofone#1#2%
1061 \HyPsd@@GreekNum#1{#3#4#5}%
1062 }
1063 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1064 \HyPsd@GreekNumII\@firstofone#1#2#3%
1065 \HyPsd@@GreekNum#1{#4#5#6}%
1066 }
1067 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1068 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1069 \HyPsd@@GreekNum#1{#5#6#7}%
1070 }
1071 \def\HyPsd@SpanishPatch{%
1072 \begingroup\expandafter\expandafter\expandafter\endgroup
1073 \expandafter\ifx\csname es@save@dot\endcsname\relax
1074 \else
1075 \let\.\es@save@dot
1076 \fi
1077 }

```

6.5.3 CJK patch

```

1078 \RequirePackage{intcalc}[2007/09/27]
1079 \RequirePackage{ltxcmds}[2010/03/09]

```

\HyPsd@CJKhook

```

1080 \def\HyPsd@CJKhook{%
1081 \ltx@ifpackageloaded{CJK}{%
1082 \let\CJK@kern\relax
1083 \let\CJKkern\relax
1084 \let\CJK@CJK\relax
1085 \ifHy@CJKbookmarks
1086 \HyPsd@@CJKhook@bookmarks
1087 \fi
1088 \HyPsd@CJKhook@unicode
1089 }{}%
1090 }

```

6.5.4 CJK bookmarks

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

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

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

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

```
1091 \begingroup
1092 \catcode"7F=\active
1093 \toks@{%
1094 \let\CJK@ignorespaces\empty
1095 \def\CJK@char#1{\@gobbletwo}%
1096 \let\CJK@charx\@gobblefour
1097 \let\CJK@punctchar\@gobblefour
1098 \def\CJK@punctcharx#1{\@gobblefour}%
1099 \catcode"7F=\active
1100 \def^^7f#1^^7f#2^^7f{%
1101 \string #1\HyPsd@DecimalToOctal{#2}%
1102 }%
1103 % ... ?
1104 \ifHy@unicode
1105 \def\Hy@cjkpu{\80}%
1106 \else
1107 \let\Hy@cjkpu\@empty
1108 \fi
1109 \HyPsd@CJKActiveChars
1110 }%
1111 \count@=127 %
1112 \@whilenum\count@<255 \do{%
1113 \advance\count@ by 1 %
1114 \lccode'\~= \count@
1115 \lowercase{%
1116 \toks@\expandafter{\the\toks@ ~}%
1117 }%
1118 }%
1119 \toks@\expandafter{\the\toks@ !}%
1120 \xdef\HyPsd@CJKhook@bookmarks{%
1121 \the\toks@
1122 }%
1123 \endgroup
```

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

```
1124 \def\HyPsd@CJKActiveChars#1{%
1125 \ifx#1!%
1126 \let\HyPsd@CJKActiveChars\relax
1127 \else
1128 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1129 \fi
1130 \HyPsd@CJKActiveChars
1131 }
```

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

```

1132 \def\HyPsd@DecimalToOctal#1{%
1133   \ifcase #1 %
1134     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1135     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1136     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1137     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1138     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1139     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1140     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1141     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1142     \or @\or A\or B\or C\or D\or E\or F\or G%
1143     \or H\or I\or J\or K\or L\or M\or N\or O%
1144     \or P\or Q\or R\or S\or T\or U\or V\or W%
1145     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1146     \or \140\or a\or b\or c\or d\or e\or f\or g%
1147     \or h\or i\or j\or k\or l\or m\or n\or o%
1148     \or p\or q\or r\or s\or t\or u\or v\or w%
1149     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1150     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1151     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1152     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1153     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1154     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1155     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1156     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1157     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1158     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1159     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1160     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1161     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1162     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1163     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1164     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1165     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1166   \fi
1167 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1168 \def\HyPsd@CJKhook@unicode{%
1169   \let\Unicode\HyPsd@CJK@Unicode
1170   \let\CJKnumber\HyPsd@CJKnumber
1171   \let\CJKdigits\HyPsd@CJKdigits
1172 }

```

\HyPsd@CJK@Unicode

```

1173 \def\HyPsd@CJK@Unicode#1#2{%
1174   \ifnum#1<256 %
1175     \HyPsd@DecimalToOctalFirst{#1}%
1176     \HyPsd@DecimalToOctal{#2}%
1177   \else
1178     \933%
1179     \expandafter\expandafter\expandafter\HyPsd@HighA
1180     \intcalcDiv{#1}{4}!%
1181     \933%
1182     \ifcase\intcalcMod{#1}{4} %

```

```

1183     4\or 5\or 6\or 7%
1184     \fi
1185     \HyPsd@DecimalToOctal{#2}%
1186 \fi
1187 }

1188 \def\HyPsd@HighA#1!{%
1189 \expandafter\expandafter\expandafter\HyPsd@HighB
1190 \IntCalcDiv#1!64!!%
1191 \expandafter\expandafter\expandafter\HyPsd@HighD
1192 \IntCalcMod#1!64!!%
1193 }

1194 \def\HyPsd@HighB#1!{%
1195 \expandafter\expandafter\expandafter\HyPsd@HighC
1196 \IntCalcDec#1!!%
1197 }

1198 \def\HyPsd@HighC#1!{%
1199 \IntCalcDiv#1!4!%
1200 \@backslashchar
1201 \IntCalcMod#1!4!%
1202 }

1203 \def\HyPsd@HighD#1!{%
1204 \ifcase\IntCalcDiv#1!8! %
1205     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1206 \fi
1207 \ifcase\IntCalcMod#1!8! %
1208     0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1209 \fi
1210 }

1211 \def\HyPsd@DecimalToOctalFirst#1{%
1212 \9%
1213 \ifcase#1 %
1214     000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1215     \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1216     \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1217     \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1218     \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1219     \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1220     \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1221     \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1222     \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1223     \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1224     \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1225     \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1226     \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1227     \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1228     \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1229     \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1230     \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1231     \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%
1232     \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1233     \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1234     \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1235     \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1236     \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1237     \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1238     \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1239     \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%

```

```

1240 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1241 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1242 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1243 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1244 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1245 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1246 \fi
1247 }

1248 \def\HyPsd@CJKnumber#1{%
1249 \ifnum#1<\z@
1250 \CJK@minus
1251 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1252 \else
1253 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1254 \fi
1255 }

1256 \def\HyPsd@@CJKnumber#1{%
1257 \ifcase#1 %
1258 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1259 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1260 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1261 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1262 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1263 \CJK@ten\CJK@nine
1264 \else
1265 \ifnum#1<10000 %
1266 \HyPsd@CJKnumberFour#1!\@empty
1267 \@empty
1268 \else
1269 \ifnum#1<100000000 %
1270 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1271 \IntCalcDiv#1!10000!%
1272 !{}%
1273 \CJK@tenthousand
1274 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1275 \IntCalcMod#1!10000!%
1276 !\CJK@zero
1277 \@empty
1278 \else
1279 \expandafter\HyPsd@CJKnumberLarge
1280 \number\IntCalcDiv#1!100000000!\expandafter!%
1281 \number\IntCalcMod#1!100000000!!%
1282 \fi
1283 \fi
1284 \fi
1285 }

1286 \def\HyPsd@CJKnumberLarge#1!#2!{%
1287 \HyPsd@CJKnumberFour#1!{}%
1288 \CJK@hundredmillion
1289 \ifnum#2=\z@
1290 \else
1291 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1292 \IntCalcDiv#2!10000!%
1293 !\CJK@zero
1294 \CJK@tenthousand
1295 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1296 \IntCalcMod#2!10000!%

```



```

1297  !\CJK@zero
1298  \@empty
1299  \fi
1300 }
1301 \def\HyPsd@CJKnumberFour#1!#2{%
1302  \ifnum#1=\z@
1303    \expandafter\@gobble
1304  \else
1305    \ifnum#1<1000 %
1306      #2%
1307    \HyPsd@CJKnumberThree#1!}%
1308  \else
1309    \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%
1310    \CJK@thousand
1311    \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1312      \IntCalcMod#1!1000!%
1313    !\CJK@zero
1314  \fi
1315  \fi
1316 }
1317 \def\HyPsd@CJKnumberThree#1!#2{%
1318  \ifnum#1=\z@
1319  \else
1320    \ifnum#1<100 %
1321      #2%
1322    \HyPsd@CJKnumberTwo#1!}%
1323  \else
1324    \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1325    \CJK@hundred
1326    \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1327      \IntCalcMod#1!100!%
1328    !\CJK@zero
1329  \fi
1330  \fi
1331 }
1332 \def\HyPsd@CJKnumberTwo#1!#2{%
1333  \ifnum#1=\z@
1334  \else
1335    \ifnum#1<10 %
1336      #2%
1337    \HyPsd@@CJKnumber{#1}%
1338  \else
1339    \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1340    \CJK@ten
1341    \ifnum\IntCalcMod#1!10!=\z@
1342    \else
1343      \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1344    \fi
1345  \fi
1346  \fi
1347 }
1348 \def\HyPsd@CJKdigits#1{%
1349  \ifx*#1\relax
1350    \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1351  \else
1352    \HyPsd@@CJKdigits\CJK@null{#1}%
1353  \fi

```

```

1354 }
1355 \def\HyPsd@@@CJKdigits#1#2{%
1356   \ifx\\#2\\%
1357     \else
1358       \HyPsd@@@CJKdigits#1#2\@nil
1359     \fi
1360 }%
1361 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1362   \HyPsd@CJKdigit#1{#2}%
1363   \ifx\\#3\\%
1364     \expandafter\@gobble
1365   \else
1366     \expandafter\@firstofone
1367   \fi
1368   {%
1369     \HyPsd@@@CJKdigits#1#3\@nil
1370   }%
1371 }
1372 \def\HyPsd@CJKdigit#1#2{%
1373   \ifcase#2 %
1374     #1\or
1375     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1376     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1377   \fi
1378 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

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

1379 \def\HyPsd@inmathwarn#1#2{%
1380   \ifx#2\expandafter
1381     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1382       \HyPsd@GLYPHERR
1383       \expandafter\@gobble\string#1%
1384       >%
1385       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1386     \else
1387       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1388     \fi
1389   \else
1390     \expandafter#2%
1391   \fi
1392 }
1393 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1394 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1395 \def\HyPsd@add@accent#1#2{%
1396   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1397   #2%
1398 }%

```

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 caught by undelimited arguments.
- And they work in number, dimen, and skip assignments.

These properties are used in \HyPsd@CheckCatcodes.

```

1399 \def\HyPsd@LetUnexpandableSpace#1{%
1400   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1401 }

```

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

```

1402 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

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

```
1403 \edef\HyPsd@XSPACE{\string#\string X}
1404 \edef\HyPsd@ITALCORR{\string#\string I}
1405 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.9 `\hspace fix`

`\HyPsd@hspace`

```
1406 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1407 \def\HyPsd@@hspace#1*#2\END{%
1408   \ifx\#2\%
1409     \HyPsd@hspacetest{#1}%
1410   \else
1411     \expandafter\HyPsd@hspacetest
1412   \fi
1413 }
```

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

```
1414 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1415 \ifundefined{tocsection}{%
1416   \let\HyPsd@AMSclassfix\relax
1417 }{%
1418   \def\HyPsd@AMSclassfix{%
1419     \let\tocpart\HyPsd@tocsection
1420     \let\tocchapter\HyPsd@tocsection
1421     \let\tocappendix\HyPsd@tocsection
1422     \let\tocsection\HyPsd@tocsection
1423     \let\tocsubsection\HyPsd@tocsection
1424     \let\tocsubsubsection\HyPsd@tocsection
1425     \let\tocparagraph\HyPsd@tocsection
1426   }%
1427   \def\HyPsd@tocsection#1#2#3{%
1428     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1429     #3%
1430   }%
1431 }
```

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.

```
1432 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1433 \def\HyPsd@@ref#1*#2\END{%
```

```

1434 \ifx\\#2\\%
1435 \HyPsd@@@ref{#1}%
1436 \else
1437 \expandafter\HyPsd@@@ref
1438 \fi
1439 }%

```

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

```

1440 \def\HyPsd@@@ref#1{%
1441 \expandafter\ifx\csname r@#1\endcsname\relax
1442 ??%
1443 \else
1444 \expandafter\expandafter\expandafter
1445 \@car\csname r@#1\endcsname\@nil
1446 \fi
1447 }

```

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

```

1448 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1449 \def\HyPsd@@pageref#1*#2\END{%
1450 \ifx\\#2\\%
1451 \HyPsd@@@pageref{#1}%
1452 \else
1453 \expandafter\HyPsd@@@pageref
1454 \fi
1455 }

```

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

```

1456 \def\HyPsd@@@pageref#1{%
1457 \expandafter\ifx\csname r@#1\endcsname\relax
1458 ??%
1459 \else
1460 \expandafter\expandafter\expandafter\expandafter
1461 \expandafter\expandafter\expandafter\@car
1462 \expandafter\expandafter\expandafter\@gobble
1463 \csname r@#1\endcsname{}\@nil
1464 \fi
1465 }

```

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

```

1466 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

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

```

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

```

1474 \def\HyPsd@@@nameref#1{%
1475   \expandafter\ifx\csname r@#1\endcsname\relax
1476     ??%
1477   \else
1478     \expandafter\expandafter\expandafter\expandafter
1479     \expandafter\expandafter\expandafter\@car
1480     \expandafter\expandafter\expandafter\@gobbletwo
1481     \csname r@#1\endcsname\}\}\@nil
1482   \fi
1483 }

```

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

```

1484 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1485 \def\HyPsd@@autoref#1*#2\END{%
1486   \ifx\#2\%
1487     \HyPsd@@@autoref{#1}%
1488   \else
1489     \expandafter\HyPsd@@@autoref
1490   \fi
1491 }

```

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

```

1492 \def\HyPsd@@@autoref#1{%
1493   \expandafter\ifx\csname r@#1\endcsname\relax
1494     ??%
1495   \else
1496     \expandafter\expandafter\expandafter\HyPsd@autorefname
1497     \csname r@#1\endcsname\}\}\}\@nil
1498     \expandafter\expandafter\expandafter
1499     \@car\csname r@#1\endcsname\@nil
1500   \fi
1501 }

```

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

```

1502 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1503   \ifx\#4\%
1504   \else
1505     \HyPsd@@autorefname#4.\@nil
1506   \fi
1507 }

```

`\HyPsd@@autorefname`

```

1508 \def\HyPsd@@autorefname#1.#2\@nil{%
1509   \@ifundefined{#1autorefname}{%
1510     \@ifundefined{#1name}{%
1511       }{%
1512         \csname#1name\endcsname\space
1513       }%
1514     }{%
1515       \csname#1autorefname\endcsname\space
1516     }%
1517 }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand
1518 \begingroup
1519 \def\x#1#2{%
1520 \endgroup
1521 \let#1\def
1522 \def\HyPsd@DefCommand##1##2##3{%
1523   #1%
1524   \expandafter\noexpand
1525     \csname\expandafter\@gobble\string##1\@empty\endcsname
1526     \@gobble
1527   }%
1528 \let#2\let
1529 \def\HyPsd@LetCommand##1{%
1530   \expandafter\ifx\csname##1\expandafter\endcsname
1531     \csname iftrue\endcsname
1532     \pdfstringdefWarn\let
1533     \expandafter\@gobble
1534   \else
1535     \expandafter\ifx\csname##1\expandafter\endcsname
1536       \csname iffalse\endcsname
1537       \pdfstringdefWarn\let
1538       \expandafter\expandafter\expandafter\@gobble
1539     \else
1540       #2%
1541       \expandafter\noexpand
1542       \csname##1\expandafter\expandafter\expandafter\endcsname

```

```

1543     \fi
1544     \fi
1545   }%
1546 }%
1547 \expandafter\x\csname <def>-command\expandafter\endcsname
1548     \csname <let>-command\endcsname
1549 \def\HyPsd@LetCommand#1{%
1550   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1551     \expandafter\expandafter\expandafter{%
1552     \expandafter\@gobble\string#1\@empty
1553   }%
1554 }

```

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).

```

1555 \def\HyPsd@ifnextchar#1{%
1556   \pdfstringdefWarn#1%
1557   \expandafter\@gobbletwo\@gobble
1558 }

```

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`.

```

1559 \def\HyPsd@protected@testopt#1{%
1560   \pdfstringdefWarn#1%
1561   \@gobbletwo
1562 }

```

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:

```

1563 \def\HyPsd@Warning#1{%
1564   \begingroup
1565     \def\space{ }%
1566     \Hy@Warning{#1}%
1567   \endgroup
1568 }

```


6.6.2 Protecting spaces

```

1569 \RequirePackage{etexcmds}[2007/09/09]
1570 \ifetex@unexpanded
1571   \expandafter\@secondoftwo
1572 \else
1573   \expandafter\@firstoftwo
1574 \fi
1575 {%

```

`\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`.

```

1576   \def\HyPsd@ProtectSpaces#1{%
1577     \iftrue
1578       \expandafter\HyPsd@@ProtectSpacesFi
1579       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1580     \fi
1581   }%

```

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

```

1582   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1583     \fi
1584     \ifx\scrollmode#2\scrollmode
1585       \HyPsd@RemoveMask#1\HyPsd@End#3%
1586     \else
1587       \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1588       \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1589     \fi
1590   }%

```

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.

```

1591   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1592     \toks@\expandafter{#1}%
1593     \xdef#2{\the\toks@}%
1594   }%

1595 }{%
1596   \let\HyPsd@fi\fi
1597   \def\HyPsd@ProtectSpaces#1{%
1598     \xdef#1{%
1599       \iftrue
1600         \expandafter\HyPsd@@ProtectSpacesFi
1601         \expandafter|\expandafter\@empty#1| %
1602       \HyPsd@fi
1603     }%
1604     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1605   }%
1606   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1607     \fi
1608     \etex@unexpanded{#1}%
1609     \ifx\scrollmode#2\scrollmode
1610     \else
1611       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%

```

```

1612 \HyPsd@fi
1613 }%
1614 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1615 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1616 }%
1617 }

```

6.6.3 Remove grouping braces

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

```

1618 \def\HyPsd@RemoveBraces#1{%
1619 \ifx\scrollmode#1\scrollmode
1620 \else
1621 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1622 \fi
1623 }

```

`\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`.

```

1624 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1625 \fi
1626 \def\Hy@temp@A{#1#2}%
1627 \def\Hy@temp@B{#3}%
1628 \ifx\Hy@temp@A\Hy@temp@B
1629 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1630 \HyPsd@String#1%
1631 }%
1632 \ifx\scrollmode#2\scrollmode
1633 \else
1634 \Hy@ReturnAfterFiFiEnd{%
1635 \HyPsd@RemoveBraces{#2}%
1636 }%
1637 \fi
1638 \else
1639 \def\Hy@temp@A{#1}%
1640 \HyPsd@AppendItalcrr\HyPsd@String
1641 \ifx\Hy@temp@A\@empty
1642 \Hy@ReturnAfterElseFiFiEnd{%
1643 \HyPsd@RemoveBraces{#2}%
1644 }%
1645 \else
1646 \HyPsd@ProtectSpaces\Hy@temp@A
1647 \HyPsd@AppendItalcrr\Hy@temp@A
1648 \Hy@ReturnAfterFiFiEnd{%
1649 \expandafter\HyPsd@RemoveBraces\expandafter
1650 {\Hy@temp@A#2}%
1651 }%
1652 \fi
1653 \fi

```

```

1654 \Hy@ReturnEnd
1655 }

```

\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.

```

1656 \def\HyPsd@AppendItalcrr#1{%
1657   \expandafter\HyPsd@@AppendItalcrr\expandafter{\/#1}%
1658 }
1659 \def\HyPsd@@AppendItalcrr#1#2{%
1660   \expandafter\def\expandafter#2\expandafter{#2#1}%
1661 }

```

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).

```

1662 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1663   \global\let\HyPsd@Rest\relax
1664   \ifcat\relax\noexpand#1\relax
1665     \ifx#1\protect
1666     \else
1667       \ifx#1\penalty
1668         \setbox\z@=\hbox{%
1669           \afterassignment\HyPsd@AfterCountRemove
1670           \count@=#2\HyPsd@End
1671         }%
1672       \else
1673         \ifx#1\kern
1674         \setbox\z@=\hbox{%
1675           \afterassignment\HyPsd@AfterDimenRemove
1676           \dimen@=#2\HyPsd@End
1677         }%
1678       \else
1679         \ifx#1\hskip
1680         \setbox\z@=\hbox{%
1681           \afterassignment\HyPsd@AfterSkipRemove
1682           \skip@=#2\HyPsd@End
1683         }%
1684       \else
1685         \HyPsd@CatcodeWarning{#1}%
1686       \fi
1687     \fi
1688   \fi
1689 \else
1690   \ifcat#1A% letter
1691   \expandafter\def\expandafter\HyPsd@String\expandafter{%

```

```

1693     \HyPsd@String#1%
1694   }%
1695 \else
1696   \ifcat#1 % SPACE
1697     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1698       \HyPsd@String\HyPsd@SPACEOPTI
1699     }%
1700 \else
1701   \ifcat$#1%
1702     \HyPsd@CatcodeWarning{math shift}%
1703 \else
1704   \ifcat&#1%
1705     \HyPsd@CatcodeWarning{alignment tab}%
1706 \else
1707   \ifcat^#1%
1708     \HyPsd@CatcodeWarning{superscript}%
1709 \else
1710   \ifcat_#1%
1711     \HyPsd@CatcodeWarning{subscript}%
1712 \else
1713   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1714     \HyPsd@String#1%
1715   }%
1716 \fi
1717 \fi
1718 \fi
1719 \fi
1720 \fi
1721 \fi
1722 \fi
1723 \ifx\HyPsd@Rest\relax
1724   \ifx\scrollmode#2\scrollmode
1725   \else
1726     \Hy@ReturnAfterFiFiEnd{%
1727       \HyPsd@CheckCatcodes#2\HyPsd@End
1728     }%
1729   \fi
1730 \else
1731   \ifx\HyPsd@Rest\@empty
1732   \else
1733     \Hy@ReturnAfterFiFiEnd{%
1734       \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1735     }%
1736   \fi
1737 \fi
1738 \Hy@ReturnEnd
1739 }

```

Remove counts, dimens, skips.

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

```

1740 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1741   \gdef\HyPsd@Rest{#1}%
1742 }

```

`\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.

```

1743 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1744   \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1745     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1746     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1747   \else
1748     \ifdim\dimen@=\z@
1749     \else
1750       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1751     \fi
1752   \gdef\HyPsd@Rest{#1}%
1753 \fi
1754 }
```

`\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).

```

1755 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1756   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1757     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1758     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1759   \else
1760     \ifdim\skip@=\z@
1761     \else
1762       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1763     \fi
1764   \gdef\HyPsd@Rest{#1}%
1765 \fi
1766 }
```

Catcode warnings.

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

```

1767 \def\HyPsd@CatcodeWarning#1{%
1768   \HyPsd@Warning{%
1769     Token not allowed in a PDF string (%
1770     \ifHy@unicode
1771       Unicode%
1772     \else
1773       PDFDocEncoding%
1774     \fi
1775   ):%
1776   \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1777 }%
1778 }
1779 \begingroup
1780 \catcode‘\|=0 %
1781 \catcode‘\|=12 %
1782 |gdef|HyPsd@RemoveCmdPrefix#1{%
1783   |expandafter|HyPsd@@RemoveCmdPrefix
1784   |string#1|@empty\<>-|@empty|@empty
1785 }%
1786 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1787 |endgroup
```

`\HyPsd@RemoveSpaceWarning`

```

1788 \def\HyPsd@RemoveSpaceWarning#1{%
1789   \HyPsd@Warning{%
1790     Token not allowed in a PDF string (%)
1791     \ifHy@unicode
1792       Unicode%
1793     \else
1794       PDFDocEncoding%
1795     \fi
1796   }:%
1797   \MessageBreak #1\MessageBreak
1798   removed%
1799 }%
1800 }

```

\HyPsd@ReplaceSpaceWarning

```

1801 \def\HyPsd@ReplaceSpaceWarning#1{%
1802   \HyPsd@Warning{%
1803     Token not allowed in a PDF string (%)
1804     \ifHy@unicode
1805       Unicode%
1806     \else
1807       PDFDocEncoding%
1808     \fi
1809   }:%
1810   \MessageBreak #1\MessageBreak
1811   replaced by space%
1812 }%
1813 }

```

6.6.5 Check for wrong glyphs

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

```

1814 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1815   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1816     \HyPsd@String#1%
1817   }%
1818   \ifx\#2\%
1819   \else
1820     \Hy@ReturnAfterFi{%
1821       \HyPsd@GlyphProcessWarning#2\@empty
1822     }%
1823   \fi
1824 }
1825 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1826   \HyPsd@@@GlyphProcessWarning#1++>%
1827   \HyPsd@GlyphProcess#2\@empty
1828 }
1829 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
1830   \ifx\#2\%
1831     \HyPsd@Warning{%
1832       Glyph not defined in %
1833       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1834       removing ‘\@backslashchar#1’%
1835     }%
1836   \else
1837     \HyPsd@Warning{%

```

```

1838     Composite letter '@backslashchar#1+#2'\MessageBreak
1839     not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1840     \MessageBreak
1841     removing '@backslashchar#1'%
1842 }%
1843 \fi
1844 }

```

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`.

```

1845 \def\HyPsd@spaceopti#1{ % first space
1846   \ifx\HyPsd@spaceopti#1%
1847     \040%
1848   \else
1849     #1%
1850   \fi
1851 }%

```

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.

```

1852 \def\HyPsd@Subst#1#2#3{%
1853   \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1854     \fi
1855     ##1%
1856     \ifx\scrollmode##2\scrollmode
1857     \else
1858       #2%
1859     \HyPsd@@ReplaceFi##2\END
1860     \fi
1861   }%
1862   \xdef#3{%
1863     \iftrue
1864       \expandafter\HyPsd@@ReplaceFi#3#1\END
1865     \fi
1866   }%
1867 }

```

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

```

1868 \def\HyPsd@StringSubst#1{%
1869   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1870 }

```

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.

```

1871 \def\HyPsd@doxspace#1{%
1872   \ifx#1\relax\else
1873   \ifx#1.\else
1874   \ifx#1:\else
1875   \ifx#1,\else
1876   \ifx#1;\else
1877   \ifx#1!\else
1878   \ifx#1?\else
1879   \ifx#1/\else
1880   \ifx#1-\else
1881   \ifx#1'\else
1882     \HyPsd@SPACEOPTI
1883   \fi
1884   \fi
1885   \fi
1886   \fi
1887   \fi
1888   \fi
1889   \fi
1890   \fi
1891   \fi
1892   \fi
1893   #1%
1894 }%

```

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.

```

1895 \begingroup
1896   \catcode'\|=0 %
1897   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1898 |gdef|HyPsd@ConvertToUnicode#1{%
1899   |xdef#1{%
1900     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1901   }%
1902   |ifx#1|@empty
1903   |else
1904     |xdef#1{%
1905       \376\377%
1906       #1%
1907     }%
1908   |fi
1909 }%

```

\HyPsd@DoConvert

```

1910 |gdef|HyPsd@DoConvert#1{%
1911   |ifx#1|@empty
1912   |else
1913     |Hy@ReturnAfterFi{%
1914       |ifx#1\%%
1915       \%%

```



```

1916         |expandafter|HyPsd@DoEscape
1917         |else
1918         |HyPsd@Char{#1}%
1919         |expandafter|HyPsd@DoConvert
1920         |fi
1921     }%
1922 |fi
1923 }%

```

\HyPsd@DoEscape

```

1924 |gdef|HyPsd@DoEscape#1{%
1925     |ifx#19%
1926     |expandafter|HyPsd@GetTwoBytes
1927     |else
1928     |Hy@ReturnAfterFi{%
1929     |ifx#18%
1930     00%
1931     |expandafter|HyPsd@GetTwoBytes
1932     |else
1933     #1%
1934     |expandafter|HyPsd@GetOneByte
1935     |fi
1936     }%
1937 |fi
1938 }%

```

\HyPsd@GetTwoBytes

```

1939 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1940     #1\#2#3#4%
1941     |HyPsd@DoConvert
1942     }%

```

\HyPsd@GetOneByte

```

1943 |gdef|HyPsd@GetOneByte#1#2{%
1944     #1#2%
1945     |HyPsd@DoConvert
1946     }%
1947 |endgroup

```

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

```

1948 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1949     \xdef#4{#4#1#2}%
1950     \HyPsd@@ConvertToUnicode#3\END#4%
1951 }

```

\HyPsd@Char

```

1952 \begingroup
1953 \catcode0=9 %
1954 \catcode'\^=7 %
1955 \catcode'\^^=12 %
1956 \def\x{^^^^0000}%
1957 \expandafter\endgroup
1958 \ifx\x\@empty
1959 \def\HyPsd@Char#1{%
1960     \ifnum'#1<128 %
1961         \@backslashchar 000#1%

```

```

1962 \else
1963 \ifnum'#1<65536 %
1964 \expandafter\HyPsd@CharTwoByte\number'#1!%
1965 \else
1966 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1967 \intcalcSub{'#1}{65536}!%
1968 \fi
1969 \fi
1970 }%
1971 \def\HyPsd@CharTwoByte#1!{%
1972 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1973 \IntCalcDiv#1!256!!%
1974 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1975 \IntCalcMod#1!256!!%
1976 }%
1977 \def\HyPsd@CharOctByte#1!{%
1978 \@backslashchar
1979 \IntCalcDiv#1!64!%
1980 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1981 \IntCalcMod#1!8!%
1982 }%
1983 \def\HyPsd@CharSurrogate#1!{%
1984 \@backslashchar 33%
1985 \IntCalcDiv#1!262144!%
1986 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1987 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1988 \@backslashchar 33%
1989 \expandafter\expandafter\expandafter\IntCalcAdd
1990 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1991 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1992 \IntCalcMod#1!256!!%
1993 }%
1994 \else
1995 \def\HyPsd@Char#1{%
1996 \@backslashchar 000#1%
1997 }%
1998 \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

1999 \begingroup\expandafter\expandafter\expandafter\endgroup
2000 \expandafter\ifx\csname numexpr\endcsname\relax
2001 \let\HyPsd@UTFviii\relax
2002 \else
2003 \begingroup
2004 \lccode'\~='^f4\relax

```

```

2005 \lowercase{\endgroup
2006 \def\HyPsd@UTFviii{%
2007   \let\UTFviii@two@octets\HyPsd@UTFviii@two
2008   \let\UTFviii@three@octets\HyPsd@UTFviii@three
2009   \let\UTFviii@four@octets\HyPsd@UTFviii@four
2010   \ifx~\HyPsd@UTFviii@ccxliv@undef
2011     \let~\HyPsd@UTFviii@ccxliv@def
2012   \fi
2013   \let\unichar\HyPsd@unichar
2014 }%
2015 }%
2016 \def\HyPsd@UTFviii@ccxliv@undef{\@inpencl@undefined@{utf8}}%
2017 \edef\HyPsd@UTFviii@ccxliv@def{%
2018   \noexpand\UTFviii@four@octets\string ^^f4%
2019 }%

```

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.

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

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

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

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

$$(5)$$

```

2020 \def\HyPsd@UTFviii@two#1#2{%
2021   \expandafter\HyPsd@UTFviii@@two
2022   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2023   \number'#1\expandafter| %
2024   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2025   \number'#2 \@nil
2026 }%
2027 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2028   \expandafter\8%
2029   \number\numexpr #1-48\expandafter\relax
2030   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2031   \number\numexpr #3-8*%
2032   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2033   \number\numexpr #4-8*#3\relax
2034 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2035 \def\HyPsd@UTFviii@three#1#2#3{%
2036   \expandafter\HyPsd@UTFviii@@three

```

```

2037 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2038 \number'#1\expandafter| %
2039 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2040 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2041 \number'#2\expandafter| %
2042 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2043 \number'#3 \@nil
2044 }%
2045 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2046 \expandafter\9%
2047 \number\numexpr #1-56\expandafter\relax
2048 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2049 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2050 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2051 \number\numexpr #6-16\expandafter\relax
2052 \number\numexpr #7-8*#6\relax
2053 }%

```

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

```

```

2054 \def\HyPsd@UTFviii@four#1#2{%
2055 \expandafter\HyPsd@@UTFviii@four\number
2056 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2057 \expandafter|\number
2058 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2059 }%
2060 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2061 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2062 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2063 \ifodd#2 %
2064 \number\numexpr(#2-1)/2\relax
2065 \else
2066 \number\numexpr#2/2\relax
2067 \fi
2068 \number\numexpr\ifodd#2 4+\fi
2069 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2070 \933%
2071 \expandafter\HyPsd@@@UTFviii@four\number
2072 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2073 }%
2074 \def\HyPsd@@@UTFviii@four#1|#2{%
2075 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2076 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2077 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2078 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2079 }%

```

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

```

2080 \def\HyPsd@unichar#1{%
2081 \ifHy@unicode
2082 \ifnum#1>"10FFFF %
2083 \HyPsd@UnicodeReplacementCharacter % illegal

```

```

2084     \else
2085     \ifnum#1>"FFFF %

```

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

```

2086     \expandafter\HyPsd@unichar\expandafter{%
2087     \number\dimexpr 55296+ %
2088     \dimexpr.0009765625\dimexpr\number#1sp-\p@
2089     \relax\relax\relax
2090     }%

```

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

```

2091     \expandafter\HyPsd@unichar\expandafter{%
2092     \number\dimexpr#1-9216%
2093     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2094     \relax\relax\relax
2095     }%
2096     \else
2097     \ifnum#1>"7FF %
2098     \9%
2099     \expandafter\HyPsd@unichar@first@byte\expandafter{%
2100     \number
2101     \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2102     }%
2103     \else
2104     \8%
2105     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2106     \fi
2107     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2108     \number
2109     \numexpr#1-256*\number
2110     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2111     }%
2112     \fi
2113     \fi
2114     \else
2115     .% unsupported (Unicode -> PDF Doc Encoding)
2116     \fi
2117     }%
2118     \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2119     \def\HyPsd@unichar@first@byte#1{%
2120     \number\dimexpr.015625\dimexpr#1sp\relax\relax
2121     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2122     \number
2123     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2124     \relax\relax\relax
2125     }%
2126     }%
2127     \def\HyPsd@unichar@second@byte#1{%
2128     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2129     \expandafter\HyPsd@unichar@octtwo\expandafter{%
2130     \number
2131     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2132     \relax\relax\relax
2133     }%
2134     }%
2135     \def\HyPsd@unichar@octtwo#1{%
2136     \number\dimexpr.125\dimexpr#1sp\relax\relax
2137     \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%

```

```

2138 \relax\relax\relax
2139 }%
2140 \fi

```

7 Support of other packages

7.1 Class memoir

```

2141 \@ifclassloaded{memoir}{%
2142 \AtEndOfPackage{\RequirePackage{memhfixc}}}%
2143 }{}

```

7.2 Package subfigure

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

```

2144 \@ifpackageloaded{subfigure}{%
2145 \ifundefined{sub@label}{%
2146 \Hy@hypertexnamesfalse
2147 }{%
2148 \renewcommand*{\sub@label}[1]{%
2149 \@bsphack
2150 \subfig@oldlabel{#1}%
2151 \if@filesw
2152 \begingroup
2153 \edef\@currentlabstr{%
2154 \expandafter\strip@prefix\meaning\@currentlabelname
2155 }%
2156 \protected@write\@auxout{}{%
2157 \string\newlabel{sub@#1}{%
2158 {\@nameuse{@@thesub\@capytype}}%
2159 {\thepage}%
2160 }%
2161 \expandafter\strip@period\@currentlabstr
2162 \relax.\relax\@@@%
2163 }%
2164 {\@currentHref}%
2165 }%
2166 }%
2167 }%
2168 \endgroup
2169 \fi
2170 \@esphack
2171 }%
2172 \@ifpackagelater{subfigure}{2002/03/26}{%
2173 \providecommand*{\toclevel@subfigure}{1}%
2174 \providecommand*{\toclevel@subtable}{1}%
2175 }%
2176 }%
2177 }{}

```

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:

```

2178 \ifundefined{XR@addURL}{%
2179 }%

```

```

2180 \def\XR@addURL#1{\XR@@dURL#1}{-}{-}\}%
2181 \def\XR@@dURL#1#2#3#4#5\\{%
2182   {#1}-{#2}%
2183   \if!#4!%
2184   \else
2185     {#3}-{#4}-{\XR@URL}%
2186   \fi
2187 }%
2188 }

2189 \def\Hy@true{true}
2190 \def\Hy>false{false}

```

```

2191 \let\literalps@out\@gobble
2192 \newcommand\pdfbookmark[3][{}]{
2193 \def\Acrobatmenu#1#2{\leavevmode#2}
2194 \def\Hv@writebookmark#1#2#3#4#5#{}%

```

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):

- ```

2195 \let\HyperRaiseLinkHook\@empty
2196 \def\HyperRaiseLinkDefault{\baselineskip}

```

```

2197 \def\Hy@raisedlink#1{%
2198 \ifvmode
2199 #1%
2200 \else
2201 \penalty\@M
2202 \smash{%
2203 \begingroup
2204 \let\HyperRaiseLinkLength\@tempdima
2205 \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2206 \HyperRaiseLinkHook
2207 \expandafter\endgroup
2208 \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2209 }%
2210 \fi
2211 }

```

2212 \def\Hy@SaveLastskip{%

```

2213 \let\Hy@RestoreLastskip\relax
2214 \ifvmode
2215 \ifdim\lastskip=\z@
2216 \let\Hy@RestoreLastskip\nobreak
2217 \else
2218 \begingroup
2219 \skip@=-\lastskip
2220 \edef\x{%
2221 \endgroup
2222 \def\noexpand\Hy@RestoreLastskip{%
2223 \noexpand\ifvmode
2224 \noexpand\nobreak
2225 \vskip\the\skip@
2226 \vskip\the\lastskip\relax
2227 \noexpand\fi
2228 }%
2229 }%
2230 \x
2231 \fi
2232 \else
2233 \ifhmode
2234 \ifdim\lastskip=\z@
2235 \let\Hy@RestoreLastskip\nobreak
2236 \else
2237 \begingroup
2238 \skip@=-\lastskip
2239 \edef\x{%
2240 \endgroup
2241 \def\noexpand\Hy@RestoreLastskip{%
2242 \noexpand\ifhmode
2243 \noexpand\nobreak
2244 \hskip\the\skip@
2245 \hskip\the\lastskip\relax
2246 \noexpand\fi
2247 }%
2248 }%
2249 \x
2250 \fi
2251 \fi
2252 \fi
2253 }%

```

## 9 Options

### 9.1 Help macros

\Hy@boolkey

```

2254 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2255 \def\Hy@@boolkey[#1]#2#3{%
2256 \edef\Hy@tempa{#3}%
2257 \lowercase\expandafter{%
2258 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2259 }%
2260 \ifx\Hy@tempa\@empty
2261 \let\Hy@tempa\Hy@true
2262 \fi

```



```

2263 \ifx\Hy@tempa\Hy@true
2264 \else
2265 \ifx\Hy@tempa\Hy@false
2266 \else
2267 \let\Hy@tempa\relax
2268 \fi
2269 \fi
2270 \ifx\Hy@tempa\relax
2271 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2272 \else
2273 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2274 \csname Hy@#2\Hy@tempa\endcsname
2275 \fi
2276 }

```

\Hy@WarnOptionValue

```

2277 \def\Hy@WarnOptionValue#1#2#3{%
2278 \Hy@Warning{%
2279 Unexpected value ‘#1’\MessageBreak
2280 of option ‘#2’ instead of\MessageBreak
2281 #3%
2282 }%
2283 }

```

\Hy@DisableOption

```

2284 \def\Hy@DisableOption#1{%
2285 \@ifundefined{KV@Hyp@#1@default}{%
2286 \define@key{Hyp}{#1}%
2287 }{%
2288 \define@key{Hyp}{#1}[]%
2289 }%
2290 {\Hy@WarnOptionDisabled{#1}}%
2291 }

```

\Hy@WarnOptionDisabled

```

2292 \def\Hy@WarnOptionDisabled#1{%
2293 \Hy@Warning{%
2294 Option ‘#1’ has already been used,\MessageBreak
2295 setting the option has no effect%
2296 }%
2297 }

```

\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.

```

2298 \def\Hy@CheckOptionValue#1#2#3{%
2299 \begingroup
2300 \edef\x{#1}%
2301 \@onelevel@sanitize\x
2302 \let\y=y%
2303 \def\do##1##2{%
2304 \def\z{##1}%
2305 \@onelevel@sanitize\z
2306 \ifx\x\z
2307 \let\y=n%
2308 \let\do\@gobbletwo
2309 \fi
2310 }%

```

```

2311 #3%
2312 \ifx\y y%
2313 \def\do##1##2{%
2314 * '##1'%
2315 \ifx\##2\\\else\space(##2)\fi
2316 \MessageBreak
2317 }%
2318 \Hy@Warning{%
2319 Values of option '#2':\MessageBreak
2320 #3%
2321 * An empty value disables the option.\MessageBreak
2322 Unknown value '\x'%
2323 }%
2324 \fi
2325 \endgroup
2326 }

```

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

```

2327 \def\Hy@DefNameKey#1{%
2328 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2329 }

```

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

```

2330 \def\Hy@@DefNameKey#1#2#3{%
2331 \define@key{Hyp}{#2}{%
2332 \edef#1{##1}%
2333 \ifx#1\@empty
2334 \else
2335 \Hy@CheckOptionValue{##1}{#2}{#3}%
2336 \fi
2337 }%
2338 \let#1\@empty
2339 }

```

`\Hy@UseNameKey`

```

2340 \def\Hy@UseNameKey#1#2{%
2341 \ifx#2\@empty
2342 \else
2343 /#1/#2%
2344 \fi
2345 }

```

## 9.2 Defining the options

```

2346 \define@key{Hyp}{implicit}[true]{%
2347 \Hy@boolkey{implicit}{#1}%
2348 }
2349 \define@key{Hyp}{draft}[true]{%
2350 \Hy@boolkey{draft}{#1}%
2351 }
2352 \define@key{Hyp}{final}[true]{%
2353 \Hy@boolkey{final}{#1}%

```

```

2354 }
2355 \let\KV@Hyp@nolinks\KV@Hyp@draft
2356 \def\Hy@ObsoletePaperOption#1{%
2357 \Hy@WarningNoLine{%
2358 Option '#1' is no longer used%
2359 }%
2360 \define@key{Hyp}{#1}[true]{}%
2361 }
2362 \def\Hy@temp#1{%
2363 \define@key{Hyp}{#1}[true]{%
2364 \Hy@ObsoletePaperOption{#1}%
2365 }%
2366 }
2367 \Hy@temp{a4paper}
2368 \Hy@temp{a5paper}
2369 \Hy@temp{b5paper}
2370 \Hy@temp{letterpaper}
2371 \Hy@temp{legalpaper}
2372 \Hy@temp{executivepaper}
2373 \define@key{Hyp}{setpagesize}[true]{%
2374 \Hy@boolkey{setpagesize}{#1}%
2375 }
2376 \define@key{Hyp}{debug}[true]{%
2377 \Hy@boolkey[debug]{verbose}{#1}%
2378 }
2379 \define@key{Hyp}{linktocpage}[true]{%
2380 \Hy@boolkey{linktocpage}{#1}%
2381 \ifHy@linktocpage
2382 \let\Hy@linktoc\Hy@linktoc@page
2383 \else
2384 \let\Hy@linktoc\Hy@linktoc@section
2385 \fi
2386 }
2387 \chardef\Hy@linktoc@none=0 %
2388 \chardef\Hy@linktoc@section=1 %
2389 \chardef\Hy@linktoc@page=2 %
2390 \chardef\Hy@linktoc@all=3 %
2391 \ifHy@linktocpage
2392 \let\Hy@linktoc\Hy@linktoc@page
2393 \else
2394 \let\Hy@linktoc\Hy@linktoc@section
2395 \fi
2396 \define@key{Hyp}{linktoc}{%
2397 \@ifundefined{Hy@linktoc@#1}{%
2398 \Hy@Warning{%
2399 Unexpected value '#1' of\MessageBreak
2400 option 'linktoc' instead of 'none',\MessageBreak
2401 'section', 'page' or 'all'%
2402 }%
2403 }{%
2404 \expandafter\let\expandafter\Hy@linktoc
2405 \csname Hy@linktoc@#1\endcsname
2406 }%
2407 }
2408 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2409 \let\XR@ext\relax
2410 \define@key{Hyp}{verbose}[true]{%

```

```

2411 \Hy@boolkey{verbose}{#1}%
2412 }
2413 \define@key{Hyp}{typexml}[true]{%
2414 \Hy@boolkey{typexml}{#1}%
2415 }

```

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.

```

2416 \define@key{Hyp}{raiselinks}[true]{%
2417 \Hy@boolkey{raiselinks}{#1}%
2418 }

```

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

```

2419 \def\Hy@setbreaklinks#1{%
2420 \csname breaklinks#1\endcsname
2421 }

2422 \def\Hy@breaklinks@unsupported{%
2423 \ifx\Hy@setbreaklinks\@gobble
2424 \ifHy@breaklinks
2425 \Hy@WarningNoLine{%
2426 You have enabled option 'breaklinks'.\MessageBreak
2427 But driver '\Hy@driver.def' does not support this.\MessageBreak
2428 Expect trouble with the link areas of broken links%
2429 }%
2430 \fi
2431 \fi
2432 }

2433 \define@key{Hyp}{breaklinks}[true]{%
2434 \Hy@boolkey{breaklinks}{#1}%
2435 \let\Hy@setbreaklinks\@gobble
2436 }

```

Determines whether an automatic anchor is put on each page

```

2437 \define@key{Hyp}{pageanchor}[true]{%
2438 \Hy@boolkey{pageanchor}{#1}%
2439 }

```

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.

```

2440 \define@key{Hyp}{plainpages}[true]{%
2441 \Hy@boolkey{plainpages}{#1}%
2442 }

```

Are the names for anchors made as per the HyperTeX system, or do they simply use what L<sup>A</sup>T<sub>E</sub>X provides?

```

2443 \define@key{Hyp}{naturalnames}[true]{%
2444 \Hy@boolkey{naturalnames}{#1}%
2445 }

```

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

```

2446 \define@key{Hyp}{hypertexnames}[true]{%
2447 \Hy@boolkey{hypertexnames}{#1}%
2448 }

```

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

```

2449 \define@key{Hyp}{nesting}[true]{%
2450 \Hy@boolkey{nesting}{#1}%

```

```

2451 }
2452 \define@key{Hyp}{unicode}[true]{%
2453 \Hy@boolkey{unicode}{#1}%
2454 \ifHy@unicode
2455 \def\HyPsd@pdfencoding{unicode}%
2456 \HyPsd@LoadUnicode
2457 \else
2458 \def\HyPsd@pdfencoding{pdfdoc}%
2459 \fi
2460 }
2461 \def\HyPsd@LoadUnicode{%
2462 \@ifundefined{T@PU}{%
2463 \input{puenc.def}%
2464 \HyLinguex@Restore
2465 }{}%
2466 \DeclareFontFamily{PU}{pdf}{}%
2467 \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2468 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2469 \global\let\HyPsd@LoadUnicode\relax
2470 }
2471 \AtBeginDocument{%
2472 \ifx\HyPsd@LoadUnicode\relax
2473 \else
2474 \def\HyPsd@LoadUnicode{%
2475 \PackageError{hyperref}{%
2476 Unicode support for bookmarks is not available.\MessageBreak
2477 Activate unicode support by using one of the options\MessageBreak
2478 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2479 in the preamble%
2480 }\@ehc
2481 \global\let\HyPsd@LoadUnicode\relax
2482 \global\Hy@unicodedefalse
2483 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2484 }%
2485 \fi
2486 }
2487 \define@key{Hyp}{pdfencoding}{%
2488 \edef\HyPsd@temp{#1}%
2489 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2490 \let\HyPsd@pdfencoding\HyPsd@temp
2491 \Hy@unicodedefalse
2492 \else
2493 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2494 \z@
2495 \else
2496 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2497 \z@
2498 \else
2499 \@ne
2500 \fi
2501 \fi
2502 \let\HyPsd@pdfencoding\HyPsd@temp
2503 \hypersetup{unicode}%
2504 \ifHy@unicode
2505 \def\HyPsd@pdfencoding{#1}%
2506 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2507 \HyPsd@LoadStringEncoding

```

```

2508 \fi
2509 \else
2510 \Hy@Warning{Cannot switch to unicode bookmarks}%
2511 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2512 \fi
2513 \else
2514 \@onelevel@sanitize\HyPsd@temp
2515 \Hy@Warning{%
2516 Values of option 'pdfencoding':\MessageBreak
2517 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2518 Ignoring unknown value '\HyPsd@temp'%
2519 }%
2520 \fi
2521 \fi
2522 }
2523 \def\HyPsd@pdfencoding@auto{auto}
2524 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2525 \def\HyPsd@pdfencoding@unicode{unicode}
2526 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2527 \def\HyPsd@LoadStringEnc{%
2528 \RequirePackage{stringenc}[2009/12/15]%
2529 \let\HyPsd@LoadStringEnc\relax
2530 }
2531 \AtBeginDocument{%
2532 \ifpackageloaded{stringenc}{%
2533 \let\HyPsd@LoadStringEnc\relax
2534 }{%
2535 \def\HyPsd@LoadStringEnc{%
2536 \Hy@WarningNoLine{%
2537 Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2538 in the preamble or load the package there%
2539 }%
2540 }%
2541 }%
2542 }
2543 \newif\ifHy@setpdfversion
2544 \define@key{Hyp}{pdfversion}{%
2545 \ifundefined{Hy@pdfversion@#1}{%
2546 \PackageWarning{hyperref}{%
2547 Unsupported PDF version '#1'.\MessageBreak
2548 Valid values: 1.2 until 1.9%
2549 }%
2550 }{%
2551 \Hy@setpdfversiontrue
2552 \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2553 }%
2554 }
2555 \@namedef{Hy@pdfversion@1.2}{2}%
2556 \@namedef{Hy@pdfversion@1.3}{3}%
2557 \@namedef{Hy@pdfversion@1.4}{4}%
2558 \@namedef{Hy@pdfversion@1.5}{5}%
2559 \@namedef{Hy@pdfversion@1.6}{6}%
2560 \@namedef{Hy@pdfversion@1.7}{7}%
2561 \@namedef{Hy@pdfversion@1.8}{8}%
2562 \@namedef{Hy@pdfversion@1.9}{9}%
2563 \def\Hy@pdfversion{2}

```

## 10 Options for different drivers

```

2564 \define@key{Hyp}{hyperref}[true]{}
2565 \define@key{Hyp}{tex4ht}[true]{%
2566 \Hy@texhttrue
2567 \setkeys{Hyp}{colorlinks=true}%
2568 \def\BeforeTeXIVht{\usepackage{color}}%
2569 \def\Hy@driver{htex4ht}%
2570 \def\MaybeStopEarly{%
2571 \typeout{Hyperref stopped early}%
2572 \AfterBeginDocument{%
2573 \PDF@FinishDoc
2574 \gdef\PDF@FinishDoc{}%
2575 }%
2576 \endinput
2577 }%
2578 }
2579 \define@key{Hyp}{pdftex}[true]{%
2580 \def\Hy@driver{hpdftex}%
2581 }
2582 \define@key{Hyp}{nativepdf}[true]{%
2583 \def\Hy@driver{hdvips}%
2584 }
2585 \define@key{Hyp}{dvipdfm}[true]{%
2586 \def\Hy@driver{hdvipdfm}%
2587 }
2588 \define@key{Hyp}{dvipdfmx}[true]{%
2589 \def\Hy@driver{hdvipdfm}%
2590 }
2591 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2592 \expandafter\ifx\csname if#1\expandafter\endcsname
2593 \csname iftrue\endcsname
2594 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2595 \else
2596 \chardef\SpecialDvipdfmxOutlineOpen\z@
2597 \fi
2598 }
2599 \define@key{Hyp}{xetex}[true]{%
2600 \def\Hy@driver{hxetex}%
2601 }
2602 \define@key{Hyp}{pdfmark}[true]{%
2603 \def\Hy@driver{hdvips}%
2604 }
2605 \define@key{Hyp}{dvips}[true]{%
2606 \def\Hy@driver{hdvips}%
2607 }
2608 \define@key{Hyp}{hypertex}[true]{%
2609 \def\Hy@driver{hypertex}%
2610 }
2611 \let\Hy@MaybeStopNow\relax
2612 \define@key{Hyp}{vtex}[true]{%
2613 \begingroup\expandafter\expandafter\expandafter\endgroup
2614 \expandafter\ifx\csname OpMode\endcsname\relax
2615 \@latex@error{Non-VTeX processor}{}%
2616 \global\let\Hy@MaybeStopNow\endinput
2617 \endinput
2618 \else

```

```

2619 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2620 \def\Hy@driver{hvtex}%
2621 \else
2622 \ifnum\OpMode=10\relax
2623 \def\Hy@driver{hvtexhtm}%
2624 \def\MaybeStopEarly{%
2625 \typeout{Hyperref stopped early}%
2626 \AfterBeginDocument{%
2627 \PDF@FinishDoc
2628 \gdef\PDF@FinishDoc{}}%
2629 }%
2630 \endinput
2631 }%
2632 \else
2633 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2634 \global\let\Hy@MaybeStopNow\endinput
2635 \endinput
2636 \fi
2637 \fi
2638 \fi
2639 }
2640 \define@key{Hyp}{vtexpdfmark}[true]{%
2641 \begingroup\expandafter\expandafter\expandafter\endgroup
2642 \expandafter\ifx\csname OpMode\endcsname\relax
2643 \@latex@error{Non-VTeX processor}{}%
2644 \let\Hy@MaybeStopNow\endinput
2645 \endinput
2646 \else
2647 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2648 \def\Hy@driver{hvtexmrk}%
2649 \else
2650 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2651 \let\Hy@MaybeStopNow\endinput
2652 \endinput
2653 \fi
2654 \fi
2655 }
2656 \define@key{Hyp}{dviwindo}[true]{%
2657 \def\Hy@driver{hdviwind}%
2658 \setkeys{Hyp}{colorlinks}%
2659 \ifpdf
2660 \else
2661 \ifxetex
2662 \else
2663 \PassOptionsToPackage{dviwindo}{color}%
2664 \fi
2665 \fi
2666 }
2667 \define@key{Hyp}{dvipsone}[true]{%
2668 \def\Hy@driver{hdvipson}%
2669 }
2670 \define@key{Hyp}{textures}[true]{%
2671 \def\Hy@driver{htexture}%
2672 }
2673 \define@key{Hyp}{latex2html}[true]{%
2674 \AtBeginDocument{\@@latextohtmlX}%
2675 }

```



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

```
2676 \define@key{Hyp}{ps2pdf}[true]{%
2677 \def\Hy@driver{hdvips}%
2678 \providecommand*\@pdfborder{0 0 1}%
2679 }
```

## 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.

```
2680 \define@key{Hyp}{hyperfigures}[true]{%
2681 \Hy@boolkey[hyperfigures]{figures}{#1}%
2682 }
```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2683 \define@key{Hyp}{hyperfootnotes}[true]{%
2684 \Hy@boolkey{hyperfootnotes}{#1}%
2685 }
```

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

```
2686 \def\back@none{none}
2687 \def\back@section{section}
2688 \def\back@page{page}
2689 \def\back@slide{slide}
2690 \define@key{Hyp}{backref}[section]{%
2691 \lowercase{\def\Hy@tempa{#1}}%
2692 \ifx\Hy@tempa\@empty
2693 \let\Hy@tempa\back@section
2694 \fi
2695 \ifx\Hy@tempa\Hy@false
2696 \let\Hy@tempa\back@none
2697 \fi
2698 \ifx\Hy@tempa\back@slide
2699 \let\Hy@tempa\back@section
2700 \fi
2701 \ifx\Hy@tempa\back@page
2702 \PassOptionsToPackage{hyperpageref}{backref}%
2703 \Hy@backreftrue
2704 \else
2705 \ifx\Hy@tempa\back@section
2706 \PassOptionsToPackage{hyperref}{backref}%
2707 \Hy@backreftrue
2708 \else
2709 \ifx\Hy@tempa\back@none
2710 \Hy@backreffalse
2711 \else
2712 \Hy@WarnOptionValue{#1}{backref}{%
2713 'section', 'slide', 'page', 'none', \MessageBreak
2714 or 'false'}%
2715 \fi
2716 \fi
2717 \fi
2718 }
2719 \define@key{Hyp}{pagebackref}[true]{%
2720 \edef\Hy@tempa{#1}%
2721 \lowercase\expandafter{%
2722 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2723 }%
```

```

2724 \ifx\Hy@tempa\@empty
2725 \let\Hy@tempa\Hy@true
2726 \fi
2727 \ifx\Hy@tempa\Hy@true
2728 \PassOptionsToPackage{hyperpageref}{backref}%
2729 \Hy@backreftrue
2730 \else
2731 \ifx\Hy@tempa\Hy@false
2732 \Hy@backreffalse
2733 \else
2734 \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
2735 \fi
2736 \fi
2737 }

```

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

```

2738 \define@key{Hyp}{hyperindex}[true]{%
2739 \Hy@boolkey{hyperindex}{#1}%
2740 }

```

Configuration of encap char.

```

2741 \define@key{Hyp}{encap}[|]{%
2742 \def\HyInd@EncapChar{#1}%
2743 }

```

## 12 Language options

The `\autoref` feature depends on the language.

```

2744 \def\HyLang@afrikaans{%
2745 \def\equationautorefname{Vergelyking}%
2746 \def\footnoteautorefname{Voetnota}%
2747 \def\itemautorefname{Item}%
2748 \def\figureautorefname{Figuur}%
2749 \def\tableautorefname{Tabel}%
2750 \def\partautorefname{Deel}%
2751 \def\appendixautorefname{Bylae}%
2752 \def\chapterautorefname{Hoofstuk}%
2753 \def\sectionautorefname{Afdeling}%
2754 \def\subsectionautorefname{Subafdeling}%
2755 \def\subsubsectionautorefname{Subsubafdeling}%
2756 \def\paragraphautorefname{Paragraaf}%
2757 \def\subparagraphautorefname{Subparagraaf}%
2758 \def\FancyVerbLineautorefname{Lyn}%
2759 \def\theoremautorefname{Teorema}%
2760 \def\pageautorefname{Bladsy}%
2761 }
2762 \def\HyLang@english{%
2763 \def\equationautorefname{Equation}%
2764 \def\footnoteautorefname{footnote}%
2765 \def\itemautorefname{item}%
2766 \def\figureautorefname{Figure}%
2767 \def\tableautorefname{Table}%
2768 \def\partautorefname{Part}%
2769 \def\appendixautorefname{Appendix}%
2770 \def\chapterautorefname{chapter}%
2771 \def\sectionautorefname{section}%

```

```

2772 \def\subsectionautorefname{subsection}%
2773 \def\subsubsectionautorefname{subsubsection}%
2774 \def\paragraphautorefname{paragraph}%
2775 \def\subparagraphautorefname{subparagraph}%
2776 \def\FancyVerbLineautorefname{line}%
2777 \def\theoremautorefname{Theorem}%
2778 \def\pageautorefname{page}%
2779 }
2780 \def\HyLang@french{%
2781 \def\equationautorefname{'Equation}%
2782 \def\footnoteautorefname{note}%
2783 \def\itemautorefname{item}%
2784 \def\figureautorefname{Figure}%
2785 \def\tableautorefname{Tableau}%
2786 \def\partautorefname{Partie}%
2787 \def\appendixautorefname{Appendice}%
2788 \def\chapterautorefname{chapitre}%
2789 \def\sectionautorefname{section}%
2790 \def\subsectionautorefname{sous-section}%
2791 \def\subsubsectionautorefname{sous-sous-section}%
2792 \def\paragraphautorefname{paragraphe}%
2793 \def\subparagraphautorefname{sous-paragraphe}%
2794 \def\FancyVerbLineautorefname{ligne}%
2795 \def\theoremautorefname{Th\'eor\'eme}%
2796 \def\pageautorefname{page}%
2797 }
2798 \def\HyLang@german{%
2799 \def\equationautorefname{Gleichung}%
2800 \def\footnoteautorefname{Fu\ss note}%
2801 \def\itemautorefname{Punkt}%
2802 \def\figureautorefname{Abbildung}%
2803 \def\tableautorefname{Tabelle}%
2804 \def\partautorefname{Teil}%
2805 \def\appendixautorefname{Anhang}%
2806 \def\chapterautorefname{Kapitel}%
2807 \def\sectionautorefname{Abschnitt}%
2808 \def\subsectionautorefname{Unterabschnitt}%
2809 \def\subsubsectionautorefname{Unterunterabschnitt}%
2810 \def\paragraphautorefname{Absatz}%
2811 \def\subparagraphautorefname{Unterabsatz}%
2812 \def\FancyVerbLineautorefname{Zeile}%
2813 \def\theoremautorefname{Theorem}%
2814 \def\pageautorefname{Seite}%
2815 }
2816 \def\HyLang@italian{%
2817 \def\equationautorefname{Equazione}%
2818 \def\footnoteautorefname{nota}%
2819 \def\itemautorefname{punto}%
2820 \def\figureautorefname{Figura}%
2821 \def\tableautorefname{Tabella}%
2822 \def\partautorefname{Parte}%
2823 \def\appendixautorefname{Appendice}%
2824 \def\chapterautorefname{Capitolo}%
2825 \def\sectionautorefname{sezione}%
2826 \def\subsectionautorefname{sottosezione}%
2827 \def\subsubsectionautorefname{sottosottosezione}%
2828 \def\paragraphautorefname{paragrafo}%

```

```

2829 \def\subparagraphautorefname{sottoparagrafo}%
2830 \def\FancyVerbLineautorefname{linea}%
2831 \def\theoremautorefname{Teorema}%
2832 \def\pageautorefname{Pag.\@}%
2833 }
2834 \def\HyLang@magyar{%
2835 \def\equationautorefname{Egyenlet}%
2836 \def\footnoteautorefname{l\'abjegyzet}%
2837 \def\itemautorefname{Elem}%
2838 \def\figureautorefname{'Abra}%
2839 \def\tableautorefname{T\'abl\'azat}%
2840 \def\partautorefname{R\'esz}%
2841 \def\appendixautorefname{F\'uggel\'ek}%
2842 \def\chapterautorefname{fejezet}%
2843 \def\sectionautorefname{szakasz}%
2844 \def\subsectionautorefname{alszakasz}%
2845 \def\subsubsectionautorefname{alalszakasz}%
2846 \def\paragraphautorefname{bekezd\'es}%
2847 \def\subparagraphautorefname{albekezd\'es}%
2848 \def\FancyVerbLineautorefname{sor}%
2849 \def\theoremautorefname{T\'etel}%
2850 \def\pageautorefname{oldal}%
2851 }
2852 \def\HyLang@portuges{%
2853 \def\equationautorefname{Equa\c c\~ao}%
2854 \def\footnoteautorefname{Nota de rodap\'e}%
2855 \def\itemautorefname{Item}%
2856 \def\figureautorefname{Figura}%
2857 \def\tableautorefname{Tabela}%
2858 \def\partautorefname{Parte}%
2859 \def\appendixautorefname{Ap\~endice}%
2860 \def\chapterautorefname{Cap\'itulo}%
2861 \def\sectionautorefname{Se\c c\~ao}%
2862 \def\subsectionautorefname{Subse\c c\~ao}%
2863 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2864 \def\paragraphautorefname{par\'agrafo}%
2865 \def\subparagraphautorefname{subpar\'agrafo}%
2866 \def\FancyVerbLineautorefname{linha}%
2867 \def\theoremautorefname{Teorema}%
2868 \def\pageautorefname{P\'agina}%
2869 }

```

Next commented section for Russian is provided by Olga Lapko.

Next follow the checked reference names with commented variants and explanations. All they are abbreviated and they won't create a grammatical problems in the *middle* of sentences.

The most weak points in these abbreviations are the `\equationautorefname`, `\theoremautorefname` and the `\FancyVerbLineautorefname`. But those three, and also the `\footnoteautorefname` are not *too* often referenced. Another rather weak point is the `\appendixautorefname`.

```

2870 \def\HyLang@russian{%

```

The abbreviated reference to the equation: it is not for “the good face of the book”, but maybe it will be better to get the company for the `\theoremautorefname`?

```

2871 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

The name of the equation reference has common form for both nominative and accusative but changes in other forms, like “of `\autoref{auto}`” etc. The full name must follow full

name of the \theoremautorefname.

```
2872 % \def\equationautorefname{%
2873 % \cyr\cyrv\cyrry\cyrr\cyra\cyrrzh\cyre\cyrn\cyri\cyre
2874 % }%
```

The variant of footnote has abbreviation form of the synonym of the word “footnote”. This variant of abbreviated synonym has alternative status (maybe obsolete?).

```
2875 \def\footnoteautorefname{%
2876 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2877 }%
```

Commented form of the full synonym for “footnote”. It has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}”

```
2878 % \def\footnoteautorefname{%
2879 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrrzh\cyrn\cyro\cyre\ %
2880 % \cyrp\cyrr\cyri\cyrm\cyre\cyrrzh\cyra\cyrn\cyri\cyre
2881 % }%
```

Commented forms of the “footnote”: have different forms, the same is for the nominative and accusative. (The others needed?)

```
2882 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2883 % \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%
```

Name of the list item, can be confused with the paragraph reference name, but reader could understand meaning from context(?). Commented variant has common form for both nominative and accusative but changes in other forms, like “of \autoref{auto}” etc.

```
2884 \def\itemautorefname{\cyr\cyrp.}%
2885 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

Names of the figure and table have stable (standard) abbreviation forms. No problem in the middle of sentence.

```
2886 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2887 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%
```

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

```
2888 \def\partautorefname{\cyr\cyrrh.}%
2889 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2890 \def\sectionautorefname{\cyr\cyrr\cyra\cyrrzh\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.

```
2891 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2892 % \def\appendixautorefname{%
2893 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrzh\cyre\cyrn\cyri\cyre
2894 % }%
```

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.

```
2895 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrrzh\cyrd.}%
2896 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrrzh\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.

```
2897 \def\paragraphautorefname{\cyr\cyrp.}%
2898 \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.

```
2899 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2900 % \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.

```
2901 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2902 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2903 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2904 % \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 . . .

```
2905 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2906 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
2907 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2908 \def\pageautorefname{\cyr\cyrs.}%
2909 }
```

```
2910 \def\HyLang@spanish{%
2911 \def\equationautorefname{Ecuaci'on}%
2912 \def\footnoteautorefname{Nota a pie de p'agina}%
2913 \def\itemautorefname{Elemento}%
2914 \def\figureautorefname{Figura}%
2915 \def\tableautorefname{Tabla}%
2916 \def\partautorefname{Parte}%
2917 \def\appendixautorefname{Ap'endice}%
2918 \def\chapterautorefname{Cap'itulo}%
2919 \def\sectionautorefname{Secci'on}%
2920 \def\subsectionautorefname{Subsecci'on}%
2921 \def\subsubsectionautorefname{Subsubsecci'on}%
2922 \def\paragraphautorefname{P'arrafo}%
2923 \def\subparagraphautorefname{Subp'arrafo}%
2924 \def\FancyVerbLineautorefname{L'inea}%
2925 \def\theoremautorefname{Teorema}%
2926 \def\pageautorefname{P'agina}%
2927 }
```

```
2928 \def\HyLang@vietnamese{%
2929 \def\equationautorefname{Ph\uhorn{ }\ohorn{ }ng tr'inh}%
2930 \def\footnoteautorefname{Ch'u th'ich}%
2931 \def\itemautorefname{m\d{u}c}%
2932 \def\figureautorefname{H'inh}%
2933 \def\tableautorefname{B'h{a}ng}%
2934 \def\partautorefname{Ph'\acircumflex{n}%
2935 \def\appendixautorefname{Ph\d{u} l\d{u}c}%
```

```

2936 \def\chapterautorefname{ch\uhorn{}}\ohorn{ng}%
2937 \def\sectionautorefname{m\d{u}c}%
2938 \def\subsectionautorefname{m\d{u}c}%
2939 \def\subsubsectionautorefname{m\d{u}c}%
2940 \def\paragraphautorefname{\dj{}}\o\d{a}n}%
2941 \def\subparagraphautorefname{\dj{}}\o\d{a}n}%
2942 \def\FancyVerbLineautorefname{d\'ong}%
2943 \def\theoremautorefname{DJ{}}\d{i}nh l\'y}%
2944 \def\pageautorefname{Trang}%
2945 }

```

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

```

2946 \def\HyLang@addto#1#2{%
2947 #2%
2948 \@temptokena{#2}%
2949 \ifx#1\relax
2950 \let#1\@empty
2951 \fi
2952 \ifx#1\undefined
2953 \edef#1{\the\@temptokena}%
2954 \else
2955 \toks@\expandafter{#1}%
2956 \edef#1{\the\toks@\the\@temptokena}%
2957 \fi
2958 \@temptokena{}\toks@\@temptokena
2959 }

2960 \def\HyLang@DeclareLang#1#2#3{%
2961 \begingroup
2962 \edef\x#1#2{%
2963 \noexpand\ifx##2\relax
2964 \errmessage{No definitions for language #2' found!}%
2965 \noexpand\fi
2966 \endgroup
2967 \noexpand\define@key{Hyp}{#1}[]{}%
2968 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2969 #3%
2970 }%
2971 }%
2972 \expandafter\x\csname extras#1\expandafter\endcsname
2973 \csname HyLang@#2\endcsname
2974 }

2975 \HyLang@DeclareLang{english}{english}{}
2976 \HyLang@DeclareLang{UKenglish}{english}{}
2977 \HyLang@DeclareLang{british}{english}{}
2978 \HyLang@DeclareLang{USenglish}{english}{}
2979 \HyLang@DeclareLang{american}{english}{}
2980 \HyLang@DeclareLang{german}{german}{}
2981 \HyLang@DeclareLang{austrian}{german}{}
2982 \HyLang@DeclareLang{ngerman}{german}{}
2983 \HyLang@DeclareLang{naustrian}{german}{}
2984 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2985 \HyLang@DeclareLang{brazil}{portuges}{}
2986 \HyLang@DeclareLang{brazilian}{portuges}{}
2987 \HyLang@DeclareLang{portuguese}{portuges}{}
2988 \HyLang@DeclareLang{spanish}{spanish}{}
2989 \HyLang@DeclareLang{afrikaans}{afrikaans}{}

```

```

2990 \HyLang@DeclareLang{french}{french}{}
2991 \HyLang@DeclareLang{frenchb}{french}{}
2992 \HyLang@DeclareLang{francais}{french}{}
2993 \HyLang@DeclareLang{acadian}{french}{}
2994 \HyLang@DeclareLang{canadien}{french}{}
2995 \HyLang@DeclareLang{italian}{italian}{}
2996 \HyLang@DeclareLang{magyar}{magyar}{}
2997 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

2998 \define@key{Hyp}{vietnamese}[]{}%
2999 \HyLang@addto\extravietnamese\HyLang@vietnamese
3000 \AtEndOfPackage{%
3001 \ifundefined{T@PU}{}{}%
3002 \input{puvnenc.def}%
3003 }%
3004 }%
3005 }
3006 \define@key{Hyp}{vietnam}[]{}%
3007 \HyLang@addto\extravietnam\HyLang@vietnamese
3008 \AtEndOfPackage{%
3009 \ifundefined{T@PU}{}{}%
3010 \input{puvnenc.def}%
3011 }%
3012 }%
3013 }

```

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

```

3014 \define@key{Hyp}{arabic}[]{}%
3015 \AtEndOfPackage{%
3016 \ifundefined{T@PU}{}{}%
3017 \input{puarenc.def}%
3018 }%
3019 }%
3020 }

```

## 13 Options to change appearance of links

Colouring links at the L<sup>A</sup>T<sub>E</sub>X level is useful for debugging, perhaps.

```

3021 \define@key{Hyp}{colorlinks}[true]{}%
3022 \Hy@boolkey{colorlinks}{#1}%
3023 }
3024 \define@key{Hyp}{ocgcolorlinks}[true]{}%
3025 \Hy@boolkey{ocgcolorlinks}{#1}%
3026 }
3027 \AtBeginDocument{%
3028 \begingroup
3029 \ifundefined{OBJ@OCG@view}{}%
3030 \ifHy@ocgcolorlinks
3031 \Hy@Warning{%
3032 Driver does not support ‘ocgcolorlinks’,\MessageBreak
3033 using ‘colorlinks’ instead%
3034 }%
3035 \fi
3036 }{}%
3037 \endgroup
3038 }

```



```

3039 \define@key{Hyp}{frenchlinks}[true]{%
3040 \Hy@boolkey{frenchlinks}{#1}%
3041 }

```

## 14 Bookmarking

```

3042 \begingroup\expandafter\expandafter\expandafter\endgroup
3043 \expandafter\ifx\csname chapter\endcsname\relax
3044 \def\toclevel@part{0}%
3045 \else
3046 \def\toclevel@part{-1}%
3047 \fi
3048 \def\toclevel@chapter{0}
3049 \def\toclevel@section{1}
3050 \def\toclevel@subsection{2}
3051 \def\toclevel@subsubsection{3}
3052 \def\toclevel@paragraph{4}
3053 \def\toclevel@subparagraph{5}
3054 \def\toclevel@figure{0}
3055 \def\toclevel@table{0}
3056 \ifpackageloaded{listings}{%
3057 \providecommand*\theHlstlisting{\thelstlisting}%
3058 \providecommand*\toclevel@lstlisting{0}%
3059 }{}
3060 \ifpackageloaded{listing}{%
3061 \providecommand*\theHlisting{\thelisting}%
3062 \providecommand*\toclevel@listing{0}%
3063 }{}

3064 \define@key{Hyp}{bookmarks}[true]{%
3065 \Hy@boolkey{bookmarks}{#1}%
3066 }

3067 \define@key{Hyp}{bookmarksopen}[true]{%
3068 \Hy@boolkey{bookmarksopen}{#1}%
3069 }

```

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.

```

3070 \let\Hy@bookmarksdepth\c@tocdepth
3071 \define@key{Hyp}{bookmarksdepth}[]{}%
3072 \begingroup
3073 \edef\x{#1}%
3074 \ifx\x\empty
3075 \global\let\Hy@bookmarksdepth\c@tocdepth
3076 \else
3077 \ifundefined{toclevel@\x}{%
3078 \@onelevel@sanitize\x
3079 \edef\y{\expandafter\@car\x\@nil}%

```

```

3080 \ifcase 0\expandafter\ifx\y-1\fi
3081 \expandafter\ifnum\expandafter'\y>47 %
3082 \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3083 \Hy@Warning{Unknown document division name (\x)}%
3084 \else
3085 \setbox\z@=\hbox{%
3086 \count@=\x
3087 \xdef\Hy@bookmarksdepth{\the\count@}%
3088 }%
3089 \fi
3090 }{%
3091 \setbox\z@=\hbox{%
3092 \count@=\csname toplevel@\x\endcsname
3093 \xdef\Hy@bookmarksdepth{\the\count@}%
3094 }%
3095 }%
3096 \fi
3097 \endgroup
3098 }

```

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

```

3099 \define@key{Hyp}{bookmarksopenlevel}{%
3100 \def\@bookmarksopenlevel{#1}%
3101 }
3102 \def\@bookmarksopenlevel{\maxdimen}
3103 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3104 \define@key{Hyp}{bookmarkstype}{%
3105 \def\Hy@bookmarkstype{#1}%
3106 }
3107 \def\Hy@bookmarkstype{toc}

```

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

```

3108 \define@key{Hyp}{bookmarksnumbered}[true]{%
3109 \Hy@boolkey{bookmarksnumbered}{#1}%
3110 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3111 \define@key{Hyp}{CJKbookmarks}[true]{%
3112 \Hy@boolkey{CJKbookmarks}{#1}%
3113 }

3114 \def\Hy@temp#1{%
3115 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3116 }

3117 \def\Hy@@temp#1#2#3{%
3118 \define@key{Hyp}{#2color}{%
3119 \HyColor@HyperrefColor{##1}#1%
3120 }%
3121 \def#1{#3}%
3122 }

3123 \Hy@temp{link}{red}
3124 \Hy@temp{anchor}{black}
3125 \Hy@temp{cite}{green}
3126 \Hy@temp{file}{cyan}
3127 \Hy@temp{url}{magenta}
3128 \Hy@temp{menu}{red}
3129 \Hy@temp{run}{\@filecolor}
3130 \define@key{Hyp}{pagecolor}{%

```

```

3131 \Hy@WarningPageColor
3132 }
3133 \def\Hy@WarningPageColor{%
3134 \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3135 \global\let\Hy@WarningPageColor\relax
3136 }

3137 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3138 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3139 \let\@baseurl\@empty
3140 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3141 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3142 \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.

```

3143 \let\@pdfpagetransition\relax
3144 \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.

```

3145 \let\@pdfpageduration\relax
3146 \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.

```

3147 \newif\ifHy@useHidKey
3148 \Hy@useHidKeyfalse
3149 \define@key{Hyp}{pdfpagehidden}[true]{%
3150 \Hy@boolkey{pdfpagehidden}{#1}%
3151 \ifHy@pdfpagehidden
3152 \global\Hy@useHidKeytrue
3153 \fi
3154 }

```

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).

```

3155 \def\Hy@ColorList{cite,file,link,menu,run,url}
3156 \@for\Hy@temp:=\Hy@ColorList\do{%
3157 \edef\Hy@temp{%
3158 \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3159 \noexpand\Hy@Color@HyperrefBorderColor
3160 {##1}%
3161 \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3162 {hyperref}%
3163 {\Hy@temp bordercolor}%

```

```

3164 }%
3165 }%
3166 \Hy@temp
3167 }
3168 \define@key{Hyp}{pagebordercolor}{%
3169 \Hy@WarningPageBorderColor
3170 }
3171 \def\Hy@WarningPageBorderColor{%
3172 \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3173 \global\let\Hy@WarningPageBorderColor\relax
3174 }

3175 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3176 \Hy@DefNameKey{pdfhighlight}{%
3177 \do{/I}{Invert}%
3178 \do{/N}{None}%
3179 \do{/O}{Outline}%
3180 \do{/P}{Push}%
3181 }
3182 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
3183 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3184 \def\Hy@setpdfborder{%
3185 \ifx\@pdfborder\@empty
3186 \else
3187 /Border[\@pdfborder]%
3188 \fi
3189 \ifx\@pdfborderstyle\@empty
3190 \else
3191 /BS<<\@pdfborderstyle>>%
3192 \fi
3193 }
3194 \Hy@DefNameKey{pdfpagemode}{%
3195 \do{UseNone}{}%
3196 \do{UseOutlines}{}%
3197 \do{UseThumbs}{}%
3198 \do{FullScreen}{}%
3199 \do{UseOC}{PDF 1.5}%
3200 \do{UseAttachments}{PDF 1.6}%
3201 }
3202 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3203 \do{UseNone}{}%
3204 \do{UseOutlines}{}%
3205 \do{UseThumbs}{}%
3206 \do{FullScreen}{}%
3207 \do{UseOC}{PDF 1.5}%
3208 \do{UseAttachments}{PDF 1.6}%
3209 }
3210 \Hy@DefNameKey{pdfdirection}{%
3211 \do{L2R}{Left to right}%
3212 \do{R2L}{Right to left}%
3213 }
3214 \Hy@DefNameKey{pdfviewarea}{%
3215 \do{MediaBox}{}%
3216 \do{CropBox}{}%
3217 \do{BleedBox}{}%
3218 \do{TrimBox}{}%
3219 \do{ArtBox}{}%
3220 }

```

```

3221 \Hy@DefNameKey{pdfviewclip}{%
3222 \do{MediaBox}{}%
3223 \do{CropBox}{}%
3224 \do{BleedBox}{}%
3225 \do{TrimBox}{}%
3226 \do{ArtBox}{}%
3227 }
3228 \Hy@DefNameKey{pdfprintarea}{%
3229 \do{MediaBox}{}%
3230 \do{CropBox}{}%
3231 \do{BleedBox}{}%
3232 \do{TrimBox}{}%
3233 \do{ArtBox}{}%
3234 }
3235 \Hy@DefNameKey{pdfprintclip}{%
3236 \do{MediaBox}{}%
3237 \do{CropBox}{}%
3238 \do{BleedBox}{}%
3239 \do{TrimBox}{}%
3240 \do{ArtBox}{}%
3241 }
3242 \Hy@DefNameKey{pdfprintscaling}{%
3243 \do{AppDefault}{}%
3244 \do{None}{}%
3245 }
3246 \Hy@DefNameKey{pdfduplex}{%
3247 \do{Simplex}{}%
3248 \do{DuplexFlipShortEdge}{}%
3249 \do{DuplexFlipLongEdge}{}%
3250 }
3251 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3252 \do{true}{}%
3253 \do{false}{}%
3254 }
3255 \define@key{Hyp}{pdfprintpagerange}{%
3256 \def\@pdfprintpagerange{#1}%
3257 }
3258 \Hy@DefNameKey{pdfnumcopies}{%
3259 \do{2}{two copies}%
3260 \do{3}{three copies}%
3261 \do{4}{four copies}%
3262 \do{5}{five copies}%
3263 }
3264 \define@key{Hyp}{pdfusetitle}[true]{%
3265 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3266 }
3267 \def\HyXeTeX@CheckUnicode{%
3268 \ifxetex
3269 \ifHy@unicode
3270 \else
3271 \Hy@WarningNoLine{%
3272 XeTeX driver only supports unicode.\MessageBreak
3273 Enabling option 'unicode'%
3274 }%
3275 \setkeys{Hyp}{unicode}%
3276 \fi
3277 \else

```

```

3278 \let\HyXeTeX@CheckUnicode\relax
3279 \fi
3280 }
3281 \define@key{Hyp}{pdftitle}{%
3282 \HyXeTeX@CheckUnicode
3283 \HyPsd@XeTeXBigCharstrue
3284 \pdfstringdef\@pdftitle{#1}%
3285 }
3286 \define@key{Hyp}{pdfauthor}{%
3287 \HyXeTeX@CheckUnicode
3288 \HyPsd@XeTeXBigCharstrue
3289 \pdfstringdef\@pdfauthor{#1}%
3290 }
3291 \define@key{Hyp}{pdfproducer}{%
3292 \HyXeTeX@CheckUnicode
3293 \HyPsd@XeTeXBigCharstrue
3294 \pdfstringdef\@pdfproducer{#1}%
3295 }
3296 \define@key{Hyp}{pdfcreator}{%
3297 \HyXeTeX@CheckUnicode
3298 \HyPsd@XeTeXBigCharstrue
3299 \pdfstringdef\@pdfcreator{#1}%
3300 }
3301 \define@key{Hyp}{pdfcreationdate}{%
3302 \begingroup
3303 \Hy@unicodedefalse
3304 \pdfstringdef\@pdfcreationdate{#1}%
3305 \endgroup
3306 }
3307 \define@key{Hyp}{pdfmoddate}{%
3308 \begingroup
3309 \Hy@unicodedefalse
3310 \pdfstringdef\@pdfmoddate{#1}%
3311 \endgroup
3312 }
3313 \define@key{Hyp}{pdfsubject}{%
3314 \HyXeTeX@CheckUnicode
3315 \HyPsd@XeTeXBigCharstrue
3316 \pdfstringdef\@pdfsubject{#1}%
3317 }
3318 \define@key{Hyp}{pdfkeywords}{%
3319 \HyXeTeX@CheckUnicode
3320 \HyPsd@XeTeXBigCharstrue
3321 \pdfstringdef\@pdfkeywords{#1}%
3322 }
3323 \define@key{Hyp}{pdftrapped}{%
3324 \lowercase{\edef\Hy@temp{#1}}%
3325 \ifx\Hy@temp\HyInfo@trapped@true
3326 \def\@pdftrapped{True}%
3327 \else
3328 \ifx\Hy@temp\HyInfo@trapped@false
3329 \def\@pdftrapped{False}%
3330 \else
3331 \ifx\Hy@temp\HyInfo@trapped@unknown
3332 \def\@pdftrapped{Unknown}%
3333 \else
3334 \ifx\Hy@temp\@empty

```

```

3335 \else
3336 \Hy@Warning{%
3337 Unsupported value '#1'\MessageBreak
3338 for option 'pdftrapped'%
3339 }%
3340 \fi
3341 \def\@pdftrapped{}%
3342 \fi
3343 \fi
3344 \fi
3345 }
3346 \def\HyInfo@trapped@true{true}
3347 \def\HyInfo@trapped@false{false}
3348 \def\HyInfo@trapped@unknown{unknown}
3349 \def\HyInfo@TrappedUnsupported{%
3350 \ifx\@pdftrapped\@empty
3351 \else
3352 \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3353 \gdef\HyInfo@TrappedUnsupported{}%
3354 \fi
3355 }
3356 \define@key{Hyp}{pdfinfo}{%
3357 \kvsetkeys{pdfinfo}{#1}%
3358 }
3359 \def\Hy@temp#1{%
3360 \lowercase{\Hy@temp@A{#1}}{#1}%
3361 }
3362 \def\Hy@temp@A#1#2{%
3363 \define@key{pdfinfo}{#2}{%
3364 \hypersetup{pdf#1={##1}}%
3365 }%
3366 }
3367 \Hy@temp{Title}
3368 \Hy@temp{Author}
3369 \Hy@temp{Keywords}
3370 \Hy@temp{Subject}
3371 \Hy@temp{Creator}
3372 \Hy@temp{Producer}
3373 \Hy@temp{CreationDate}
3374 \Hy@temp{ModDate}
3375 \Hy@temp{Trapped}
3376 \newif\ifHyInfo@AddonUnsupported
3377 \kv@set@family@handler{pdfinfo}{%
3378 \HyInfo@AddonHandler{#1}{#2}%
3379 }
3380 \let\HyInfo@do\relax
3381 \def\HyInfo@AddonHandler#1#2{%
3382 \ifx\kv@value\relax
3383 \Hy@Warning{%
3384 Option 'pdfinfo': ignoring key '\kv@key' without value%
3385 }%
3386 \else
3387 \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3388 \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3389 \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3390 \ifHyInfo@AddonUnsupported
3391 \Hy@Warning{%

```

```

3392 This driver does not support additional\MessageBreak
3393 information entries, therefore\MessageBreak
3394 '\kv@key' is ignored%
3395 }%
3396 \else
3397 \define@key{pdfinfo}{\HyInfo@Key}{%
3398 \HyXeTeX@CheckUnicode
3399 \HyPsd@XeTeXBigCharstrue
3400 \pdfstringdef\HyInfo@Value{##1}%
3401 \expandafter\let\csname HyInfo@Value\HyInfo@Key\endcsname
3402 \HyInfo@Value
3403 }%
3404 \edef\HyInfo@AddonList{%
3405 \HyInfo@AddonList
3406 \HyInfo@do{\HyInfo@Key}%
3407 }%
3408 \kv@parse@normalized{%
3409 \HyInfo@Key={#2}%
3410 }{%
3411 \kv@processor@default{pdfinfo}%
3412 }%
3413 \fi
3414 \else
3415 \kv@parse@normalized{%
3416 \HyInfo@Key={#2}%
3417 }{%
3418 \kv@processor@default{pdfinfo}%
3419 }%
3420 \fi
3421 \fi
3422 }
3423 \def\HyInfo@GenerateAddons{%
3424 \ifHyInfo@AddonUnsupported
3425 \def\HyInfo@Addons{}%
3426 \else
3427 \begingroup
3428 \toks@{}%
3429 \def\HyInfo@do##1{%
3430 \EdefEscapeName\HyInfo@Key{##1}%
3431 \edef\x{%
3432 \toks@{%
3433 \the\toks@
3434 /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3435 }%
3436 }%
3437 \x
3438 }%
3439 \HyInfo@AddonList
3440 \edef\x{\endgroup
3441 \def\noexpand\HyInfo@Addons{\the\toks@}%
3442 }%
3443 \x
3444 \fi
3445 }
3446 \def\HyInfo@AddonList{}
3447 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3448 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}

```



```

3449 \let\setpdfinkmargin\@gobble
3450 \def\calculate@pdfview#1 #2\{\%
3451 \def\@pdfview{#1}%
3452 \ifx\#2\{\%
3453 \def\@pdfviewparams{ -32768}%
3454 \else
3455 \def\@pdfviewparams{ #2}%
3456 \fi
3457 }
3458 \begingroup\expandafter\expandafter\expandafter\endgroup
3459 \expandafter\ifx\csname numexpr\endcsname\relax
3460 \def\Hy@number#1{%
3461 \expandafter\@firstofone\expandafter{\number#1}%
3462 }%
3463 \else
3464 \def\Hy@number#1{%
3465 \the\numexpr#1\relax
3466 }%
3467 \fi
3468 \define@key{Hyp}{pdfstartpage}{%
3469 \ifx\#1\{\%
3470 \def\@pdfstartpage{}%
3471 \else
3472 \edef\@pdfstartpage{\Hy@number{#1}}%
3473 \fi
3474 }%
3475 \define@key{Hyp}{pdfstartview}{%
3476 \ifx\#1\{\%
3477 \def\@pdfstartview{}%
3478 \else
3479 \hypercalcbpdef\@pdfstartview{ /#1 }%
3480 \fi
3481 }
3482 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3483 \define@key{Hyp}{pdftoolbar}[true]{%
3484 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3485 }
3486 \define@key{Hyp}{pdfmenubar}[true]{%
3487 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3488 }
3489 \define@key{Hyp}{pdfwindowui}[true]{%
3490 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3491 }
3492 \define@key{Hyp}{pdffitwindow}[true]{%
3493 \Hy@boolkey[pdfitwindow]{fitwindow}{#1}%
3494 }
3495 \define@key{Hyp}{pdfcenterwindow}[true]{%
3496 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3497 }
3498 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3499 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3500 }
3501 \define@key{Hyp}{pdfa}[true]{%
3502 \Hy@boolkey{pdfa}{#1}%
3503 }
3504 \define@key{Hyp}{pdfnewwindow}[true]{%
3505 \def\Hy@temp{#1}%

```

```

3506 \ifx\Hy@temp\@empty
3507 \Hy@newwindowsetfalse
3508 \else
3509 \Hy@newwindowsettrue
3510 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3511 \fi
3512 }
3513 \def\Hy@SetNewWindow{%
3514 \ifHy@newwindowset
3515 /NewWindow %
3516 \ifHy@newwindow true\else false\fi
3517 \fi
3518 }
3519 \Hy@DefNameKey{pdfpagelayout}{%
3520 \do{SinglePage}{}%
3521 \do{OneColumn}{}%
3522 \do{TwoColumnLeft}{}%
3523 \do{TwoColumnRight}{}%
3524 \do{TwoPageLeft}{PDF 1.5}%
3525 \do{TwoPageRight}{PDF 1.5}%
3526 }
3527 \define@key{Hyp}{pdflang}{%
3528 \def\@pdflang{#1}%
3529 }
3530 \define@key{Hyp}{pdfpagelabels}[true]{%
3531 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3532 }
3533 \define@key{Hyp}{pdfescapeform}[true]{%
3534 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3535 }

```

Default values:

```

3536 \def\@linkbordercolor{1 0 0}
3537 \def\@urlbordercolor{0 1 1}
3538 \def\@menubordercolor{1 0 0}
3539 \def\@filebordercolor{0 .5 .5}
3540 \def\@runbordercolor{0 .7 .7}
3541 \def\@citebordercolor{0 1 0}
3542 \def\@pdfhighlight{/I}
3543 \def\@pdftitle{}
3544 \def\@pdfauthor{}
3545 \let\@pdfproducer\relax
3546 \def\@pdfcreator{LaTeX with hyperref package}
3547 \def\@pdfcreationdate{}
3548 \def\@pdfmoddate{}
3549 \def\@pdfsubject{}
3550 \def\@pdfkeywords{}
3551 \def\@pdftrapped{}
3552 \def\@pdfpagescrop{}
3553 \def\@pdfstartview{/Fit }
3554 \def\@pdfstartpage{1}
3555 \def\@pdfprintpagerange{}
3556 \def\@pdflang{}
3557 \let\PDF@SetupDoc\@empty
3558 \let\PDF@FinishDoc\@empty
3559 \let\phantomsection\@empty
3560 \let\special@paper\@empty
3561 \def\HyperDestNameFilter#1{#1}

```

```

3562 \AtBeginDocument{%
3563 \begingroup
3564 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3565 \dimen@=\x\relax
3566 \ifdim\dimen@>\z@
3567 \else
3568 \dimen@=11in\relax
3569 \Hy@WarningNoLine{%
3570 Height of page (\expandafter\string\x) %
3571 is invalid (\the\x),\MessageBreak
3572 using 11in%
3573 }%
3574 \fi
3575 \dimen@=0.99626401\dimen@
3576 \xdef\Hy@pageheight{\strip@pt\dimen@}%
3577 \endgroup
3578 }
3579 \def\HyInd@EncapChar{\|}
3580 \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.

```

3581 \let\hyper@normalise\ExecuteOptions
3582 \let\ExecuteOptions\hypersetup
3583 \Hy@RestoreCatcodes
3584 \InputIfFileExists{hyperref.cfg}{-}{-}
3585 \Hy@SetCatcodes
3586 \let\ExecuteOptions\hyper@normalise
3587 \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`.

```

3588 \RequirePackage{kvoptions}[2009/07/21]
3589 \SetupKeyvalOptions{family=Hyp}
3590 \DeclareLocalOptions{%
3591 a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3592 }

```

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

```

3593 \@ifpackageloaded{tex4ht}{%
3594 \@ifpackagewith{hyperref}{tex4ht}{-}{-}%
3595 \PassOptionsToPackage{tex4ht}{hyperref}%
3596 }%
3597 }{-}

```

```

3598 \let\ReadBookmarks\relax
3599 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3600 \AtBeginDocument{%
3601 \ifHy@draft
3602 \let\hyper@@anchor\@gobble
3603 \gdef\hyper@link#1#2#3{#3}%
3604 \let\hyper@anchorstart\@gobble
3605 \let\hyper@anchorend\@empty

```

```

3606 \let\hyper@linkstart\@gobbletwo
3607 \let\hyper@linkend\@empty
3608 \def\hyper@linkurl#1#2{#1}%
3609 \def\hyper@linkfile#1#2#3{#1}%
3610 \def\hyper@link@{#1}#2#3}%
3611 \def\Acrobatmenu#1#2{\leavevmode#2}%
3612 \let\PDF@SetupDoc\@empty
3613 \let\PDF@FinishDoc\@empty
3614 \let\@fifthoffive\@secondoftwo
3615 \let\@secondoffive\@secondoftwo
3616 \let\ReadBookmarks\relax
3617 \let\WriteBookmarks\relax
3618 \Hy@WarningNoLine{ draft mode on}%
3619 \fi
3620 \Hy@DisableOption{draft}%
3621 \Hy@DisableOption{nolinks}%
3622 \Hy@DisableOption{final}%
3623 }

```

## 15.1 PDF/A

```

3624 \Hy@DisableOption{pdfa}
3625 \ifHy@pdfa
3626 \setkeys{Hyp}{pdfversion=1.4}%
3627 \def\Hy@Acrobatmenu#1#2{%
3628 \leavevmode
3629 \begingroup
3630 \edef\x{#1}%
3631 \@onelevel@sanitize\x
3632 \ifx\x\Hy@NextPage
3633 \let\y=Y%
3634 \else
3635 \ifx\x\Hy@PrevPage
3636 \let\y=Y%
3637 \else
3638 \ifx\x\Hy@FirstPage
3639 \let\y=Y%
3640 \else
3641 \ifx\x\Hy@LastPage
3642 \let\y=Y%
3643 \else
3644 \let\y=N%
3645 \fi
3646 \fi
3647 \fi
3648 \fi
3649 \expandafter\endgroup
3650 \ifx\y Y%
3651 \else
3652 \PackageError{hyperref}{%
3653 PDF/A: Named action ‘#1’ is not permitted%
3654 }\@ehc
3655 {#2}%
3656 \expandafter\@gobble
3657 \fi
3658 }%
3659 \def\Hy@temp#1{%

```

```

3660 \expandafter\def\csname Hy@#1\endcsname{#1}%
3661 \expandafter\@onelevel\csname Hy@#1\endcsname
3662 }%
3663 \Hy@temp{NextPage}%
3664 \Hy@temp{PrevPage}%
3665 \Hy@temp{FirstPage}%
3666 \Hy@temp{LastPage}%
3667 \else
3668 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3669 \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.

```

3670 \Hy@nextfalse
3671 \ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3672 \ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3673 \ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3674 \ifHy@next
3675 \let\texttilde\~%
3676 \fi

3677 \ifHy@figures
3678 \Hy@Info{Hyper figures ON}%
3679 \else
3680 \Hy@Info{Hyper figures OFF}%
3681 \fi

3682 \ifHy@nesting
3683 \Hy@Info{Link nesting ON}%
3684 \else
3685 \Hy@Info{Link nesting OFF}%
3686 \fi

3687 \ifHy@hyperindex
3688 \Hy@Info{Hyper index ON}%
3689 \else
3690 \Hy@Info{Hyper index OFF}%
3691 \fi

3692 \ifHy@plainpages
3693 \Hy@Info{Plain pages ON}%
3694 \else
3695 \Hy@Info{Plain pages OFF}%
3696 \fi

3697 \ifHy@backref
3698 \Hy@Info{Backreferencing ON}%
3699 \else
3700 \Hy@Info{Backreferencing OFF}%
3701 \fi

3702 \ifHy@typexml
3703 \AtEndOfPackage{%
3704 \RequirePackage{color}%
3705 \RequirePackage{nameref}%
3706 }%
3707 \fi

3708 \Hy@DisableOption{typexml}
3709 \ifHy@implicit
3710 \typeout{Implicit mode ON; LaTeX internals redefined}%
3711 \else

```

```

3712 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3713 \def\MaybeStopEarly{%
3714 \typeout{Hyperref stopped early}%
3715 \AfterBeginDocument{%
3716 \PDF@FinishDoc
3717 \gdef\PDF@FinishDoc{}}%
3718 }%
3719 \endinput
3720 }%
3721 \AtBeginDocument{%
3722 \let\autoref\ref
3723 \let\autopageref\pageref
3724 \ifx\@pdfpagemode\@empty
3725 \gdef\@pdfpagemode{UseNone}%
3726 \fi
3727 \global\Hy@backreffalse
3728 }%
3729 \AtEndOfPackage{%
3730 \global\let\ReadBookmarks\relax
3731 \global\let\WriteBookmarks\relax
3732 }%
3733 \fi
3734 \Hy@DisableOption{implicit}

```

### 15.2.1 Driver loading

```

3735 \AtEndOfPackage{%
3736 \ifpackageloaded{tex4ht}{%
3737 \def\Hy@driver{htex4ht}%
3738 \Hy@texhttrue
3739 }{}%

```

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.

```

3740 \ifx\Hy@driver\@empty
3741 \else
3742 \def\Hy@temp{hpdftex}%
3743 \ifpdf
3744 \ifx\Hy@driver\Hy@temp
3745 \else
3746 \Hy@WarningNoLine{%
3747 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3748 pdfTeX is running in PDF mode.\MessageBreak
3749 Forcing driver ‘\Hy@temp.def’%
3750 }%
3751 \let\Hy@driver\Hy@temp
3752 \fi
3753 \else
3754 \ifx\Hy@driver\Hy@temp
3755 \Hy@WarningNoLine{%
3756 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3757 pdfTeX is not running in PDF mode.\MessageBreak
3758 Using default driver%
3759 }%
3760 \let\Hy@driver\@empty
3761 \fi
3762 \fi
3763 \fi

```

```

3764 \ifx\Hy@driver\@empty
3765 \else
3766 \def\Hy@temp{hxtex}%
3767 \ifxetex
3768 \ifx\Hy@driver\Hy@temp
3769 \else
3770 \Hy@WarningNoLine{%
3771 Wrong driver '\Hy@driver.def';\MessageBreak
3772 XeTeX is running.\MessageBreak
3773 Forcing driver '\Hy@temp.def' for XeTeX%
3774 }%
3775 \let\Hy@driver\Hy@temp
3776 \fi
3777 \fi
3778 \fi
3779 \ifx\Hy@driver\@empty
3780 \else
3781 \def\Hy@temp{hvtexhtm}%
3782 \ifvtexhtml
3783 \ifx\Hy@driver\Hy@temp
3784 \else
3785 \Hy@WarningNoLine{%
3786 Wrong driver '\Hy@driver.def';\MessageBreak
3787 VTeX is running in HTML mode.\MessageBreak
3788 Forcing driver '\Hy@temp.def'%
3789 }%
3790 \let\Hy@driver\Hy@temp
3791 \fi
3792 \else
3793 \ifx\Hy@driver\Hy@temp
3794 \Hy@WarningNoLine{%
3795 Wrong driver '\Hy@driver.def';\MessageBreak
3796 VTeX is not running in HTML mode.\MessageBreak
3797 Using default driver%
3798 }%
3799 \let\Hy@driver\@empty
3800 \fi
3801 \fi
3802 \fi

```

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

```

3803 \ifx\Hy@driver\@empty
3804 \providecommand*{\Hy@defaultdriver}{hypertex}%
3805 \ifpdf
3806 \def\Hy@driver{hpdftex}%
3807 \else
3808 \ifxetex
3809 \def\Hy@driver{hxtex}%
3810 \else
3811 \ifvtexhtml
3812 \def\Hy@driver{hvtexhtm}%
3813 \def\MaybeStopEarly{%
3814 \typeout{Hyperref stopped early}%
3815 \AfterBeginDocument{%
3816 \PDF@FinishDoc
3817 \gdef\PDF@FinishDoc{}%
3818 }%
3819 \endinput

```

```

3820 }%
3821 \else
3822 \ifvtexpdf
3823 \def\Hy@driver{hvtex}%
3824 \else
3825 \ifvtexps
3826 \def\Hy@driver{hvtex}%
3827 \else
3828 \let\Hy@driver\Hy@defaultdriver
3829 \fi
3830 \fi
3831 \fi
3832 \fi
3833 \fi
3834 \ifx\Hy@driver\Hy@defaultdriver
3835 \def\Hy@temp{hdvwind}%
3836 \ifx\Hy@temp\Hy@driver
3837 \setkeys{Hyp}{colorlinks}%
3838 \PassOptionsToPackage{dviwindo}{color}%
3839 \fi
3840 \fi
3841 \typeout{*hyperref using default driver \Hy@driver*}%
3842 \else
3843 \typeout{*hyperref using driver \Hy@driver*}%
3844 \fi
3845 \input{\Hy@driver.def}%
3846 \let\@unprocessedoptions\relax
3847 \Hy@RestoreCatcodes
3848 }

```

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.

```

3849 \newif\ifHy@DvipdfmxOutlineOpen
3850 \ifxetex
3851 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3852 \else
3853 \Hy@DvipdfmxOutlineOpentrue
3854 \fi
3855 \fi
3856 \begingroup\expandafter\expandafter\expandafter\endgroup
3857 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3858 \else
3859 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3860 \Hy@DvipdfmxOutlineOpentrue
3861 \fi
3862 \fi
3863 \Hy@DisableOption{tex4ht}
3864 \Hy@DisableOption{pdftex}
3865 \Hy@DisableOption{nativepdf}
3866 \Hy@DisableOption{dvipdfm}
3867 \Hy@DisableOption{dvipdfmx}
3868 \Hy@DisableOption{dvipdfmx-outline-open}
3869 \Hy@DisableOption{pdfmark}
3870 \Hy@DisableOption{dvips}
3871 \Hy@DisableOption{hypertex}
3872 \Hy@DisableOption{vtex}
3873 \Hy@DisableOption{vtexpdfmark}

```



```

3874 \Hy@DisableOption{dviwindo}
3875 \Hy@DisableOption{dvipsone}
3876 \Hy@DisableOption{textures}
3877 \Hy@DisableOption{latex2html}
3878 \Hy@DisableOption{ps2pdf}
3879 \Hy@DisableOption{xetex}
3880 \AtEndOfPackage{%
3881 \Hy@DisableOption{pdfversion}%
3882 }

```

### 15.2.2 Bookmarks

```

3883 \def\WriteBookmarks{0}
3884 \def\@bookmarkopenstatus#1{%
3885 \ifHy@bookmarksopen

```

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

```

3886 \ifnum#1<\expandafter\@firstofone\expandafter
3887 {\number\@bookmarkopenlevel} % explicit space
3888 \else
3889 -%
3890 \fi
3891 \else
3892 -%
3893 \fi
3894 }
3895 \ifHy@bookmarks
3896 \Hy@Info{Bookmarks ON}%
3897 \ifx\@pdfpagemode\@empty
3898 \def\@pdfpagemode{UseOutlines}%
3899 \fi
3900 \else
3901 \def\@bookmarkopenstatus#1{%
3902 \Hy@Info{Bookmarks OFF}%
3903 \AtEndOfPackage{%
3904 \global\let\ReadBookmarks\relax
3905 \global\let\WriteBookmarks\relax
3906 }%
3907 \ifx\@pdfpagemode\@empty
3908 \def\@pdfpagemode{UseNone}%
3909 \fi
3910 \fi
3911 \Hy@DisableOption{bookmarks}

```

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

```

3912 \def\Hy@CatcodeWrapper#1{%
3913 \def\Hy@EndWrap{}%
3914 \def\TMP@EnsureCode##1##2{%
3915 \edef\Hy@EndWrap{%
3916 \Hy@EndWrap
3917 \catcode##1 \the\catcode##1\relax
3918 }%
3919 \catcode##1 ##2\relax
3920 }%
3921 \TMP@EnsureCode{10}{12}% ^^J
3922 \TMP@EnsureCode{33}{12}% !
3923 \TMP@EnsureCode{34}{12}% "
3924 \TMP@EnsureCode{36}{3}% $ (math)
3925 \TMP@EnsureCode{38}{4}% & (alignment)

```

```

3926 \TMP@EnsureCode{39}{12}% '
3927 \TMP@EnsureCode{40}{12}% (
3928 \TMP@EnsureCode{41}{12}%)
3929 \TMP@EnsureCode{42}{12}% *
3930 \TMP@EnsureCode{43}{12}% +
3931 \TMP@EnsureCode{44}{12}% ,
3932 \TMP@EnsureCode{45}{12}% -
3933 \TMP@EnsureCode{46}{12}% .
3934 \TMP@EnsureCode{47}{12}% /
3935 \TMP@EnsureCode{58}{12}% :
3936 \TMP@EnsureCode{59}{12}% ;
3937 \TMP@EnsureCode{60}{12}% <
3938 \TMP@EnsureCode{61}{12}% =
3939 \TMP@EnsureCode{62}{12}% >
3940 \TMP@EnsureCode{63}{12}% ?
3941 \TMP@EnsureCode{91}{12}% [
3942 \TMP@EnsureCode{93}{12}%]
3943 \TMP@EnsureCode{94}{7}% ^ (superscript)
3944 \TMP@EnsureCode{95}{8}% _ (subscript)
3945 \TMP@EnsureCode{96}{12}% '
3946 \TMP@EnsureCode{124}{12}% |
3947 \TMP@EnsureCode{126}{13}% ~ (active)
3948 #1\relax
3949 \Hy@EndWrap
3950 }

```

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

```

3951 \AtBeginDocument{%
3952 \ifHy@ocgcolorlinks
3953 \setkeys{Hyp}{colorlinks}%
3954 \ifHy@pdfa
3955 \Hy@Warning{%
3956 PDF/A: Optional Content Groups are prohibited,\MessageBreak
3957 using 'colorlinks' instead of 'ocgcolorlinks'%
3958 }%
3959 \Hy@ocgcolorlinksfalse
3960 \fi
3961 \fi
3962 \ifHy@ocgcolorlinks
3963 \else
3964 \Hy@DisableOption{ocgcolorlinks}%
3965 \fi
3966 \ifHy@colorlinks
3967 \def\@pdfborder{0 0 0}%
3968 \let\@pdfborderstyle\@empty
3969 \ifHy@typexml
3970 \else
3971 \Hy@CatcodeWrapper{%
3972 \RequirePackage{color}%
3973 }%
3974 \fi
3975 \def\Hy@colorlink#1{%
3976 \begingroup
3977 \HyColor@UseColor#1%
3978 }%
3979 \def\Hy@endcolorlink{\endgroup}%
3980 \Hy@Info{Link coloring ON}%

```

```

3981 \else
3982 \ifHy@frenchlinks
3983 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3984 \def\Hy@endcolorlink{\endgroup}%
3985 \Hy@Info{French linking ON}%
3986 \else
for grouping consistency:
3987 \def\Hy@colorlink#1{\begingroup}%
3988 \def\Hy@endcolorlink{\endgroup}%
3989 \Hy@Info{Link coloring OFF}%
3990 \fi
3991 \fi
3992 \Hy@DisableOption{colorlinks}%
3993 \Hy@DisableOption{frenchlinks}%
3994 \ifHy@texht
3995 \long\def\@firstoffive#1#2#3#4#5{#1}%
3996 \long\def\@secondoffive#1#2#3#4#5{#2}%
3997 \long\def\@thirdoffive#1#2#3#4#5{#3}%
3998 \long\def\@fourthoffive#1#2#3#4#5{#4}%
3999 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4000 \providecommand*\@safe@activestruer{}%
4001 \providecommand*\@safe@activesfalse{}%
4002 \def\T@ref#1{%
4003 \Hy@safe@activestruer
4004 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4005 \Hy@safe@activesfalse
4006 }%
4007 \def\T@pageref#1{%
4008 \Hy@safe@activestruer
4009 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4010 \Hy@safe@activesfalse
4011 }%
4012 \else
4013 \ifHy@typexml
4014 \else
4015 \Hy@CatcodeWrapper{%
4016 \RequirePackage{nameref}%
4017 }%
4018 \fi
4019 \fi
4020 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
4021 \DeclareRobustCommand\pageref{%
4022 \@ifstar\@pagerefstar\T@pageref
4023 }%
4024 }
4025 \AfterBeginDocument{%
4026 \ifHy@texht
4027 \else
4028 \Hy@CatcodeWrapper{%
4029 \ReadBookmarks
4030 }%
4031 \fi
4032 }
4033 \ifHy@backref
4034 \RequirePackage{backref}%
4035 \else
4036 \let\Hy@backout\@gobble

```

```

4037 \fi
4038 \Hy@DisableOption{backref}
4039 \Hy@DisableOption{pagebackref}
4040 \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.

```

4041 \begingroup
4042 \endlinechar=-1 %
4043 \catcode'\^^A=14 %
4044 \catcode'\^^M\active
4045 \catcode'\%\active
4046 \catcode'\#\active
4047 \catcode'_\active
4048 \catcode'\$\active
4049 \catcode'\&\active
4050 \gdef\hyper@normalise{^^A
4051 \begingroup
4052 \catcode'\^^M\active
4053 \def^^M{ }^^A
4054 \catcode'\%\active
4055 \let%\@percentchar
4056 \let%\@percentchar
4057 \catcode'\#\active
4058 \def#{\hyper@hash}^^A
4059 \def\#{\hyper@hash}^^A
4060 \@makeother\&^^A
4061 \edef&{\string&}^^A
4062 \edef&{\string&}^^A
4063 \edef\textunderscore{\string_}^^A
4064 \let_\textunderscore
4065 \catcode'_\active
4066 \let_\textunderscore
4067 \let~\hyper@tilde
4068 \let~\hyper@tilde
4069 \let\textasciitilde\hyper@tilde
4070 \let\\ \@backslashchar
4071 \edef\string}^^A
4072 \Hy@safe@activetrue
4073 \hyper@n@rmalise
4074 }^^A
4075 \catcode'\#=6 ^^A
4076 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4077 \gdef\hyper@n@rmalise#1#2{^^A
4078 \def\Hy@tempa{#2}^^A
4079 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4080 \Hy@ReturnAfterElseFi{^^A
4081 \hyper@@normalise{#1}^^A
4082 }^^A
4083 \else

```

```

4084 \Hy@ReturnAfterFi{^^A
4085 \hyper@@normalise{#1}{#2}^^A
4086 }^^A
4087 \fi
4088 }^^A
4089 \gdef\hyper@@normalise#1#2{^^A
4090 \edef\Hy@tempa{^^A
4091 \endgroup
4092 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4093 }^^A
4094 \Hy@tempa
4095 }^^A
4096 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4097 #1^^A
4098 \ifx\limits#2\limits
4099 \else
4100 \Hy@ReturnAfterFi{^^A
4101 \Hy@RemovePercentCr #2\@nil
4102 }^^A
4103 \fi
4104 }^^A
4105 \endgroup
4106 \providecommand*\hyper@chars{%
4107 \let\#\hyper@hash
4108 \let\%\@percentchar
4109 \Hy@safe@activetrue
4110 }

4111 \def\hyperlink#1#2{%
4112 \hyper@@link{#1}{#2}%
4113 }

4114 \def\Hy@VerboseLinkStart#1#2{%
4115 \ifHy@verbose
4116 \begingroup
4117 \Hy@safe@activetrue
4118 \Hy@Info{Reference (#1) to '#2'}%
4119 \endgroup
4120 \fi
4121 }

4122 \def\Hy@VerboseAnchor#1{%
4123 \ifHy@verbose
4124 \begingroup
4125 \Hy@safe@activetrue
4126 \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4127 \endgroup
4128 \fi
4129 }

4130 \def\Hy@AllowHyphens{%
4131 \relax
4132 \ifhmode
4133 \penalty\@M
4134 \hskip\z@skip
4135 \fi
4136 }

4137 \DeclareRobustCommand*\href{%
4138 \@ifnextchar\bgroup\Hy@href{\hyper@@normalise\href@}%
4139 }

```

```

4140 \def\Hy@href#%
4141 \hyper@normalise\href@
4142 }
4143 \begingroup
4144 \catcode'\$=6 %
4145 \catcode'\#=12 %
4146 \gdef\href$1{\expandafter\href@split$1##\\}%
4147 \gdef\href@split$1#$2##$3\\{%
4148 \hyper@@link{#1}{#2}%
4149 }%
4150 \endgroup

```

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

```

4151 \RequirePackage{url}
4152 \let\HyOrg@url\url
4153 \def\Hurl{\begingroup \Url}
4154 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4155 \def\nolinkurl@#1{\Hurl{#1}}
4156 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4157 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4158 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4159 \providecommand\hyper@image[2]{#2}
4160 \def\hypertarget#1#2{%
4161 \ifHy@nesting
4162 \hyper@@anchor{#1}{#2}%
4163 \else
4164 \hyper@@anchor{#1}{\relax}#2%
4165 \fi
4166 }

```

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

```

4167 \DeclareRobustCommand*\hyperref{%
4168 \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
4169 }
4170 \def\Hy@babelnormalise#1[#2]{%
4171 \begingroup
4172 \Hy@safe@activetrue
4173 \edef\Hy@tempa{%
4174 \endgroup
4175 \noexpand#1[#2]}%
4176 }%
4177 \Hy@tempa
4178 }
4179 \def\@hyperref{\hyper@normalise\@hyperref}
4180 \def\@hyperref#1#2#3{%
4181 \edef\ref@one{\ifx\\#2\\ \else#2.\fi#3}%
4182 \expandafter\tryhyper@link\ref@one\\{#1}%
4183 }
4184 \def\tryhyper@link#1\\#2{%
4185 \hyper@@link{#2}{#1}%
4186 }

```

```

4187 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4188 \def\label@hyperdef#1#2#3{% , category, name, text
4189 \ifx\#1\%
4190 \def\Hy@AnchorName{#2}%
4191 \else
4192 \def\Hy@AnchorName{#1.#2}%
4193 \fi
4194 \ifHy@nesting
4195 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4196 \else
4197 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
4198 \fi
4199 }

```

We also have a need to give a L<sup>A</sup>T<sub>E</sub>X *label* to a hyper reference, to ease the pain of referring to it later.

```

4200 \def\label@hyperref[#1]{%
4201 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4202 }%
4203 \def\label@@hyperref#1#2#3{%
4204 \ifx#1\relax
4205 \protect\G@refundefinedtrue
4206 \@latex@warning{%
4207 Hyper reference ‘#2’ on page \thepage \space undefined%
4208 }%
4209 \hyper@@link{}{??}{#3}%
4210 \else
4211 \hyper@@link{\expandafter\@fifthoffive#1}%
4212 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4213 \fi
4214 }
4215 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4216 % anchor text
4217 \@bsphack
4218 \ifx\#2\%
4219 \def\Hy@AnchorName{#3}%
4220 \else
4221 \def\Hy@AnchorName{#2.#3}%
4222 \fi
4223 \if@filesw
4224 \protected@write\@auxout{}{%
4225 \string\newlabel{#1}{\@empty}{\@empty}{\Hy@AnchorName}{}}%
4226 }%
4227 \fi
4228 \@esphack
4229 \ifHy@nesting
4230 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4231 \else
4232 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#4}%
4233 \fi
4234 }

```

## 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.

```

4235 \def\hyper@@link{\let\Hy@reserved@a\relax
4236 \ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4237 }
4238 \def\hyper@link@[#1]#2#3#4{%
4239 \begingroup
4240 \protected@edef\Hy@tempa{#2}%
4241 \Hy@safe@activetrue
4242 \edef\x{#3}%
4243 \ifx\Hy@tempa\@empty
4244 \toks0{\hyper@link{#1}}%
4245 \else
4246 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4247 \fi
4248 \toks2{%
4249 \Hy@safe@activesfalse
4250 #4%
4251 }%
4252 \edef\Hy@tempa{\the\toks2}%
4253 \edef\x{\endgroup
4254 \ifx\Hy@tempa\@empty
4255 \noexpand\Hy@Warning{Suppressing empty link}%
4256 \else
4257 \the\toks0 {\x}{\the\toks2}}%
4258 \fi
4259 }%
4260 \x
4261 }

```

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.

```

4262 \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.

```

4263 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4264 }

```

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

```

4265 \def\@pdftempwordfile{file}%
4266 \def\@pdftempwordrun{run}%
4267 \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:

```

4268 \ifx\#6\%
4269 \expandafter\@hyper@linkfile file:#7\{\#3}\{\#2}%
4270 \else
4271 \ifx\#4\%
4272 \expandafter\@hyper@linkfile file:#7\{\#3}\{\#2}%
4273 \else

```

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

```

4274 \def\@pdftempa{\#4}%
4275 \ifx\@pdftempa\@pdftempwordfile
4276 \expandafter\@hyper@linkfile#7\{\#3}\{\#2}%
4277 \else

```

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

```

4278 \ifx\@pdftempa\@pdftempwordrun
4279 \ifHy@pdfa
4280 \PackageError{hyperref}{%
4281 PDF/A: Launch action is prohibited%
4282 }\@ehc
4283 \begingroup
4284 \leavevmode
4285 #2%
4286 \endgroup
4287 \else
4288 \expandafter\@hyper@launch#7\{\#3}\{\#2}%
4289 \fi
4290 \else

```

otherwise its a URL

```

4291 \hyper@linkurl{\#3}\{\#7\ifx\#2\% \else\hyper@hash#2\fi}%
4292 \fi
4293 \fi
4294 \fi
4295 \fi
4296 }

```

By default, turn run: into file:

```

4297 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4298 \hyper@linkurl{\#2}\{\#3}%
4299 \Hy@linkfileprefix
4300 #1%
4301 \ifx\#3\%
4302 \else
4303 \hyper@hash
4304 #3%
4305 \fi
4306 }%
4307 }

```

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

```

4308 \def\@hyper@linkfile file:#1\#2#3{%
4309 %file url,link string, name
4310 \filename@parse{\#1}%
4311 \ifx\filename@ext\relax

```

```

4312 \edef\filename@ext{\XR@ext}%
4313 \fi
4314 \def\use@file{\filename@area\filename@base.\filename@ext}%
4315 \ifx\filename@ext\XR@ext
4316 \hyper@linkfile{#2}{\use@file}{#3}%
4317 \else
4318 \ifx\@baseurl\@empty
4319 \hyper@linkurl{#2}{%
4320 \Hy@linkfileprefix\use@file\ifx\\#3\\else\hyper@hash#3\fi
4321 }%
4322 \else
4323 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4324 \fi
4325 \fi
4326 }

```

Anchors have a name, and marked text. We have to be careful with the marked text, as if we break off part of something to put a `\special` around it, all hell breaks loose. Therefore, we check the category code of the first token, and only proceed if its safe. Tanmoy sorted this out.

A curious case arises if the original parameter was in braces. That means that `#2` comes here a multiple letters, and the `noexpand` just looks at the first one, putting the rest in the output. Yuck.

```

4327 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4328 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4329 \ifx\\#1\\%
4330 #2\Hy@WarningNoLine{empty link? #1: #2#3}%
4331 \else
4332 \def\anchor@spot{#2#3}%
4333 \let\put@me@back\@empty
4334 \ifx\relax#2\relax
4335 \else
4336 \ifHy@nesting
4337 \else
4338 \ifcat a\noexpand#2\relax
4339 \else
4340 \ifcat 0\noexpand#2 \relax
4341 \else
4342 % \typeout{Anchor start is not alphanumeric %
4343 % on input line\the\inputlineno%
4344 % }%
4345 \let\anchor@spot\@empty
4346 \def\put@me@back{#2#3}%
4347 \fi
4348 \fi
4349 \fi
4350 \fi
4351 \ifHy@activeanchor
4352 \anchor@spot
4353 \else
4354 \hyper@anchor{#1}%
4355 \fi
4356 \expandafter\put@me@back
4357 \fi
4358 \let\anchor@spot\@empty
4359 }

```

## 18 Compatibility with the *LaTeX2html* package

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

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

```
4360 \let\htmladdimg\hyperimage
4361 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4362 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4363 \def\htmlref#1#2{% anchor text, label
4364 \label@hyperref[{#2}]{#1}%
4365 }
```

This is really too much. The *LaTeX2html* 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.

```
4366 \def\@latextohtmlX{%
4367 \let\hhyperref\hyperref
4368 \def\hyperref##1##2##3##4{% anchor text for HTML
4369 % text to print before label in print
4370 % label
4371 % post-label text in print
4372 ##2\ref{##4}##3%
4373 }%
4374 }
```

## 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.

```
4375 \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
4376 \def\HyField@NewFlag#1#2{%
4377 \lowercase{\HyField@NewOption{#2}}%
4378 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4379 }
```

```

\HyField@NewFlagOnly
4380 \def\HyField@NewFlagOnly#1#2{%
4381 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4382 }

\HyField@NewOption #1: option name
4383 \def\HyField@NewOption#1{%
4384 \expandafter\newif\csname ifFld@#1\endcsname
4385 \define@key{Field}{#1}[true]{%
4386 \lowercase{\Field@boolkey{##1}}{#1}%
4387 }%
4388 }

\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
4389 \def\HyField@NewBitsetFlag#1#2#3#4{%
4390 \begingroup
4391 \count@=#4\relax
4392 \advance\count@\m@ne
4393 \def\x##1{%
4394 \endgroup
4395 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4396 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4397 \expandafter\edef\csname HyField@#3@##1\endcsname{%
4398 (\number#4) #2%
4399 }%
4400 \else
4401 \expandafter\edef\csname HyField@#3@##1\endcsname{%
4402 \csname HyField@#3@##1\endcsname
4403 /#2%
4404 }%
4405 \fi
4406 }%
4407 \expandafter\x\expandafter{\the\count@}%
4408 }

\HyField@UseFlag The bit set is HyField@#1
4409 \def\HyField@UseFlag#1#2{%
4410 \lowercase{\HyField@@UseFlag{#2}}{#1}%
4411 }

\HyField@@UseFlag
4412 \def\HyField@@UseFlag#1#2{%
4413 \bitsetSetValue{HyField@#2}{%
4414 \csname HyField@#2@#1\endcsname
4415 }{%
4416 \csname ifFld@#1\endcsname 1\else 0\fi
4417 }%
4418 }

\HyField@SetFlag The bit set is HyField@#1
4419 \def\HyField@SetFlag#1#2{%
4420 \lowercase{\HyField@@SetFlag{#2}}{#1}%
4421 }

```

```

\HyField@@SetFlag
4422 \def\HyField@@SetFlag#1#2{%
4423 \bitsetSetValue{HyField@#2}{%
4424 \csname HyField@#2@#1\endcsname
4425 }{1}%
4426 }

\HyField@PrintFlags
4427 \def\HyField@PrintFlags#1#2{%
4428 \ifHy@verbose
4429 \begingroup
4430 \let\Hy@temp\@empty
4431 \let\MessageBreak\relax
4432 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4433 \bitsetGetSetBitList{HyField@#1}\do{%
4434 \edef\Hy@temp{%
4435 \Hy@temp
4436 \csname HyField@#1@\x\endcsname\MessageBreak
4437 }%
4438 }%
4439 \edef\x{\endgroup
4440 \noexpand\Hy@Info{%
4441 Field flags: %
4442 \expandafter\ifx\@car#1\@nil S\else/\fi
4443 #1 %
4444 \bitsetGetDec{HyField@#1} %
4445 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4446 \Hy@temp
4447 for #2%
4448 }%
4449 } \x
4450 \fi
4451 }

```

### 19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4452 \HyField@NewFlag{Ff}{ReadOnly}{1}
4453 \HyField@NewFlag{Ff}{Required}{2}
4454 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4455 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4456 \HyField@NewFlag{Ff}{Radio}{16}
4457 \HyField@NewFlag{Ff}{Pushbutton}{17}
4458 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4459 \HyField@NewFlag{Ff}{Multiline}{13}
4460 \HyField@NewFlag{Ff}{Password}{14}
4461 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4462 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4463 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4464 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4465 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4466 \HyField@NewFlag{Ff}{Combo}{18}

```

```

4467 \HyField@NewFlag{Ff}{Edit}{19}
4468 \HyField@NewFlag{Ff}{Sort}{20}
4469 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4470 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4471 \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.

```

4472 \newif\ifFld@popdown
4473 \define@key{Field}{popdown}{true}{%
4474 \lowercase{\Field@boolkey{#1}}{popdown}%
4475 }

```

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.

```

4476 \HyField@NewFlag{F}{Invisible}{1}
4477 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4478 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4479 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4480 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4481 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4482 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4483 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4484 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4485 \ifHy@pdfa
4486 \def\HyField@PDFAFflagWarning#1#2{%
4487 \Hy@Warning{%
4488 PDF/A: Annotation flag ‘#1’ must\MessageBreak
4489 be set to ‘#2’%
4490 }%
4491 }%
4492 \Fld@invisiblefalse
4493 \def\Fld@invisibletrue{%
4494 \HyField@PDFAFflagWarning{invisible}{false}%
4495 }%
4496 \Fld@hiddenfalse
4497 \def\Fld@hiddenttrue{%
4498 \HyField@PDFAFflagWarning{hidden}{false}%
4499 }%
4500 \Fld@printtrue
4501 \def\Fld@printfalse{%
4502 \HyField@PDFAFflagWarning{print}{true}%
4503 }%
4504 \Fld@nozoomtrue
4505 \def\Fld@nozoomfalse{%
4506 \HyField@PDFAFflagWarning{nozoom}{true}%
4507 }%
4508 \Fld@norotatetrue
4509 \def\Fld@norotatefalse{%
4510 \HyField@PDFAFflagWarning{norotate}{true}%
4511 }%
4512 \Fld@noviewfalse
4513 \def\Fld@noviewtrue{%

```

```

4514 \HyField@PDFAFIWarning{noview}{false}%
4515 }%
4516 \fi

```

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

```

4517 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4518 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4519 \HyField@NewFlag{Submit}{GetMethod}{4}
4520 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4521 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4522 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4523 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4524 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4525 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4526 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4527 \HyField@NewFlag{Submit}{ExclFKey}{12}
4528 \HyField@NewFlag{Submit}{EmbedForm}{14}

4529 \define@key{Field}{export}{%
4530 \lowercase{\def\Hy@temp{#1}}%
4531 \@ifundefined{Fld@export@\Hy@temp}{%
4532 \onelevel@sanitize\Hy@temp
4533 \PackageError{hyperref}{%
4534 Unknown export format '\Hy@temp'.\MessageBreak
4535 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4536 }\@ehc
4537 }{%
4538 \let\Fld@export\Hy@temp
4539 }%
4540 }
4541 \def\Fld@export{fdf}
4542 \@namedef{Fld@export@fdf}{0}%
4543 \@namedef{Fld@export@html}{1}%
4544 \@namedef{Fld@export@xfdf}{2}%
4545 \@namedef{Fld@export@pdf}{3}%

```

### 19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4546 \def\HyField@FlagsSubmit{%
4547 \bitsetReset{HyField@Submit}%
4548 \ifcase\@nameuse{Fld@export@\Fld@export} %
4549 % FDF
4550 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4551 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4552 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4553 \HyField@UseFlag{Submit}{IncludeAnnotations}%
4554 \HyField@UseFlag{Submit}{CanonicalFormat}%
4555 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4556 \HyField@UseFlag{Submit}{ExclFKey}%
4557 \HyField@UseFlag{Submit}{EmbedForm}%
4558 \or % HTML
4559 \HyField@SetFlag{Submit}{ExportFormat}%
4560 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4561 \HyField@UseFlag{Submit}{GetMethod}%
4562 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4563 \HyField@UseFlag{Submit}{CanonicalFormat}%
4564 \or % XFDF

```

```

4565 \HyField@SetFlag{Submit}{XFDF}%
4566 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4567 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4568 \HyField@UseFlag{Submit}{CanonicalFormat}%
4569 \or % PDF
4570 \HyField@SetFlag{Submit}{SubmitPDF}%
4571 \HyField@UseFlag{Submit}{GetMethod}%
4572 \fi
4573 \HyField@PrintFlags{Submit}{submit button field}%
4574 \bitsetIsEmpty{HyField@Submit}{%
4575 \def\Fld@submitflags{%
4576 }{%
4577 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4578 }%
4579 }

```

### 19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4580 \def\HyField@FlagsAnnot#1{%
4581 \bitsetReset{HyField@F}%
4582 \HyField@UseFlag{F}{Invisible}%
4583 \HyField@UseFlag{F}{Hidden}%
4584 \HyField@UseFlag{F}{Print}%
4585 \HyField@UseFlag{F}{NoZoom}%
4586 \HyField@UseFlag{F}{NoRotate}%
4587 \HyField@UseFlag{F}{NoView}%
4588 \HyField@UseFlag{F}{Locked}%
4589 \HyField@UseFlag{F}{ToggleNoView}%
4590 \HyField@UseFlag{F}{LockedContents}%
4591 \HyField@PrintFlags{F}{#1}%
4592 \bitsetIsEmpty{HyField@F}{%
4593 \def\Fld@annotflags{%
4594 }{%
4595 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4596 }%
4597 }

```

### 19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4598 \def\HyField@FlagsPushButton{%
4599 \HyField@FlagsAnnot{push button field}%
4600 \bitsetReset{HyField@Ff}%
4601 \HyField@UseFlag{Ff}{ReadOnly}%
4602 \HyField@UseFlag{Ff}{Required}%
4603 \HyField@UseFlag{Ff}{NoExport}%
4604 \HyField@SetFlag{Ff}{Pushbutton}%
4605 \HyField@PrintFlags{Ff}{push button field}%
4606 \bitsetIsEmpty{HyField@Ff}{%
4607 \def\Fld@flags{%
4608 }{%
4609 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4610 }%
4611 }

```



### 19.1.5 Check box field

\HyField@FlagsCheckBox

```
4612 \def\HyField@FlagsCheckBox{%
4613 \HyField@FlagsAnnot{check box field}%
4614 \bitsetReset{HyField@Ff}%
4615 \HyField@UseFlag{Ff}{ReadOnly}%
4616 \HyField@UseFlag{Ff}{Required}%
4617 \HyField@UseFlag{Ff}{NoExport}%
4618 \HyField@PrintFlags{Ff}{check box field}%
4619 \bitsetIsEmpty{HyField@Ff}{%
4620 \def\Fld@flags{%
4621 }{%
4622 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4623 }%
4624 }
```

### 19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4625 \def\HyField@FlagsRadioButton{%
4626 \HyField@FlagsAnnot{radio button field}%
4627 \bitsetReset{HyField@Ff}%
4628 \HyField@UseFlag{Ff}{ReadOnly}%
4629 \HyField@UseFlag{Ff}{Required}%
4630 \HyField@UseFlag{Ff}{NoExport}%
4631 \HyField@UseFlag{Ff}{NoToggleToOff}%
4632 \HyField@SetFlag{Ff}{Radio}%
4633 \HyField@UseFlag{Ff}{RadiosInUnison}%
4634 \HyField@PrintFlags{Ff}{radio button field}%
4635 \bitsetIsEmpty{HyField@Ff}{%
4636 \def\Fld@flags{%
4637 }{%
4638 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4639 }%
4640 }
```

### 19.1.7 Text fields

\HyField@FlagsText

```
4641 \def\HyField@FlagsText{%
4642 \HyField@FlagsAnnot{text field}%
4643 \bitsetReset{HyField@Ff}%
4644 \HyField@UseFlag{Ff}{ReadOnly}%
4645 \HyField@UseFlag{Ff}{Required}%
4646 \HyField@UseFlag{Ff}{NoExport}%
4647 \HyField@UseFlag{Ff}{Multiline}%
4648 \HyField@UseFlag{Ff}{Password}%
4649 \HyField@UseFlag{Ff}{FileSelect}%
4650 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4651 \HyField@UseFlag{Ff}{DoNotScroll}%
4652 \ifFld@comb
4653 \ifcase0\ifFld@multiline
4654 \else\ifFld@password
4655 \else\ifFld@fileselect
4656 \else 1\fi\fi\fi\relax
```

```

4657 \PackageError{hyperref}{%
4658 Field option 'comb' cannot used together with\MessageBreak
4659 'multiline', 'password', or 'fileselect'%
4660 } \@ehc
4661 \else
4662 \HyField@UseFlag{Ff}{Comb}%
4663 \fi
4664 \fi
4665 \HyField@UseFlag{Ff}{RichText}%
4666 \HyField@PrintFlags{Ff}{text field}%
4667 \bitsetIsEmpty{HyField@Ff}{%
4668 \def\Fld@flags{%
4669 }{%
4670 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4671 }%
4672 }

```

### 19.1.8 Choice fields

\HyField@FlagsChoice

```

4673 \def\HyField@FlagsChoice{%
4674 \HyField@FlagsAnnot{choice field}%
4675 \bitsetReset{HyField@Ff}%
4676 \HyField@UseFlag{Ff}{ReadOnly}%
4677 \HyField@UseFlag{Ff}{Required}%
4678 \HyField@UseFlag{Ff}{NoExport}%
4679 \HyField@UseFlag{Ff}{Combo}%
4680 \ifFld@combo
4681 \HyField@UseFlag{Ff}{Edit}%
4682 \fi
4683 \HyField@UseFlag{Ff}{Sort}%
4684 \HyField@UseFlag{Ff}{MultiSelect}%
4685 \ifFld@combo
4686 \ifFld@edit
4687 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4688 \fi
4689 \fi
4690 \HyField@UseFlag{Ff}{CommitOnSelChange}%
4691 \HyField@PrintFlags{Ff}{choice field}%
4692 \bitsetIsEmpty{HyField@Ff}{%
4693 \def\Fld@flags{%
4694 }{%
4695 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4696 }%
4697 }

```

## 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.

```

4698 \def\HyField@PDFChoices#1{%
4699 \begingroup
4700 \gdef\Fld@choices{%
4701 \def\HyTmp@optlist{%
4702 \let\HyTmp@optitem\relax

```

```

4703 \count@=0 %
4704 \kv@parse{#1}{%
4705 \Hy@pdfstringdef\kv@key\kv@key
4706 \ifx\kv@value\relax
4707 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4708 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4709 \else
4710 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4711 \fi
4712 \else
4713 \Hy@pdfstringdef\kv@value\kv@value
4714 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4715 \fi
4716 \edef\HyTmp@optlist{%
4717 \HyTmp@optlist
4718 \HyTmp@optitem{\the\count@}{\kv@key}0%
4719 }%
4720 \advance\count@ by 1 %
4721 \@gobbletwo
4722 }%
4723 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4724 \ifFld@multiselect
4725 \HyField@@PDFChoices{DV}\Fld@default
4726 \HyField@@PDFChoices{V}\Fld@value
4727 \else
4728 \ifx\Fld@default\relax
4729 \else
4730 \pdfstringdef\Hy@gtemp\Fld@default
4731 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4732 \fi
4733 \ifx\Fld@value\relax
4734 \else
4735 \pdfstringdef\Hy@gtemp\Fld@value
4736 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4737 \fi
4738 \fi
4739 \endgroup
4740 }

```

\HyField@@PDFChoices

```

4741 \def\HyField@@PDFChoices#1#2{%
4742 \ifx#2\relax
4743 \else
4744 \count@=0 %
4745 \def\HyTmp@optitem##1##2##3{%
4746 \def\HyTmp@key{##2}%
4747 \ifx\HyTmp@key\Hy@gtemp
4748 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4749 \HyTmp@optlist
4750 \HyTmp@optitem{##1}{##2}1%
4751 }%
4752 \let\HyTmp@found=Y%
4753 \else
4754 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4755 \HyTmp@optlist
4756 \HyTmp@optitem{##1}{##2}##3%
4757 }%

```

```

4758 \fi
4759 }%
4760 \expandafter\comma@parse\expandafter{#2}{%
4761 \pdfstringdef\Hy@gtemp\comma@entry
4762 \let\HyTmp@found=N %
4763 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4764 \HyTmp@optlist
4765 \ifx\HyTmp@found Y%
4766 \advance\count@ by 1 %
4767 \else
4768 \@onelevel@sanitize\comma@entry
4769 \PackageWarning{hyperref}{%
4770 \string\ChoiceBox: Ignoring value '\comma@entry',%
4771 \MessageBreak
4772 it cannot be found in the choices%
4773 }%
4774 \fi
4775 \@gobble
4776 }%
4777 \def\HyTmp@optitem##1##2##3{%
4778 \ifnum##3=1 %
4779 (##2)%
4780 \fi
4781 }%
4782 \ifcase\count@
4783 \or
4784 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4785 \else
4786 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4787 \ifx#1V%
4788 \def\HyTmp@optitem##1##2##3{%
4789 \ifnum##3=1 %
4790 \@firstofone{ ##1}%
4791 \fi
4792 }%
4793 \edef\HyTmp@optlist{\HyTmp@optlist}%
4794 \xdef\Fld@choices{%
4795 \Fld@choices
4796 /I[\expandafter\@firstofone\HyTmp@optlist]}%
4797 }%
4798 \fi
4799 \fi
4800 \fi
4801 }

```

## 19.3 Forms

\HyField@SetKeys

```

4802 \def\HyField@SetKeys{%
4803 \setkeys{Field}%
4804 }

4805 \newif\ifFld@checked
4806 \newif\ifFld@disabled
4807 \Fld@checkedfalse
4808 \Fld@disabledfalse
4809 \newcount\Fld@menulength

```

```

4810 \newdimen\Fld@Width
4811 \newdimen\Fld@charsize
4812 \Fld@charsize=10\p@
4813 \def\Fld@maxlen{0}
4814 \def\Fld@align{0}
4815 \def\Fld@color{0 0 0 rg}
4816 \def\Fld@bcolor{1 1 1}
4817 \def\Fld@bordercolor{1 0 0}
4818 \def\Fld@bordersep{1\p@}
4819 \def\Fld@borderwidth{1}
4820 \def\Fld@borderstyle{S}
4821 \def\Fld@cbsymbol{4}
4822 \def\Fld@radiosymbol{H}
4823 \def\Fld@rotation{0}
4824 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4825 \def\endForm{\@endForm}
4826 \newif\ifForm@html
4827 \Form@htmlfalse
4828 \def\Form@boolkey#1#2{%
4829 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4830 }
4831 \define@key{Form}{action}{%
4832 \hyper@normalise\Hy@DefFormAction{#1}%
4833 }
4834 \def\Hy@DefFormAction{\def\Form@action}
4835 \def\enc@html{html}
4836 \define@key{Form}{encoding}{%
4837 \def\Hy@tempa{#1}%
4838 \ifx\Hy@tempa\enc@html
4839 \Form@htmltrue
4840 \def\Fld@export{html}%
4841 \else
4842 \typeout{hyperref: form 'encoding' key set to #1 %
4843 -- unknown type%
4844 }%
4845 \Form@htmlfalse
4846 \fi
4847 }
4848 \define@key{Form}{method}{%
4849 \lowercase{\def\Hy@temp{#1}}%
4850 \@ifundefined{Form@method@\Hy@temp}{%
4851 \@onelevel@sanitize\Hy@temp
4852 \PackageError{hyperref}{%
4853 Unknown method '\Hy@temp'.\MessageBreak
4854 Known values are 'post' and 'get'%
4855 }\@ehc
4856 }{%
4857 \let\Form@method\Hy@temp
4858 \ifcase\@nameuse{Form@method@\Hy@temp} %
4859 \Fld@getmethodfalse
4860 \else
4861 \Fld@getmethodtrue
4862 \fi
4863 }%
4864 }
4865 \def\Form@method{}
4866 \@namedef{Form@method@post}{0}

```

```

4867 \@namedef{Form@method@get}{1}
4868 \def\Field@boolkey#1#2{%
4869 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4870 }
4871 \newtoks\Field@toks
4872 \Field@toks={ }%
4873 \def\Field@addtoks#1#2{%
4874 \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4875 \@processme
4876 }
4877 \def\Fld@checkequals#1=#2=#3\{\{%
4878 \def\@currDisplay{#1}%
4879 \ifx\#2\%
4880 \def\@currValue{#1}%
4881 \else
4882 \def\@currValue{#2}%
4883 \fi
4884 }
4885 \define@key{Field}{loc}{%
4886 \def\Fld@loc{#1}%
4887 }
4888 \define@key{Field}{checked}[true]{%
4889 \lowercase{\Field@boolkey{#1}}{checked}%
4890 }
4891 \define@key{Field}{disabled}[true]{%
4892 \lowercase{\Field@boolkey{#1}}{disabled}%
4893 }
4894 \define@key{Field}{accesskey}{%
4895 \Field@addtoks{accesskey}{#1}%
4896 }
4897 \define@key{Field}{tabkey}{%
4898 \Field@addtoks{tabkey}{#1}%
4899 }
4900 \define@key{Field}{name}{%
4901 \def\Fld@name{#1}%
4902 }
4903 \define@key{Field}{width}{%
4904 \def\Fld@width{#1}%
4905 \Field@Width#1\setbox0=\hbox{m}%
4906 }
4907 \define@key{Field}{maxlen}{%
4908 \def\Fld@maxlen{#1}%
4909 }
4910 \define@key{Field}{menulength}{%
4911 \Fld@menulength=#1\relax
4912 }
4913 \define@key{Field}{height}{%
4914 \def\Fld@height{#1}%
4915 }
4916 \define@key{Field}{charsize}{%
4917 \Fld@charsize#1%
4918 }
4919 \define@key{Field}{borderwidth}{%
4920 \def\Fld@borderwidth{#1}%
4921 }
4922 \define@key{Field}{borderstyle}{%
4923 \def\Fld@borderstyle{#1}%

```

```

4924 }
4925 \define@key{Field}{bordersep}{%
4926 \def\Fld@bordersep{#1}%
4927 }
4928 \define@key{Field}{default}{%
4929 \def\Fld@default{#1}%
4930 }
4931 \define@key{Field}{align}{%
4932 \def\Fld@align{#1}%
4933 }
4934 \define@key{Field}{value}{%
4935 \def\Fld@value{#1}%
4936 }
4937 \define@key{Field}{checkboxsymbol}{%
4938 \Fld@DingDef\Fld@cbsymbol{#1}%
4939 }
4940 \define@key{Field}{radiosymbol}{%
4941 \Fld@DingDef\Fld@radiosymbol{#1}%
4942 }
4943 \def\Fld@DingDef#1#2{%
4944 \def\Fld@temp{}%
4945 \Fld@@DingDef#2\ding{ }\@nil
4946 \let#1\Fld@temp
4947 }
4948 \def\Fld@@DingDef#1\ding{#2#3}\@nil{%
4949 \expandafter\def\expandafter\Fld@temp\expandafter{%
4950 \Fld@temp
4951 #1%
4952 }%
4953 \ifx\#3\%
4954 \expandafter\@gobble
4955 \else
4956 \begingroup
4957 \lccode'0=#2\relax
4958 \lowercase{\endgroup
4959 \expandafter\def\expandafter\Fld@temp\expandafter{%
4960 \Fld@temp
4961 0%
4962 }%
4963 }%
4964 \expandafter\@firstofone
4965 \fi
4966 {%
4967 \Fld@@DingDef#3\@nil
4968 }%
4969 }
4970 \define@key{Field}{rotation}{%
4971 \def\Fld@rotation{#1}%
4972 }
4973 \define@key{Field}{backgroundcolor}{%
4974 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4975 }
4976 \define@key{Field}{bordercolor}{%
4977 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4978 }
4979 \define@key{Field}{color}{%
4980 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%

```

```

4981 }
4982 \def\Fld@onclick@code{}
4983 \def\Fld@format@code{}
4984 \def\Fld@validate@code{}
4985 \def\Fld@calculate@code{}
4986 \def\Fld@keystroke@code{}
4987 \def\Fld@onfocus@code{}
4988 \def\Fld@onblur@code{}
4989 \def\Fld@onmousedown@code{}
4990 \def\Fld@onmouseup@code{}
4991 \def\Fld@onenter@code{}
4992 \def\Fld@onexit@code{}
4993 \def\Hy@temp#1{%
4994 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4995 }
4996 \def\Hy@@temp#1#2{%
4997 \ifHy@pdfa
4998 \define@key{Field}{#2}{%
4999 \PackageError{hyperref}{%
5000 PDF/A: Additional action ‘#2’ is prohibited%
5001 }\@ehc
5002 }%
5003 \else
5004 \define@key{Field}{#2}{%
5005 \def#1{##1}%
5006 }%
5007 \fi
5008 }
5009 \Hy@temp{keystroke}
5010 \Hy@temp{format}
5011 \Hy@temp{validate}
5012 \Hy@temp{calculate}
5013 \Hy@temp{onfocus}
5014 \Hy@temp{onblur}
5015 \Hy@temp{onenter}
5016 \Hy@temp{onexit}
5017 \def\Hy@temp#1{%
5018 \define@key{Field}{#1}{%
5019 \Field@addtoks{#1}{##1}%
5020 }%
5021 }
5022 \Hy@temp{onselect}
5023 \Hy@temp{onchange}
5024 \Hy@temp{ondblclick}
5025 \Hy@temp{onmousedown}
5026 \Hy@temp{onmouseup}
5027 \Hy@temp{onmouseover}
5028 \Hy@temp{onmousemove}
5029 \Hy@temp{onmouseout}
5030 \Hy@temp{onkeypress}
5031 \Hy@temp{onkeydown}
5032 \Hy@temp{onkeyup}
5033 \ifHy@pdfa
5034 \define@key{Field}{onclick}{%
5035 \PackageError{hyperref}{%
5036 PDF/A: Action ‘onclick’ is prohibited%
5037 }\@ehc

```



```

5038 }%
5039 \else
5040 \define@key{Field}{onclick}{%
5041 \def\Fld@onclick@code{#1}%
5042 \Field@addtoks{onclick}{#1}%
5043 }%
5044 \fi

5045 \DeclareRobustCommand\TextField{%
5046 \@ifnextchar[{\@TextField}{\@TextField[]}%
5047 }
5048 \DeclareRobustCommand\ChoiceMenu{%
5049 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5050 }
5051 \DeclareRobustCommand\CheckBox{%
5052 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5053 }
5054 \DeclareRobustCommand\PushButton{%
5055 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5056 }
5057 \DeclareRobustCommand\Gauge{%
5058 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5059 }
5060 \DeclareRobustCommand\Submit{%
5061 \@ifnextchar[{\@Submit}{\@Submit[]}%
5062 }
5063 \DeclareRobustCommand\Reset{%
5064 \@ifnextchar[{\@Reset}{\@Reset[]}%
5065 }
5066 \def\LayoutTextField#1#2{% label, field
5067 #1 #2%
5068 }
5069 \def\LayoutChoiceField#1#2{% label, field
5070 #1 #2%
5071 }
5072 \def\LayoutCheckField#1#2{% label, field
5073 #1 #2%
5074 }
5075 \def\LayoutPushButtonField#1{% button
5076 #1%
5077 }
5078 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5079 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5080 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5081 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5082 \def\MakeButtonField#1{%
5083 \sbox0{%
5084 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5085 }%
5086 \@tempdima\ht0 %
5087 \advance\@tempdima by \Fld@borderwidth bp %
5088 \advance\@tempdima by \Fld@borderwidth bp %
5089 \ht0\@tempdima
5090 \@tempdima\dp0 %
5091 \advance\@tempdima by \Fld@borderwidth bp %
5092 \advance\@tempdima by \Fld@borderwidth bp %
5093 \dp0\@tempdima
5094 \box0\relax

```

```

5095 }
5096 \def\DefaultHeightofSubmit{14pt}
5097 \def\DefaultWidthofSubmit{2cm}
5098 \def\DefaultHeightofReset{14pt}
5099 \def\DefaultWidthofReset{2cm}
5100 \def\DefaultHeightofCheckBox{\baselineskip}
5101 \def\DefaultWidthofCheckBox{\baselineskip}
5102 \def\DefaultHeightofChoiceMenu{\baselineskip}
5103 \def\DefaultWidthofChoiceMenu{\baselineskip}
5104 \def\DefaultHeightofText{\baselineskip}
5105 \def\DefaultHeightofTextMultiline{4\baselineskip}
5106 \def\DefaultWidthofText{3cm}
5107 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5108 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5109 \def\DefaultOptionsofPushButton{print}
5110 \def\DefaultOptionsofCheckBox{print}
5111 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5112 \def\DefaultOptionsofListBox{print}
5113 \def\DefaultOptionsofComboBox{print,edit,sort}
5114 \def\DefaultOptionsofPopdownBox{print}
5115 \def\DefaultOptionsofRadio{print,notoggletoo}

```

## 20 Setup

```

5116 \ifHy@figures
5117 \Hy@Info{Hyper figures ON}%
5118 \else
5119 \Hy@Info{Hyper figures OFF}%
5120 \fi
5121 \ifHy@nesting
5122 \Hy@Info{Link nesting ON}%
5123 \else
5124 \Hy@Info{Link nesting OFF}%
5125 \fi
5126 \ifHy@hyperindex
5127 \Hy@Info{Hyper index ON}%
5128 \else
5129 \Hy@Info{Hyper index OFF}%
5130 \fi
5131 \ifHy@backref
5132 \Hy@Info{backreferencing ON}%
5133 \else
5134 \Hy@Info{backreferencing OFF}%
5135 \fi
5136 \ifHy@colorlinks
5137 \Hy@Info{Link coloring ON}%
5138 \else
5139 \Hy@Info{Link coloring OFF}%
5140 \fi
5141 \ifHy@ocgcolorlinks
5142 \Hy@Info{Link coloring with OCG ON}%
5143 \else
5144 \Hy@Info{Link coloring with OCG OFF}%
5145 \fi
5146 \ifHy@pdfa

```

```

5147 \Hy@Info{PDF/A mode ON}%
5148 \else
5149 \Hy@Info{PDF/A mode OFF}%
5150 \fi

```

## 21 Low-level utility macros

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

```

5151 \edef\hyper@hash{\string#}
5152 \edef\hyper@tilde{\string~}
5153 \edef\hyper@quote{\string"}
5154 \let\@currentHref\@empty
5155 \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.

```

5156 \AfterBeginDocument{%
5157 \Hy@pdfstringtrue
5158 \PDF@SetupDoc
5159 \let\PDF@SetupDoc\@empty
5160 \Hy@DisableOption{pdfpagescrop}%
5161 \Hy@DisableOption{pdfpagemode}%
5162 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5163 \Hy@DisableOption{pdfdirection}%
5164 \Hy@DisableOption{pdfviewarea}%
5165 \Hy@DisableOption{pdfviewclip}%
5166 \Hy@DisableOption{pdfprintarea}%
5167 \Hy@DisableOption{pdfprintclip}%
5168 \Hy@DisableOption{pdfprintscaling}%
5169 \Hy@DisableOption{pdfduplex}%
5170 \Hy@DisableOption{pdfpicktraybypdfsize}%
5171 \Hy@DisableOption{pdfprintpagerange}%
5172 \Hy@DisableOption{pdfnumcopies}%
5173 \Hy@DisableOption{pdfstartview}%
5174 \Hy@DisableOption{pdfstartpage}%
5175 \Hy@DisableOption{pdftoolbar}%
5176 \Hy@DisableOption{pdfmenubar}%
5177 \Hy@DisableOption{pdfwindowui}%
5178 \Hy@DisableOption{pdfitwindow}%
5179 \Hy@DisableOption{pdfcenterwindow}%
5180 \Hy@DisableOption{pdfdisplaydoctitle}%
5181 \Hy@DisableOption{pdfpagelayout}%
5182 \Hy@DisableOption{pdflang}%
5183 \Hy@DisableOption{baseurl}%
5184 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5185 \Hy@pdfstringfalse
5186 }

```

Ignore star from referencing macros:

```

5187 \LetLtxMacro\NoHy@OrgRef\ref
5188 \DeclareRobustCommand*\ref{%
5189 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5190 }
5191 \LetLtxMacro\NoHy@OrgPageRef\pageref
5192 \DeclareRobustCommand*\pageref{%
5193 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5194 }

```

## 22 Localized nullifying of package

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

```
5195 \def\NoHyper{%
5196 \def\hyper@link@{##1}##2##3##4{##4}%
5197 \def\hyper@@anchor##1{%
5198 \global\let\hyper@livelink\hyper@link
5199 \gdef\hyper@link##1##2##3{##3}%
5200 \def\hyper@anchor##1{%
5201 \def\hyper@anchorstart##1{%
5202 \let\hyper@anchorend\@empty
5203 \def\hyper@linkstart##1##2{%
5204 \let\hyper@linkend\@empty
5205 \def\hyper@linkurl##1##2{##1}%
5206 \def\hyper@linkfile##1##2##3{##1}%
5207 \def\hyper@link@{##1}##2##3{%
5208 \let\Hy@backout\@gobble
5209 }
5210 \def\stop@hyper{%
5211 \def\hyper@link@{##1}##2##3##4{##4}%
5212 \let\Hy@backout\@gobble
5213 \def\hyper@@anchor##1{%
5214 \def\hyper@link##1##2##3{##3}%
5215 \def\hyper@anchor##1{%
5216 \def\hyper@anchorstart##1{%
5217 \let\hyper@anchorend\@empty
5218 \def\hyper@linkstart##1##2{%
5219 \let\hyper@linkend\@empty
5220 \def\hyper@linkurl##1##2{##1}%
5221 \def\hyper@linkfile##1##2##3{##1}%
5222 \def\hyper@link@{##1}##2##3{%
5223 }
5224 \def\endNoHyper{%
5225 \global\let\hyper@link\hyper@livelink
5226 }
5227 }
5228 }
5229 }
5230 \let\Hy@backout\@gobble
5231 \def\hyper@link##1##2##3{##3}%
5232 \let\hyper@anchorstart\@gobble
5233 \let\hyper@anchorend\@empty
5234 \let\hyper@linkstart\@gobbletwo
```

## 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:

```
5228 *nohyperref
5229 \RequirePackage{letltxmacro}[2008/06/13]
5230 \let\hyper@@anchor\@gobble
5231 \def\hyper@link##1##2##3{##3}%
5232 \let\hyper@anchorstart\@gobble
5233 \let\hyper@anchorend\@empty
5234 \let\hyper@linkstart\@gobbletwo
```

```

5235 \let\hyper@linkend\@empty
5236 \def\hyper@linkurl#1#2{#1}%
5237 \def\hyper@linkfile#1#2#3{#1}%
5238 \def\hyper@link@{#1}#2#3{}%
5239 \let\PDF@SetupDoc\@empty
5240 \let\PDF@FinishDoc\@empty
5241 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5242 \def\Acrobatmenu#1#2{\leavevmode#2}
5243 \let\pdfstringdefDisableCommands\@gobbletwo
5244 \let\texorpdfstring\@firstoftwo
5245 \let\pdfbookmark\@undefined
5246 \newcommand\pdfbookmark[3]{}{}
5247 \let\phantomsection\@empty
5248 \let\hypersetup\@gobble
5249 \let\hyperbaseurl\@gobble
5250 \let\href\@gobble
5251 \let\hyperdef\@gobbletwo
5252 \let\hyperlink\@gobble
5253 \let\hypertarget\@gobble
5254 \def\hyperref{%
5255 \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5256 }
5257 \long\def\@gobbleopt[#1]{}
5258 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5259 \LetLtxMacro\NoHy@OrgRef\ref
5260 \DeclareRobustCommand*\ref{%
5261 \ifstar\NoHy@OrgRef\NoHy@OrgRef
5262 }
5263 \LetLtxMacro\NoHy@OrgPageRef\pageref
5264 \DeclareRobustCommand*\pageref{%
5265 \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5266 }
5267 \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}

```

5268 *package
5269 \AfterBeginDocument{%

```

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

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

```

5270 \if@filesw
5271 \ifHy@typexml
5272 \immediate\closeout\@mainaux
5273 \immediate\openout\@mainaux\jobname.aux\relax
5274 \immediate\write\@auxout{<relaxxml>\relax}%
5275 \fi
5276 \immediate\write\@auxout{%
5277 \string\ifx\string\hyper@anchor\string\@undefined^^J%

```



```

5317 \let\HyOrg@title\title
5318 \let\HyOrg@author\author
5319 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5320 \def\Hy@scanopttitle[#1]{%
5321 \gdef\Hy@title{#1}%
5322 \HyOrg@title{#1}%
5323 }%
5324 \def\Hy@scantitle#1{%
5325 \gdef\Hy@title{#1}%
5326 \HyOrg@title{#1}%
5327 }%
5328 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5329 \def\Hy@scanoptauthor[#1]{%
5330 \gdef\Hy@author{#1}%
5331 \HyOrg@author{#1}%
5332 }%
5333 \def\Hy@scanauthor#1{%
5334 \gdef\Hy@author{#1}%
5335 \HyOrg@author{#1}%
5336 }%

```

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.

```

5337 \begingroup
5338 \def\process@me#1\@nil#2{%
5339 \expandafter\let\expandafter\x\csname @#2\endcsname
5340 \edef\y{\expandafter\strip@prefix\meaning\x}%
5341 \def\c##1##2\@nil{%
5342 \ifx\\##1\\%
5343 \else
5344 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5345 \expandafter{\x}%
5346 \fi
5347 }%
5348 \expandafter\c\y\relax#1\@nil
5349 }%
5350 \expandafter\process@me\string\@latex@\@nil{title}%
5351 \expandafter\process@me\string\@latex@\@nil{author}%
5352 \endgroup
5353 \fi
5354 \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.

```

5355 \def\Hy@UseMaketitleString#1{%
5356 \@ifundefined{Hy@#1}{-}%
5357 \begingroup
5358 \let\Hy@saved@hook\pdfstringdefPreHook
5359 \pdfstringdefDisableCommands{%
5360 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname

```

```

5361 \let\newline\\%
5362 }%
5363 \expandafter\ifx\csname @pdf#1\endcsname\@empty
5364 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5365 \csname Hy@#1\endcsname\@empty
5366 }%
5367 \fi
5368 \global\let\pdfstringdefPreHook\Hy@saved@hook
5369 \endgroup
5370 }%
5371 }
5372 \def\Hy@newline@title#1{ #1}
5373 \def\Hy@newline@author#1{, #1}
5374 \def\Hy@UseMaketitleInfos{%
5375 \Hy@UseMaketitleString{title}%
5376 \Hy@UseMaketitleString{author}%
5377 }

```

## 26 Page numbers

This stuff is done by Heiko Oberdiek.

## 27 Every page

```

5378 \RequirePackage{atbegshi}[2007/09/09]
5379 \def\Hy@EveryPageHook{}
5380 \def\Hy@EveryPageBoxHook{}
5381 \def\Hy@FirstPageHook{}
5382 \AtBeginShipout{%
5383 \Hy@EveryPageHook
5384 \ifx\Hy@EveryPageBoxHook\@empty
5385 \else
5386 \setbox\AtBeginShipoutBox=\vbox{%
5387 \offinterlineskip
5388 \Hy@EveryPageBoxHook
5389 \box\AtBeginShipoutBox
5390 }%
5391 \fi
5392 }
5393 \AtBeginShipoutFirst{%
5394 \Hy@FirstPageHook
5395 }
5396 \g@addto@macro\Hy@FirstPageHook{%
5397 \PDF@FinishDoc
5398 \gdef\PDF@FinishDoc{}}%
5399 }

```

### 27.1 PDF /PageLabels

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

```

5400 \ifHy@pagelabels
5401 \begingroup\expandafter\expandafter\expandafter\endgroup
5402 \expandafter\ifx\csname thepage\endcsname\relax
5403 \Hy@pagelabelsfalse
5404 \Hy@WarningNoLine{%
5405 Option 'pdfpagelabels' is turned off\MessageBreak

```



```

5406 because \string\thepage\space is undefined%
5407 }%
5408 \csname fi\endcsname
5409 \csname iffalse\expandafter\endcsname
5410 \fi

```

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

```

5411 \def\thispdfpagelabel#1{%
5412 \gdef\HyPL@thisLabel{#1}%
5413 }%
5414 \global\let\HyPL@thisLabel\relax

```

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

```

5415 \def\HyPL@Labels{}%

```

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

```

5416 \newcount\Hy@abspage
5417 \Hy@abspage=0 %

```

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

```

5418 \def\HyPL@LastType{init}%
5419 \def\HyPL@LastNumber{0}%
5420 \def\HyPL@LastPrefix{}%

```

Definitions for the PDF names of the L<sup>A</sup>T<sub>E</sub>X pendants.

```

5421 \def\HyPL@arabic{D}%
5422 \def\HyPL@Roman{R}%
5423 \def\HyPL@roman{r}%
5424 \def\HyPL@Alph{A}%
5425 \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.

```

5426 \def\HyPL@EveryPage{%
5427 \begingroup
5428 \ifx\HyPL@thisLabel\relax
5429 \let\HyPL@page\thepage
5430 \else
5431 \let\HyPL@page\HyPL@thisLabel
5432 \global\let\HyPL@thisLabel\relax
5433 \fi
5434 \let\HyPL@Type\relax
5435 \ifnum\the\c@page>0 %
5436 \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5437 \fi
5438 \let\Hy@temp Y%
5439 \ifx\HyPL@Type\HyPL@LastType
5440 \else
5441 \let\Hy@temp N%
5442 \fi
5443 \ifx\HyPL@Type\relax
5444 \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5445 \else
5446 \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5447 \fi
5448 \ifx\HyPL@Prefix\HyPL@LastPrefix

```

```

5449 \else
5450 \let\Hy@temp N%
5451 \fi
5452 \if Y\Hy@temp
5453 \advance\c@page by -1 %
5454 \ifnum\HyPL@LastNumber=\the\c@page\relax
5455 \else
5456 \let\Hy@temp N%
5457 \fi
5458 \Hy@StepCount\c@page
5459 \fi
5460 \if N\Hy@temp
5461 \ifx\HyPL@Type\relax
5462 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5463 \else
5464 \HyPL@StorePageLabel{%
5465 \ifx\HyPL@Prefix\@empty
5466 \else
5467 /P(\HyPL@Prefix)%
5468 \fi
5469 /S/\csname HyPL\HyPL@Type\endcsname
5470 \ifnum\the\c@page=1 %
5471 \else
5472 \space/St \the\c@page
5473 \fi
5474 }%
5475 \fi
5476 \fi
5477 \xdef\HyPL@LastNumber{\the\c@page}%
5478 \global\let\HyPL@LastType\HyPL@Type
5479 \global\let\HyPL@LastPrefix\HyPL@Prefix
5480 \endgroup
5481 \Hy@GlobalStepCount\Hy@abspage
5482 }%

```

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

```

5483 \def\HyPL@CheckThePage#1\@nil{%
5484 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5485 }%

```

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

```

5486 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5487 \def\Hy@tempa{#4}%
5488 \def\Hy@tempb{\csname\endcsname\c@page}%
5489 \ifx\Hy@tempa\Hy@tempb
5490 \expandafter\ifx\csname HyPL#3\endcsname\relax
5491 \else
5492 \def\HyPL@Type{#3}%
5493 \def\HyPL@Prefix{#2}%
5494 \fi
5495 \else
5496 \begingroup
5497 \let\Hy@next\endgroup

```

```

5498 \let\HyPL@found\@undefined
5499 \def\arabic{\HyPL@Format{arabic}}%
5500 \def\Roman{\HyPL@Format{Roman}}%
5501 \def\roman{\HyPL@Format{roman}}%
5502 \def\Alph{\HyPL@Format{Alph}}%
5503 \def\alph{\HyPL@Format{alph}}%
5504 \protected@edef\Hy@temp{#1}%
5505 \ifx\HyPL@found\relax
5506 \toks@ \expandafter{\Hy@temp}%
5507 \edef\Hy@next{\endgroup
5508 \noexpand\HyPL@@@CheckThePage\the\toks@
5509 \noexpand\HyPL@found\relax\noexpand\@nil
5510 }%
5511 \fi
5512 \Hy@next
5513 \fi
5514 }%

```

`\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`.

```

5515 \def\HyPL@Format#1#2{%
5516 \ifx\HyPL@found\@undefined
5517 \expandafter\ifx\csname c@#2\endcsname\c@page
5518 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5519 \else
5520 \expandafter\noexpand\csname#1\endcsname{#2}%
5521 \fi
5522 \else
5523 \expandafter\noexpand\csname#1\endcsname{#2}%
5524 \fi
5525 }%

```

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

```

5526 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5527 \def\Hy@tempa{#3}%
5528 \def\Hy@tempb{\HyPL@found\relax}%
5529 \ifx\Hy@tempa\Hy@tempb
5530 \def\HyPL@Type{#2}%
5531 \def\HyPL@Prefix{#1}%
5532 \fi
5533 }%

```

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

```

5534 \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`.

```

5535 \def\HyPL@Useless{0<</S/D>>}%
5536 \@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.

```

5537 \def\HyPL@SetPageLabels{%
5538 \@onelevel@sanitize\HyPL@Labels

```

```

5539 \ifx\HyPL@Labels\@empty
5540 \else
5541 \ifx\HyPL@Labels\HyPL@Useless
5542 \else
5543 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5544 \fi
5545 \fi
5546 }%

5547 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5548 \fi

```

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

```

5549 \Hy@DisableOption{pdfpagelabels}
5550 \endpackage

```

### 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

```

5551 \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.

```

5552 *vTeX
5553 \providecommand*{\XR@ext}{pdf}
5554 \edef\Hy@VTeXversion{%
5555 \ifx\VTeXversion\@undefined
5556 \z@
5557 \else
5558 \ifx\VTeXversion\relax
5559 \z@
5560 \else
5561 \VTeXversion
5562 \fi
5563 \fi
5564 }
5565 \begingroup
5566 \ifnum\Hy@VTeXversion<660 %
5567 \gdef\Hy@PutCatalog#1{%
5568 \Hy@WarningNoLine{%
5569 VTeX 6.59g or above required for pdfpagelabels%
5570 }%
5571 }%
5572 \else
5573 \gdef\Hy@PutCatalog#1{%
5574 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5575 }%
5576 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5577 \ifx\#2\%
5578 \else
5579 \immediate\special{!pdfpagelabels #2}%
5580 \fi

```

```

5581 }%
5582 \fi
5583 \endgroup
5584 \>/vtx\>
5585 \<pdf\> | \vtx\>

```

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

```

5586 \ifHy@pagelabels
5587 \def\HyPL@StorePageLabel#1{%
5588 \toks@\expandafter{\HyPL@Labels}%
5589 \xdef\HyPL@Labels{%
5590 \the\toks@
5591 \the\Hy@abspage<<#1>>%
5592 }%
5593 }%

```

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.

```

5594 \RequirePackage{atveryend}[2009/12/07]%
5595 \AtVeryEndDocument{%
5596 \HyPL@SetPageLabels
5597 }%
5598 \fi
5599 \</pdf\> | \vtx\>

```

### 27.1.2 xetex

```

5600 \<pdf\> | \vtx\>
5601 \HyPsd@LoadUnicode
5602 \Hy@unicodetrue
5603 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5604 \else
5605 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5606 \fi
5607 \HyPsd@LoadStringEncoding
5608 \define@key{Hyp}{unicode}[true]{%
5609 \Hy@boolkey{unicode}{#1}%
5610 \ifHy@unicode
5611 \else
5612 \Hy@Warning{%
5613 XeTeX driver only supports 'unicode=true'.\MessageBreak
5614 Ignoring option setting 'unicode=false'%
5615 }%
5616 \Hy@unicodetrue
5617 \fi
5618 }
5619 \define@key{Hyp}{pdfencoding}{%
5620 \edef\HyPsd@temp{#1}%
5621 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5622 \let\HyPsd@pdfencoding\HyPsd@temp
5623 \else
5624 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5625 \let\HyPsd@pdfencoding\HyPsd@temp
5626 \else
5627 \Hy@Warning{%

```

```

5628 XeTeX driver only supports 'pdfencoding=unicode|auto.%
5629 \MessageBreak
5630 Ignoring option setting 'pdfencoding=\HyPsd@temp'%
5631 }%
5632 \fi
5633 \fi
5634 }
5635 \let\HyXeTeX@CheckUnicode\relax
5636 \xetex

```

### 27.1.3 pdfmarkbase, dvipdfm, xetex

```

5637 <*pdfmarkbase>
5638 \begingroup
5639 \ifundefined{headerps@out}{%
5640 \toks@{\expandafter{\Hy@FirstPageHook}%
5641 \xdef\Hy@FirstPageHook{%
5642 \noexpand\headerps@out{%
5643 systemdict /pdfmark known%
5644 {%
5645 userdict /?pdfmark systemdict /exec get put%
5646 }{%
5647 userdict /?pdfmark systemdict /pop get put %
5648 userdict /pdfmark systemdict /cleartomark get put%
5649 }%
5650 ifelse%
5651 }%
5652 \the\toks@
5653 }%
5654 }%
5655 \endgroup
5656 </pdfmarkbase>

\Hy@PutCatalog

5657 <dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5658 <*pdfmarkbase>
5659 \def\Hy@PutCatalog#1{%
5660 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5661 }
5662 </pdfmarkbase>

5663 <*pdfmarkbase | dvipdfm | xetex>
5664 \ifHy@pagelabels

```

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

```

5665 \def\HyPL@StorePageLabel#1{%
5666 \if@filesw
5667 \begingroup
5668 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5669 \immediate\write\@mainaux{%
5670 \string\HyPL@Entry{\Hy@tempa}%
5671 }%
5672 \endgroup
5673 \fi
5674 }%

```

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.

```

5675 \AfterBeginDocument{%
5676 \if@files
5677 \immediate\write\@mainaux{%
5678 \string\providecommand\string*\string\HyPL@Entry[1]{}%
5679 }%
5680 \fi
5681 \ifx\HyPL@Labels\@empty
5682 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5683 \else
5684 \HyPL@SetPageLabels
5685 \fi
5686 \let\HyPL@Entry\@gobble
5687 }%

```

\HyPL@Entry

```

5688 \def\HyPL@Entry#1{%
5689 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5690 \HyPL@Labels
5691 #1%
5692 }%
5693 }%

5694 \fi
5695 </pdfmarkbase | dvipdfm | xetex>

5696 <*package>

5697 \MaybeStopEarly

```

## 28 Automated L<sup>A</sup>T<sub>E</sub>X 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<sup>A</sup>T<sub>E</sub>X 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

```

5698 \def\Hy@CounterExists#1{%
5699 \begingroup\expandafter\expandafter\expandafter\endgroup
5700 \expandafter\ifx\csname c@#1\endcsname\relax
5701 \expandafter\@gobble
5702 \else
5703 \begingroup\expandafter\expandafter\expandafter\endgroup
5704 \expandafter\ifx\csname the#1\endcsname\relax
5705 \expandafter\expandafter\expandafter\@gobble
5706 \else

```

```

5707 \expandafter\expandafter\expandafter\@firstofone
5708 \fi
5709 \fi
5710 }
5711 \Hy@CounterExists{section}{%
5712 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5713 }
5714 \Hy@CounterExists{part}{%
5715 \newcommand\theHpart{\arabic{part}}}%
5716 }
5717 \ifundefined{thechapter}{%
5718 \newcommand\theHsection {\arabic{section}}%
5719 \newcommand\theHfigure {\arabic{figure}}%
5720 \newcommand\theHtable {\arabic{table}}%
5721 }{%
5722 \newcommand\theHchapter {\arabic{chapter}}%
5723 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
5724 \newcommand\theHtable {\theHchapter.\arabic{table}}%
5725 \newcommand\theHsection {\theHchapter.\arabic{section}}%
5726 }
5727 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5728 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5729 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5730 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5731 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5732 \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.

```

5733 \let\H@item\item
5734 \newcounter{Item}
5735 \def\theHItem{\arabic{Item}}
5736 \def\item{%
5737 \@hyper@itemfalse
5738 \if@nmbrlist\@hyper@itemtrue\fi
5739 \H@item
5740 }
5741 \newcommand\theHenumi {\theHItem}
5742 \newcommand\theHenumii {\theHItem}
5743 \newcommand\theHenumiii {\theHItem}
5744 \newcommand\theHenumiv {\theHItem}
5745 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5746 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5747 \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.

```

5748 \let\H@refstepcounter\refstepcounter
5749 \edef\name@of@eq{equation}%
5750 \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.

```

5751 \newif\if@hyper@item
5752 \newif\if@skiphyperref

```



```

5753 \@hyper@itemfalse
5754 \@skiphyperreffalse
5755 \def\refstepcounter#1{%
5756 \ifHy@pdfstring
5757 \else
5758 \H@refstepcounter{#1}%
5759 \edef\This@name{#1}%
5760 \ifx\This@name\name@of@slide
5761 \else
5762 \if@skiphyperref
5763 \else
5764 \if@hyper@item
5765 \stepcounter{Item}%
5766 \hyper@refstepcounter{Item}%
5767 \@hyper@itemfalse
5768 \else
5769 \hyper@refstepcounter{#1}%
5770 \fi
5771 \fi
5772 \fi
5773 \fi
5774 }

```

AMS<sup>1</sup>TeX 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.

```

5775 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5776 \def\hyper@refstepcounter#1{%
5777 \edef\This@name{#1}%
5778 \ifx\This@name\name@of@eq
5779 \@ifundefined{theHequation}{%
5780 \make@stripped@name{\theequation}%
5781 \let\theHequation\newname
5782 }{}%
5783 \fi
5784 \@ifundefined{theH#1}{%
5785 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5786 }{}%
5787 \hyper@makecurrent{#1}%
5788 \ifmeasuring@
5789 \else
5790 \Hy@raisedlink{%
5791 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5792 }%
5793 \fi
5794 }

```

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`.

```

5795 \begingroup\expandafter\expandafter\expandafter\endgroup
5796 \expandafter\ifx\csname chapter\endcsname\relax
5797 \def\Hy@chapterstring{section}%

```

```

5798 \else
5799 \def\Hy@chapterstring{chapter}%
5800 \fi
5801 \def\Hy@appendixstring{appendix}
5802 \def\Hy@chapapp{\Hy@chapterstring}
5803 \let\HyOrg@appendix\appendix
5804 \def\appendix{%
5805 \@ifundefined{chapter}%
5806 {\gdef\theHsection{\Alph{section}}}%
5807 {\gdef\theHchapter{\Alph{chapter}}}%
5808 \xdef\Hy@chapapp{\Hy@appendixstring}%
5809 \HyOrg@appendix
5810 }

```

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

```

5811 \def\hyper@makecurrent#1{%
5812 \begingroup
5813 \edef\Hy@param{#1}%
5814 \ifx\Hy@param\Hy@chapterstring
5815 \let\Hy@param\Hy@chapapp
5816 \fi
5817 \ifHy@hypertextnames
5818 \let\@number\@firstofone
5819 \@ifundefined{latin@Alph}{-}{%
5820 \ifx\@Alph\greek@Alph
5821 \def\@Alph{Alph\@arabic}%
5822 \fi
5823 }%
5824 \ifx\@Alph\@Alph@bul
5825 \def\@Alph{Alph\@arabic}%
5826 \fi
5827 \ifx\@alph\@alph@bul
5828 \def\@alph{alph\@arabic}%
5829 \fi
5830 \ifHy@naturalnames
5831 \let\textlatin\@firstofone
5832 \xdef\@currentHlabel{\csname the#1\endcsname}%
5833 \else
5834 \xdef\@currentHlabel{%
5835 \csname
5836 the%
5837 \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5838 #1%
5839 \endcsname
5840 }%
5841 \fi
5842 \xdef\@currentHref{%
5843 \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5844 }%
5845 \else
5846 \Hy@GlobalStepCount\Hy@linkcounter
5847 \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5848 \fi
5849 \endgroup
5850 }

5851 \ifpackageloaded{fancyvrb}{%

```

```

5852 \@ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
5853 \def\FV@StepLineNo{%
5854 \FV@SetLineNo
5855 \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5856 \FV@StepLineNo
5857 }%
5858 }%
5859 }{-}

```

## 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`

```

5860 \AtBeginDocument{%
5861 \@ifclassloaded{revtex4}{-}%
5862 \@namedef{ver@lastpage.sty}{1994/06/25}%
5863 }{-}%
5864 \@ifpackageloaded{lastpage}{-}%
5865 \ifHy@pageanchor
5866 \else
5867 \Hy@WarningNoLine{%
5868 The \string\pageref{LastPage} link doesn't work\MessageBreak
5869 with disabled option 'pageanchor'%
5870 }%
5871 \fi
5872 \def\lastpage@putlabel{%
5873 \addtocounter{page}{-1}%
5874 \if@filesw
5875 \begingroup
5876 \let\@number\@firstofone
5877 \ifHy@pageanchor
5878 \ifHy@hypertextnames
5879 \ifHy@plainpages
5880 \def\Hy@temp{\arabic{page}}%
5881 \else
5882 \Hy@unicodefalse
5883 \pdfstringdef\Hy@temp{\thepage}%
5884 \fi
5885 \else
5886 \def\Hy@temp{\the\Hy@pagecounter}%
5887 \fi
5888 \fi
5889 \immediate\write\@auxout{%
5890 \string\newlabel
5891 {LastPage}{-}{\thepage}{-}{-}%
5892 \ifHy@pageanchor page.\Hy@temp\fi}{-}%
5893 }%
5894 \endgroup
5895 \fi

```

```

5896 \addtocounter{page}{1}%
5897 }%
5898 \@ifclassloaded{revtex4}{%
5899 \begingroup
5900 \toks@{\expandafter{\lastpage@putlabel}%
5901 \edef\x{\endgroup
5902 \def\noexpand\lastpage@putlabel{%
5903 \noexpand\stepcounter{page}%
5904 \the\toks@
5905 \noexpand\addtocounter{page}\noexpand\m@ne
5906 }%
5907 }%
5908 \x
5909 }{}%
5910 }{}%
5911 }
5912 \</package>
5913 \<*check>
5914 \checkpackage{lastpage}[1994/06/25]
5915 \checkcommand\def\lastpage@putlabel{%
5916 \addtocounter{page}{-1}%
5917 \immediate\write\@auxout{%
5918 \string\newlabel{LastPage}{\the\thepage}}%
5919 }%
5920 \addtocounter{page}{1}%
5921 }
5922 \</check>
5923 \<*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.

```

5924 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
5925 \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:

```

5926 \@ifpackageloaded{titlesec}{%
5927 \def\ttl@Hy@steplink#1{%
5928 \Hy@GlobalStepCount\Hy@linkcounter
5929 \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5930 \edef\ttl@Hy@saveanchor{%
5931 \noexpand\Hy@raisedlink{%
5932 \noexpand\hyper@anchorstart{\@currentHref}%
5933 \noexpand\hyper@anchorend
5934 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
5935 \noexpand\ttl@Hy@PatchSaveWrite
5936 }%
5937 }%
5938 }%

```

```

5939 \def\ttl@Hy@PatchSaveWrite{%
5940 \begingroup
5941 \toks@{\expandafter{\ttl@savewrite}}%
5942 \edef\x{\endgroup
5943 \def\noexpand\ttl@savewrite{%
5944 \let\noexpand\@currentHref
5945 \noexpand\ttl@Hy@SavedCurrentHref
5946 \the\toks@
5947 }%
5948 }%
5949 \x
5950 }%
5951 \def\ttl@Hy@refstepcounter#1{%
5952 \let\ttl@b\Hy@raisedlink
5953 \def\Hy@raisedlink##1{%
5954 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5955 }%
5956 \refstepcounter{#1}%
5957 \let\Hy@raisedlink\ttl@b
5958 }%
5959 }{}

```

Package titletoc support:

```

5960 \@ifpackageloaded{titletoc}{%
5961 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5962 }{}

```

## 32 Package varioref support

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

```

5963 \def\Hy@varioref@undefined{{??}{??}{-}{-}}
5964 \@ifpackageloaded{varioref}{%
5965 \def\vref@pagenum#1#2{%
5966 \@ifundefined{r@#2}{%
5967 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5968 }{}%
5969 \edef#1{\getpagerefnumber{#2}}%
5970 }%
5971 }{}

```

## 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

```

5972 \@ifpackageloaded{longtable}{%
5973 \begingroup
5974 \def\y{\LT@array}%
5975 \@ifundefined{scr@LT@array}{}{\def\y{\scr@LT@array}}%
5976 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5977 \expandafter\endgroup
5978 \expandafter\def\y[##1]##2{%

```

```

5979 \H@refstepcounter{#1}%
5980 \hyper@makecurrent{table}%
5981 \let\Hy@LT@currentHlabel\@currentHlabel
5982 \let\Hy@LT@currentHref\@currentHref
5983 #2\@sharp#####4%
5984 }%
5985 }%
5986 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
5987 \begingroup
5988 \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5989 \endgroup
5990 \def\LT@start{%
5991 #1%
5992 \let\@currentHlabel\Hy@LT@currentHlabel
5993 \let\@currentHref\Hy@LT@currentHref
5994 \Hy@raisedlink{%
5995 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5996 }%
5997 \ifvoid\LT@firsthead\copy
5998 #2%
5999 }%
6000 }%
6001 \expandafter\x\LT@start\@nil
6002 }{}

```

## 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.

```

6003 \let\new@refstepcounter\refstepcounter
6004 \let\H@equation\equation
6005 \let\H@endequation\endequation
6006 \@ifpackageloaded{amsmath}{%
6007 \long\def\Hy@temp{%
6008 \incr@eqnum
6009 \mathdisplay@push
6010 \st@rredfalse \global\@eqnswtrue
6011 \mathdisplay{equation}%
6012 }%
6013 \ifx\Hy@temp\equation
6014 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6015 \csname iftrue\endcsname
6016 \else
6017 \long\def\equation{%
6018 \mathdisplay@push
6019 \st@rredfalse \global\@eqnswtrue
6020 \mathdisplay{equation}%
6021 \incr@eqnum
6022 }%
6023 \fi
6024 \fi

```

```

6025 }{%
6026 \def\equation{%
6027 \let\refstepcounter\H@refstepcounter
6028 \H@equation
6029 \@ifundefined{theHequation}{%
6030 \make@stripped@name{\theequation}%
6031 \let\theHequation\newname
6032 }{%
6033 \hyper@makecurrent{equation}%
6034 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6035 \let\refstepcounter\new@refstepcounter
6036 }%
6037 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6038 }

```

My goodness, why can't L<sup>A</sup>T<sub>E</sub>X 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.

```

6039 \newif\if@eqnstar
6040 \@eqnstarfalse
6041 \let\H@eqnarray\eqnarray
6042 \let\H@endeqnarray\endeqnarray
6043 \def\eqnarray{%
6044 \let\Hy@reserved@a\relax
6045 \def\@currentHref{}%
6046 \H@eqnarray
6047 \if@eqnstar
6048 \else
6049 \ifx\\\@currentHref\\%
6050 \else
6051 \@ifundefined{theHequation}{%
6052 \make@stripped@name{\theequation}%
6053 \let\theHequation\newname
6054 }{%
6055 \hyper@makecurrent{equation}%
6056 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6057 }%
6058 \fi
6059 }
6060 \def\endeqnarray{%
6061 \H@endeqnarray
6062 }

```

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.

```

6063 \@namedef{eqnarray*}{%
6064 \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6065 }
6066 \@namedef{endeqnarray*}{%
6067 \nonumber\endeqnarray\@eqnstarfalse
6068 }

```

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

```

6069 \@ifundefined{subeqnarray}{%
6070 \let\H@subeqnarray\subeqnarray
6071 \let\H@endsubeqnarray\endsubeqnarray

```

```

6072 \def\subeqnarray{%
6073 \let\Hy@reserved@a\relax
6074 \H@subeqnarray
6075 \@ifundefined{theHequation}{%
6076 \make@stripped@name{\theequation}%
6077 \let\theHequation\newname
6078 }{}%
6079 \hyper@makecurrent{equation}%
6080 \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6081 }%
6082 \def\endsubeqnarray{%
6083 \H@endsubeqnarray
6084 }%
6085 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6086 }

```

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

```

6087 \def\make@stripped@name#1{%
6088 \begingroup
6089 \escapechar\m@ne
6090 \global\let\newname\@empty
6091 \protected@edef\Hy@tempa{#1}%
6092 \edef\@tempb{%
6093 \noexpand\@tfor\noexpand\Hy@tempa:=%
6094 \expandafter\strip@prefix\meaning\Hy@tempa
6095 }%
6096 \@tempb\do{%
6097 \if{\Hy@tempa\else
6098 \if}\Hy@tempa\else
6099 \xdef\newname{\newname\Hy@tempa}%
6100 \fi
6101 }%
6102 }%
6103 \endgroup
6104 }

```

Support for amsmath's subequations:

```

6105 \begingroup\expandafter\expandafter\expandafter\endgroup
6106 \expandafter\ifx\csname subequations\endcsname\relax
6107 \else
6108 \let\HyOrg@subequations\subequations
6109 \def\subequations{%
6110 \stepcounter{equation}%
6111 \protected@edef\theHparentequation{%
6112 \@ifundefined{theHequation}\theequation\theHequation
6113 }%
6114 \addtocounter{equation}{-1}%
6115 \HyOrg@subequations
6116 \def\theHequation{\theHparentequation\alph{equation}}%
6117 \ignorespaces
6118 }%
6119 \fi

```

Support for package amsthm (Daniel Müllner):

```

6120 \@ifpackageloaded{amsthm}{%
6121 \def\@thm#1#2#3{%
6122 \ifhmode
6123 \unskip\unskip\par

```



```

6124 \fi
6125 \normalfont
6126 \trivlist
6127 \let\thmheadnl\relax
6128 \let\thm@swap\@gobble
6129 \thm@notefont{\fontseries\mddefault\upshape}%
6130 \thm@headpunct{.}% add period after heading
6131 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6132 \thm@space@setup
6133 #1% style overrides
6134 \@topsep \thm@preskip % used by thm head
6135 \@topsepadd \thm@postskip % used by \@endparenv
6136 \def\dth@counter{#2}%
6137 \ifx\@empty\dth@counter
6138 \def\@tempa{%
6139 \@oparg{\@begintheorem{#3}{}}[]%
6140 }%
6141 \else
6142 \H@refstepcounter{#2}%
6143 \hyper@makecurrent{#2}%
6144 \def\@tempa{%
6145 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
6146 }%
6147 \fi
6148 \@tempa
6149 }%
6150 \dth@everypar={%
6151 \@minipagefalse
6152 \global\@newlistfalse
6153 \@noparitemfalse
6154 \if@inlabel
6155 \global\@inlabelfalse
6156 \begingroup
6157 \setbox\z@\lastbox
6158 \ifvoid\z@
6159 \kern-\itemindent
6160 \fi
6161 \endgroup
6162 \ifx\@empty\dth@counter
6163 \else
6164 \Hy@raisedlink{%
6165 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6166 }%
6167 \fi
6168 \unhbox\@labels
6169 \fi
6170 \if@nobreak
6171 \@nobreakfalse \clubpenalty\@M
6172 \else
6173 \clubpenalty\@clubpenalty \everypar{}%
6174 \fi
6175 }%
6176 }{}

```

## 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.

```
6177 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6178 \ifHy@hyperfootnotes
6179 \newcounter{Hfootnote}%
6180 \let\H@@footnotetext\@footnotetext
6181 \let\H@@footnotemark\@footnotemark
6182 \def\xfootnotenext[#1]{%
6183 \begingroup
6184 \csname c@\@mpfn\endcsname #1\relax
6185 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6186 \endgroup
6187 \ifx\@footnotetext\@mpfootnotetext
6188 \expandafter\H@@mpfootnotetext
6189 \else
6190 \expandafter\H@@footnotetext
6191 \fi
6192 }%
6193 \def\@xfootnotemark[#1]{%
6194 \begingroup
6195 \c@footnote #1\relax
6196 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6197 \endgroup
6198 \H@@footnotemark
6199 }%
6200 \let\H@@mpfootnotetext\@mpfootnotetext
6201 \long\def\@mpfootnotetext#1{%
6202 \H@@mpfootnotetext{%
6203 \ifHy@nesting
6204 \expandafter\hyper@@anchor\expandafter{%
6205 \Hy@footnote@currentHref
6206 }{#1}%
6207 \else
6208 \Hy@raisedlink{%
6209 \expandafter\hyper@@anchor\expandafter{%
6210 \Hy@footnote@currentHref
6211 }{\relax}%
6212 }#1%
6213 \fi
6214 }%
6215 }%
6216 \long\def\@footnotetext#1{%
6217 \H@@footnotetext{%
6218 \ifHy@nesting
6219 \expandafter\hyper@@anchor\expandafter{%
6220 \Hy@footnote@currentHref
6221 }{#1}%
6222 \else
6223 \Hy@raisedlink{%
6224 \expandafter\hyper@@anchor\expandafter{%
6225 \Hy@footnote@currentHref
6226 }{\relax}%

```

```

6227 }%
6228 \let\@currentHlabel\Hy@footnote@currentHlabel
6229 \let\@currentHref\Hy@footnote@currentHref
6230 \let\@currentlabelname\@empty
6231 #1%
6232 \fi
6233 }%
6234 }%

```

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.

```

6235 \def\@footnotemark{%
6236 \leavevmode
6237 \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6238 \stepcounter{Hfootnote}%
6239 \global\let\Hy@saved@currentHlabel\@currentHlabel
6240 \global\let\Hy@saved@currentHref\@currentHref
6241 \hyper@makecurrent{Hfootnote}%
6242 \global\let\Hy@footnote@currentHlabel\@currentHlabel
6243 \global\let\Hy@footnote@currentHref\@currentHref
6244 \global\let\@currentHlabel\Hy@saved@currentHlabel
6245 \global\let\@currentHref\Hy@saved@currentHref
6246 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6247 \@makefnmark
6248 \hyper@linkend
6249 \ifhmode\spacefactor\x@sf\fi
6250 \relax
6251 }%

```

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

```

6252 \@ifpackageloaded{longtable}{%
6253 \CheckCommand*\LT@p@ftntext}[1]{%
6254 \edef\@tempa{%
6255 \the\LT@p@ftn
6256 \noexpand\footnotetext[\the\c@footnote]%
6257 }%
6258 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6259 }%
6260 \long\def\LT@p@ftntext#1{%
6261 \edef\@tempa{%
6262 \the\LT@p@ftn
6263 \begingroup
6264 \noexpand\c@footnote=\the\c@footnote\relax
6265 \noexpand\protected@xdef
6266 \noexpand\@thefnmark{\noexpand\thempfn}%
6267 \noexpand\protected@xdef\noexpand\@thefnmark{%
6268 \noexpand\thempfn
6269 }%
6270 \expandafter\expandafter\expandafter\noexpand
6271 \expandafter\expandafter\expandafter\Hy@LT@footnotetext
6272 \expandafter\expandafter\expandafter{%
6273 \expandafter\Hy@footnote@currentHref\expandafter
6274 \expandafter{\Hy@footnote@currentHlabel}%

```

```

6275 }%
6276 \global\LT@p@ftn\expandafter{%
6277 \@tempa{#1}%
6278 \endgroup
6279 }%
6280 }%
6281 \long\def\Hy@LT@footnotetext#1#2#3{%
6282 \H@@@footnotetext{%
6283 \ifHy@nesting
6284 \hyper@@anchor{#1}{#3}%
6285 \else
6286 \Hy@raisedlink{%
6287 \hyper@@anchor{#1}{\relax}%
6288 }%
6289 \def\@currentHlabel{#2}%
6290 \def\@currentHref{#1}%
6291 \let\@currentlabelname\@empty
6292 #3%
6293 \fi
6294 }%
6295 }%
6296 }{}%

```

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

```

6297 \@ifpackageloaded{fancyvrb}{%
6298 \def\V@@@footnotetext{%
6299 \insert\footins\bgroup
6300 \csname reset@font\endcsname
6301 \footnotesize
6302 \interlinepenalty\interfootnotelinepenalty
6303 \splittopskip\footnotesep
6304 \splitmaxdepth\dp\strutbox
6305 \floatingpenalty \@MM
6306 \hsize\columnwidth
6307 \@parboxrestore
6308 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6309 \@makefnintext{}%
6310 \rule{\z@}{\footnotesep}%
6311 \bgroup
6312 \aftergroup\V@@@footnotetext
6313 \Hy@raisedlink{%
6314 \expandafter\hyper@@anchor\expandafter{%
6315 \Hy@footnote@currentHref
6316 }\relax}%
6317 }%
6318 \let\@currentHlabel\Hy@footnote@currentHlabel
6319 \let\@currentHref\Hy@footnote@currentHref
6320 \let\@currentlabelname\@empty
6321 \ignorespaces
6322 }%
6323 }{}%

```

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

```

6324 \def\Hy@temp#1{%
6325 \begingroup
6326 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6327 \endgroup

```

```

6328 \@@footnotemark
6329 }%
6330 \ifx\Hy@temp\footref
6331 \def\footref#1{%
6332 \begingroup
6333 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6334 \endgroup
6335 \H@@@footnotemark
6336 }%
6337 \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.

```

6338 \let\HyOrg@maketitle\maketitle
6339 \def\maketitle{%
6340 \let\Hy@saved@footnotemark\@@footnotemark
6341 \let\Hy@saved@footnotetext\@@footnotetext
6342 \let\@@footnotemark\H@@@footnotemark
6343 \let\@@footnotetext\H@@@footnotetext
6344 \@ifnextchar[\Hy@maketitle@optarg{%]
6345 \HyOrg@maketitle
6346 \Hy@maketitle@end
6347 }%
6348 }%
6349 \def\Hy@maketitle@optarg[#1]{%
6350 \HyOrg@maketitle[{#1}]%
6351 \Hy@maketitle@end
6352 }%
6353 \def\Hy@maketitle@end{%
6354 \ifx\@@footnotemark\H@@@footnotemark
6355 \let\@@footnotemark\Hy@saved@footnotemark
6356 \fi
6357 \ifx\@@footnotetext\H@@@footnotetext
6358 \let\@@footnotetext\Hy@saved@footnotetext
6359 \fi
6360 }%

```

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

```

6361 \def\realfootnote{%
6362 \@ifnextchar[\@xfootnote{%
6363 \stepcounter{\@mpfn}%
6364 \protected@xdef\@thefnmark{\thempfn}%
6365 \H@@@footnotemark\H@@@footnotetext
6366 }%
6367 }%
6368 \fi
6369 \Hy@DisableOption{hyperfootnotes}
6370 </package>
6371 <*check>
6372 \checklatex
6373 \checkcommand\def\@xfootnotenext[#1]{%
6374 \begingroup
6375 \csname c@\@mpfn\endcsname #1\relax
6376 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6377 \endgroup
6378 \@footnotetext

```

```

6379 }
6380 \checkcommand\def\@xfootnotemark[#1]{%
6381 \begingroup
6382 \c@footnote #1\relax
6383 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6384 \endgroup
6385 \@footnotemark
6386 }
6387 \checkcommand\def\@footnotemark{%
6388 \leavevmode
6389 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6390 \@makefnmark
6391 \ifhmode\spacefactor\@x@sf\fi
6392 \relax
6393 }
6394 \end{check}
6395 \end{package}

```

## 36 Float captions

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

```

6396 \def\caption{%
6397 \ifx\@capttype\@undefined
6398 \@latex@error{\noexpand\caption outside float}\@ehd
6399 \expandafter\@gobble
6400 \else
6401 \H@refstepcounter\@capttype
6402 \let\Hy@tempa\@caption
6403 \@ifundefined{float@caption}{%
6404 }{%
6405 \expandafter\ifx\csname @float@c@\@capttype\endcsname
6406 \float@caption
6407 \let\Hy@tempa\Hy@float@caption
6408 \fi
6409 }%
6410 \expandafter\@firstofone
6411 \fi
6412 {\@dblarg{\Hy@tempa\@capttype}}%
6413 }
6414 \long\def\@caption#1[#2]#3{%
6415 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6416 \csname iftrue\endcsname
6417 \global\let\@currentHref\hc@currentHref
6418 \else
6419 \hyper@makecurrent{\@capttype}%
6420 \fi
6421 \@ifundefined{NR@gettitle}{%
6422 \def\@currentlabelname{#2}%
6423 }{%
6424 \NR@gettitle{#2}%
6425 }%
6426 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6427 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6428 }%
6429 \begingroup

```

```

6430 \@parboxrestore
6431 \if@minipage
6432 \setminipage
6433 \fi
6434 \normalize
6435 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6436 \csname iftrue\endcsname
6437 \global\@capstartfalse
6438 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6439 \else
6440 \makecaption{\csname fnum@#1\endcsname}{%
6441 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6442 \ifHy@nesting
6443 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6444 \else
6445 \Hy@raisedlink{%
6446 \expandafter\hyper@@anchor\expandafter{%
6447 \@currentHref
6448 }{\relax}%
6449 }%
6450 #3%
6451 \fi
6452 }%
6453 \fi
6454 \par
6455 \endgroup
6456 }

```

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.

```

6457 \let\Hy@float@caption\@caption
6458 \ifpackageloaded{float}{%
6459 \def\Hy@float@caption{%
6460 \ifx\Hy@float@currentHref\@undefined
6461 \hyper@makecurrent{\@cuptype}%
6462 \global\let\Hy@float@currentHref\@currentHref
6463 \else
6464 \let\@currentHref\Hy@float@currentHref
6465 \fi
6466 \float@caption
6467 }%
6468 \let\HyOrg@float@makebox\float@makebox
6469 \renewcommand{\float@makebox}[1]{%
6470 \HyOrg@float@makebox{%
6471 #1\relax
6472 \ifx\Hy@float@currentHref\@undefined
6473 \else
6474 \expandafter\hyper@@anchor\expandafter{%
6475 \Hy@float@currentHref
6476 }{\relax}%
6477 \global\let\Hy@float@currentHref\@undefined
6478 \fi
6479 }%
6480 }%
6481 }{}
6482 \</package>

```

```

6483 <*check>
6484 \checklatex[1999/06/01 - 2000/06/01]
6485 \checkcommand\def\caption{%
6486 \ifx\@capttype\@undefined
6487 \@latex@error{\noexpand\caption outside float}\@ehd
6488 \expandafter\@gobble
6489 \else
6490 \refstepcounter\@capttype
6491 \expandafter\@firstofone
6492 \fi
6493 {\@dblarg{\@caption\@capttype}}}%
6494 }
6495 \checkcommand\long\def\@caption#1[#2]#3{%
6496 \par
6497 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6498 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6499 }%
6500 \begingroup
6501 \@parboxrestore
6502 \if@minipage
6503 \setminipage
6504 \fi
6505 \normalsize
6506 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6507 \endgroup
6508 }
6509 </check>
6510 <*package>

```

## 37 Bibliographic references

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

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

```

6511 \def\hyper@natlinkstart#1{%
6512 \Hy@backout{#1}%
6513 \hyper@linkstart{cite}{cite.#1}%
6514 \def\hyper@nat@current{#1}%
6515 }
6516 \def\hyper@natlinkend{%
6517 \hyper@linkend
6518 }
6519 \def\hyper@natlinkbreak#1#2{%
6520 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6521 }
6522 \def\hyper@natanchorstart#1{%
6523 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6524 }
6525 \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.

```

6526 \ifundefined{NAT@parse}{%
6527 \providecommand*\@extra@binfo{}%
6528 \providecommand*\@extra@b@citeb{}%
6529 \def\bibcite#1#2{%
6530 \@newl@bel{b}{#1\@extra@binfo}{%
6531 \hyper@link[cite]{#1\@extra@b@citeb}{#2}%
6532 }%
6533 }%
6534 \gdef\@extra@binfo{}%

```

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

```

6535 \let\Hy@bibcite\bibcite
6536 \begingroup
6537 \ifundefined{bbl@cite@choice}{%
6538 \g@addto@macro\bbl@cite@choice{%
6539 \let\bibcite\Hy@bibcite
6540 }%
6541 }%
6542 \endgroup

```

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

```

6543 \providecommand*\@BIBLABEL{\@biblabel}%
6544 \def\@bibitem[#1]#2{%
6545 \@skiphyperreftrue
6546 \H@item[%
6547 \ifx\Hy@raisedlink\@empty
6548 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6549 \@BIBLABEL{#1}%
6550 \hyper@anchorend
6551 \else
6552 \Hy@raisedlink{%
6553 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6554 }%
6555 \@BIBLABEL{#1}%
6556 \fi
6557 \hfill
6558]%
6559 \@skiphyperreffalse
6560 \if@filesw
6561 \begingroup
6562 \let\protect\noexpand
6563 \immediate\write\@auxout{%
6564 \string\bibcite{#2}{#1}%
6565 }%
6566 \endgroup
6567 \fi
6568 \ignorespaces
6569 }%

```

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

```

6570 \def\@bibitem#1{%
6571 \@skiphyperreftrue\H@item\@skiphyperreffalse
6572 \Hy@raisedlink{%

```

```

6573 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6574 }%
6575 \if@filesw
6576 \begingroup
6577 \let\protect\noexpand
6578 \immediate\write\@auxout{%
6579 \string\bibcite{#1}{\the\value{\@listctr}}}%
6580 }%
6581 \endgroup
6582 \fi
6583 \ignorespaces
6584 }%
6585 }{}

6586 \</package>
6587 \<*check>
6588 \checklatex
6589 \checkcommand\def\@lbibitem[#1]#2{%
6590 \item[\@biblabel{#1}\hfill]%
6591 \if@filesw
6592 {%
6593 \let\protect\noexpand
6594 \immediate\write\@auxout{%
6595 \string\bibcite{#2}{#1}%
6596 }%
6597 }%
6598 \fi
6599 \ignorespaces
6600 }
6601 \checkcommand\def\@bibitem#1{%
6602 \item
6603 \if@filesw
6604 \immediate\write\@auxout{%
6605 \string\bibcite{#1}{\the\value{\@listctr}}}%
6606 }%
6607 \fi
6608 \ignorespaces
6609 }
6610 \</check>
6611 \<*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.

```

6612 \@ifclassloaded{revtex}{%
6613 \Hy@Info{*** compatibility with revtex **** }%
6614 \def\revtex@checking#1#2{%
6615 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6616 \expandafter\def\csname b@#1\endcsname{#2}%
6617 \@SetMaxRnhefLabel{#1}%
6618 \expandafter\let\csname b@#1\endcsname\T@temp
6619 }%

```

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

```

6620 \@ifundefined{CITE}{\def\CITE{\cite}}{}%
6621 \providecommand*\@extra@b@citeb{}%
6622 \def\CITEX[#1]#2{%

```

```

6623 \let\@citea\@empty
6624 \leavevmode
6625 \unskip
6626 \sim
6627 \scriptstyle
6628 \@CITE{
6629 \@for\@citeb:=#2\do{
6630 \citea
6631 \def\@citea{,\penalty\@m\ }
6632 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6633 \if@filesw
6634 \immediate\write\@auxout{\string\citation{\@citeb}}%
6635 \fi
6636 \ifundefined{b@\@citeb\extra@b@citeb}{
6637 \mbox{\reset@font\bfseries ?}%
6638 \G@refundefinedtrue
6639 \latex@warning{
6640 Citation '\@citeb' on page \thepage \space undefined%
6641 }
6642 }{
6643 {\csname b@\@citeb\extra@b@citeb\endcsname}%
6644 }
6645 }
6646 }{#1}%
6647 }$%
6648 }%

```

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.

```

6649 \def\citex[#1]#2{
6650 \let\@citea\@empty
6651 \@cite{
6652 \@for\@citeb:=#2\do{
6653 \citea
6654 \def\@citea{,\penalty\@m\ }
6655 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6656 \if@filesw
6657 \immediate\write\@auxout{\string\citation{\@citeb}}%
6658 \fi
6659 \ifundefined{b@\@citeb\extra@b@citeb}{
6660 \mbox{\reset@font\bfseries ?}%
6661 \G@refundefinedtrue
6662 \latex@warning{
6663 Citation '\@citeb' on page \thepage \space undefined%
6664 }
6665 }{
6666 \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6667 }
6668 }
6669 }{#1}%
6670 }%
6671 }{}

```

### 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.

```

6672 \ifpackageloaded{harvard}{%
6673 \AtBeginDocument{%
6674 \Hy@Info{*** compatibility with harvard **** }%
6675 \Hy@raiselinksfalse
6676 \def\harvardcite#1#2#3#4{%
6677 \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
6678 \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
6679 \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
6680 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6681 }%
6682 \def\HAR@citetoaux#1{%
6683 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6684 \ifHy@backref
6685 \ifx\@empty\@currentlabel
6686 \else
6687 \@bsphack
6688 \if@filesw
6689 \protected@write\@auxout{}{%
6690 \string\@writefile{brf}{%
6691 \string\backcite{#1}{%
6692 {\thepage}{\@currentlabel}{\@currentHref}%
6693 }%
6694 }%
6695 }%
6696 \fi
6697 \@esphack
6698 \fi
6699 \fi
6700 }%
6701 \def\harvarditem{%
6702 \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6703 }%
6704 \def\@harvarditem[#1]#2#3#4#5\par{%
6705 \item[]%
6706 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6707 \if@filesw
6708 \begingroup
6709 \def\protect##1{\string ##1\space}%
6710 \ifthenelse{\equal{#1}{\null}}{%
6711 {\def\next{{#4}{#2}{#3}}}%
6712 {\def\next{{#4}{#2}{#1}{#3}}}%
6713 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6714 \endgroup
6715 \fi
6716 \protect\hspace*{-\labelwidth}%
6717 \protect\hspace*{-\labelsep}%
6718 \ignorespaces
6719 #5%
6720 \ifHy@backref
6721 \newblock
6722 \backref{\csname br@#4\endcsname}%
6723 \fi
6724 \par

```

```
6725 }%
```

\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:

```
6726 \long\def\HAR@checkcitations#1#2#3#4{%
6727 \def\HAR@tempa{\hyper@@link[cite]{#1}{#2}}%
6728 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6729 \def\HAR@tempa{\hyper@@link[cite]{#1}{#3}}%
6730 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6731 \def\HAR@tempa{\hyper@@link[cite]{#1}{#4}}%
6732 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6733 \else
6734 \@tempswatrue
6735 \fi
6736 \else
6737 \@tempswatrue
6738 \fi
6739 \else
6740 \@tempswatrue
6741 \fi
6742 }%
6743 }%

6744 }{}
```

## 37.2 Package chicago

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

```
6745 \@ifpackageloaded{chicago}{%
```

\citeN

```
6746 \def\citeN{%
6747 \def\@citesep{-1000}%
6748 \def\@cite##1##2{##1}%
6749 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6750 \@citedata@opt
6751 }%
```

\shortciteN

```
6752 \def\shortciteN{%
6753 \def\@citesep{-1000}%
6754 \def\@cite##1##2{##1}%
6755 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6756 \@citedata@opt
6757 }%
```

\@citedata@opt

```
6758 \def\@citedata@opt{%
6759 \let\@cite@opt\@empty
6760 \ifnextchar [{%
6761 \@tempswatrue
6762 \@citedatax@opt
6763 }{%
6764 \@tempswafalse
6765 \@citedatax[]%
```

```

6766 }%
6767 }%

```

\@citedatax@opt

```

6768 \def\@citedatax@opt[#1]{%
6769 \def\@cite@opt{, #1}%
6770 \@citedatax[{#1}]%
6771 }%

6772 }{}

```

## 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.

```

6773 \def\Hy@EveryPageAnchor{%
6774 \Hy@DistillerDestFix
6775 \ifHy@pageanchor
6776 \ifHy@hypertextnames
6777 \ifHy@plainpages
6778 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6779 \else
6780 \begingroup
6781 \let\@number\@firstofone
6782 \Hy@unicodedefalse
6783 \pdfstringdef\@the@H@page{\thepage}%
6784 \endgroup
6785 \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6786 \fi
6787 \else
6788 \Hy@GlobalStepCount\Hy@pagecounter
6789 \def\Hy@TempPageAnchor{%
6790 \hyper@@anchor{page.\the\Hy@pagecounter}%
6791 }%
6792 \fi
6793 \vbox to 0pt{%
6794 \kern\voffset
6795 \kern\topmargin
6796 \kern-1bp\relax
6797 \hbox to 0pt{%
6798 \kern\hoffset
6799 \kern\ifodd\value{page}%
6800 \oddsidemargin
6801 \else
6802 \evensidemargin
6803 \fi
6804 \kern-1bp\relax
6805 \Hy@TempPageAnchor
6806 \hss
6807 }%
6808 \vss
6809 }%

```

```

6810 \fi
6811 }
6812 \g@addto@macro\Hy@EveryPageBoxHook{%
6813 \Hy@EveryPageAnchor
6814 }

```

## 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.

```

6815 \def\addcontentsline#1#2#3{% toc extension, type, tag
6816 \begingroup
6817 \let\label\@gobble
6818 \ifx\@currentHref\@empty
6819 \Hy@Warning{%
6820 No destination for bookmark of \string\addcontentsline,%
6821 \MessageBreak destination is added%
6822 }%
6823 \phantomsection
6824 \fi
6825 \expandafter\ifx\csname toplevel@#2\endcsname\relax
6826 \begingroup
6827 \def\Hy@tempa{#1}%
6828 \ifx\Hy@tempa\Hy@bookmarkstype
6829 \Hy@WarningNoLine{%
6830 bookmark level for unknown #2 defaults to 0%
6831 }%
6832 \else
6833 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6834 \fi
6835 \endgroup
6836 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6837 \fi
6838 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
6839 \Hy@writebookmark{\csname the#2\endcsname}%
6840 {#3}%
6841 {\@currentHref}%
6842 {\Hy@toplevel}%
6843 {#1}%
6844 \ifHy@verbose
6845 \begingroup
6846 \def\Hy@tempa{#3}%
6847 \@onelevel@sanitize\Hy@tempa
6848 \let\temp@online\on@line
6849 \let\on@line\@empty
6850 \Hy@Info{%
6851 bookmark\temp@online:\MessageBreak
6852 thecounter {\csname the#2\endcsname}\MessageBreak
6853 text {\Hy@tempa}\MessageBreak
6854 reference {\@currentHref}\MessageBreak
6855 toplevel {\Hy@toplevel}\MessageBreak
6856 type {#1}%
6857 }%
6858 \endgroup
6859 \fi

```

```

6860 \addtocontents{#1}{%
6861 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6862 }%
6863 \endgroup
6864 }
6865 \def\contentsline#1#2#3#4{%
6866 \ifx\\#4\\%
6867 \csname l@#1\endcsname{#2}{#3}%
6868 \else
6869 \ifcase\Hy@linktoc % none
6870 \csname l@#1\endcsname{#2}{#3}%
6871 \or % section
6872 \csname l@#1\endcsname{%
6873 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6874 }{#3}%
6875 \or % page
6876 \csname l@#1\endcsname{#2}{#3}%
6877 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6878 }%
6879 \else % all
6880 \csname l@#1\endcsname{%
6881 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6882 }{%
6883 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6884 }%
6885 \fi
6886 \fi
6887 }
6888 \end{package}
6889 \end{check}
6890 \checklatex
6891 \checkcommand\def\addcontentsline#1#2#3{%
6892 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6893 }
6894 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6895 \end{check}
6896 \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.

```

6897 \let\H@definecounter\@definecounter
6898 \def\@definecounter#1{%
6899 \H@definecounter{#1}%
6900 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6901 }

```

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.

```

6902 \let\H@newctr\@newctr
6903 \def\@newctr#1[#2]{%
6904 \H@newctr#1[#2]%
6905 \expandafter\def\csname theH#1\endcsname{%
6906 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6907 }%

```



6908 }

## 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.

```

6909 \ifpackageloaded{amsmath}{%
6910 \def\Hy@make@anchor{%
6911 \Hy@GlobalStepCount\Hy@linkcounter
6912 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6913 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6914 }%
6915 \def\Hy@make@df@tag@@#1{%
6916 \gdef\df@tag{%
6917 \maketag@@@{\Hy@make@anchor#1}%
6918 \def\@currentlabel{#1}%
6919 }%
6920 }%
6921 \def\Hy@make@df@tag@@@#1{%
6922 \gdef\df@tag{%
6923 \tagform@{\Hy@make@anchor#1}%
6924 \toks@\xp{\p@equation{#1}}%
6925 \edef\@currentlabel{\the\toks@}%
6926 }%
6927 }%
6928 \let\HyOrg@make@df@tag@@\make@df@tag@@
6929 \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6930 \let\make@df@tag@@\Hy@make@df@tag@@
6931 \let\make@df@tag@@@\Hy@make@df@tag@@@
6932 }{}

```

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

```

6933 \ifpackagewith{hyperref}{pdf \TeX }{%
6934 \let\H@seteqlabel\@seteqlabel
6935 \def\@seteqlabel#1{%
6936 \H@seteqlabel{#1}%
6937 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6938 \Hy@raisedlink{%
6939 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6940 }%
6941 }%
6942 }{}

```

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.

```

6943 \let\HyOrg@addtoreset\@addtoreset
6944 \def\@addtoreset#1#2{%
6945 \HyOrg@addtoreset{#1}{#2}%
6946 \expandafter\xdef\csname theH#1\endcsname{%
6947 \expandafter\noexpand
6948 \csname the\@ifundefined{theH#2}{H#2}\endcsname
6949 .\noexpand\the\noexpand\value{#1}%
6950 }%
6951 }
```

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

```

6952 \</package>
6953 \<check>
6954 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6955 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6956 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6957 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6958 \@addtoreset{#2}{#3}%
6959 \@xp\xdef\csname the#2\endcsname{%
6960 \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6961 }%
6962 }%
6963 }%
6964 }%
6965 \</check>
6966 \<package>
6967 \@ifpackageloaded{amsmath}{%
6968 \@ifpackagelater{amsmath}{1999/12/14}{%
6969 \renewcommand*{\numberwithin}[3][\arabic]{%
6970 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6971 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6972 \HyOrg@addtoreset{#2}{#3}%
6973 \@xp\xdef\csname the#2\endcsname{%
6974 \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6975 }%
6976 \@xp\xdef\csname theH#2\endcsname{%
6977 \@xp\@nx
6978 \csname the\@ifundefined{theH#3}{H#3}\endcsname
6979 .\@nx#1{#2}%
6980 }%
6981 }%
6982 }%
6983 }%
6984 }{%
6985 \Hy@WarningNoLine{%
6986 \string\numberwithin\space of package 'amsmath' %
6987 only fixed\MessageBreak
6988 for version 2000/06/06 v2.12 or newer%
6989 }%
6990 }%
6991 }
```

## 42 Included figures

Simply intercept the low level graphics package macro.

```
6992 \ifHy@figures
6993 \let\Hy@Gin@setfile\Gin@setfile
6994 \def\Gin@setfile#1#2#3{%
6995 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6996 }%
6997 \fi
6998 \Hy@DisableOption{hyperfigures}
```

## 43 hyperindex entries

Internal command names are prefixed with \HyInd@.

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

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

```
6999 \ifHy@hyperindex
7000 \def\HyInd@ParenLeft{ }%
7001 \def\HyInd@ParenRight{ }%
7002 \def\hyperindexformat#1#2{%
7003 \let\HyOrg@hyperpage\hyperpage
7004 \let\hyperpage\@firstofone
7005 #1{\HyOrg@hyperpage{#2}}%
7006 \let\hyperpage\HyOrg@hyperpage
7007 }%
7008 \Hy@nextfalse
7009 \@ifpackageloaded{multind}{\Hy@nexttrue}{ }%
7010 \@ifpackageloaded{index}{\Hy@nexttrue}{ }%
7011 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{ }%
7012 \begingroup
7013 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7014 \lccode'\|/\|=\relax
7015 \lowercase{\endgroup
7016 \ifHy@next
7017 \let\HyInd@org@wrindex\@wrindex
7018 \def\@wrindex#1#2{\HyInd@\@wrindex{#1}{#2}||}%
7019 \def\HyInd@\@wrindex#1#2|#3|#4\|{%
7020 \ifx\|#3\|
7021 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7022 \else
7023 \HyInd@\@wrindex{#1}{#2}{#3}\|
7024 \fi
7025 }%
7026 \def\HyInd@\@wrindex#1#2#3#4\|{%
7027 \def\Hy@temp@A{#3}%
7028 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7029 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7030 \relax
7031 \HyInd@org@wrindex{#1}{%
```

```

7032 #2|hyperindexformat{/#3#4}%
7033 }%
7034 \else
7035 \ifx\\#4\\%
7036 \ifx\Hy@temp@A\HyInd@ParenRight
7037 \HyInd@org@wrindex{#1}{#2|#3}%
7038 \else
7039 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7040 \fi
7041 \else
7042 \HyInd@org@wrindex{#1}{%
7043 #2|#3hyperindexformat{/#4}%
7044 }%
7045 \fi
7046 \fi
7047 }%
7048 \else
7049 \def\@wrindex#1{\@@wrindex#1||\}%
7050 \def\@@wrindex#1|#2|#3\{\%
7051 \if@filesw
7052 \ifx\\#2\\%
7053 \protected@write\@indexfile{}\{%
7054 \string\indexentry{#1|hyperpage}\{thepage}%
7055 }%
7056 \else
7057 \HyInd@@@wrindex{#1}#2\%
7058 \fi
7059 \fi
7060 \endgroup
7061 \@esphack
7062 }%
7063 \def\HyInd@@@wrindex#1#2#3\{\%
7064 \def\Hy@temp@A{#2}%
7065 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7066 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7067 \relax
7068 \protected@write\@indexfile{}\{%
7069 \string\indexentry{%
7070 #1|hyperindexformat{/#2#3}%
7071 }\{thepage}%
7072 }%
7073 \else
7074 \ifx\\#3\\%
7075 \ifx\Hy@temp@A\HyInd@ParenRight
7076 \protected@write\@indexfile{}\{%
7077 \string\indexentry{#1|#2}\{thepage}%
7078 }%
7079 \else
7080 \protected@write\@indexfile{}\{%
7081 \string\indexentry{#1|#2hyperpage}\{thepage}%
7082 }%
7083 \fi
7084 \else
7085 \protected@write\@indexfile{}\{%
7086 \string\indexentry{%
7087 #1|#2hyperindexformat{/#3}%
7088 }\{thepage}%

```

```

7089 }%
7090 \fi
7091 \fi
7092 }%
7093 \fi
7094 }%
7095 \fi
7096 \Hy@DisableOption{hyperindex}
7097 \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.

```

7098 \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.

```

7099 \def\hyperpage#1{%
7100 \HyInd@hyperpage#1\nohyperpage{}\@nil
7101 }
7102 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7103 \HyInd@@hyperpage{#1}%
7104 #2%
7105 \def\Hy@temp{#3}%
7106 \ifx\Hy@temp\@empty
7107 \else
7108 \Hy@ReturnAfterFi{%
7109 \HyInd@hyperpage#3\@nil
7110 }%
7111 \fi
7112 }
7113 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7114 \def\@hyperpage#1--#2--#3\{\{%
7115 \ifx\#2\}%
7116 \@commahyperpage{#1}%
7117 \else
7118 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7119 \fi
7120 }
7121 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7122 \def\@commahyperpage#1, #2,#3\{\{%
7123 \ifx\#2\}%
7124 \HyInd@pagelink{#1}%
7125 \else
7126 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7127 \fi
7128 }

```

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

```

7129 \def\HyInd@pagelink#1{%
7130 \begingroup
7131 \toks@={}%
7132 \HyInd@removespaces#1 \@nil
7133 \endgroup
7134 }
7135 \def\HyInd@removespaces#1 #2\@nil{%
7136 \toks@=\expandafter{\the\toks@#1}%

```

```

7137 \ifx\#2\%
7138 \edef\x{\the\toks@}%
7139 \ifx\x\@empty
7140 \else
7141 \hyperlink{page.\the\toks@}{\the\toks@}%
7142 \fi
7143 \else
7144 \Hy@ReturnAfterFi{%
7145 \HyInd@removespaces#2\@nil
7146 }%
7147 \fi
7148 }

```

## 44 Compatibility with foiltex

```

7149 \@ifclassloaded{foils}{%
7150 \providecommand*\ext@table{lot}%
7151 \providecommand*\ext@figure{lof}%
7152 }{}

```

## 45 Compatibility with seminar slide package

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

```

7153 \@ifclassloaded{seminar}{%
7154 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7155 }{%
7156 \Hy@seminarslidesfalse
7157 }
7158 \@ifpackageloaded{slidesec}{%
7159 \newcommand\theHslidesection {\arabic{slidesection}}}%
7160 \newcommand\theHslidesubsection{%
7161 \theHslidesection.\arabic{slidesubsection}}%
7162 }%
7163 \def\slide@heading[#1]#2{%
7164 \H@refstepcounter{slidesection}%
7165 \@addtoreset{slidesubsection}{slidesection}%
7166 \addtocontents{los}{%
7167 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7168 {\@SCTR}{slideheading.\theslidesection}}%
7169 }%
7170 \def\Hy@tempa{#2}%
7171 \ifx\Hy@tempa\@empty
7172 \else
7173 {%
7174 \edef\@currentlabel{%
7175 \csname p@slidesection\endcsname\theslidesection
7176 }%
7177 \makeslideheading{#2}%
7178 }%
7179 \fi
7180 \gdef\theslideheading{#1}%
7181 \gdef\theslidesubheading{}%
7182 \ifHy@bookmarksnumbered
7183 \def\Hy@slidetitle{\theslidesection\space #1}%
7184 \else

```

```

7185 \def\Hy@slidetitle{#1}%
7186 \fi
7187 \ifHy@hypertextnames
7188 \ifHy@naturalnames
7189 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7190 \Hy@writebookmark
7191 {\theslidesection}%
7192 {\Hy@slidetitle}%
7193 {slideheading.\theslidesection}%
7194 {1}%
7195 {toc}%
7196 \else
7197 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7198 \Hy@writebookmark
7199 {\theslidesection}%
7200 {\Hy@slidetitle}%
7201 {slideheading.\theHslidesection}%
7202 {1}%
7203 {toc}%
7204 \fi
7205 \else
7206 \Hy@GlobalStepCount\Hy@linkcounter
7207 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7208 \Hy@writebookmark
7209 {\theslidesection}%
7210 {\Hy@slidetitle}%
7211 {slideheading.\the\Hy@linkcounter}%
7212 {1}%
7213 {toc}%
7214 \fi
7215 }%
7216 \def\slide@subheading[#1]#2{%
7217 \H@refstepcounter{slidesubsection}%
7218 \addtocontents{los}{%
7219 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7220 {\@SCTR}{slideheading.\theslidesubsection}%
7221 }%
7222 \def\Hy@tempa{#2}%
7223 \ifx\Hy@tempa\@empty
7224 \else
7225 {%
7226 \edef\@currentlabel{%
7227 \csname p@slidesubsection\endcsname\theslidesubsection
7228 }%
7229 \makeslidesubheading{#2}%
7230 }%
7231 \fi
7232 \gdef\theslidesubheading{#1}%
7233 \ifHy@bookmarksnumbered
7234 \def\Hy@slidetitle{\theslidesubsection\space #1}%
7235 \else
7236 \def\Hy@slidetitle{#1}%
7237 \fi
7238 \ifHy@hypertextnames
7239 \ifHy@naturalnames
7240 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7241 \Hy@writebookmark

```

```

7242 {\theslidesubsection}%
7243 {\Hy@slidetitle}%
7244 {slideheading.\theslidesubsection}%
7245 {2}%
7246 {toc}%
7247 \else
7248 \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7249 \Hy@writebookmark
7250 {\theslidesubsection}%
7251 {\Hy@slidetitle}%
7252 {slideheading.\theHslidesubsection}%
7253 {2}%
7254 {toc}%
7255 \fi
7256 \else
7257 \Hy@GlobalStepCount\Hy@linkcounter
7258 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7259 \Hy@writebookmark
7260 {\theslidesubsection}%
7261 {\Hy@slidetitle}%
7262 {slideheading.\the\Hy@linkcounter}%
7263 {1}%
7264 {toc}%
7265 \fi
7266 }%
7267 \providecommand*{\listslidenam}{List of Slides}%
7268 \def\listofslides{%
7269 \section*{%
7270 \listslidenam
7271 \@mkboth{%
7272 \expandafter\MakeUppercase\listslidenam
7273 }{%
7274 \expandafter\MakeUppercase\listslidenam
7275 }%
7276 }%
7277 \def\l@slide##1##2##3##4{%
7278 \slide@undottedcline{%
7279 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7280 }{%
7281 }%
7282 \let\l@subslide\l@slide
7283 \@startlos
7284 }%
7285 \def\slide@contents{%
7286 \def\l@slide##1##2##3##4{%
7287 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7288 }%
7289 \let\l@subslide\@gobblefour
7290 \@startlos
7291 }%
7292 \def\Slide@contents{%
7293 \def\l@slide##1##2##3##4{%
7294 \ifcase\lslide@flag
7295 \message{##1 ** \the\c@slidesection}%
7296 \ifnum##1>\c@slidesection
7297 \def\lslide@flag{1}%
7298 {%

```



```

7299 \large
7300 \slide@cline{%
7301 \slidenumberline{$\rightarrow\bullet$}%
7302 {\hyperlink{##4}{##2}}%
7303 }{##3}%
7304 }%
7305 \else
7306 {%
7307 \large
7308 \slide@cline{%
7309 \slidenumberline{$\surd\;\bullet$}%
7310 {\hyperlink{##4}{##2}}%
7311 }{##3}%
7312 }%
7313 \fi
7314 \or
7315 \def\lslide@flag{2}%
7316 {%
7317 \large
7318 \slide@cline{%
7319 \slidenumberline{\bullet}%
7320 {\hyperlink{##4}{##2}}%
7321 }{##3}%
7322 }%
7323 \or
7324 {%
7325 \large
7326 \slide@cline{%
7327 \slidenumberline{\bullet}%
7328 {\hyperlink{##4}{##2}}%
7329 }{##3}%
7330 }%
7331 \fi
7332 }%
7333 \def\l@subslide##1##2##3##4{%
7334 \ifnum\lslide@flag=1 %
7335 \undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7336 \fi
7337 }%
7338 \def\lslide@flag{0}%
7339 \@startlos
7340 }%
7341 }{}

```

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.)

```

7342 \ifHy@texht
7343 \expandafter\endinput
7344 \fi
7345 \let\real@setref\@setref
7346 \def\@setref#1#2#3{% csname, extract group, refname
7347 \ifx#1\relax
7348 \protect\G@refundefinedtrue
7349 \nfss@text{\reset@font\bfseries ??}%
7350 \@latex@warning{%
7351 Reference '#3' on page \thepage \space undefined%
7352 }%

```

```

7353 \else
7354 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7355 \fi
7356 }

```

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

```

7357 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7358 \begingroup
7359 \toks0={\hyper@@link{#5}{#4}}%
7360 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7361 \edef\x{\endgroup
7362 \the\toks0 \the\toks1 }%
7363 }%
7364 \x
7365 }
7366 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7367 \ifx#1\relax
7368 \protect\G@refundefinedtrue
7369 \nfss@text{\reset@font\bfseries ??}%
7370 \@latex@warning{%
7371 Reference '#3' on page \thepage \space undefined%
7372 }%
7373 \else
7374 \protect\hyper@@link
7375 {\expandafter\@fifthoffive#1}%
7376 {page.\expandafter\@secondoffive#1}%
7377 {\expandafter\@secondoffive#1}%
7378 \fi
7379 }
7380 \end{package}
7381 \check
7382 \checklatex
7383 \checkcommand\def\@setref#1#2#3{%
7384 \ifx#1\relax
7385 \protect\G@refundefinedtrue
7386 \nfss@text{\reset@font\bfseries ??}%
7387 \@latex@warning{%
7388 Reference '#3' on page \thepage\space undefined%
7389 }%
7390 \else
7391 \expandafter#2#1\null
7392 \fi
7393 }
7394 \end{check}
7395 \end{package}

```

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

```

7396 \def\HyRef@StarSetRef#1{%
7397 \begingroup
7398 \Hy@safe@activetrue
7399 \edef\x{#1}%
7400 \@onelevel@sanitize\x
7401 \edef\x{\endgroup
7402 \noexpand\HyRef@@StarSetRef
7403 \expandafter\noexpand\csname r@\x\endcsname{\x}%
7404 }%

```

```

7405 \x
7406 }
7407 \def\HyRef@@StarSetRef#1#2#3{%
7408 \ifx#1\@undefined
7409 \let#1\relax
7410 \fi
7411 \real@setref#1#3{#2}%
7412 }
7413 \def\@refstar#1{%
7414 \HyRef@StarSetRef{#1}\@firstoffive
7415 }
7416 \def\@pagerefstar#1{%
7417 \HyRef@StarSetRef{#1}\@secondoffive
7418 }
7419 \AtBeginDocument{%
7420 \ifpackageloaded{varioref}{%
7421 \def\@Refstar#1{%
7422 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7423 }%
7424 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7425 \MakeUppercase#1%
7426 }%
7427 \DeclareRobustCommand*\@Ref{#1}{%
7428 \ifstar\@Refstar\HyRef@Ref
7429 }%
7430 \def\HyRef@Ref#1{%
7431 \hyperref[{#1}]{\@Ref*{#1}}%
7432 }%
7433 \def\Vr@f#1{%
7434 \leavevmode\unskip\vref@space
7435 \hyperref[{#1}]{%
7436 \Ref*{#1}%
7437 \let\vref@space\nobreakspace
7438 \@vpageref{\unskip}{#1}%
7439 }%
7440 }%
7441 \def\vr@f#1{%
7442 \leavevmode\unskip\vref@space
7443 \begingroup
7444 \let\T@pageref\@pagerefstar
7445 \hyperref[{#1}]{%
7446 \ref*{#1}%
7447 \vpageref{\unskip}{#1}%
7448 }%
7449 \endgroup
7450 }%
7451 }{}%
7452 }
7453 \DeclareRobustCommand*\@autopageref{%
7454 \ifstar{%
7455 \HyRef@autopagerefname\pageref*%
7456 }\HyRef@autopageref
7457 }
7458 \def\HyRef@autopageref#1{%
7459 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7460 }
7461 \def\HyRef@autopagerefname{%

```

```

7462 \@ifundefined{pageautorefname}{%
7463 \@ifundefined{pagename}{%
7464 \Hy@Warning{No autoref name for 'page'}%
7465 }{%
7466 \pagename\nobreakspace
7467 }%
7468 }{%
7469 \pageautorefname\nobreakspace
7470 }%
7471 }
7472 \DeclareRobustCommand*{\autoref}{%
7473 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7474 }
7475 \def\HyRef@autoref#1#2{%
7476 \begingroup
7477 \Hy@safe@activetrue
7478 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7479 \endgroup
7480 }
7481 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7482 \HyRef@ShowKeysRef{#2}%
7483 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7484 \edef\HyRef@thisref{%
7485 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7486 }%
7487 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7488 \Hy@safe@activetrue
7489 #3{%
7490 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7491 }{%
7492 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7493 }{%
7494 \HyRef@currentHtag
7495 \expandafter\@firstoffive#1\@empty\@empty\@empty
7496 \null
7497 }%
7498 \else
7499 \protect\G@refundefinedtrue
7500 \nfss@text{\reset@font\bfseries ??}%
7501 \@latex@warning{%
7502 Reference '#2' on page \thepage\space undefined%
7503 }%
7504 \fi
7505 }
7506 \def\HyRef@testreftype#1.#2\.%
7507 \@ifundefined{#1autorefname}{%
7508 \@ifundefined{#1name}{%
7509 \HyRef@StripStar#1*\@nil{#1}%
7510 \@ifundefined{\HyRef@name autorefname}{%
7511 \@ifundefined{\HyRef@name name}{%
7512 \def\HyRef@currentHtag{}%
7513 \Hy@Warning{No autoref name for '#1'}%
7514 }{%
7515 \edef\HyRef@currentHtag{%
7516 \expandafter\noexpand\csname\HyRef@name name\endcsname
7517 \noexpand~%
7518 }%

```

```

7519 }%
7520 }{%
7521 \edef\HyRef@currentHtag{%
7522 \expandafter\noexpand
7523 \csname\HyRef@name autorefname\endcsname
7524 \noexpand~%
7525 }%
7526 }%
7527 }{%
7528 \edef\HyRef@currentHtag{%
7529 \expandafter\noexpand\csname#1name\endcsname
7530 \noexpand~%
7531 }%
7532 }%
7533 }{%
7534 \edef\HyRef@currentHtag{%
7535 \expandafter\noexpand\csname#1autorefname\endcsname
7536 \noexpand~%
7537 }%
7538 }%
7539 }
7540 \def\HyRef@StripStar#1*\#2\@nil#3{%
7541 \def\HyRef@name{#2}%
7542 \ifx\HyRef@name\HyRef@CaseStar
7543 \def\HyRef@name{#1}%
7544 \else
7545 \def\HyRef@name{#3}%
7546 \fi
7547 }
7548 \def\HyRef@CaseStar{*\\}
7549 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7550 \let\HyRef@ShowKeysRef\@gobble
7551 \def\HyRef@ShowKeysInit{%
7552 \begingroup\expandafter\expandafter\expandafter\endgroup
7553 \expandafter\ifx\csname SK@@label\endcsname\relax
7554 \else
7555 \ifx\SK@ref\@empty
7556 \else
7557 \def\HyRef@ShowKeysRef{%
7558 \SK@\SK@@ref
7559 }%
7560 \fi
7561 \fi
7562 }
7563 \@ifpackageloaded{showkeys}{%
7564 \HyRef@ShowKeysInit
7565 }{%
7566 \AtBeginDocument{%
7567 \@ifpackageloaded{showkeys}{%
7568 \HyRef@ShowKeysInit
7569 }{}%
7570 }%
7571 }

```

Defaults for the names that \autoref uses.

```

7572 \providecommand* \AMSautorefname { \equationautorefname }
7573 \providecommand* \Hfootnoteautorefname { \footnoteautorefname }
7574 \providecommand* \Itemautorefname { \itemautorefname }
7575 \providecommand* \itemautorefname { item }
7576 \providecommand* \equationautorefname { Equation }
7577 \providecommand* \footnoteautorefname { footnote }
7578 \providecommand* \itemautorefname { item }
7579 \providecommand* \figureautorefname { Figure }
7580 \providecommand* \tableautorefname { Table }
7581 \providecommand* \partautorefname { Part }
7582 \providecommand* \appendixautorefname { Appendix }
7583 \providecommand* \chapterautorefname { chapter }
7584 \providecommand* \sectionautorefname { section }
7585 \providecommand* \subsectionautorefname { subsection }
7586 \providecommand* \subsubsectionautorefname { subsubsection }
7587 \providecommand* \paragraphautorefname { paragraph }
7588 \providecommand* \subparagraphautorefname { subparagraph }
7589 \providecommand* \FancyVerbLineautorefname { line }
7590 \providecommand* \theoremautorefname { Theorem }
7591 \providecommand* \pageautorefname { page }
7592 \endpackage

```

## 46 Configuration files

### 46.1 PS/PDF strings

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

\Hy@pstringdef Therefore such strings should be passed through \Hy@pstringdef. The first argument holds a macro for the result, the second argument is the string that needs protecting. Since version 1.30.0 pdf<sub>T</sub>EX offers \pdfescapestring.

```

7593 < *pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo >
7594 \RequirePackage { pdfTeXcmds } [2009 / 04 / 10]
7595 \begingroup \expandafter \expandafter \expandafter \endgroup
7596 \expandafter \ifx \cscname pdf@escapestring \endcscname \relax
7597 \begingroup
7598 \catcode \backslash = 0 %
7599 \makeother \backslash %
7600 | @firstofone { | \endgroup
7601 | def | Hy@pstringdef #1 #2 { %
7602 | \begingroup
7603 | \edef ~ { | string ~ } %
7604 | \xdef | Hy@gtemp { #2 } %
7605 | \endgroup
7606 | let #1 | Hy@gtemp
7607 | @onelevel @sanitize #1 %
7608 | \edef #1 { | \expandafter | Hy@ExchangeBackslash #1 \backslash | @nil } %
7609 | \edef #1 { | \expandafter | Hy@ExchangeLeftParenthesis #1 (| @nil } %
7610 | \edef #1 { | \expandafter | Hy@ExchangeRightParenthesis #1) | @nil } %
7611 } %
7612 | def | Hy@ExchangeBackslash #1 \backslash #2 | @nil { %
7613 #1 %

```

```

7614 |ifx|\#2|\%%
7615 |else
7616 \\\%
7617 |Hy@ReturnAfterFi{%
7618 |Hy@ExchangeBackslash#2|@nil
7619 }%
7620 |fi
7621 }%
7622 }%
7623 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7624 #1%
7625 \ifx\#2\\%
7626 \else
7627 \@backslashchar(%
7628 \Hy@ReturnAfterFi{%
7629 \Hy@ExchangeLeftParenthesis#2\@nil
7630 }%
7631 \fi
7632 }%
7633 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7634 #1%
7635 \ifx\#2\\%
7636 \else
7637 \@backslashchar)%
7638 \Hy@ReturnAfterFi{%
7639 \Hy@ExchangeRightParenthesis#2\@nil
7640 }%
7641 \fi
7642 }%
7643 \else
7644 \def\Hy@pstringdef#1#2{%
7645 \begingroup
7646 \edef~{\string~}%
7647 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7648 \endgroup
7649 \let#1\Hy@gtemp
7650 }%
7651 \fi
7652 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

## 46.2 pdfTeX

```

7653 <*pdfTeX>
7654 \providecommand*{\XR@ext}{pdf}
7655 \Hy@setbreaklinks{true}

```

This driver is for Han The Thanh's T<sub>E</sub>X 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<sub>E</sub>X 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT<sub>E</sub>X 1.30, 2005-08-08: `\pdfminorversion`

```

7656 \let\Hy@pdfminorversion\relax
7657 \begingroup\expandafter\expandafter\expandafter\endgroup
7658 \expandafter\ifx\cname pdfminorversion\endcname\relax
7659 \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

7660 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
7661 \else
7662 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7663 \fi
7664 \else
7665 \def\Hy@pdfminorversion{\pdfminorversion}%
7666 \fi
7667 \@ifundefined{Hy@pdfminorversion}{%
7668 \PackageInfo{hyperref}{%
7669 PDF version is not set, because pdfTeX is too old (<1.10a)%
7670 }%
7671 }{%
7672 \ifHy@ocgcolorlinks
7673 \ifnum\Hy@pdfminorversion<5 %
7674 \setkeys{Hyp}{pdfversion=1.5}%
7675 \fi
7676 \fi
7677 \ifHy@setpdfversion
7678 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7679 \else
7680 \Hy@pdfminorversion=\Hy@pdfversion\relax
7681 \fi
7682 \PackageInfo{hyperref}{%
7683 \expandafter\string\Hy@pdfminorversion
7684 :=\number\Hy@pdfversion\space
7685 }%
7686 \fi
7687 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7688 }
7689 \Hy@DisableOption{pdfversion}%

7690 \ifHy@ocgcolorlinks
7691 \immediate\pdfobj{%
7692 <<%
7693 /Type/OCG%
7694 /Name(View)%
7695 /Usage<<%
7696 /Print<<%
7697 /PrintState/OFF%
7698 >>%
7699 /View<<%
7700 /ViewState/ON%
7701 >>%
7702 >>%
7703 >>%
7704 }%
7705 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7706 \immediate\pdfobj{%
7707 <<%
7708 /Type/OCG%
7709 /Name(Print)%
7710 /Usage<<%
7711 /Print<<%
7712 /PrintState/ON%
7713 >>%
7714 /View<<%
7715 /ViewState/OFF%
7716 >>%

```



```

7717 >>%
7718 >>%
7719 }%
7720 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7721 \immediate\pdfobj{%
7722 [%
7723 \OBJ@OCG@view\space\OBJ@OCG@print
7724]%
7725 }%
7726 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7727 \pdfcatalog{%
7728 /OCProperties<<%
7729 /OCGs \OBJ@OCGs
7730 /D<<%
7731 /OFF[\OBJ@OCG@print]%
7732 /AS[%
7733 <<%
7734 /Event/View%
7735 /OCGs \OBJ@OCGs
7736 /Category[/View]%
7737 >>%
7738 <<%
7739 /Event/Print%
7740 /OCGs \OBJ@OCGs
7741 /Category[/Print]%
7742 >>%
7743 <<%
7744 /Event/Export%
7745 /OCGs \OBJ@OCGs
7746 /Category[/Print]%
7747 >>%
7748]%
7749 >>%
7750 >>%
7751 }%
7752 \begingroup
7753 \edef\x{\endgroup
7754 \pdfpageresources{%
7755 /Properties<<%
7756 /OCView \OBJ@OCG@view
7757 /OCPrint \OBJ@OCG@print
7758 >>%
7759 }%
7760 }%
7761 \x
7762 \AtBeginDocument{%
7763 \def\Hy@colorlink#1{%
7764 \begingroup
7765 \ifHy@ocgcolorlinks
7766 \def\Hy@ocgcolor{#1}%
7767 \setbox0=\color@hbox
7768 \else
7769 \HyColor@UseColor#1%
7770 \fi
7771 }%
7772 \def\Hy@endcolorlink{%
7773 \ifHy@ocgcolorlinks

```

```

7774 \color@endbox
7775 \mbox{%
7776 \pdfliteral page{/OC/OCPrint BDC}%
7777 \rlap{\copy0}%
7778 \pdfliteral page{EMC/OC/OCView BDC}%
7779 \begingroup
7780 \expandafter\HyColor@UseColor\Hy@ocgcolor
7781 \box0 %
7782 \endgroup
7783 \pdfliteral page{EMC}%
7784 }%
7785 \fi
7786 \endgroup
7787 }%
7788 }%
7789 \else
7790 \Hy@DisableOption{ocgcolorlinks}%
7791 \fi

```

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

```

7792 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7793 \ifx\pdfstartlink\@undefined% less than version 14
7794 \let\pdfstartlink\pdfannotlink
7795 \let\pdfinkmargin\@tempdima
7796 \let\pdfxform\pdfform
7797 \let\pdfastxform\pdfastform
7798 \let\pdfrefxform\pdfrefform
7799 \else
7800 \pdfinkmargin1pt %
7801 \fi

```

First set up the default linking

```

7802 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

7803 \def\new@pdfink#1{%
7804 \Hy@SaveLastskip
7805 \Hy@VerboseAnchor{#1}%
7806 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7807 \Hy@DestName\Hy@pstringDest\@pdfview
7808 \Hy@RestoreLastskip
7809 }
7810 \let\pdf@endanchor\@empty

```

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

```

7811 \def\Hy@DestName#1#2{%
7812 \pdfdest name{#1}#2\relax
7813 }

```

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.

```

7814 \providecommand*\@pdfborder{0 0 1}
7815 \providecommand*\@pdfborderstyle{}
7816 \def\Hy@undefinedname{UNDEFINED}
7817 \def\find@pdfink#1#2{%

```

```

7818 \leavevmode
7819 \protected@edef\Hy@testname{#2}%
7820 \ifx\Hy@testname\@empty
7821 \Hy@Warning{%
7822 Empty destination name,\MessageBreak
7823 using '\Hy@undefinedname'%
7824 }%
7825 \let\Hy@testname\Hy@undefinedname
7826 \else
7827 \Hy@pstringdef\Hy@testname{%
7828 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7829 }%
7830 \fi
7831 \Hy@StartlinkName{%
7832 \ifHy@pdfa /F 4\fi
7833 \Hy@setpdfborder
7834 \ifx\@pdfhighlight\@empty
7835 \else
7836 /H\@pdfhighlight
7837 \fi
7838 \ifx\CurrentBorderColor\relax
7839 \else
7840 /C[\CurrentBorderColor]%
7841 \fi
7842 } \Hy@testname
7843 \expandafter\Hy@colorlink\csname @#1color\endcsname
7844 }
7845 \def\Hy@StartlinkName#1#2{%
7846 \pdfstartlink attr{#1}goto name{#2}\relax
7847 }
7848 \def\close@pdfink{%
7849 \Hy@endcolorlink
7850 \pdfendlink
7851 }
7852 \def\hyper@anchor#1{%
7853 \new@pdfink{#1}\anchor@spot\pdf@endanchor
7854 }
7855 \def\hyper@anchorstart#1{%
7856 \new@pdfink{#1}%
7857 \Hy@activeanchortrue
7858 }
7859 \def\hyper@anchorend{%
7860 \pdf@endanchor
7861 \Hy@activeanchorfalse
7862 }
7863 \def\hyper@linkstart#1#2{%
7864 \Hy@VerboseLinkStart{#1}{#2}%
7865 \@ifundefined{@#1bordercolor}{%
7866 \let\CurrentBorderColor\relax
7867 }{%
7868 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7869 }%
7870 \find@pdfink{#1}{#2}%
7871 }
7872 \def\hyper@linkend{\close@pdfink}
7873 \def\hyper@link#1#2#3{%
7874 \Hy@VerboseLinkStart{#1}{#2}%

```

```

7875 \@ifundefined{@#1bordercolor}{%
7876 \let\CurrentBorderColor\relax
7877 }{%
7878 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7879 }%
7880 \find@pdfink{#1}{#2}#3%
7881 \close@pdfink
7882 }
7883 \let\CurrentBorderColor\@linkbordercolor
7884 \def\hyper@linkurl#1#2{%
7885 \begingroup
7886 \Hy@pstringdef\Hy@pstringURI{#2}%
7887 \hyper@chars
7888 \leavevmode
7889 \pdfstartlink
7890 attr{%
7891 \Hy@setpdfborder
7892 \ifx\@pdfhighlight\@empty
7893 \else
7894 /H\@pdfhighlight
7895 \fi
7896 \ifx\@urlbordercolor\relax
7897 \else
7898 /C[\@urlbordercolor]%
7899 \fi
7900 }%
7901 user{%
7902 /Subtype/Link%
7903 \ifHy@pdfa /F 4\fi
7904 /A<<%
7905 /Type/Action%
7906 /S/URI%
7907 /URI(\Hy@pstringURI)%
7908 >>%
7909 }%
7910 \relax
7911 \Hy@colorlink\@urlcolor#1%
7912 \close@pdfink
7913 \endgroup
7914 }
7915 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7916 \begingroup
7917 \Hy@pstringdef\Hy@pstringF{#2}%
7918 \Hy@pstringdef\Hy@pstringD{#3}%
7919 \leavevmode
7920 \pdfstartlink
7921 attr{%
7922 \Hy@setpdfborder
7923 \ifx\@pdfhighlight\@empty
7924 \else
7925 /H\@pdfhighlight
7926 \fi
7927 \ifx\@filebordercolor\relax
7928 \else
7929 /C[\@filebordercolor]%
7930 \fi
7931 }%

```

```

7932 user {%
7933 /Subtype/Link%
7934 \ifHy@pdfa /F 4\fi
7935 /A<<%
7936 /F(\Hy@pstringF)%
7937 /S/GoToR%
7938 \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}

```

```

7939 \ifx\#3\%
7940 /D[0 \@pdfstartview]%
7941 \else
7942 /D(\Hy@pstringD)%
7943 \fi
7944 >>%
7945 }%
7946 \relax
7947 \Hy@colorlink\@filecolor#1%
7948 \close@pdfink
7949 \endgroup
7950 }
7951 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7952 \begingroup
7953 \Hy@pstringdef\Hy@pstringF{#1}%
7954 \Hy@pstringdef\Hy@pstringP{#3}%
7955 \leavevmode
7956 \pdfstartlink
7957 attr{%
7958 \Hy@setpdfborder
7959 \ifx\@pdfhighlight\@empty
7960 \else
7961 /H\@pdfhighlight
7962 \fi
7963 \ifx\@runbordercolor\relax
7964 \else
7965 /C[\@runbordercolor]%
7966 \fi
7967 }%
7968 user {%
7969 /Subtype/Link%
7970 \ifHy@pdfa /F 4\fi
7971 /A<<%
7972 /F(\Hy@pstringF)%
7973 /S/Launch%
7974 \Hy@SetNewWindow
7975 \ifx\#3\%
7976 \else
7977 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%

```

```

7978 \fi
7979 >>%
7980 }%
7981 \relax
7982 \Hy@colorlink\@runcolor#2%
7983 \close@pdflink
7984 \endgroup
7985 }

```

\@pdfproducer

```

7986 \ifx\@pdfproducer\relax
7987 \begingroup\expandafter\expandafter\expandafter\endgroup
7988 \expandafter\ifx\csname luatexversion\endcsname\relax
7989 \def\@pdfproducer{pdfTeX}%
7990 \ifx\eTeXversion\@undefined
7991 \else
7992 \ifx\eTeXversion\relax
7993 \else
7994 \ifnum\eTeXversion>0 %
7995 \def\@pdfproducer{pdfTeX}%
7996 \fi
7997 \fi
7998 \fi
7999 \ifx\pdfTeXversion\@undefined
8000 \else
8001 \ifnum\pdfTeXversion<100 %
8002 \edef\@pdfproducer{%
8003 \@pdfproducer
8004 \the\pdfTeXversion.\pdfTeXrevision
8005 }%
8006 \else
8007 \ifnum\pdfTeXversion<130 %
8008 \edef\@pdfproducer{%
8009 \@pdfproducer-%
8010 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8011 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8012 \pdfTeXrevision
8013 }%
8014 \else
8015 \ifnum\pdfTeXversion<140 %
8016 \else
8017 \def\@pdfproducer{pdfTeX}%
8018 \fi
8019 \edef\@pdfproducer{%
8020 \@pdfproducer-%
8021 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8022 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8023 \pdfTeXrevision
8024 }%
8025 \fi
8026 \fi
8027 \fi
8028 \else
8029 \begingroup
8030 \count@=\luatexversion
8031 \divide\count@ by 100 %
8032 \edef\x{\the\count@}%

```

```

8033 \count@=-\x\relax
8034 \multiply\count@ by 100 %
8035 \advance\count@ by \luatexversion
8036 \edef\x{\endgroup
8037 \def\noexpand\@pdfproducer{%
8038 LuaTeX-\x.\the\count@.\luatexrevision
8039 }%
8040 }%
8041 \x
8042 \fi
8043 \fi

```

\PDF@SetupDox

```

8044 \def\PDF@SetupDoc{%
8045 \ifx\@pdfpagescrop\@empty
8046 \else
8047 \edef\process@me{%
8048 \pdfpagesattr={%
8049 /CropBox[\@pdfpagescrop]%
8050 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
8051 \else
8052 ^^Jthe\pdfpagesattr
8053 \fi
8054 }%
8055 }%
8056 \process@me
8057 \fi
8058 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8059 \pdfcatalog{%
8060 /PageMode/\@pdfpagemode
8061 \ifx\@baseurl\@empty
8062 \else
8063 /URI<</Base(\Hy@pstringB)>>%
8064 \fi
8065 }%
8066 \ifx\@pdfstartpage\@empty
8067 \else
8068 \ifx\@pdfstartview\@empty
8069 \else
8070 openaction goto page\@pdfstartpage{\@pdfstartview}%
8071 \fi
8072 \fi
8073 \edef\Hy@temp{%
8074 \ifHy@toolbar\else /HideToolbar true\fi
8075 \ifHy@menubar\else /HideMenubar true\fi
8076 \ifHy>windowui\else /HideWindowUI true\fi
8077 \ifHy@fitwindow /FitWindow true\fi
8078 \ifHy@centerwindow /CenterWindow true\fi
8079 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8080 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8081 \Hy@UseNameKey{Direction}\@pdfdirection
8082 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8083 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8084 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8085 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8086 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8087 \Hy@UseNameKey{Duplex}\@pdfduplex

```

```

8088 \ifx\@pdfpicktraybypdfsize\@empty
8089 \else
8090 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8091 \fi
8092 \ifx\@pdfprintpagerange\@empty
8093 \else
8094 /PrintPageRange[\@pdfprintpagerange]%
8095 \fi
8096 \ifx\@pdfnumcopies\@empty
8097 \else
8098 /NumCopies \@pdfnumcopies
8099 \fi
8100 }%
8101 \pdfcatalog{%
8102 \ifx\Hy@temp\@empty
8103 \else
8104 /ViewerPreferences<<\Hy@temp>>%
8105 \fi
8106 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8107 \ifx\@pdflang\@empty
8108 \else
8109 /Lang(\@pdflang)%
8110 \fi
8111 }%
8112 }

```

\PDF@FinishDoc

```

8113 \def\PDF@FinishDoc{%
8114 \Hy@UseMaketitleInfos
8115 \HyInfo@GenerateAddons
8116 \pdfinfo{%
8117 /Author(\@pdfauthor)%
8118 /Title(\@pdftitle)%
8119 /Subject(\@pdfsubject)%
8120 /Creator(\@pdfcreator)%
8121 \ifx\@pdfcreationdate\@empty
8122 \else
8123 /CreationDate(\@pdfcreationdate)%
8124 \fi
8125 \ifx\@pdfmoddate\@empty
8126 \else
8127 /ModDate(\@pdfmoddate)%
8128 \fi
8129 \ifx\@pdfproducer\relax
8130 \else
8131 /Producer(\@pdfproducer)%
8132 \fi
8133 /Keywords(\@pdfkeywords)%
8134 \ifx\@pdftrapped\@empty
8135 \else
8136 /Trapped/\@pdftrapped
8137 \fi
8138 \HyInfo@Addons
8139 }%
8140 \Hy@DisableOption{pdfauthor}%
8141 \Hy@DisableOption{pdftitle}%
8142 \Hy@DisableOption{pdfsubject}%

```



```

8143 \Hy@DisableOption{pdfcreator}%
8144 \Hy@DisableOption{pdfcreationdate}%
8145 \Hy@DisableOption{pdfmoddate}%
8146 \Hy@DisableOption{pdfproducer}%
8147 \Hy@DisableOption{pdfkeywords}%
8148 \Hy@DisableOption{pdftrapped}%
8149 \Hy@DisableOption{pdfinfo}%
8150 }

```

`\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`.

```

8151 \def\hyper@pagetransition{%
8152 \ifx\@pdfpagetransition\relax
8153 \else
8154 \expandafter\Hy@RemoveTransPageAttr
8155 \the\pdfpageattr^^J/Trans{>>\END
8156 \ifx\@pdfpagetransition\@empty
8157 \else
8158 \edef\@processme{%
8159 \global\pdfpageattr{%
8160 \the\pdfpageattr
8161 ^^J/Trans << /S /\@pdfpagetransition\space >>%
8162 }%
8163 }%
8164 \@processme
8165 \fi
8166 \fi
8167 }

```

`\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.

```

8168 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8169 \ifx\#2\%
8170 \global\pdfpageattr{#1}%
8171 \else
8172 \Hy@RemoveTransPageAttr#1#4\END
8173 \fi
8174 }

```

`\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`.

```

8175 \def\hyper@pageduration{%
8176 \ifx\@pdfpageduration\relax
8177 \else
8178 \expandafter
8179 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8180 \ifx\@pdfpageduration\@empty
8181 \else
8182 \edef\@processme{%
8183 \global\pdfpageattr{%
8184 \the\pdfpageattr
8185 ^^J/Dur \@pdfpageduration\space
8186 }%

```

```

8187 }%
8188 \@processme
8189 \fi
8190 \fi
8191 }

```

`\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.

```

8192 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8193 \ifx\#2\%
8194 \global\pdfpageattr{#1}%
8195 \else
8196 \Hy@RemoveDurPageAttr#1#4\END
8197 \fi
8198 }

```

`\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).

```

8199 \def\hyper@pagehidden{%
8200 \ifHy@useHidKey
8201 \expandafter
8202 \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{ } \END
8203 \ifHy@pdfpagehidden
8204 \edef\@processme{%
8205 \global\pdfpageattr{%
8206 \the\pdfpageattr
8207 ^^J/Hid true % SPACE
8208 }%
8209 }%
8210 \@processme
8211 \fi
8212 \fi
8213 }

```

`\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.

```

8214 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8215 \ifx\#2\%
8216 \global\pdfpageattr{#1}%
8217 \else
8218 \Hy@RemoveHidPageAttr#1#4\END
8219 \fi
8220 }

8221 \g@addto@macro\Hy@EveryPageHook{%
8222 \hyper@pagetransition
8223 \hyper@pageduration
8224 \hyper@pagehidden
8225 }

```

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

```

8226 </pdftex>
8227 <*pdftex | xetex>
8228 \AtBeginDocument{%
8229 \ifHy@setpagesize
8230 \expandafter\@firstofone
8231 \else
8232 \expandafter\@gobble
8233 \fi
8234 {%
8235 \@ifclassloaded{seminar}{%
8236 <*pdftex>
8237 \setlength{\pdfhorigin}{1truein}%
8238 \setlength{\pdfvorigin}{1truein}%
8239 </pdftex>
8240 \ifportrait
8241 \ifdim\paperwidth=\z@
8242 \else
8243 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8244 \fi
8245 \ifdim\paperheight=\z@
8246 \else
8247 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8248 \fi
8249 \else
8250 \ifdim\paperheight=\z@
8251 \else
8252 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8253 \fi
8254 \ifdim\paperwidth=\z@
8255 \else
8256 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8257 \fi
8258 \fi
8259 }{%
8260 \@ifundefined{stockwidth}{%
8261 \ifdim\paperwidth>\z@
8262 \setlength{\pdfpagewidth}{\paperwidth}%
8263 \fi
8264 \ifdim\paperheight>\z@
8265 \setlength{\pdfpageheight}{\paperheight}%
8266 \fi
8267 }{%
8268 \ifdim\stockwidth>\z@
8269 \setlength{\pdfpagewidth}{\stockwidth}%
8270 \fi
8271 \ifdim\stockheight>\z@
8272 \setlength{\pdfpageheight}{\stockheight}%
8273 \fi
8274 }%
8275 }%
8276 }%
8277 \Hy@DisableOption{setpagesize}%
8278 }
8279 </pdftex | xetex>
8280 <*pdftex>
8281 \def\Acrobatmenu#1#2{%
8282 \Hy@Acrobatmenu{#1}{#2}%

```

```

8283 \pdfstartlink
8284 attr{%
8285 \Hy@setpdfborder
8286 \ifx\@pdfhighlight\@empty
8287 \else
8288 /H\@pdfhighlight
8289 \fi
8290 \ifx\@menubordercolor\relax
8291 \else
8292 /C[\@menubordercolor]%
8293 \fi
8294 }%
8295 user{%
8296 /Subtype/Link%
8297 \ifHy@pdfa /F 4\fi
8298 /A<<%
8299 /S/Named/N/#1%
8300 >>%
8301 }%
8302 \relax
8303 \Hy@colorlink\@menucolor#2%
8304 \close@pdflink
8305 }%
8306 }

```

#### 46.2.1 Fix for problem with different nesting levels

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

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

```

8307 \def\Hy@FixNotFirstPage{%
8308 \gdef\Hy@FixNotFirstPage{%
8309 \setbox\AtBeginShipoutBox=\hbox{%
8310 \copy\AtBeginShipoutBox
8311 }%
8312 }%
8313 }
8314 \AtBeginShipout{\Hy@FixNotFirstPage}
8315 \</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:<a href = "href_string">`

**name:** `html:<a name = "name_string">`

**end:** `html:</a>`

**image:** `html:<img src = "href_string">`

**base\_name:** html:<base href = "href\_string">

The *href*, *name* and *end* commands are used to do the basic hypertext operations of establishing links between sections of documents. The *image* command is intended (as with current html viewers) to place an image of arbitrary graphical format on the page in the current location. The *base\_name* command is be used to communicate to the *dvi* viewer the full (URL) location of the current document so that files specified by relative URL's may be retrieved correctly.

The *href* and *name* commands must be paired with an *end* command later in the T<sub>E</sub>X file — the T<sub>E</sub>X 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.

```
8316 (*hypertex)
8317 \providecommand*{\XR@ext}{dvi}
8318 \def\PDF@FinishDoc{}
8319 \def\PDF@SetupDoc{%
8320 \ifx\@baseurl\@empty
8321 \else
8322 \special{html:<base href="\@baseurl">}%
8323 \fi
8324 }
8325 \def\hyper@anchor#1{%
8326 \Hy@SaveLastskip
8327 \Hy@VerboseAnchor{#1}%
8328 \begingroup
8329 \let\protect=\string
8330 \hyper@chars
8331 \special{html:<a name=%
8332 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8333 \endgroup
8334 \Hy@Activeanchortrue
8335 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8336 \special{html:}%
8337 \Hy@Activeanchorfalse
8338 \Hy@RestoreLastskip
8339 }
8340 \def\hyper@anchorstart#1{%
8341 \Hy@SaveLastskip
8342 \Hy@VerboseAnchor{#1}%
8343 \begingroup
8344 \hyper@chars
8345 \special{html:<a name=%
8346 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8347 \endgroup
8348 \Hy@Activeanchortrue
8349 }
8350 \def\hyper@anchorend{%
8351 \special{html:}%
8352 \Hy@Activeanchorfalse
```

```

8353 \Hy@RestoreLastskip
8354 }
8355 \def\@urlltype{url}
8356 \def\hyper@linkstart#1#2{%
8357 \Hy@VerboseLinkStart{#1}{#2}%
8358 \expandafter\Hy@colorlink\csname @#1color\endcsname
8359 \def\Hy@tempa{#1}%
8360 \ifx\Hy@tempa\@urlltype
8361 \special{html:}%
8362 \else
8363 \begingroup
8364 \hyper@chars
8365 \special{html:<a href=%
8366 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
8367 \endgroup
8368 \fi
8369 }
8370 \def\hyper@linkend{%
8371 \special{html:}%
8372 \Hy@endcolorlink
8373 }
8374 \def\hyper@linkfile#1#2#3{%
8375 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8376 }
8377 \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<sup>A</sup>T<sub>E</sub>X constructs make this totally foul up, and make us revert to basic T<sub>E</sub>X. I do not know.

```

8378 \leavevmode
8379 \ifHy@raiselinks
8380 \setbox\@tempboxa=\color@hbox #1\color@endbox
8381 \@linkdim\dp\@tempboxa
8382 \lower\@linkdim\hbox{%
8383 \hyper@chars
8384 \special{html:}%
8385 }%
8386 \Hy@colorlink\@urlcolor#1%
8387 \@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).

```

8388 \advance\@linkdim by -6.5\p@
8389 \raise\@linkdim\hbox{\special{html:}}%
8390 \Hy@endcolorlink
8391 \else
8392 \begingroup
8393 \hyper@chars
8394 \special{html:}%
8395 \Hy@colorlink\@urlcolor#1%
8396 \special{html:}%
8397 \Hy@endcolorlink
8398 \endgroup
8399 \fi
8400 }

```

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

```

8401 \def\hyper@link#1#2#3{%

```

```

8402 \Hy@VerboseLinkStart{#1}{#2}%
8403 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
8404 }

8405 \def\hyper@image#1#2{%
8406 \begingroup
8407 \hyper@chars
8408 \special{html:}%
8409 \endgroup
8410 }
8411 </hypertex>
8412 <*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.

```

8413 \providecommand*\XR@ext}{dvi}
8414 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8415 \def\hyper@anchor#1{%
8416 \Hy@SaveLastskip
8417 \Hy@VerboseAnchor{#1}%
8418 \begingroup
8419 \let\protect=\string
8420 \special{mark: #1}%
8421 \endgroup
8422 \Hy@activeanchortrue
8423 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8424 \Hy@activeanchorfalse
8425 \Hy@RestoreLastskip
8426 }
8427 \def\hyper@anchorstart#1{%
8428 \Hy@SaveLastskip
8429 \Hy@VerboseAnchor{#1}%
8430 \special{mark: #1}%
8431 \Hy@activeanchortrue
8432 }
8433 \def\hyper@anchorend{%
8434 \Hy@activeanchorfalse
8435 \Hy@RestoreLastskip
8436 }
8437 \def\hyper@linkstart#1#2{%
8438 \Hy@VerboseLinkStart{#1}{#2}%
8439 \expandafter\Hy@colorlink\csname @#1color\endcsname
8440 \special{button: %
8441 10000000 %
8442 \number\baselineskip\space
8443 #2%
8444 }%

```

```

8445 }
8446 \def\hyper@linkend{%
8447 \Hy@endcolorlink
8448 }
8449 \def\hyper@link#1#2#3{%
8450 \Hy@VerboseLinkStart{#1}{#2}%
8451 \setbox\@tempboxa=\color@hbox #3\color@endbox
8452 \leavevmode
8453 \ifHy@raiselinks
8454 \@linkdim\dp\@tempboxa
8455 \lower\@linkdim\hbox{%
8456 \special{button: %
8457 \number\wd\@tempboxa\space
8458 \number\ht\@tempboxa\space
8459 #2%
8460 }%
8461 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8462 \Hy@endcolorlink
8463 }%
8464 \@linkdim\ht\@tempboxa
8465 \advance\@linkdim by -6.5\p@
8466 \raise\@linkdim\hbox{}%
8467 \else
8468 \special{button: %
8469 \number\wd\@tempboxa\space
8470 \number\ht\@tempboxa\space
8471 #2%
8472 }%
8473 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8474 \Hy@endcolorlink
8475 \fi
8476 }
8477 \def\hyper@linkurl#1#2{%
8478 \begingroup
8479 \hyper@chars
8480 \leavevmode
8481 \setbox\@tempboxa=\color@hbox #1\color@endbox
8482 \ifHy@raiselinks
8483 \@linkdim\dp\@tempboxa
8484 \lower\@linkdim\hbox{%
8485 \special{button: %
8486 \number\wd\@tempboxa\space
8487 \number\ht\@tempboxa\space
8488 launch: \wwwbrowser\space
8489 #2%
8490 }%
8491 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8492 }%
8493 \@linkdim\ht\@tempboxa
8494 \advance\@linkdim by -6.5\p@
8495 \raise\@linkdim\hbox{}%
8496 \else
8497 \special{button: %
8498 \number\wd\@tempboxa\space
8499 \number\ht\@tempboxa\space
8500 launch: \wwwbrowser\space
8501 #2%

```



```

8502 }%
8503 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8504 \fi
8505 \endgroup
8506 }
8507 \def\hyper@linkfile#1#2#3{%
8508 \begingroup
8509 \hyper@chars
8510 \leavevmode
8511 \setbox\@tempboxa=\color@hbox #1\color@endbox
8512 \ifHy@raiselinks
8513 \@linkdim\dp\@tempboxa
8514 \lower\@linkdim\hbox{%
8515 \special{button: %
8516 \number\wd\@tempboxa\space
8517 \number\ht\@tempboxa\space
8518 #3,%
8519 file: #2%
8520 }%
8521 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8522 }%
8523 \@linkdim\ht\@tempboxa
8524 \advance\@linkdim by -6.5\p@
8525 \raise\@linkdim\hbox{%}%
8526 \else
8527 \special{button: %
8528 \number\wd\@tempboxa\space
8529 \number\ht\@tempboxa\space
8530 #3,%
8531 file: #2%
8532 }%
8533 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8534 \fi
8535 \endgroup
8536 }
8537 \ifx\@pdfproducer\relax
8538 \def\@pdfproducer{dviwindo + Distiller}%
8539 \fi
8540 \HyInfo@AddonUnsupportedtrue
8541 \def\PDF@FinishDoc{%
8542 \Hy@UseMaketitleInfos
8543 \HyInfo@TrappedUnsupported
8544 \special{PDF: Keywords \@pdfkeywords}%
8545 \special{PDF: Title \@pdftitle}%
8546 \special{PDF: Creator \@pdfcreator}%
8547 \ifx\@pdfcreationdate\@empty
8548 \else
8549 \special{PDF: CreationDate \@pdfcreationdate}%
8550 \fi
8551 \ifx\@pdfmoddate\@empty
8552 \else
8553 \special{PDF: ModDate \@pdfmoddate}%
8554 \fi
8555 \special{PDF: Author \@pdfauthor}%
8556 \ifx\@pdfproducer\relax
8557 \else
8558 \special{PDF: Producer \@pdfproducer}%

```

```

8559 \fi
8560 \special{PDF: Subject \@pdfsubject}%
8561 \Hy@DisableOption{pdfauthor}%
8562 \Hy@DisableOption{pdftitle}%
8563 \Hy@DisableOption{pdfsubject}%
8564 \Hy@DisableOption{pdfcreator}%
8565 \Hy@DisableOption{pdfcreationdate}%
8566 \Hy@DisableOption{pdfmoddate}%
8567 \Hy@DisableOption{pdfproducer}%
8568 \Hy@DisableOption{pdfkeywords}%
8569 \Hy@DisableOption{pdftrapped}%
8570 \Hy@DisableOption{pdfinfo}%
8571 }
8572 \def\PDF@SetupDoc{%
8573 \ifx\@baseurl\@empty
8574 \else
8575 \special{PDF: Base \@baseurl}%
8576 \fi
8577 \ifx\@pdfpagescrop\@empty\else
8578 \special{PDF: BBox \@pdfpagescrop}%
8579 \fi
8580 \def\Hy@temp{ }%
8581 \ifx\@pdfstartpage\@empty
8582 \else
8583 \ifx\@pdfstartview\@empty
8584 \else
8585 \edef\Hy@temp{%
8586 ,Page=\@pdfstartpage
8587 ,View=\@pdfstartview
8588 }%
8589 \fi
8590 \fi
8591 \edef\Hy@temp{%
8592 \noexpand\pdfmark{%
8593 pdfmark=/DOCVIEW,%
8594 PageMode=/\@pdfpagemode
8595 }\Hy@temp
8596 }%
8597 }%
8598 \Hy@temp
8599 \ifx\@pdfpagescrop\@empty
8600 \else
8601 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8602 \fi
8603 \edef\Hy@temp{%
8604 \ifHy@toolbar\else /HideToolbar true\fi
8605 \ifHy@menubar\else /HideMenubar true\fi
8606 \ifHy>windowui\else /HideWindowUI true\fi
8607 \ifHy@fitwindow /FitWindow true\fi
8608 \ifHy@centerwindow /CenterWindow true\fi
8609 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8610 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8611 \Hy@UseNameKey{Direction}\@pdfdirection
8612 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8613 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8614 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8615 \Hy@UseNameKey{PrintClip}\@pdfprintclip

```

```

8616 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8617 \Hy@UseNameKey{Duplex}\@pdfduplex
8618 \ifx\@pdfpicktraybypdfsize\@empty
8619 \else
8620 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8621 \fi
8622 \ifx\@pdfprintpagerange\@empty
8623 \else
8624 /PrintPageRange[\@pdfprintpagerange]%
8625 \fi
8626 \ifx\@pdfnumcopies\@empty
8627 \else
8628 /NumCopies \@pdfnumcopies
8629 \fi
8630 }%
8631 \pdfmark{pdfmark=/PUT,%
8632 Raw={%
8633 \string{Catalog\string}<<%
8634 \ifx\Hy@temp\@empty
8635 \else
8636 /ViewerPreferences<<\Hy@temp>>%
8637 \fi
8638 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8639 \ifx\@pdflang\@empty
8640 \else
8641 /Lang(\@pdflang)%
8642 \fi
8643 >>%
8644 }%
8645 }%
8646 }
8647 </dviwindo>
8648 <*dvi pdfm | xetex>

```

## 46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8649 \providecommand*{\XR@ext}{pdf}
8650 \Hy@setbreaklinks{true}
8651 \newsavebox{\pdfm@box}
8652 \def\@pdfm@mark#1{\special{pdf:#1}}
8653 \def\@pdfm@dest#1{%
8654 \Hy@SaveLastskip
8655 \Hy@VerboseAnchor{#1}%
8656 \begingroup
8657 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8658 \def\x{XYZ}%
8659 \ifx\x\@pdfview
8660 \def\x{XYZ @xpos @ypos null}%
8661 \else
8662 \def\x{FitH}%
8663 \ifx\x\@pdfview
8664 \def\x{FitH @ypos}%
8665 \else
8666 \def\x{FitBH}%
8667 \ifx\x\@pdfview
8668 \def\x{FitBH @ypos}%

```

```

8669 \else
8670 \def\x{FitV}%
8671 \ifx\x\@pdfview
8672 \def\x{FitV @xpos}%
8673 \else
8674 \def\x{FitBV}%
8675 \ifx\x\@pdfview
8676 \def\x{FitBV @xpos}%
8677 \else
8678 \def\x{Fit}%
8679 \ifx\x\@pdfview
8680 \let\x\@pdfview
8681 \else
8682 \def\x{FitB}%
8683 \ifx\x\@pdfview
8684 \let\x\@pdfview
8685 \else
8686 \def\x{FitR}%
8687 \ifx\x\@pdfview
8688 \Hy@Warning{'pdfview=FitR' is not supported}%
8689 \def\x{XYZ @xpos @ypos null}%
8690 \else
8691 \@onelevel@sanitize\@pdfview
8692 \Hy@Warning{%
8693 Unknown value '\@pdfview' for pdfview%
8694 }%
8695 \def\x{XYZ @xpos @ypos null}%
8696 \fi
8697 \fi
8698 \fi
8699 \fi
8700 \fi
8701 \fi
8702 \fi
8703 \fi
8704 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8705 \endgroup
8706 \Hy@RestoreLastskip
8707 }
8708 \providecommand*\@pdfview{XYZ}
8709 \providecommand*\@pdfborder{0 0 1}
8710 \providecommand*\@pdfborderstyle{}
8711 \def\hyper@anchor#1{%
8712 \@pdfm@dest{#1}%
8713 }
8714 \def\hyper@anchorstart#1{%
8715 \Hy@activeanchortrue
8716 \@pdfm@dest{#1}%
8717 }
8718 \def\hyper@anchorend{%
8719 \Hy@activeanchorfalse
8720 }
8721 \newcounter{Hy@AnnotLevel}
8722 \ifHy@ocgcolorlinks
8723 \def\OBJ@OCG@view{@OCG@view}%
8724 \@pdfm@mark{%
8725 obj \OBJ@OCG@view <<%

```

```

8726 /Type/OCG%
8727 /Name(View)%
8728 /Usage<<%
8729 /Print<<%
8730 /PrintState/OFF%
8731 >>%
8732 /View<<%
8733 /ViewState/ON%
8734 >>%
8735 >>%
8736 >>%
8737 }%
8738 \@pdfm@mark{close \OBJ@OCG@view}%
8739 \def\OBJ@OCG@print{\@OCG@print}%
8740 \@pdfm@mark{%
8741 obj \OBJ@OCG@print <<%
8742 /Type/OCG%
8743 /Name(Print)%
8744 /Usage<<%
8745 /Print<<%
8746 /PrintState/ON%
8747 >>%
8748 /View<<%
8749 /ViewState/OFF%
8750 >>%
8751 >>%
8752 >>%
8753 }%
8754 \@pdfm@mark{close \OBJ@OCG@print}%
8755 \def\OBJ@OCGs{\@OCGs}%
8756 \@pdfm@mark{%
8757 obj \OBJ@OCGs [%
8758 \OBJ@OCG@view\space\OBJ@OCG@print
8759]%
8760 }%
8761 \@pdfm@mark{close \OBJ@OCGs}%
8762 \@pdfm@mark{%
8763 put @catalog <<%
8764 /OCProperties<<%
8765 /OCGs \OBJ@OCGs
8766 /D<<%
8767 /OFF[\OBJ@OCG@print]%
8768 /AS[%
8769 <<%
8770 /Event/View%
8771 /OCGs \OBJ@OCGs
8772 /Category[/View]%
8773 >>%
8774 <<%
8775 /Event/Print%
8776 /OCGs \OBJ@OCGs
8777 /Category[/Print]%
8778 >>%
8779 <<%
8780 /Event/Export%
8781 /OCGs \OBJ@OCGs
8782 /Category[/Print]%

```

```

8783 >>%
8784]%
8785 >>%
8786 >>%
8787 >>%
8788 }%
8789 \AtBeginShipout{%
8790 \setbox\AtBeginShipoutBox=\hbox{%
8791 \copy\AtBeginShipoutBox
8792 \@pdfm@mark{%
8793 put @resources <<%
8794 /Properties<<%
8795 /OCView \OBJ@OCG@view
8796 /OCPrint \OBJ@OCG@print
8797 >>%
8798 >>%
8799 }%
8800 }%
8801 }%
8802 \AtBeginDocument{%
8803 \def\Hy@colorlink#1{%
8804 \begingroup
8805 \ifHy@ocgcolorlinks
8806 \def\Hy@ocgcolor{#1}%
8807 \setbox0=\color@hbox
8808 \else
8809 \HyColor@UseColor#1%
8810 \fi
8811 }%
8812 \def\Hy@endcolorlink{%
8813 \ifHy@ocgcolorlinks
8814 \color@endbox
8815 \mbox{%
8816 \@pdfm@mark{content /OC/OCPrint BDC}%
8817 \rlap{\copy0}%
8818 \@pdfm@mark{content EMC/OC/OCView BDC}%
8819 \begingroup
8820 \expandafter\HyColor@UseColor\Hy@ocgcolor
8821 \box0 %
8822 \endgroup
8823 \@pdfm@mark{content EMC}%
8824 }%
8825 \fi
8826 \endgroup
8827 }%
8828 }%
8829 \else
8830 \Hy@DisableOption{ocgcolorlinks}%
8831 \fi
8832 \def\Hy@BeginAnnot#1{%
8833 \stepcounter{Hy@AnnotLevel}%
8834 \ifnum\value{Hy@AnnotLevel}=\@ne
8835 #1%
8836 \fi
8837 }
8838 \def\Hy@endAnnot{%
8839 \ifnum\value{Hy@AnnotLevel}=\@ne

```

```

8840 \Hy@endcolorlink
8841 \@pdfm@mark{eann}%
8842 \fi
8843 \addtocounter{Hy@AnnotLevel}\m@ne
8844 }

8845 \def\Hy@undefinedname{UNDEFINED}
8846 \def\hyper@linkstart#1#2{%
8847 \Hy@VerboseLinkStart{#1}{#2}%
8848 \Hy@BeginAnnot{%
8849 \protected@edef\Hy@testname{#2}%
8850 \ifx\Hy@testname\@empty
8851 \Hy@Warning{%
8852 Empty destination name,\MessageBreak
8853 using '\Hy@undefinedname'%
8854 }%
8855 \let\Hy@testname\Hy@undefinedname
8856 \else
8857 \Hy@pstringdef\Hy@testname{%
8858 \expandafter\HyperDestNameFilter\expandafter{%
8859 \Hy@testname
8860 }%
8861 }%
8862 \fi
8863 \@pdfm@mark{%
8864 bann<<%
8865 /Type/Annot%
8866 /Subtype/Link%
8867 \ifHy@pdfa /F 4\fi
8868 \Hy@setpdfborder
8869 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8870 \else
8871 /C[\csname @#1bordercolor\endcsname]%
8872 \fi
8873 /A<<%
8874 /S/GoTo%
8875 /D(\Hy@testname)%
8876 >>%
8877 >>%
8878 }%
8879 \expandafter\Hy@colorlink\csname @#1color\endcsname
8880 }%
8881 }

8882 \def\hyper@linkend{\Hy@EndAnnot}%
8883 \def\hyper@link#1#2#3{%
8884 \hyper@linkstart{#1}{#2}#3\hyper@linkend
8885 }

8886 \def\hyper@linkfile#1#2#3{%
8887 \leavevmode
8888 \Hy@BeginAnnot{%
8889 \Hy@pstringdef\Hy@pstringF{#2}%
8890 \Hy@pstringdef\Hy@pstringD{#3}%
8891 \@pdfm@mark{%
8892 bann<<%
8893 /Type/Annot%
8894 /Subtype/Link%
8895 \ifHy@pdfa /F 4\fi
8896 \Hy@setpdfborder

```

```

8897 \ifx\@filebordercolor\relax
8898 \else
8899 /C[\@filebordercolor]%
8900 \fi
8901 /A<<%
8902 /S/GoToR%
8903 /F(\Hy@pstringF)%
8904 /D\ifx\#3\0 \@pdfstartview\else(\Hy@pstringD)\fi
8905 \Hy@SetNewWindow
8906 >>%
8907 >>%
8908 }%
8909 \Hy@colorlink\@filecolor
8910 }%
8911 #1%
8912 \Hy@endAnnot
8913 }
8914 \def\hyper@linkurl#1#2{%
8915 \leavevmode
8916 \Hy@BeginAnnot{%
8917 \Hy@pstringdef\Hy@pstringURI{#2}%
8918 \@pdfm@mark{%
8919 bann<<%
8920 /Type/Annot%
8921 /Subtype/Link%
8922 \ifHy@pdfa /F 4\fi
8923 \Hy@setpdfborder
8924 \ifx\@urlbordercolor\relax
8925 \else
8926 /C[\@urlbordercolor]%
8927 \fi
8928 /A<<%
8929 /S/URI%
8930 /URI(\Hy@pstringURI)%
8931 >>%
8932 >>%
8933 }%
8934 \Hy@colorlink\@urlcolor
8935 }%
8936 #1%
8937 \Hy@endAnnot
8938 }
8939 \def\Acrobatmenu#1#2{%
8940 \Hy@Acrobatmenu{#1}{#2}{%
8941 \Hy@BeginAnnot{%
8942 \@pdfm@mark{%
8943 bann<<%
8944 /Type/Annot%
8945 /Subtype/Link%
8946 \ifHy@pdfa /F 4\fi
8947 /A<<%
8948 /S/Named%
8949 /N/#1%
8950 >>%
8951 \Hy@setpdfborder
8952 \ifx\@menubordercolor\relax
8953 \relax

```



```

8954 /C[\@menubordercolor]%
8955 \fi
8956 >>%
8957 }%
8958 \Hy@colorlink\@menucolor
8959 }%
8960 #2%
8961 \Hy@EndAnnot
8962 }%
8963 }
8964 \ifx\@pdfproducer\relax
8965 \def\@pdfproducer{dvipdfm}%

```

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

```

8966 \begingroup\expandafter\expandafter\expandafter\endgroup
8967 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8968 \else
8969 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8970 \fi
8971 \fi
8972 \def\PDF@FinishDoc{%
8973 \Hy@UseMaketitleInfos
8974 \HyInfo@GenerateAddons
8975 \@pdfm@mark{%
8976 docinfo<<%
8977 /Title(\@pdftitle)%
8978 /Subject(\@pdfsubject)%
8979 /Creator(\@pdfcreator)%
8980 \ifx\@pdfcreationdate\@empty
8981 \else
8982 /CreationDate(\@pdfcreationdate)%
8983 \fi
8984 \ifx\@pdfmoddate\@empty
8985 \else
8986 /ModDate(\@pdfmoddate)%
8987 \fi
8988 /Author(\@pdfauthor)%
8989 \ifx\@pdfproducer\relax
8990 \else
8991 /Producer(\@pdfproducer)%
8992 \fi
8993 /Keywords(\@pdfkeywords)%
8994 \ifx\@pdftrapped\@empty
8995 \else
8996 /Trapped/\@pdftrapped
8997 \fi
8998 \HyInfo@Addons
8999 >>%
9000 }%
9001 \Hy@DisableOption{pdfauthor}%
9002 \Hy@DisableOption{pdftitle}%
9003 \Hy@DisableOption{pdfsubject}%
9004 \Hy@DisableOption{pdfcreator}%
9005 \Hy@DisableOption{pdfcreationdate}%
9006 \Hy@DisableOption{pdfmoddate}%
9007 \Hy@DisableOption{pdfproducer}%
9008 \Hy@DisableOption{pdfkeywords}%
9009 \Hy@DisableOption{pdftrapped}%

```

```

9010 \Hy@DisableOption{pdfinfo}%
9011 }

9012 \def\PDF@SetupDoc{%
9013 \edef\Hy@temp{%
9014 \ifHy@toolbar\else /HideToolbar true\fi
9015 \ifHy@menubar\else /HideMenubar true\fi
9016 \ifHy>windowui\else /HideWindowUI true\fi
9017 \ifHy@fitwindow /FitWindow true\fi
9018 \ifHy@centerwindow /CenterWindow true\fi
9019 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9020 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
9021 \Hy@UseNameKey{Direction}\@pdfdirection
9022 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9023 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9024 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9025 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9026 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9027 \Hy@UseNameKey{Duplex}\@pdfduplex
9028 \ifx\@pdfpicktraybypdfsize\@empty
9029 \else
9030 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9031 \fi
9032 \ifx\@pdfprintpagerange\@empty
9033 \else
9034 /PrintPageRange[\@pdfprintpagerange]%
9035 \fi
9036 \ifx\@pdfnumcopies\@empty
9037 \else
9038 /NumCopies \@pdfnumcopies
9039 \fi
9040 }%
9041 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9042 \@pdfm@mark{%
9043 docview<<%
9044 \ifx\@pdfstartpage\@empty
9045 \else
9046 \ifx\@pdfstartview\@empty
9047 \else
9048 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
9049 \fi
9050 \fi
9051 \ifx\@baseurl\@empty
9052 \else
9053 /URI<</Base(\Hy@pstringB)>>%
9054 \fi
9055 /PageMode/\@pdfpagemode
9056 \ifx\Hy@temp\@empty
9057 \else
9058 /ViewerPreferences<<\Hy@temp>>%
9059 \fi
9060 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9061 \ifx\@pdflang\@empty
9062 \else
9063 /Lang(\@pdflang)%
9064 \fi
9065 >>%
9066 }%

```

```

9067 \ifx\@pdfpagescrop\@empty
9068 \else
9069 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9070 \fi
9071 }
9072 </dvipdfm | xetex>

```

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

```

9073 <*dvipdfm>
9074 \AtBeginShipoutFirst{%
9075 \ifHy@setpagesize
9076 \begingroup
9077 \@ifundefined{stockwidth}{%
9078 \ifdim\paperwidth>\z@
9079 \ifdim\paperheight>\z@
9080 \special{papersize=\the\paperwidth,\the\paperheight}%
9081 \fi
9082 \fi
9083 }{%
9084 \ifdim\stockwidth>\z@
9085 \ifdim\stockheight>\z@
9086 \special{papersize=\the\stockwidth,\the\stockheight}%
9087 \fi
9088 \fi
9089 }%
9090 \endgroup
9091 \fi
9092 \Hy@DisableOption{setpagesize}%
9093 }
9094 </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.

```

9095 <*vtexhtml>
9096 \providecommand*{\XR@ext}{.htm}
9097 \RequirePackage{vtexhtml}
9098 \newif\if@Localurl
9099 \def\PDF@FinishDoc{}
9100 \def\PDF@SetupDoc{%
9101 \ifx\@baseurl\@empty
9102 \else
9103 \special{!direct <base href="\@baseurl">}%
9104 \fi
9105 }
9106 \def\@urltype{url}
9107 \def\hyper@link#1#2#3{%
9108 \Hy@VerboseLinkStart{#1}{#2}%
9109 \leavevmode
9110 \special{!direct <a href=%
9111 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9112 #3%
9113 \special{!direct }%
9114 }
9115 \def\hyper@linkurl#1#2{%

```

```

9116 \begingroup
9117 \hyper@chars
9118 \leavevmode
9119 \MathBSuppress=1\relax
9120 \special{!direct <a href=%
9121 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9122 #1%
9123 \MathBSuppress=0\relax
9124 \special{!direct }%
9125 \endgroup
9126 }
9127 \def\hyper@linkfile#1#2#3{%
9128 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\###3\fi}%
9129 }
9130 \def\hyper@linkstart#1#2{%
9131 \Hy@VerboseLinkStart{#1}{#2}%
9132 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9133 \@Localurltrue
9134 \special{!direct }%
9135 \else
9136 \@Localurlfalse
9137 \begingroup
9138 \hyper@chars
9139 \special{!aref \HyperDestNameFilter{#2}}%
9140 \endgroup
9141 \fi
9142 }
9143 \def\hyper@linkend{%
9144 \if@Localurl
9145 \special{!endaref}%
9146 \else
9147 \special{!direct }%
9148 \fi
9149 }
9150 \def\hyper@anchorstart#1{%
9151 \Hy@SaveLastskip
9152 \Hy@VerboseAnchor{#1}%
9153 \begingroup
9154 \hyper@chars
9155 \special{!aname #1}%
9156 \special{!direct <a name=%
9157 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9158 \endgroup
9159 \Hy@activeanchortrue
9160 }
9161 \def\hyper@anchorend{%
9162 \special{!direct }%
9163 \Hy@activeanchorfalse
9164 \Hy@RestoreLastskip
9165 }
9166 \def\hyper@anchor#1{%
9167 \Hy@SaveLastskip
9168 \Hy@VerboseAnchor{#1}%
9169 \begingroup
9170 \let\protect=\string
9171 \hyper@chars
9172 \leavevmode

```

```

9173 \special{!aname #1}%
9174 \special{!direct <a name=%
9175 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9176 \endgroup
9177 \Hy@activeanchortrue
9178 \bgroup\anchor@spot\egroup
9179 \special{!direct }%
9180 \Hy@activeanchorfalse
9181 \Hy@RestoreLastskip
9182 }
9183 \def\@Form[#1]{%
9184 \typeout{Sorry, TeXpider does not yet support FORMs}%
9185 }
9186 \def\@endForm{}
9187 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9188 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9189 }
9190 \def\@TextField[#1]#2{% parameters, label
9191 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9192 }
9193 \def\@CheckBox[#1]#2{% parameters, label
9194 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9195 }
9196 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9197 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9198 }
9199 \def\@PushButton[#1]#2{% parameters, label
9200 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9201 }
9202 \def\@Reset[#1]#2{%
9203 \typeout{Sorry, TeXpider does not yet support FORMs}%
9204 }
9205 \def\@Submit[#1]#2{%
9206 \typeout{Sorry, TeXpider does not yet support FORMs}%
9207 }
9208 </vtexhtml>
9209 <*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.

```

9210 \ifx\mediaheight\@undefined
9211 \else
9212 \ifx\mediaheight\relax
9213 \else
9214 \ifHy@setpagesize
9215 \providecommand*\VTeXInitMediaSize{%
9216 \@ifundefined{stockwidth}{%
9217 \ifdim\paperheight>0pt %
9218 \setlength\mediaheight\paperheight
9219 \fi
9220 \ifdim\paperheight>0pt %
9221 \setlength\mediawidth\paperwidth
9222 \fi
9223 }{%
9224 \ifdim\stockheight>0pt %
9225 \setlength\mediaheight\stockheight

```

```

9226 \fi
9227 \ifdim\stockwidth>0pt %
9228 \setlength\mediawidth\stockwidth
9229 \fi
9230 }%
9231 }%
9232 \AtBeginDocument{\VTeXInitMediaSize}%
9233 \fi
9234 \Hy@DisableOption{setpagesize}%
9235 \fi
9236 \fi

```

Older versions of VTeX require xyz in lower case.

```

9237 \providecommand*\@pdfview{xyz}
9238 \providecommand*\@pdfborder{0 0 1}
9239 \providecommand*\@pdfborderstyle{}
9240 \let\CurrentBorderColor\@linkbordercolor
9241 \def\hyper@anchor#1{%
9242 \Hy@SaveLastskip
9243 \Hy@VerboseAnchor{#1}%
9244 \begingroup
9245 \let\protect=\string
9246 \hyper@chars
9247 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9248 \endgroup
9249 \Hy@activeanchortrue
9250 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9251 \Hy@activeanchorfalse
9252 \Hy@RestoreLastskip
9253 }
9254 \def\hyper@anchorstart#1{%
9255 \Hy@SaveLastskip
9256 \Hy@VerboseAnchor{#1}%
9257 \begingroup
9258 \hyper@chars
9259 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9260 \endgroup
9261 \Hy@activeanchortrue
9262 }
9263 \def\hyper@anchorend{%
9264 \Hy@activeanchorfalse
9265 \Hy@RestoreLastskip
9266 }
9267 \def\@urltype{url}
9268 \def\Hy@undefinedname{UNDEFINED}
9269 \def\hyper@linkstart#1#2{%
9270 \Hy@VerboseLinkStart{#1}{#2}%
9271 \Hy@pstringdef\Hy@pstringURI{#2}%
9272 \expandafter\Hy@colorlink\csname @#1color\endcsname
9273 \@ifundefined{@#1bordercolor}{%
9274 \let\CurrentBorderColor\relax
9275 }{%
9276 \edef\CurrentBorderColor{%
9277 \csname @#1bordercolor\endcsname
9278 }%
9279 }%
9280 \def\Hy@tempa{#1}%
9281 \ifx\Hy@tempa\@urltype

```

```

9282 \special{!%
9283 \href <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9284 a=<%
9285 \ifHy@pdfa /F 4\fi
9286 \Hy@setpdfborder
9287 \ifx\CurrentBorderColor\relax
9288 \else
9289 /C [\CurrentBorderColor]%
9290 \fi
9291 >%
9292 }%
9293 \else
9294 \protected@edef\Hy@testname{#2}%
9295 \ifx\Hy@testname\@empty
9296 \Hy@Warning{%
9297 Empty destination name,\MessageBreak
9298 using '\Hy@undefinedname'%
9299 }%
9300 \let\Hy@testname\Hy@undefinedname
9301 \fi
9302 \special{!%
9303 \expandafter\HyperDestNameFilter
9304 \expandafter{\Hy@testname};%
9305 a=<%
9306 \ifHy@pdfa /F 4\fi
9307 \Hy@setpdfborder
9308 \ifx\CurrentBorderColor\relax
9309 \else
9310 /C [\CurrentBorderColor]%
9311 \fi
9312 >%
9313 }%
9314 \fi
9315 }
9316 \def\hyper@linkend{%
9317 \special{!endaref}%
9318 \Hy@endcolorlink
9319 }
9320 \def\hyper@linkfile#1#2#3{%
9321 \leavevmode
9322 \special{!%
9323 \href <%
9324 \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9325 f=#2>#3;%
9326 a=<%
9327 \ifHy@pdfa /F 4\fi
9328 \Hy@setpdfborder
9329 \ifx\@filebordercolor\relax
9330 \else
9331 /C [\@filebordercolor]%
9332 \fi
9333 >%
9334 }%
9335 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9336 \special{!endaref}%
9337 }
9338 \def\hyper@linkurl#1#2{%

```

```

9339 \begingroup
9340 \Hy@pstringdef\Hy@pstringURI{#2}%
9341 \hyper@chars
9342 \leavevmode
9343 \special{!%
9344 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9345 a=<%
9346 \ifHy@pdfa /F 4\fi
9347 \Hy@setpdfborder
9348 \ifx\@urlbordercolor\relax
9349 \else
9350 /C [\@urlbordercolor]%
9351 \fi
9352 >%
9353 }%
9354 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9355 \special{!endaref}%
9356 \endgroup
9357 }
9358 \def\hyper@link#1#2#3{%
9359 \Hy@VerboseLinkStart{#1}{#2}%
9360 \@ifundefined{@#1bordercolor}{%
9361 \let\CurrentBorderColor\relax
9362 }{%
9363 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9364 }%
9365 \leavevmode
9366 \protected@edef\Hy@testname{#2}%
9367 \ifx\Hy@testname\@empty
9368 \Hy@Warning{%
9369 Empty destination name,\MessageBreak
9370 using '\Hy@undefinedname'%
9371 }%
9372 \let\Hy@testname\Hy@undefinedname
9373 \fi
9374 \special{!%
9375 aref \expandafter\HyperDestNameFilter
9376 \expandafter{\Hy@testname};%
9377 a=<%
9378 \ifHy@pdfa /F 4\fi
9379 \Hy@setpdfborder
9380 \ifx\CurrentBorderColor\relax
9381 \else
9382 /C [\CurrentBorderColor]%
9383 \fi
9384 >%
9385 }%
9386 \expandafter
9387 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9388 \special{!endaref}%
9389 }
9390 \def\hyper@image#1#2{%
9391 \hyper@linkurl{#2}{#1}%
9392 }
9393 \def\@hyper@launch run:#1\#2#3{%
9394 \Hy@pstringdef\Hy@pstringF{#1}%
9395 \Hy@pstringdef\Hy@pstringP{#3}%

```



```

9396 \leavevmode
9397 \special{!aref %
9398 <u=%
9399 /Type/Action%
9400 /S/Launch%
9401 /F(\Hy@pstringF)%
9402 \Hy@SetNewWindow
9403 \ifx\#3\%
9404 \else
9405 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9406 \fi%
9407 >;%
9408 a=<%
9409 \ifHy@pdfa /F 4\fi
9410 \Hy@setpdfborder
9411 \ifx\@runbordercolor\relax
9412 \else
9413 /C[\@runbordercolor]%
9414 \fi
9415 >%
9416 }%
9417 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9418 \special{!endaref}%
9419 }
9420 \def\Acrobatmenu#1#2{%
9421 \Hy@Acrobatmenu{#1}{#2}{%
9422 \special{!%
9423 aref <u=/S /Named /N /#1>;%
9424 a=<%
9425 \ifHy@pdfa /F 4\fi
9426 \Hy@setpdfborder
9427 \ifx\@menubordercolor\relax
9428 \else
9429 /C[\@menubordercolor]%
9430 \fi
9431 >%
9432 }%
9433 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9434 \special{!endaref}%
9435 }%
9436 }

```

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

The code below makes sense for  $\text{\TeX}$  7.02 or later.

Please never use `\ifundefined{VTeXversion}{...}{...}` *globally*.

```

9437 \ifnum\Hy@VTeXversion<702 %
9438 \else
9439 \def\hyper@pagetransition{%
9440 \ifx\@pdfpagetransition\relax
9441 \else
9442 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9443 \else
9444 \hvtex@parse@trans\@pdfpagetransition
9445 \fi
9446 \fi

```

9447 }%

I have to write an “honest” parser to convert raw PDF code into VT<sub>E</sub>X \special.  
(AVK)

Syntax of VT<sub>E</sub>X \special{!trans <transition\_effect>}:

```
<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
 <Dissolve_effect> | <Glitter_effect> |
 <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>
```

Transition codes:

```
9448 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9449 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9450 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9451 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9452 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9453 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9454 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
9455 \def\hvtex@param@dimension{/Dm}%
9456 \def\hvtex@param@direction{/Di}%
9457 \def\hvtex@param@duration{/D}%
9458 \def\hvtex@param@motion{/M}%
```

Tokenizer:

```
9459 \def\hvtex@gettoken{%
9460 \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9461 }%
```

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

```
9462 \def\hvtex@gettoken@#1 #2\@nil{%
9463 \edef\hvtex@token{#1}%
9464 \edef\hvtex@buffer{#2}%
9465 }%
9466 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
9467 \let\hvtex@trans@code\@empty
9468 \let\hvtex@param@dimension\@empty
9469 \let\hvtex@param@direction\@empty
9470 \let\hvtex@param@duration\@empty
9471 \let\hvtex@param@motion\@empty
9472 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
9473 \hvtex@gettoken
9474 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
9475 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
9476 \else
9477 \hvtex@gettoken
9478 \fi
9479 \fi
9480 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
9481 \hvtex@trans@params
9482 }%
```

Reentrant macro to parse optional parameters.

```
9483 \def\hvtex@trans@params{%
9484 \ifx\hvtex@buffer\@empty
9485 \else
9486 \hvtex@gettoken
9487 \let\hvtex@trans@par\hvtex@token
9488 \ifx\hvtex@buffer\@empty
9489 \else
9490 \hvtex@gettoken
9491 \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V<sub>T</sub><sub>E</sub>X special takes it in milliseconds.

```
9492 \let\hvtex@param@duration\hvtex@token
9493 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9494 \expandafter\edef\expandafter\hvtex@param@motion
9495 \expandafter{\expandafter\@gobble\hvtex@token}%
9496 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9497 \expandafter\edef\expandafter\hvtex@param@dimension
9498 \expandafter{\expandafter\@gobble\hvtex@token}%
9499 \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).

```
9500 \let\hvtex@param@direction\hvtex@token
9501 \fi\fi\fi
9502 \fi
9503 \fi
9504 \ifx\hvtex@buffer\@empty
9505 \let\next\hvtex@produce@trans
9506 \else
9507 \let\next\hvtex@trans@params
9508 \fi
9509 \next
9510 }%
```

Merge <transition\_\_effect> and issue the special when possible. Too lazy to validate optional parameters.

```
9511 \def\hvtex@produce@trans{%
9512 \let\vtex@trans@special\@empty
9513 \if S\hvtex@trans@code
9514 \edef\vtex@trans@special{\hvtex@trans@code
9515 \hvtex@param@dimension\hvtex@param@motion}%

```

```

9516 \else\if B\hvtex@trans@code
9517 \edef\vtex@trans@special{%
9518 \hvtex@trans@code\hvtex@param@dimension
9519 }%
9520 \else\if X\hvtex@trans@code
9521 \edef\vtex@trans@special{%
9522 \hvtex@trans@code\hvtex@param@motion
9523 }%
9524 \else\if W\hvtex@trans@code
9525 \edef\vtex@trans@special{%
9526 \hvtex@trans@code\hvtex@param@direction
9527 }%
9528 \else\if D\hvtex@trans@code
9529 \let\vtex@trans@special\hvtex@trans@code
9530 \else\if R\hvtex@trans@code
9531 \let\vtex@trans@special\hvtex@trans@code
9532 \else\if G\hvtex@trans@code
9533 \edef\vtex@trans@special{%
9534 \hvtex@trans@code\hvtex@param@direction
9535 }%
9536 \fi\fi\fi\fi\fi\fi
9537 \ifx\vtex@trans@special\@empty
9538 \else
9539 \ifx\hvtex@param@duration\@empty
9540 \else
9541 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9542 \multiply\dimen@\@m
9543 \edef\vtex@trans@special{%
9544 \vtex@trans@special,\strip@pt\dimen@
9545 }%
9546 \fi

```

And all the mess is just for this.

```

9547 \special{!trans \vtex@trans@special}%
9548 \fi
9549 }%
9550 \def\hyper@pageduration{%
9551 \ifx\@pdfpageduration\relax
9552 \else
9553 \ifx\@pdfpageduration\@empty
9554 \special{!duration-}%
9555 \else
9556 \special{!duration \@pdfpageduration}%
9557 \fi
9558 \fi
9559 }%
9560 \def\hyper@pagehidden{%
9561 \ifHy@useHidKey
9562 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9563 \fi
9564 }%
9565 \g@addto@macro\Hy@EveryPageBoxHook{%
9566 \hyper@pagetransition
9567 \hyper@pageduration
9568 \hyper@pagehidden
9569 }%

```

9570 \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

```

9571 \ifx\@pdfproducer\relax
9572 \def\@pdfproducer{VTeX}%
9573 \ifnum\Hy@VTeXversion>\z@
9574 \count@\VTeXversion
9575 \divide\count@ 100 %
9576 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9577 \multiply\count@ -100 %
9578 \advance\count@\VTeXversion
9579 \edef\@pdfproducer{%
9580 \@pdfproducer
9581 .\ifnum\count@<10 0\fi\the\count@
9582 \ifx\VTeXOS\@undefined\else
9583 \ifnum\VTeXOS>0 %
9584 \ifnum\VTeXOS<6 %
9585 \space(%
9586 \ifcase\VTeXOS
9587 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9588 \fi
9589)%
9590 \fi
9591 \fi
9592 \fi
9593 ,\space
9594 \ifnum\OpMode=\@ne PDF\else PS\fi
9595 \space backend%
9596 \ifx\gexmode\@undefined\else
9597 \ifnum\gexmode>\z@\space with GeX\fi
9598 \fi
9599 }%
9600 \fi
9601 \fi

```

Current `!pdfinfo` key syntax:

| Key | Field                  | Type   |
|-----|------------------------|--------|
| a   | <b>Author</b>          | String |
| b   | <b>CropBox</b>         | String |
| c   | <b>Creator</b>         | String |
| k   | <b>Keywords</b>        | String |
| l   | <b>PageLayout</b>      | PS     |
| p   | <b>PageMode</b>        | PS     |
| r   | <b>Producer</b>        | String |
| s   | <b>Subject</b>         | String |
| t   | <b>Title</b>           | String |
| u   | <b>URI</b>             | PS     |
| v   | <b>ViewPreferences</b> | PS     |

Note: PS objects that are dicts are in <<<...>>> (yuck; no choice).

```
9602 \def\PDF@SetupDoc{%
9603 \ifx\@pdfpagescrop\@empty
9604 \else
9605 \special{!pdfinfo b=<\@pdfpagescrop>}%
9606 \fi
9607 \ifx\@pdfstartpage\@empty
9608 \else
9609 \ifx\@pdfstartview\@empty
9610 \else
9611 \special{!onopen Page\@pdfstartpage}%
9612 \fi
9613 \fi
9614 \special{!pdfinfo p=</\@pdfpagemode>}%
9615 \ifx\@baseurl\@empty
9616 \else
9617 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9618 \fi
9619 \special{!pdfinfo v=<<<%
9620 \ifHy@toolbar\else /HideToolbar true\fi
9621 \ifHy@menubar\else /HideMenubar true\fi
9622 \ifHy>windowui\else /HideWindowUI true\fi
9623 \ifHy@fitwindow /FitWindow true\fi
9624 \ifHy@centerwindow /CenterWindow true\fi
9625 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9626 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9627 \Hy@UseNameKey{Direction}\@pdfdirection
9628 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9629 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9630 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9631 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9632 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9633 \Hy@UseNameKey{Duplex}\@pdfduplex
9634 \ifx\@pdfpicktraybypdfsize\@empty
9635 \else
9636 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9637 \fi
9638 \ifx\@pdfprintpagerange\@empty
9639 \else
9640 /PrintPageRange[\@pdfprintpagerange]%
9641 \fi
9642 \ifx\@pdfnumcopies\@empty
9643 \else
9644 /NumCopies \@pdfnumcopies
9645 \fi
9646 >>>}%
9647 \ifx\@pdfpagelayout\@empty
9648 \else
9649 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9650 \fi
9651 }%
9652 \HyInfo@AddonUnsupportedtrue
9653 \def\PDF@FinishDoc{%
9654 \Hy@UseMaketitleInfos
9655 \HyInfo@TrappedUnsupported
9656 \special{!pdfinfo a=<\@pdfauthor>}%
9657 \special{!pdfinfo t=<\@pdftitle>}%
```

```

9658 \special{!pdfinfo s=<\@pdfsubject>}%
9659 \special{!pdfinfo c=<\@pdfcreator>}%
9660 \ifx\@pdfproducer\relax
9661 \else
9662 \special{!pdfinfo r=<\@pdfproducer>}%
9663 \fi
9664 \special{!pdfinfo k=<\@pdfkeywords>}%
9665 \Hy@DisableOption{pdfauthor}%
9666 \Hy@DisableOption{pdftitle}%
9667 \Hy@DisableOption{pdfsubject}%
9668 \Hy@DisableOption{pdfcreator}%
9669 \Hy@DisableOption{pdfcreationdate}%
9670 \Hy@DisableOption{pdfmoddate}%
9671 \Hy@DisableOption{pdfproducer}%
9672 \Hy@DisableOption{pdfkeywords}%
9673 \Hy@DisableOption{pdftrapped}%
9674 \Hy@DisableOption{pdfinfo}%
9675 }
9676 </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.

```

9677 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9678 <package>\providecommand*{\Hy@DistillerDestFix}{-}
9679 <*pdfmark | dviwindo>
9680 \def\Hy@DistillerDestFix{%
9681 \begingroup
9682 \let\x\literalps@out

```

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

```

9683 \ifnum \@ifundefined{OpMode}{0}{%
9684 \ifundefined{gexmode}{0}{%
9685 \ifnum\gexmode>0 \OpMode\else 0\fi
9686 }}>1 %
9687 \def\x##1{%
9688 \immediate\special{!##1}%
9689 }%
9690 \fi
9691 \x{%
9692 /product where{%
9693 pop %
9694 product(Distiller)search{%
9695 pop pop pop %
9696 version(.)search{%
9697 exch pop exch pop%
9698 (3011)eq{%
9699 gsave %

```

```

9700 newpath 0 0 moveto closepath clip%
9701 /Courier findfont 10 scalefont setfont %
9702 72 72 moveto(.)show %
9703 grestore%
9704 }if%
9705 }{pop}ifelse%
9706 }{pop}ifelse%
9707 }if%
9708 }%
9709 \endgroup
9710 }
9711 </pdfmark | dviwindo>

```

## 46.8 Direct pdfmark support

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

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

and the correct definitions of the following PostScript procedures:

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

```

9712 <*pdfmark>
9713 \Hy@breaklinks@unsupported
9714 \def\hyper@anchor#1{%
9715 \Hy@SaveLastskip
9716 \Hy@VerboseAnchor{#1}%
9717 \begingroup
9718 \pdfmark[\anchor@spot]{%
9719 pdfmark=/DEST,%
9720 linktype=anchor,%
9721 View=/\@pdfview \@pdfviewparams,%
9722 DestAnchor={#1}%
9723 }%
9724 \endgroup
9725 \Hy@RestoreLastskip
9726 }
9727 \ifundefined{hyper@anchorstart}{-}{\endinput}
9728 \def\hyper@anchorstart#1{%
9729 \Hy@SaveLastskip
9730 \Hy@VerboseAnchor{#1}%
9731 \literalps@out{H.S}%
9732 \Hy@AllowHyphens
9733 \xdef\hyper@currentanchor{#1}%
9734 \Hy@activeanchortrue
9735 }
9736 \def\hyper@anchorend{%
9737 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9738 \pdfmark{%
9739 pdfmark=/DEST,%
9740 linktype=anchor,%

```



```

9741 View=/\@pdfview \@pdfviewparams,%
9742 DestAnchor=\hyper@currentanchor,%
9743 }%
9744 \Hy@activeanchorfalse
9745 \Hy@RestoreLastskip
9746 }
9747 \def\hyper@linkstart#1#2{%
9748 \Hy@VerboseLinkStart{#1}{#2}%
9749 \ifHy@breaklinks
9750 \else
9751 \leavevmode\hbox\bgroup
9752 \fi
9753 \expandafter\Hy@colorlink\csname @#1color\endcsname
9754 \literalps@out{H.S}%
9755 \Hy@AllowHyphens
9756 \xdef\hyper@currentanchor{#2}%
9757 \gdef\hyper@currentlinktype{#1}%
9758 }
9759 \def\hyper@linkend{%
9760 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9761 \@ifundefined{@\hyper@currentlinktype bordercolor}{%
9762 \let\Hy@tempcolor\relax
9763 }{%
9764 \edef\Hy@tempcolor{%
9765 \csname @\hyper@currentlinktype bordercolor\endcsname
9766 }%
9767 }%
9768 \pdfmark{%
9769 pdfmark=/ANN,%
9770 linktype=link,%
9771 Subtype=/Link,%
9772 PDFAFlags=4,%
9773 Dest=\hyper@currentanchor,%
9774 AcroHighlight=\@pdfhighlight,%
9775 Border=\@pdfborder,%
9776 BorderStyle=\@pdfborderstyle,%
9777 Color=\Hy@tempcolor,%
9778 Raw=H.B%
9779 }%
9780 \Hy@endcolorlink
9781 \ifHy@breaklinks
9782 \else
9783 \egroup
9784 \fi
9785 }

```

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.

```

9786 \begingroup
9787 \catcode'P=12 %
9788 \catcode'T=12 %
9789 \lowercase{\endgroup
9790 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
9791 }
9792 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```
9793 \def\hyper@pagetransition{%
9794 \ifx\@pdfpagetransition\relax
9795 \else
9796 \ifx\@pdfpagetransition\@empty
9797 % 1. Does an old entry have to be deleted?
9798 % 2. If 1=yes, how to delete?
9799 \else
9800 \pdfmark{%
9801 pdfmark=/PUT,%
9802 Raw={%
9803 \string{ThisPage\string}%
9804 <</Trans << /S /\@pdfpagetransition\space >> >>%
9805 }%
9806 }%
9807 \fi
9808 \fi
9809 }
```

\hyper@pageduration

```
9810 \def\hyper@pageduration{%
9811 \ifx\@pdfpageduration\relax
9812 \else
9813 \ifx\@pdfpageduration\@empty
9814 % 1. Does an old entry have to be deleted?
9815 % 2. If 1=yes, how to delete?
9816 \else
9817 \pdfmark{%
9818 pdfmark=/PUT,%
9819 Raw={%
9820 \string{ThisPage\string}%
9821 <</Dur \@pdfpageduration>>%
9822 }%
9823 }%
9824 \fi
9825 \fi
9826 }
```

\hyper@pagehidden

```
9827 \def\hyper@pagehidden{%
9828 \ifHy@useHidKey
9829 \pdfmark{%
9830 pdfmark=/PUT,%
9831 Raw={%
9832 \string{ThisPage\string}%
9833 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9834 }%
9835 }%
9836 \fi
9837 }

9838 \g@addto@macro\Hy@EveryPageBoxHook{%
9839 \hyper@pagetransition
9840 \hyper@pageduration
9841 \hyper@pagehidden
9842 }
```

```

9843 \def\hyper@image#1#2{%
9844 \hyper@linkurl{#2}{#1}%
9845 }
9846 \def\Hy@undefinedname{UNDEFINED}
9847 \def\hyper@link#1#2#3{%
9848 \Hy@VerboseLinkStart{#1}{#2}%
9849 \@ifundefined{#1bordercolor}{%
9850 \let\Hy@tempcolor\relax
9851 }{%
9852 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
9853 }%
9854 \begingroup
9855 \protected@edef\Hy@testname{#2}%
9856 \ifx\Hy@testname\@empty
9857 \Hy@Warning{%
9858 Empty destination name,\MessageBreak
9859 using '\Hy@undefinedname'%
9860 }%
9861 \let\Hy@testname\Hy@undefinedname
9862 \fi
9863 \pdfmark[{#3}]{%
9864 Color=\Hy@tempcolor,%
9865 linktype={#1},%
9866 AcroHighlight=\@pdfhighlight,%
9867 Border=\@pdfborder,%
9868 BorderStyle=\@pdfborderstyle,%
9869 pdfmark=/ANN,%
9870 Subtype=/Link,%
9871 PDFAFlags=4,%
9872 Dest=\Hy@testname
9873 }%
9874 \endgroup
9875 }
9876 \newtoks\pdf@docset
9877 \def\PDF@FinishDoc{%
9878 \Hy@UseMaketitleInfos
9879 \Hy@Info@GenerateAddons
9880 \let\Hy@temp\@empty
9881 \ifx\@pdfcreationdate\@empty
9882 \else
9883 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9884 \fi
9885 \ifx\@pdfmoddate\@empty
9886 \else
9887 \expandafter\def\expandafter\Hy@temp\expandafter{%
9888 \Hy@temp
9889 ModDate=\@pdfmoddate,%
9890 }%
9891 \fi
9892 \ifx\@pdfproducer\relax
9893 \else
9894 \expandafter\def\expandafter\Hy@temp\expandafter{%
9895 \Hy@temp
9896 Producer=\@pdfproducer,%
9897 }%
9898 \fi
9899 \expandafter

```

```

9900 \pdfmark\expandafter{%
9901 \Hy@temp
9902 pdfmark=/DOCINFO,%
9903 Title=\@pdftitle,%
9904 Subject=\@pdfsubject,%
9905 Creator=\@pdfcreator,%
9906 Author=\@pdfauthor,%
9907 Keywords=\@pdfkeywords,%
9908 Trapped=\@pdftrapped
9909 }%
9910 \ifx\HyInfo@Addons\@empty
9911 \else
9912 \pdfmark{%
9913 pdfmark=/DOCINFO,%
9914 Raw={\HyInfo@Addons}%
9915 }%
9916 \fi
9917 \Hy@DisableOption{pdfauthor}%
9918 \Hy@DisableOption{pdftitle}%
9919 \Hy@DisableOption{pdfsubject}%
9920 \Hy@DisableOption{pdfcreator}%
9921 \Hy@DisableOption{pdfcreationdate}%
9922 \Hy@DisableOption{pdfmoddate}%
9923 \Hy@DisableOption{pdfproducer}%
9924 \Hy@DisableOption{pdfkeywords}%
9925 \Hy@DisableOption{pdftrapped}%
9926 \Hy@DisableOption{pdfinfo}%
9927 }
9928 \def\PDF@SetupDoc{%
9929 \def\Hy@temp{%
9930 \ifx\@pdfstartpage\@empty
9931 \else
9932 \ifx\@pdfstartview\@empty
9933 \else
9934 \edef\Hy@temp{%
9935 ,Page=\@pdfstartpage
9936 ,View=\@pdfstartview
9937 }%
9938 \fi
9939 \fi
9940 \edef\Hy@temp{%
9941 \noexpand\pdfmark{%
9942 pdfmark=/DOCVIEW,%
9943 PageMode=/\@pdfpagemode
9944 }\Hy@temp
9945 }%
9946 }%
9947 \Hy@temp
9948 \ifx\@pdfpagescrop\@empty
9949 \else
9950 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9951 \fi
9952 \edef\Hy@temp{%
9953 \ifHy@toolbar\else /HideToolbar true\fi
9954 \ifHy@menubar\else /HideMenubar true\fi
9955 \ifHy>windowui\else /HideWindowUI true\fi
9956 \ifHy@fitwindow /FitWindow true\fi

```

```

9957 \ifHy@centerwindow /CenterWindow true\fi
9958 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9959 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9960 \Hy@UseNameKey{Direction}\@pdfdirection
9961 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9962 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9963 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9964 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9965 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9966 \Hy@UseNameKey{Duplex}\@pdfduplex
9967 \ifx\@pdfpicktraybypdfsize\@empty
9968 \else
9969 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9970 \fi
9971 \ifx\@pdfprintpagerange\@empty
9972 \else
9973 /PrintPageRange[\@pdfprintpagerange]%
9974 \fi
9975 \ifx\@pdfnumcopies\@empty
9976 \else
9977 /NumCopies \@pdfnumcopies
9978 \fi
9979 }%
9980 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9981 \pdfmark{%
9982 pdfmark=/PUT,%
9983 Raw={%
9984 \string{Catalog\string}<<%
9985 \ifx\Hy@temp\@empty
9986 \else
9987 /ViewerPreferences<<\Hy@temp>>%
9988 \fi
9989 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9990 \ifx\@pdflang\@empty
9991 \else
9992 /Lang(\@pdflang)%
9993 \fi
9994 \ifx\@baseurl\@empty
9995 \else
9996 /URI<</Base(\Hy@pstringB)>>%
9997 \fi
9998 >>%
9999 }%
10000 }%
10001 }
10002 </pdfmark>
10003 <*pdfmarkbase>

```

We define a single macro, pdfmark, which uses the ‘keyval’ system to define the various allowable keys; these are *exactly* as listed in the pdfmark reference for Acrobat 3.0. The only addition is pdfmark which specifies the type of pdfmark to create (like ANN, LINK etc). The surrounding round and square brackets in the pdfmark commands are supplied, but you have to put in / characters as needed for the values.

```

10004 \newif\ifHy@pdfmarkerror
10005 \def\pdfmark{\@ifnextchar{\@pdfmark@}{\pdfmark@[]}}
10006 \def\pdfmark@[#1]#2{%
10007 \Hy@pdfmarkerrorfalse

```

```

10008 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10009 \@processme
10010 \let\pdf@type\relax
10011 \setkeys{PDF}{#2}%
10012 \ifHy@pdfmarkerror
10013 \else
10014 \ifx\pdf@type\relax
10015 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10016 \ifx\#1\%
10017 \else
10018 \pdf@rect{#1}%
10019 \fi
10020 \else
10021 \ifx\#1\%
10022 \literalps@out{%
10023 [\the\pdf@toks\space\pdf@type\space pdfmark%
10024 }%
10025 \else
10026 \@ifundefined{@\pdf@linktype color}{%
10027 \Hy@colorlink\@linkcolor
10028 }{%
10029 \expandafter\Hy@colorlink
10030 \csname @\pdf@linktype color\endcsname
10031 }%
10032 \pdf@rect{#1}%
10033 \literalps@out{%
10034 [\the\pdf@toks\space\pdf@type\space pdfmark%
10035 }%
10036 \Hy@endcolorlink
10037 \fi
10038 \fi
10039 \fi
10040 }

```

The complicated bit is working out the right enclosing rectangle of some piece of TeX text, needed by the /Rect key. This solution originates with Toby Thain (tobyth@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

10041 \newsavebox{\pdf@box}
10042 \providecommand*{\Hy@setouterhbox}{\sbox}
10043 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10044 \def\Hy@DEST{/DEST}
10045 \def\pdf@rect#1{%
10046 \leavevmode
10047 \ifHy@breaklinks
10048 \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10049 \else
10050 \sbox\pdf@box{#1}%
10051 \fi
10052 \dimen@\ht\pdf@box
10053 \ifdim\dp\pdf@box=\z@

```

```

10054 \literalps@out{H.S}%
10055 \else
10056 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10057 \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...).

```

10058 \ifHy@breaklinks
10059 \expandafter\Hy@breaklinksunhbox
10060 \else
10061 \expandafter\box
10062 \fi
10063 \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

10064 \ifdim\dimen@=\z@
10065 \literalps@out{H.R}%
10066 \else
10067 \raise\dimen@\hbox{\literalps@out{H.R}}%
10068 \fi
10069 \ifx\pdf@type\Hy@DEST
10070 \else
10071 \pdf@addtoksx{H.B}%
10072 \fi
10073 }

```

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.

```

10074 \newtoks\pdf@toks
10075 \newtoks\pdf@defaulttoks
10076 \pdf@defaulttoks={}%
10077 \def\pdf@addtoks#1#2{%
10078 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10079 \@processme
10080 }
10081 \def\pdf@addtoksx#1{%
10082 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10083 \@processme
10084 }
10085 \def\PDFdefaults#1{%
10086 \pdf@defaulttoks={#1}%
10087 }

```

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

```

10088 % what is the type of pdfmark?
10089 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10090 % what is the link type?
10091 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10092 \def\pdf@linktype{link}
10093 % parameter is a stream of PDF
10094 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10095 % parameter is a name
10096 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10097 % parameter is a array

```

```

10098 \define@key{PDF}{Border}{%
10099 \edef\Hy@temp{#1}%
10100 \ifx\Hy@temp\@empty
10101 \else
10102 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10103 \fi
10104 }
10105 \let\Hy@BorderArrayPatch\@empty
10106 % parameter is a dictionary
10107 \define@key{PDF}{BorderStyle}{%
10108 \edef\Hy@temp{#1}%
10109 \ifx\Hy@temp\@empty
10110 \else
10111 \pdf@addtoks{<<#1>>}{BS}%
10112 \fi
10113 }
10114 % parameter is a array
10115 \define@key{PDF}{Color}{%
10116 \ifx\relax#1\relax
10117 \else
10118 \pdf@addtoks{[#1]}{Color}% hash-ok
10119 \fi
10120 }
10121 % parameter is a string
10122 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10123 % parameter is a integer
10124 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10125 % parameter is a array
10126 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10127 % parameter is a string
10128 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10129 % parameter is a string or file
10130 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10131 % parameter is a destination
10132 \define@key{PDF}{Dest}{%
10133 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10134 \ifx\Hy@pstringDest\@empty
10135 \Hy@pdfmarkerrortrue
10136 \Hy@Warning{Destination with empty name ignored}%
10137 \else
10138 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10139 \fi
10140 }
10141 \define@key{PDF}{DestAnchor}{%
10142 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10143 \ifx\Hy@pstringDest\@empty
10144 \Hy@pdfmarkerrortrue
10145 \Hy@Warning{Destination with empty name ignored}%
10146 \else
10147 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10148 \fi
10149 }
10150 % parameter is a string
10151 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10152 % parameter is a string
10153 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10154 % parameter is a int

```



```

10155 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10156 \define@key{PDF}{PDFAFlags}{%
10157 \ifHy@pdfa
10158 \pdf@addtoks{#1}{F}%
10159 \fi
10160 }
10161 % parameter is a name
10162 \define@key{PDF}{AcroHighlight}{%
10163 \begingroup
10164 \edef\x{#1}%
10165 \expandafter\endgroup\ifx\x@empty
10166 \else
10167 \pdf@addtoks{#1}{H}%
10168 \fi
10169 }
10170 % parameter is a string
10171 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
10172 % parameter is a string
10173 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
10174 % parameter is a string
10175 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10176 % parameter is a string
10177 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
10178 % parameter is a Boolean
10179 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10180 % parameter is an integer or name
10181 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10182 % parameter is a name
10183 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10184 % parameter is a string
10185 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
10186 % parameter is an array
10187 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
10188 % parameter is an integer
10189 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10190 % parameter is a name
10191 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10192 % parameter is a string
10193 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
10194 % parameter is a string
10195 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
10196 % parameter is a string
10197 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
10198 % parameter is an array
10199 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
10200 % parameter is a string
10201 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10202 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
10203 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
10204 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
10205 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10206 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
10207 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
10208 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
10209 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10210 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}

```

```

10211 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10212 \define@key{PDF}{Trapped}{%
10213 \edef\Hy@temp{#1}%
10214 \ifx\Hy@temp\@empty
10215 \else
10216 \pdf@addtoks{/#1}{Trapped}%
10217 \fi
10218 }
10219
10220 </pdfmarkbase>
10221 <*pdfmark>
10222 \def\Acrobatmenu#1#2{%
10223 \Hy@Acrobatmenu{#1}{#2}{%
10224 \pdfmark[{#2}]{%
10225 linktype=menu,%
10226 pdfmark=/ANN,%
10227 AcroHighlight=\@pdfhighlight,%
10228 Border=\@pdfborder,%
10229 BorderStyle=\@pdfborderstyle,%
10230 Action={<< /Subtype /Named /N /#1 >>},%
10231 Subtype=/Link,%
10232 PDFAFlags=4%
10233 }%
10234 }%
10235 }

```

And now for some useful examples:

```

10236 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10237 \def\PDFNextPage@[#1]#2{%
10238 \pdfmark[{#2}]{%
10239 #1,%
10240 Border=\@pdfborder,%
10241 BorderStyle=\@pdfborderstyle,%
10242 Color=.2 .1 .5,%
10243 pdfmark=/ANN,%
10244 Subtype=/Link,%
10245 PDFAFlags=4,%
10246 Page=/Next%
10247 }%
10248 }
10249 \def\PDFPreviousPage{%
10250 \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10251 }
10252 \def\PDFPreviousPage@[#1]#2{%
10253 \pdfmark[{#2}]{%
10254 #1,%
10255 Border=\@pdfborder,%
10256 BorderStyle=\@pdfborderstyle,%
10257 Color=.4 .4 .1,%
10258 pdfmark=/ANN,%
10259 Subtype=/Link,%
10260 PDFAFlags=4,%
10261 Page=/Prev%
10262 }%
10263 }
10264 \def\PDFOpen#1{%
10265 \pdfmark{#1,pdfmark=/DOCVIEW}%
10266 }

```

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

```
10267 \def\hyper@linkurl#1#2{%
10268 \begingroup
10269 \Hy@pstringdef\Hy@pstringURI{#2}%
10270 \hyper@chars
10271 \leavevmode
10272 \pdfmark[{#1}]{%
10273 pdfmark=/ANN,%
10274 linktype=url,%
10275 AcroHighlight=\@pdfhighlight,%
10276 Border=\@pdfborder,%
10277 BorderStyle=\@pdfborderstyle,%
10278 Color=\@urlbordercolor,%
10279 Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10280 Subtype=/Link,%
10281 PDFAFlags=4%
10282 }%
10283 \endgroup
10284 }
10285 \def\hyper@linkfile#1#2#3{%
10286 \begingroup
10287 \Hy@pstringdef\Hy@pstringF{#2}%
10288 \Hy@pstringdef\Hy@pstringD{#3}%
10289 \leavevmode
10290 \pdfmark[{#1}]{%
10291 pdfmark=/ANN,%
10292 Subtype=/Link,%
10293 PDFAFlags=4,%
10294 AcroHighlight=\@pdfhighlight,%
10295 Border=\@pdfborder,%
10296 BorderStyle=\@pdfborderstyle,%
10297 linktype=file,%
10298 Color=\@filebordercolor,%
10299 Action={%
10300 <<%
10301 /S/GoToR%
10302 \Hy@SetNewWindow
10303 /F(\Hy@pstringF)%
10304 /D\ifx\#3\[\[0 \@pdfstartview\]\else(\Hy@pstringD)cvn\fi
10305 >>%
10306 }%
10307 }%
10308 \endgroup
10309 }
10310 \def\@hyper@launch run:#1\#2#3{%
10311 \begingroup
10312 \Hy@pstringdef\Hy@pstringF{#1}%
10313 \Hy@pstringdef\Hy@pstringP{#3}%
10314 \leavevmode
10315 \pdfmark[{#2}]{%
10316 pdfmark=/ANN,%
10317 Subtype=/Link,%
10318 PDFAFlags=4,%
10319 AcroHighlight=\@pdfhighlight,%
10320 Border=\@pdfborder,%
10321 BorderStyle=\@pdfborderstyle,%
10322 linktype=run,%
```

```

10323 Color=\@runbordercolor,%
10324 Action={%
10325 <<%
10326 /S/Launch%
10327 \Hy@SetNewWindow
10328 /F(\Hy@pstringF)%
10329 \ifx\#3\%
10330 \else
10331 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10332 \fi
10333 >>%
10334 }%
10335 }%
10336 \endgroup
10337 }
10338 </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.

```

10339 < *dvips>
10340 \providecommand*\XR@ext{-pdf}
10341 \def\Hy@raisedlink{}
10342 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
10343 \def\headerps@out#1{\special{! #1}}%
10344 \input{pdfmark.def}%
10345 \ifx\@pdfproducer\relax
10346 \def\@pdfproducer{dvips + Distiller}%
10347 \fi
10348 \providecommand*\@pdfborder{0 0 1}
10349 \providecommand*\@pdfborderstyle{}
10350 \providecommand*\@pdfview{XYZ}
10351 \providecommand*\@pdfviewparams{ H.V}
10352 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10353 \g@addto@macro\Hy@FirstPageHook{%
10354 \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.

```

10355 /DvipsToPDF{72.27 mul Resolution div} def%
10356 /PDFToDvips{72.27 div Resolution mul} def%
10357 /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.

```
10358 /BorderArrayPatch{%
10359 [exch{%
10360 dup dup type/integertype eq exch type/realtype eq or%
10361 {BPToDvips}if%
10362 }forall]%
10363 }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.

```
10364 /HyperBorder {1 PDFToDvips} def%
10365 /H.V {pdf@hoff pdf@voff null} def%
10366 /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

```
10367 /H.S {%
10368 currentpoint %
10369 HyperBorder add /pdf@lly exch def %
10370 dup DvipsToPDF 72 add /pdf@hoff exch def %
10371 HyperBorder sub /pdf@llx exch def%
10372 } def%
```

The calculation of upper left  $y$  is done without raising the point in  $\text{\TeX}$ , by simply adding on the current  $\backslash$ baselineskip to the current  $y$ . This is usually too much, so we remove a notional 2 points.

We have to see what the current baselineskip is, and convert it to the dvips coordinate system.

Argument: baselineskip in pt. The  $x$  and  $y$  coordinates of the current point, minus the baselineskip

```
10373 /H.L {%
10374 2 sub dup%
10375 /HyperBasePt exch def %
10376 PDFToDvips /HyperBaseDvips exch def %
10377 currentpoint %
10378 HyperBaseDvips sub /pdf@ury exch def%
10379 /pdf@urx exch def%
10380 } def%
10381 /H.A {%
10382 H.L %
10383 % |pdf@voff| = the distance from the top of the page to a point
10384 % |\baselineskip| above the current point in PDF coordinates
10385 currentpoint exch pop %
10386 vsize 72 sub exch DvipsToPDF %
10387 HyperBasePt sub % baseline skip
10388 sub /pdf@voff exch def%
10389 } def%
10390 /H.R {%
10391 currentpoint %
10392 HyperBorder sub /pdf@ury exch def %
10393 HyperBorder add /pdf@urx exch def %
10394 % |pdf@voff| = the distance from the top of the page to the current point, in
10395 % PDF coordinates
10396 currentpoint exch pop vsize 72 sub %
10397 exch DvipsToPDF sub /pdf@voff exch def%
10398 } def%
```

```

10399 }%
10400 }
10401 \AtBeginShipoutFirst{%
10402 \ifHy@setpagesize
10403 \begingroup
10404 \ifundefined{stockwidth}{}%
10405 \ifdim\paperwidth>\z@
10406 \ifdim\paperheight>\z@
10407 \special{papersize=\the\paperwidth,\the\paperheight}%
10408 \fi
10409 \fi
10410 }{%
10411 \ifdim\stockwidth>\z@
10412 \ifdim\stockheight>\z@
10413 \special{papersize=\the\stockwidth,\the\stockheight}%
10414 \fi
10415 \fi
10416 }%
10417 \endgroup
10418 \fi
10419 \Hy@DisableOption{setpagesize}%
10420 }
10421 </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.

```

10422 < *vtexpdfmark>
10423 \providecommand*{\XR@ext}{pdf}
10424 \def\Hy@raisedlink{}
10425 \def\literalps@out#1{\special{pS:#1}}%
10426 \def\headerps@out#1{\immediate\special{pS:#1}}%
10427 \input{pdfmark.def}%
10428 \ifx\@pdfproducer\relax
10429 \ifnum\OpMode=\@ne
10430 \def\@pdfproducer{VTeX}%
10431 \else
10432 \def\@pdfproducer{VTeX + Distiller}%
10433 \fi
10434 \fi
10435 \providecommand*\@pdfborder{0 0 1}
10436 \providecommand*\@pdfborderstyle{}
10437 \providecommand*\@pdfview{XYZ}
10438 \providecommand*\@pdfviewparams{ H.V}
10439 \g@addto@macro\Hy@FirstPageHook{%
10440 \headerps@out{%
10441 /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.

```

10442 /HyperBorder {1} def%
10443 /H.V {pdf@hoff pdf@voff null} def%
10444 /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:  $\text{pdf@lly} = Y_c - \text{HyperBorder}$ ,  $\text{pdf@hoff} = X_c + 72$ ,  $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10445 /H.S {%
10446 currentpoint %
10447 HyperBorder sub%
10448 /pdf@lly exch def %
10449 dup 72 add /pdf@hoff exch def %
10450 HyperBorder sub%
10451 /pdf@llx exch def%
10452 } def%
```

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

```

10453 /H.L {%
10454 2 sub%
10455 /HyperBasePt exch def %
10456 currentpoint %
10457 HyperBasePt add HyperBorder add%
10458 /pdf@ury exch def %
10459 HyperBorder add%
10460 /pdf@urx exch def%
10461 } def%
10462 /H.A {%
10463 H.L %
10464 currentpoint exch pop %
10465 vsize 72 sub exch %
10466 HyperBasePt add add%
10467 /pdf@voff exch def%
10468 } def%
```

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

```

10469 /H.R {%
10470 currentpoint %
10471 HyperBorder add%
10472 /pdf@ury exch def %
10473 HyperBorder add%
10474 /pdf@urx exch def %
10475 currentpoint exch pop vsize 72 sub add%
10476 /pdf@voff exch def%
10477 } def%
10478 }%
10479 }
10480 </vtxpdfmark>
```

## 46.11 Textures

```

10481 <*textures>
10482 \providecommand*{\XR@ext}{pdf}
```

At the suggestion of Jacques Distler ([distler@golem.ph.utexas.edu](mailto: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](mailto: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.

```
10483 \begingroup
10484 \obeylines %
10485 \gdef\Hy@ps@CR{\noexpand
10486 }%
10487 \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.

```
10488 \def\literalps@out#1{%
10489 \special{postscript 0 0 transform}%
10490 \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10491 }%
10492 %
```

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.

```
10493 \def\headerps@out#1{%
10494 \special{%
10495 prepostscript TeXdict begin\Hy@ps@CR
10496 #1\Hy@ps@CR
10497 end%
10498 }%
10499 }%
10500 %
```

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.

```
10501 \g@addto@macro\Hy@FirstPageHook{%
10502 \headerps@out{%
10503 /betterpdfmark {%
10504 systemdict begin %
10505 dup /BP eq%
10506 {cleartomark gsave nulldevice []}%
10507 {dup /EP eq%
10508 {cleartomark cleartomark grestore}%
10509 {cleartomark}%
10510 ifelse%
10511 }ifelse %
10512 end%
10513 }def\Hy@ps@CR
10514 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10515 }% end of \headerps@out
10516 }% end of \AtBeginShipoutFirst
10517 %
10518 \input{pdfmark.def}%
10519 %
10520 \ifx\@pdfproducer\relax
```



```

10521 \def\@pdfproducer{Textures + Distiller}%
10522 \fi
10523 \providecommand*\@pdfborder{0 0 1}
10524 \providecommand*\@pdfborderstyle{}
10525 \providecommand*\@pdfview{XYZ}
10526 \providecommand*\@pdfviewparams{ H.V}
10527 %

```

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  $\TeX$ .

```

10528 \AfterBeginDocument{%
10529 \headerps@out{%

```

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

```

10530 /vsize {\Hy@pageheight} def%
10531 /DvipsToPDF {} def%
10532 /PDFToDvips {} def%
10533 /BPToDvips {} def%
10534 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10535 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10536 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10537 /H.S {%
10538 currentpoint %
10539 HyperBorder add /pdf@lly exch def %
10540 dup DvipsToPDF 72 add /pdf@hoff exch def %
10541 HyperBorder sub /pdf@llx exch def%
10542 } def\Hy@ps@CR
10543 /H.L {%
10544 2 sub %
10545 PDFToDvips /HyperBase exch def %
10546 currentpoint %
10547 HyperBase sub /pdf@ury exch def%
10548 /pdf@urx exch def%
10549 } def\Hy@ps@CR
10550 /H.A {%
10551 H.L %
10552 currentpoint exch pop %
10553 vsize 72 sub exch DvipsToPDF %
10554 HyperBase sub % baseline skip
10555 sub /pdf@voff exch def%
10556 } def\Hy@ps@CR
10557 /H.R {%
10558 currentpoint %
10559 HyperBorder sub /pdf@ury exch def %
10560 HyperBorder add /pdf@urx exch def %
10561 currentpoint exch pop vsize 72 sub %
10562 exch DvipsToPDF sub /pdf@voff exch def%
10563 } def\Hy@ps@CR
10564 }%
10565 }

10566 \AfterBeginDocument{%
10567 \ifHy@colorlinks
10568 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10569 \fi

```

10570 }

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.

```
10571 \expandafter\let\expandafter\keepPDF@SetupDoc
10572 \csname PDF@SetupDoc\endcsname
10573 \def\PDF@SetupDoc{%
10574 \ifx\@baseurl\@empty
10575 \else
10576 \special{html:<base href="\@baseurl">}%
10577 \fi
10578 \keepPDF@SetupDoc
10579 }
10580 \def\hyper@anchor#1{%
10581 \Hy@SaveLastskip
10582 \Hy@VerboseAnchor{#1}%
10583 \begingroup
10584 \let\protect=\string
10585 \special{html:<a name=%
10586 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10587 \endgroup
10588 \Hy@activeanchortrue
10589 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10590 \special{html:}%
10591 \Hy@activeanchorfalse
10592 \Hy@RestoreLastskip
10593 }
10594 \def\hyper@anchorstart#1{%
10595 \Hy@SaveLastskip
10596 \Hy@VerboseAnchor{#1}%
10597 \begingroup
10598 \hyper@chars
10599 \special{html:<a name=%
10600 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10601 \endgroup
10602 \Hy@activeanchortrue
10603 }
10604 \def\hyper@anchorend{%
10605 \special{html:}%
10606 \Hy@activeanchorfalse
10607 \Hy@RestoreLastskip
10608 }
10609 \def\@urltype{url}
10610 \def\hyper@linkstart#1#2{%
10611 \Hy@VerboseLinkStart{#1}{#2}%
10612 \expandafter\Hy@colorlink\csname @#1color\endcsname
10613 \def\Hy@tempa{#1}%
10614 \ifx\Hy@tempa\@urltype
10615 \special{html:}%
10616 \else
10617 \begingroup
10618 \hyper@chars
10619 \special{%
10620 html:<a href=%
10621 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>
10622 }%
10623 \endgroup
10624 \fi
```

```

10625 }
10626 \def\hyper@linkend{%
10627 \special{html:}%
10628 \Hy@endcolorlink
10629 }
10630 \def\hyper@linkfile#1#2#3{%
10631 \hyper@linkurl{#1}{%
10632 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10633 }%
10634 }
10635 \def\hyper@linkurl#1#2{%
10636 \leavevmode
10637 \ifHy@raiselinks
10638 \setbox\@tempboxa=\color@hbox #1\color@endbox
10639 \@linkdim\dp\@tempboxa
10640 \lower\@linkdim\hbox{%
10641 \hyper@chars
10642 \special{html:}%
10643 }%
10644 \Hy@colorlink\@urlcolor#1%
10645 \@linkdim\ht\@tempboxa
10646 \advance\@linkdim by -6.5\p@
10647 \raise\@linkdim\hbox{\special{html:}}%
10648 \Hy@endcolorlink
10649 \else
10650 \begingroup
10651 \hyper@chars
10652 \special{html:}%
10653 \Hy@colorlink\@urlcolor#1%
10654 \special{html:}%
10655 \Hy@endcolorlink
10656 \endgroup
10657 \fi
10658 }

```

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

```

10659 \def\hyper@link#1#2#3{%
10660 \Hy@VerboseLinkStart{#1}{#2}%
10661 \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
10662 }
10663 \def\hyper@image#1#2{%
10664 \begingroup
10665 \hyper@chars
10666 \special{html:}%
10667 \endgroup
10668 }
10669 </textures>

```

## 46.12 dvipsone

```

10670 % \subsection{dvipsone driver}
10671 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10672 % |\special| commands.
10673 <*dvipsone>
10674 \providecommand*\XR@ext}{pdf}
10675 \def\Hy@raisedlink{}
10676 \providecommand*\@pdfborder{0 0 1}
10677 \providecommand*\@pdfborderstyle{}

```

```

10678 \def\literalps@out#1{\special{ps:#1}}%
10679 \def\headerps@out#1{\special{headertext=#1}}%
10680 \input{pdfmark.def}%
10681 \ifx\@pdfproducer\relax
10682 \def\@pdfproducer{dvipsone + Distiller}%
10683 \fi
10684 \HyInfo@AddonUnsupportedtrue
10685 \def\PDF@FinishDoc{%
10686 \Hy@UseMaketitleInfos
10687 \HyInfo@TrappedUnsupported
10688 \special{PDF: Keywords \@pdfkeywords}%
10689 \special{PDF: Title \@pdftitle}%
10690 \special{PDF: Creator \@pdfcreator}%
10691 \ifx\@pdfcreationdate\@empty
10692 \else
10693 \special{PDF: CreationDate \@pdfcreationdate}%
10694 \fi
10695 \ifx\@pdfmoddate\@empty
10696 \else
10697 \special{PDF: ModDate \@pdfmoddate}%
10698 \fi
10699 \special{PDF: Author \@pdfauthor}%
10700 \ifx\@pdfproducer\relax
10701 \else
10702 \special{PDF: Producer \@pdfproducer}%
10703 \fi
10704 \special{PDF: Subject \@pdfsubject}%
10705 \Hy@DisableOption{pdfauthor}%
10706 \Hy@DisableOption{pdftitle}%
10707 \Hy@DisableOption{pdfsubject}%
10708 \Hy@DisableOption{pdfcreator}%
10709 \Hy@DisableOption{pdfcreationdate}%
10710 \Hy@DisableOption{pdfmoddate}%
10711 \Hy@DisableOption{pdfproducer}%
10712 \Hy@DisableOption{pdfkeywords}%
10713 \Hy@DisableOption{pdftrapped}%
10714 \Hy@DisableOption{pdfinfo}%
10715 }
10716 \def\PDF@SetupDoc{%
10717 \def\Hy@temp{}%
10718 \ifx\@pdfstartpage\@empty
10719 \else
10720 \ifx\@pdfstartview\@empty
10721 \else
10722 \edef\Hy@temp{%
10723 ,Page=\@pdfstartpage
10724 ,View=\@pdfstartview
10725 }%
10726 \fi
10727 \fi
10728 \edef\Hy@temp{%
10729 \noexpand\pdfmark{%
10730 pdfmark=/DOCVIEW,%
10731 PageMode=/\@pdfpagemode
10732 \Hy@temp
10733 }%
10734 }%

```

```

10735 \Hy@temp
10736 \ifx\@pdfpagescrop\@empty
10737 \else
10738 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10739 \fi
10740 \edef\Hy@temp{%
10741 \ifHy@toolbar\else /HideToolbar true\fi
10742 \ifHy@menubar\else /HideMenubar true\fi
10743 \ifHy>windowui\else /HideWindowUI true\fi
10744 \ifHy@fitwindow /FitWindow true\fi
10745 \ifHy@centerwindow /CenterWindow true\fi
10746 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10747 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10748 \Hy@UseNameKey{Direction}\@pdfdirection
10749 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10750 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10751 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10752 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10753 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10754 \Hy@UseNameKey{Duplex}\@pdfduplex
10755 \ifx\@pdfpicktraybypdfsize\@empty
10756 \else
10757 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10758 \fi
10759 \ifx\@pdfprintpagerange\@empty
10760 \else
10761 /PrintPageRange[\@pdfprintpagerange]%
10762 \fi
10763 \ifx\@pdfnumcopies\@empty
10764 \else
10765 /NumCopies \@pdfnumcopies
10766 \fi
10767 }%
10768 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10769 \pdfmark{%
10770 pdfmark=/PUT,%
10771 Raw={%
10772 \string{Catalog\string}<<%
10773 \ifx\Hy@temp\@empty
10774 \else
10775 /ViewerPreferences<<\Hy@temp>>%
10776 \fi
10777 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10778 \ifx\@pdflang\@empty
10779 \else
10780 /Lang(\@pdflang)%
10781 \fi
10782 \ifx\@baseurl\@empty
10783 \else
10784 /URI<</Base(\Hy@pstringB)>>%
10785 \fi
10786 >>%
10787 }%
10788 }%
10789 }
10790 \providecommand*\@pdfview{XYZ}
10791 \providecommand*\@pdfviewparams{ %

```

```

10792 gsave revscl currentpoint grestore %
10793 72 add exch pop null exch null%
10794 }
10795 \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 T<sub>E</sub>X.

```

10796 \g@addto@macro\Hy@FirstPageHook{%
10797 \headerps@out{%

```

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

```

10798 /DvipsToPDF { 65781 div } def%
10799 /PDFToDvips { 65781 mul } def%
10800 /BPToDvips{65781 mul}def%
10801 /HyperBorder { 1 PDFToDvips } def%
10802 /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.

```

10803 /BorderArrayPatch{%
10804 [exch{%
10805 dup dup type/integertype eq exch type/realtype eq or%
10806 {BPToDvips}if%
10807 }forall]%
10808 }def%
10809 /H.S {%
10810 currentpoint %
10811 HyperBorder add /pdf@lly exch def %
10812 dup DvipsToPDF 72 add /pdf@hoff exch def %
10813 HyperBorder sub /pdf@llx exch def%
10814 } def%
10815 /H.L {%
10816 2 sub %
10817 PDFToDvips /HyperBase exch def %
10818 currentpoint %
10819 HyperBase sub /pdf@ury exch def%
10820 /pdf@urx exch def%
10821 } def%
10822 /H.A {%
10823 H.L %
10824 currentpoint exch pop %
10825 HyperBase sub % baseline skip
10826 DvipsToPDF /pdf@voff exch def%
10827 } def%
10828 /H.R {%
10829 currentpoint %
10830 HyperBorder sub /pdf@ury exch def %
10831 HyperBorder add /pdf@urx exch def %
10832 currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10833 } def%
10834 }%
10835 }
10836 \end{dvipsone}

```

## 46.13 TeX4ht

```

10837 \<tex4ht>
10838 \providecommand*{\XR@ext}{html}
10839 \def\Hy@raisedlink{}
10840 \@ifpackageloaded{tex4ht}{%
10841 \typeout{hyperref tex4ht: tex4ht already loaded}%
10842 }{%
10843 \RequirePackage[htex4ht]{tex4ht}%
10844 }
10845 \hyperlinkfileprefix{}
10846 \def\PDF@FinishDoc{}
10847 \def\PDF@SetupDoc{%
10848 \ifx\@baseurl\@empty
10849 \else
10850 \special{t4ht=<base href="\@baseurl">}%
10851 \fi
10852 }
10853 \def\hyper@anchor#1{%
10854 \Hy@SaveLastskip
10855 \Hy@VerboseAnchor{#1}%
10856 \begingroup
10857 \let\protect=\string
10858 \special{t4ht=<a name=%
10859 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10860 \endgroup
10861 \Hy@activeanchortrue
10862 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10863 \special{t4ht=}%
10864 \Hy@activeanchorfalse
10865 \Hy@RestoreLastskip
10866 }
10867 \def\hyper@anchorstart#1{%
10868 \Hy@SaveLastskip
10869 \Hy@VerboseAnchor{#1}%
10870 \begingroup
10871 \hyper@chars\special{t4ht=<a name=%
10872 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10873 \endgroup
10874 \Hy@activeanchortrue
10875 }
10876 \def\hyper@anchorend{%
10877 \special{t4ht=}%
10878 \Hy@activeanchorfalse
10879 \Hy@RestoreLastskip
10880 }
10881 \def\@urltype{url}
10882 \def\hyper@linkstart#1#2{%
10883 \Hy@VerboseLinkStart{#1}{#2}%
10884 \expandafter\Hy@colorlink\csname @#1color\endcsname
10885 \def\Hy@tempa{#1}%
10886 \ifx\Hy@tempa\@urltype
10887 \special{t4ht=}%
10888 \else
10889 \begingroup
10890 \hyper@chars
10891 \special{t4ht=<a href=%
10892 \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
10893 \endgroup

```

```

10894 \fi
10895 }
10896 \def\hyper@linkend{%
10897 \special{t4ht=}%
10898 \Hy@endcolorlink
10899 }
10900 \def\hyper@linkfile#1#2#3{%
10901 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
10902 }
10903 \def\hyper@linkurl#1#2{%
10904 \leavevmode
10905 \ifHy@raiselinks
10906 \setbox\@tempboxa=\color@hbox #1\color@endbox
10907 \@linkdim\dp\@tempboxa
10908 \lower\@linkdim\hbox{%
10909 \begingroup
10910 \hyper@chars
10911 \special{%
10912 t4ht=%
10913 }%
10914 \endgroup
10915 }%
10916 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10917 \@linkdim\ht\@tempboxa
10918 \advance\@linkdim by -6.5\p@
10919 \raise\@linkdim\hbox{\special{t4ht=}}%
10920 \else
10921 \begingroup
10922 \hyper@chars
10923 \special{t4ht=}%
10924 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10925 \special{t4ht=}%
10926 \endgroup
10927 \fi
10928 }

Poor implementation of \hyper@link without considering #1.
10929 \def\hyper@link#1#2#3{%
10930 \Hy@VerboseLinkStart{#1}{#2}%
10931 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
10932 }
10933 \def\hyper@image#1#2{%
10934 \begingroup
10935 \hyper@chars
10936 \special{t4ht=}%
10937 \endgroup
10938 }
10939 \let\autoref\ref
10940 \ifx \rEfLiNK \UnDef
10941 \def\rEfLiNK #1#2{#2}%
10942 \fi
10943 \def\backref#1{}
10944 </tex4ht>
10945 <*tex4htcfg>
10946 \IfFileExists{\jobname.cfg}{\endinput}{}
10947 \Preamble{html}
10948 \begin{document}%
10949 \EndPreamble

```



```

10950 \def\TeX{\TeX}
10951 \def\OMEGA{\Omega}
10952 \def\LaTeX{\LaTeX}
10953 \def\LaTeXe{\LaTeX2e}
10954 \def\TeXe{\TeX}
10955 \def\MF{Metafont}
10956 \def\MP{MetaPost}
10957 \</tex4htcfg>

```

## 47 Driver-specific form support

### 47.1 pdfmarks

```

10958 <*pdfmark>
10959 \long\def\@Form[#1]{%
10960 \g@addto@macro\Hy@FirstPageHook{%
10961 \headerps@out{%
10962 [%
10963 /__objdef{pdfDocEncoding}%
10964 /type/dict%
10965 /OBJ pdfmark%
10966 [%
10967 {pdfDocEncoding}%
10968 <<%
10969 /Type/Encoding%
10970 /Differences[%
10971 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10972 /tilde %
10973 39/quotesingle %
10974 96/grave %
10975 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10976 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10977 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10978 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10979 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10980 164/currency %
10981 166/brokenbar %
10982 168/dieresis/copyright/ordfeminine %
10983 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10984 /twosuperior/threesuperior/acute/mu %
10985 183/periodcentered/cedilla/onesuperior/ordmasculine %
10986 188/onequarter/onehalf/threequarters %
10987 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10988 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10989 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10990 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10991 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10992 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10993 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10994 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10995 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10996 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10997]%
10998 >>%
10999 /PUT pdfmark%
11000 [%
11001 /__objdef{ZaDb}%
11002 /type/dict%

```

```

11003 /OBJ pdfmark%
11004 [%
11005 {ZaDb}%
11006 <<%
11007 /Type/Font%
11008 /Subtype/Type1%
11009 /Name/ZaDb%
11010 /BaseFont/ZapfDingbats%
11011 >>%
11012 /PUT pdfmark%
11013 [%
11014 /_objdef{Helv}%
11015 /type/dict%
11016 /OBJ pdfmark%
11017 [%
11018 {Helv}%
11019 <<%
11020 /Type/Font%
11021 /Subtype/Type1%
11022 /Name/Helv%
11023 /BaseFont/Helvetica%
11024 /Encoding{pdfDocEncoding}%
11025 >>%
11026 /PUT pdfmark%
11027 [%
11028 /_objdef{aform}%
11029 /type/dict%
11030 /OBJ pdfmark%
11031 [%
11032 /_objdef{afields}%
11033 /type/array%
11034 /OBJ pdfmark%
11035 {%
11036 [%
11037 /BBox[0 0 100 100]%
11038 /_objdef{Check}%
11039 /BP pdfmark %
11040 1 0 0 setrgbcolor%
11041 /ZapfDingbats 80 selectfont %
11042 20 20 moveto%
11043 (4)show%
11044 [/EP pdfmark%
11045 [%
11046 /BBox[0 0 100 100]%
11047 /_objdef{Cross}%
11048 /BP pdfmark %
11049 1 0 0 setrgbcolor%
11050 /ZapfDingbats 80 selectfont %
11051 20 20 moveto%
11052 (8)show%
11053 [/EP pdfmark%
11054 [%
11055 /BBox[0 0 250 100]%
11056 /_objdef{Submit}%
11057 /BP pdfmark %
11058 0.6 setgray %
11059 0 0 250 100 rectfill %

```

```

11060 1 setgray %
11061 2 2 moveto %
11062 2 98 lineto %
11063 248 98 lineto %
11064 246 96 lineto %
11065 4 96 lineto %
11066 4 4 lineto %
11067 fill %
11068 0.34 setgray %
11069 248 98 moveto %
11070 248 2 lineto %
11071 2 2 lineto %
11072 4 4 lineto %
11073 246 4 lineto %
11074 246 96 lineto %
11075 fill%
11076 /Helvetica 76 selectfont %
11077 0 setgray %
11078 8 22.5 moveto%
11079 (Submit)show%
11080 [/EP pdfmark%
11081 [%
11082 /BBox[0 0 250 100]%
11083 /_objdef{SubmitP}%
11084 /BP pdfmark %
11085 0.6 setgray %
11086 0 0 250 100 rectfill %
11087 0.34 setgray %
11088 2 2 moveto %
11089 2 98 lineto %
11090 248 98 lineto %
11091 246 96 lineto %
11092 4 96 lineto %
11093 4 4 lineto %
11094 fill %
11095 1 setgray %
11096 248 98 moveto %
11097 248 2 lineto %
11098 2 2 lineto %
11099 4 4 lineto %
11100 246 4 lineto %
11101 246 96 lineto %
11102 fill%
11103 /Helvetica 76 selectfont %
11104 0 setgray %
11105 10 20.5 moveto%
11106 (Submit)show%
11107 [/EP pdfmark%
11108 } ?pdfmark%
11109 [%
11110 {aform}%
11111 <<%
11112 /Fields{afields}%
11113 /DR<<%
11114 /Font<<%
11115 /ZaDb{ZaDb}%
11116 /Helv{Helv}%

```

```

11117 >>%
11118 >>%
11119 /DA(/Helv 10 Tf 0 g)%
11120 /CO{corder}%
11121 \ifHy@pdfa
11122 \else
11123 /NeedAppearances true%
11124 \fi
11125 >>%
11126 /PUT pdfmark%
11127 [%
11128 {Catalog}%
11129 <<%
11130 /AcroForm{aform}%
11131 >>%
11132 /PUT pdfmark%
11133 [%
11134 /__objdef{corder}%
11135 /type/array%
11136 /OBJ pdfmark% dps
11137 }]%
11138 \setkeys{Form}{#1}%
11139 }
11140 \def\@endForm{}
11141 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11142 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11143 }
11144 \def\@TextField[#1]#2{% parameters, label
11145 \def\Fld@name{#2}%
11146 \def\Fld@default{}%
11147 \let\Fld@value\@empty
11148 \def\Fld@width{\DefaultWidthofText}%
11149 \def\Fld@height{%
11150 \ifFld@multiline
11151 \DefaultHeightofTextMultiline
11152 \else
11153 \DefaultHeightofText
11154 \fi
11155 }%
11156 \begingroup
11157 \Field@toks={ }%
11158 \expandafter\HyField@SetKeys\expandafter{%
11159 \DefaultOptionsofText,#1%
11160 }%
11161 \HyField@FlagsText
11162 \ifFld@hidden\def\Fld@width{1sp}\fi
11163 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11164 \LayoutTextField{#2}{%
11165 \Hy@escapeform\PDFForm@Text
11166 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11167 pdfmark=/ANN,Raw={\PDFForm@Text}%
11168 }%
11169 }%
11170 \endgroup
11171 }
11172 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11173 \def\Fld@name{#2}%

```

```

11174 \let\Fld@default\relax
11175 \let\Fld@value\relax
11176 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11177 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11178 \begingroup
11179 \Fld@menulength=0 %
11180 \@tempdima\z@
11181 \@for\@curropt:=#3\do{%
11182 \expandafter\Fld@checkequals\@curropt==\%
11183 \Hy@StepCount\Fld@menulength
11184 \settowidth{\@tempdimb}{\@currDisplay}%
11185 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11186 }%
11187 \advance\@tempdima by 15\p@
11188 \Field@toks={ }%
11189 \begingroup
11190 \HyField@SetKeys{#1}%
11191 \edef\x{\endgroup
11192 \noexpand\expandafter
11193 \noexpand\HyField@SetKeys
11194 \noexpand\expandafter{%
11195 \expandafter\noexpand\csname DefaultOptionsof%
11196 \ifFld@radio
11197 Radio%
11198 \else
11199 \ifFld@combo
11200 \ifFld@popdown
11201 PopdownBox%
11202 \else
11203 ComboBox%
11204 \fi
11205 \else
11206 ListBox%
11207 \fi
11208 \fi
11209 \endcsname
11210 }%
11211 }\x
11212 \HyField@SetKeys{#1}%
11213 \ifFld@hidden\def\Fld@width{1sp}\fi
11214 \ifx\Fld@value\relax
11215 \let\Fld@value\Fld@default
11216 \fi
11217 \LayoutChoiceField{#2}{%
11218 \ifFld@radio
11219 \HyField@FlagsRadioButton
11220 \@@Radio{#3}%
11221 \else
11222 \begingroup
11223 \HyField@FlagsChoice
11224 \ifdim\Fld@width<\@tempdima
11225 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11226 \edef\Fld@width{\the\@tempdima}%
11227 \fi
11228 \ifFld@combo
11229 \else
11230 \@tempdima=\the\Fld@menulength\Fld@charsize

```

```

11231 \advance\@tempdima by \Fld@borderwidth bp %
11232 \advance\@tempdima by \Fld@borderwidth bp %
11233 \edef\Fld@height{\the\@tempdima}%
11234 \fi
11235 \@@ListBox{#3}%
11236 \endgroup
11237 \fi
11238 }%
11239 \endgroup
11240 }
11241 \def\@@Radio#1{%
11242 \Fld@listcount=0 %
11243 \@for\@curropt:=#1\do{%
11244 \expandafter\Fld@checkequals\@curropt==\%
11245 \Hy@StepCount\Fld@listcount
11246 \@currDisplay\space
11247 \Hy@escapeform\PDFForm@Radio
11248 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11249 pdfmark=/ANN,%
11250 Raw={%
11251 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11252 }%
11253 } % deliberate space between radio buttons
11254 }%
11255 }
11256 \newcount\Fld@listcount
11257 \def\@@ListBox#1{%
11258 \HyField@PDFChoices{#1}%
11259 \Hy@escapeform\PDFForm@List
11260 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11261 pdfmark=/ANN,Raw={\PDFForm@List}%
11262 }%
11263 }
11264 \def\@PushButton[#1]#2{% parameters, label
11265 \def\Fld@name{#2}%
11266 \begingroup
11267 \Field@toks={ }%
11268 \expandafter\HyField@SetKeys\expandafter{%
11269 \DefaultOptionsofPushButton,#1%
11270 }%
11271 \ifHy@pdfa
11272 \PackageError{hyperref}{%
11273 PDF/A: Push button with JavaScript is prohibited%
11274 }\@ehc
11275 \LayoutPushButtonField{%
11276 \leavevmode
11277 \MakeButtonField{#2}%
11278 }%
11279 \else
11280 \HyField@FlagsPushButton
11281 \ifFld@hidden\def\Fld@width{1sp}\fi
11282 \LayoutPushButtonField{%
11283 \leavevmode
11284 \Hy@escapeform\PDFForm@Push
11285 \pdfmark[\MakeButtonField{#2}]{%
11286 pdfmark=/ANN,Raw={\PDFForm@Push}%
11287 }%

```

```

11288 }%
11289 \fi
11290 \endgroup
11291 }
11292 \def\@Submit[#1]#2{%
11293 \Field@toks={ }%
11294 \def\Fld@width{\DefaultWidthofSubmit}%
11295 \def\Fld@height{\DefaultHeightofSubmit}%
11296 \begingroup
11297 \expandafter\HyField@SetKeys\expandafter{%
11298 \DefaultOptionsofSubmit,#1%
11299 }%
11300 \HyField@FlagsPushButton
11301 \HyField@FlagsSubmit
11302 \ifFld@hidden\def\Fld@width{1sp}\fi
11303 \Hy@escapeform\PDFForm@Submit
11304 \pdfmark[\MakeButtonField{#2}]{%
11305 pdfmark=/ANN,%
11306 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11307 }%
11308 \endgroup
11309 }
11310 \def\@Reset[#1]#2{%
11311 \Field@toks={ }%
11312 \def\Fld@width{\DefaultWidthofReset}%
11313 \def\Fld@height{\DefaultHeightofReset}%
11314 \begingroup
11315 \expandafter\HyField@SetKeys\expandafter{%
11316 \DefaultOptionsofReset,#1%
11317 }%
11318 \leavevmode
11319 \ifHy@pdfa
11320 \PackageError{hyperref}{%
11321 PDF/A: Reset action is prohibited%
11322 }\@ehc
11323 \MakeButtonField{#2}%
11324 \else
11325 \HyField@FlagsPushButton
11326 \ifFld@hidden\def\Fld@width{1sp}\fi
11327 \Hy@escapeform\PDFForm@Reset
11328 \pdfmark[\MakeButtonField{#2}]{%
11329 pdfmark=/ANN,Raw={\PDFForm@Reset}%
11330 }%
11331 \fi
11332 \endgroup
11333 }%
11334 \def\@CheckBox[#1]#2{% parameters, label
11335 \def\Fld@name{#2}%
11336 \def\Fld@default{0}%
11337 \begingroup
11338 \def\Fld@width{\DefaultWidthofCheckBox}%
11339 \def\Fld@height{\DefaultHeightofCheckBox}%
11340 \Field@toks={ }%
11341 \expandafter\HyField@SetKeys\expandafter{%
11342 \DefaultOptionsofCheckBox,#1%
11343 }%
11344 \HyField@FlagsCheckBox

```

```

11345 \ifFld@hidden\def\Fld@width{1sp}\fi
11346 \LayoutCheckField{#2}{%
11347 \Hy@escapeform\PDFForm@Check
11348 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11349 pdfmark=/ANN,Raw={\PDFForm@Check}%
11350 }%
11351 }%
11352 \endgroup
11353 }
11354 \pdfmark>

```

## 47.2 HyperTeX

```

11355 <*hypertex>
11356 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11357 \def\@endForm{}
11358 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11359 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11360 }
11361 \def\@TextField[#1]#2{% parameters, label
11362 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11363 }
11364 \def\@CheckBox[#1]#2{% parameters, label
11365 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11366 }
11367 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11368 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11369 }
11370 \def\@PushButton[#1]#2{% parameters, label
11371 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11372 }
11373 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11374 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11375 </hypertex>

```

## 47.3 TeX4ht

```

11376 <*tex4ht>
11377 \def\@Form[#1]{%
11378 \setkeys{Form}{#1}%
11379 \HCode{<form action="\Form@action" method="\Form@method">}%
11380 }
11381 \def\@endForm{\HCode{</form>}}
11382 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11383 \typeout{Sorry, TeX4ht does not support gauges}%
11384 }
11385 \def\@TextField[#1]#2{% parameters, label
11386 \let\Hy@reserved@a\@empty
11387 \def\Fld@name{#2}%
11388 \def\Fld@default{}%
11389 \bgroup
11390 \Field@toks={ }%
11391 \setkeys{Field}{#1}%
11392 \HCode{<label for="\Fld@name">#2</label>}%
11393 \ifFld@password
11394 \@@PasswordField
11395 \else
11396 \@@TextField
11397 \fi

```



```

11398 \egroup
11399 }
11400 \def\@@PasswordField{%
11401 \HCode{%
11402 <input type="password" %
11403 id="\Fld@name" %
11404 name="\Fld@name" %
11405 \ifFld@hidden type="hidden" \fi
11406 value="\Fld@default" %
11407 \the\Field@toks
11408 >%
11409 }%
11410 }
11411 \def\@@TextField{%
11412 \ifFld@multiline
11413 \HCode{<textarea %
11414 \ifFld@readonly readonly \fi
11415 id="\Fld@name" %
11416 name="\Fld@name" %
11417 \ifFld@hidden type="hidden" \fi
11418 \the\Field@toks>%
11419 }%
11420 \Fld@default
11421 \HCode{</textarea>}%
11422 \else
11423 \HCode{<input type="text" %
11424 \ifFld@readonly readonly \fi
11425 id="\Fld@name" %
11426 name="\Fld@name" %
11427 \ifFld@hidden type="hidden" \fi
11428 value="\Fld@default" %
11429 \the\Field@toks>%
11430 }%
11431 \fi
11432 }
11433 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11434 \def\Fld@name{#2}%
11435 \def\Fld@default{#3}%
11436 \let\Hy@reserved@a\relax
11437 \begingroup
11438 \expandafter\Fld@findlength#3\\%
11439 \Field@toks={ }%
11440 \setkeys{Field}{#1}%
11441 #2%
11442 \ifFld@radio
11443 \expandafter\@@Radio#3\\%
11444 \else
11445 \expandafter\@@Menu#3\\%
11446 \fi
11447 \endgroup
11448 }
11449 \def\Fld@findlength#1\\{%
11450 \Fld@menulength=0 %
11451 \@for\@currupt:=#1\do{\Hy@StepCount\Fld@menulength}%
11452 }
11453 \def\@@Menu#1\\{%
11454 \HCode{<select size="\the\Fld@menulength" %

```

```

11455 name="\Fld@name" %
11456 \the\Field@toks>%
11457 }%
11458 \@for\@curropt:=#1\do{%
11459 \expandafter\Fld@checkequals\@curropt==\\%
11460 \HCode{<option %
11461 \ifx\@curropt\Fld@default selected \fi
11462 value="\@currValue">\@currDisplay</option>%
11463 }%
11464 }%
11465 \HCode{</select>}%
11466 }
11467 \def\@@Radio#1\\{%
11468 \@for\@curropt:=#1\do{%
11469 \expandafter\Fld@checkequals\@curropt==\\%
11470 \HCode{<input type="radio" %
11471 \ifx\@curropt\Fld@default checked \fi
11472 name="\Fld@name" %
11473 value="\@currValue" %
11474 \the\Field@toks>%
11475 }%
11476 \@currDisplay
11477 }%
11478 }
11479 \def\@PushButton[#1]#2{% parameters, label
11480 \def\Fld@name{#2}%
11481 \bgroup
11482 \Field@toks={ }%
11483 \setkeys{Field}{#1}%
11484 \HCode{<input type="button" %
11485 name="\Fld@name" %
11486 value="#2" %
11487 \the\Field@toks>%
11488 }%
11489 \HCode{</button>}%
11490 \egroup
11491 }
11492 \def\@Submit[#1]#2{%
11493 \HCode{<button type="submit">#2</button>}%
11494 }
11495 \def\@Reset[#1]#2{%
11496 \HCode{<button type="reset">#2</button>}%
11497 }
11498 \def\@CheckBox[#1]#2{% parameters, label
11499 \let\Hy@reserved@a\@empty
11500 \def\Fld@name{#2}%
11501 \def\Fld@default{0}%
11502 \bgroup
11503 \Field@toks={ }%
11504 \setkeys{Field}{#1}%
11505 \HCode{<input type="checkbox" %
11506 \ifFld@checked checked \fi
11507 \ifFld@disabled disabled \fi
11508 \ifFld@readonly readonly \fi
11509 name="\Fld@name" %
11510 \ifFld@hidden type="hidden" \fi
11511 value="\Fld@default" %

```

```

11512 \the\Field@toks>%
11513 #2%
11514 }%
11515 \egroup
11516 }
11517 </tex4ht>

```

## 47.4 pdfTeX

```

11518 <*pdfTeX>
11519 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11520 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11521 }
11522 \def\MakeFieldObject#1#2{\sbox0{#1}%
11523 \immediate\pdfxform0 %
11524 \expandafter\edef\csname #2Object\endcsname{%
11525 \the\pdfastxform\space 0 R%
11526 }%
11527 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
11528 }%
11529 \def\HyField@afields{}
11530 \begingroup\expandafter\expandafter\expandafter\endgroup
11531 \expandafter\ifx\csname pdfastlink\endcsname\relax
11532 \let\HyField@AddToFields\relax
11533 \PackageInfo{hyperref}{%
11534 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11535 \MessageBreak
11536 Adobe Reader/ Acrobat accepts an empty /Field array,%
11537 \MessageBreak
11538 but other PDF viewers might complain%
11539 }%
11540 \else
11541 \def\HyField@AuxAddToFields#1{%
11542 \def\HyField@AfterAuxOpen{\AtBeginDocument}%
11543 \AtBeginDocument{%
11544 \if@filesw
11545 \immediate\write\@mainaux{%
11546 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11547 }%
11548 \fi
11549 \let\HyField@AfterAuxOpen\@firstofone
11550 \def\HyField@AuxAddToFields#1{%
11551 \xdef\HyField@afields{%
11552 \ifx\HyField@afields\@empty
11553 \else
11554 \HyField@afields
11555 \space
11556 \fi
11557 #1 0 R%
11558 }%
11559 }%
11560 }%
11561 \def\HyField@AddToFields{%
11562 \expandafter\HyField@@AddToFields\expandafter{%
11563 \the\pdfastlink
11564 }%
11565 }%
11566 \def\HyField@@AddToFields#1{%

```

```

11567 \HyField@AfterAuxOpen{%
11568 \if@filesw
11569 \write\@mainaux{%
11570 \string\HyField@AuxAddToFields{#1}%
11571 }%
11572 \fi
11573 }%
11574 }%
11575 \fi
11576 \def\@Form[#1]{%
11577 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11578 \setkeys{Form}{#1}%
11579 \Hy@FormObjects
11580 \ifnum\pdfTeXversion>13 %
11581 \pdfrefobj\OBJ@pdfdocencoding
11582 \pdfrefobj\OBJ@ZaDb
11583 \pdfrefobj\OBJ@Helv
11584 \fi
11585 \AtVeryEndDocument{%
11586 \immediate\pdfobj{%
11587 <<%
11588 /Fields[\HyField@afields]%
11589 /DR<<%
11590 /Font<<%
11591 /ZaDb \OBJ@ZaDb\space 0 R%
11592 /Helv \OBJ@Helv\space 0 R%
11593 >>%
11594 >>%
11595 /DA(/Helv 10 Tf 0 g)%
11596 \ifHy@pdfa
11597 \else
11598 /NeedAppearances true%
11599 \fi
11600 >>%
11601 }%
11602 \edef\OBJ@acroform{\the\pdflastobj}%
11603 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11604 }%
11605 \MakeFieldObject{%
Same as \ding{123} of package pifont.
11606 \begingroup
11607 \fontfamily{pzd}%
11608 \fontencoding{U}%
11609 \fontseries{m}%
11610 \fontshape{n}%
11611 \selectfont
11612 \char123 %
11613 \endgroup
11614 }{Ding}%
11615 \MakeFieldObject{%
11616 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11617 }{Submit}%
11618 \MakeFieldObject{%
11619 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11620 }{SubmitP}%
11621 }
11622 \def\@endForm{}

```

```

11623 \def\@TextField[#1]#2{% parameters, label
11624 \def\Fld@name{#2}%
11625 \def\Fld@default{}%
11626 \let\Fld@value\@empty
11627 \def\Fld@width{\DefaultWidthofText}%
11628 \def\Fld@height{%
11629 \ifFld@multiline
11630 \DefaultHeightofTextMultiline
11631 \else
11632 \DefaultHeightofText
11633 \fi
11634 }%
11635 \begingroup
11636 \Field@toks={ }%
11637 \expandafter\HyField@SetKeys\expandafter{%
11638 \DefaultOptionsofText,#1%
11639 }%
11640 \PDFForm@Name
11641 \HyField@FlagsText
11642 \ifFld@hidden\def\Fld@width{1sp}\fi
11643 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11644 \LayoutTextField{#2}{%
11645 \Hy@escapeform\PDFForm@Text
11646 \pdfstartlink user {\PDFForm@Text}\relax
11647 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11648 \HyField@AddToFields
11649 }%
11650 \endgroup
11651 }
11652 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11653 \def\Fld@name{#2}%
11654 \let\Fld@default\relax
11655 \let\Fld@value\relax
11656 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11657 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11658 \begingroup
11659 \Fld@menulength=0 %
11660 \@tempdima\z@
11661 \@for\@curropt:=#3\do{%
11662 \expandafter\Fld@checkequals\@curropt==\%
11663 \Hy@StepCount\Fld@menulength
11664 \settowidth{\@tempdimb}{\@currDisplay}%
11665 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11666 }%
11667 \advance\@tempdima by 15\p@
11668 \Field@toks={ }%
11669 \begingroup
11670 \HyField@SetKeys{#1}%
11671 \edef\x{\endgroup
11672 \noexpand\expandafter
11673 \noexpand\HyField@SetKeys
11674 \noexpand\expandafter{%
11675 \expandafter\noexpand\csname DefaultOptionsof%
11676 \ifFld@radio
11677 Radio%
11678 \else
11679 \ifFld@combo

```

```

11680 \ifFld@popdown
11681 PopdownBox%
11682 \else
11683 ComboBox%
11684 \fi
11685 \else
11686 ListBox%
11687 \fi
11688 \fi
11689 \endcsname
11690 }%
11691 } \x
11692 \HyField@SetKeys{#1}%
11693 \PDFForm@Name
11694 \ifFld@hidden\def\Fld@width{1sp}\fi
11695 \ifx\Fld@value\relax
11696 \let\Fld@value\Fld@default
11697 \fi
11698 \LayoutChoiceField{#2}{%
11699 \ifFld@radio
11700 \HyField@FlagsRadioButton
11701 \@@Radio{#3}%
11702 \else
11703 \begingroup
11704 \HyField@FlagsChoice
11705 \ifdim\Fld@width<\@tempdima
11706 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11707 \edef\Fld@width{\the\@tempdima}%
11708 \fi
11709 \ifFld@combo
11710 \else
11711 \@tempdima=\the\Fld@menulength\Fld@charsize
11712 \advance\@tempdima by \Fld@borderwidth bp %
11713 \advance\@tempdima by \Fld@borderwidth bp %
11714 \edef\Fld@height{\the\@tempdima}%
11715 \fi
11716 \@@Listbox{#3}%
11717 \endgroup
11718 \fi
11719 }%
11720 \endgroup
11721 }
11722 \def\@@Radio#1{%
11723 \Fld@listcount=0 %
11724 \@for\@curropt:=#1\do{%
11725 \expandafter\Fld@checkequals\@curropt==\%
11726 \Hy@StepCount\Fld@listcount
11727 \@currDisplay\space
11728 \leavevmode
11729 \Hy@escapeform\PDFForm@Radio
11730 \pdfstartlink user {%
11731 \PDFForm@Radio
11732 /AP<<%
11733 /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.

```

11734 /\@currValue\space \DingObject
11735 >>%
11736 >>%
11737 }%
11738 \relax
11739 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11740 \ifnum\Fld@listcount=1 %
11741 \HyField@AddToFields
11742 \fi
11743 \space % deliberate space between radio buttons
11744 }%
11745 }
11746 \newcount\Fld@listcount
11747 \def\@@ListBox#1{%
11748 \HyField@PDFChoices{#1}%
11749 \leavevmode
11750 \Hy@escapeform\PDFForm@List
11751 \pdfstartlink user {\PDFForm@List}\relax
11752 \MakeChoiceField{\Fld@width}{\Fld@height}%
11753 \pdfendlink
11754 \HyField@AddToFields
11755 }
11756 \def\@PushButton[#1]#2{% parameters, label
11757 \def\Fld@name{#2}%
11758 \begingroup
11759 \Field@toks={ }%
11760 \expandafter\HyField@SetKeys\expandafter{%
11761 \DefaultOptionsofPushButton,#1%
11762 }%
11763 \PDFForm@Name
11764 \ifHy@pdfa
11765 \PackageError{hyperref}{%
11766 PDF/A: Push button with JavaScript is prohibited%
11767 }\@ehc
11768 \LayoutPushButtonField{%
11769 \leavevmode
11770 \MakeButtonField{#2}%
11771 }%
11772 \else
11773 \HyField@FlagsPushButton
11774 \ifFld@hidden\def\Fld@width{1sp}\fi
11775 \LayoutPushButtonField{%
11776 \leavevmode
11777 \Hy@escapeform\PDFForm@Push
11778 \pdfstartlink user {\PDFForm@Push}\relax
11779 \MakeButtonField{#2}%
11780 \pdfendlink
11781 \HyField@AddToFields
11782 }%
11783 \fi
11784 \endgroup
11785 }
11786 \def\@Submit[#1]#2{%
11787 \Field@toks={ }%
11788 \def\Fld@width{\DefaultWidthofSubmit}%
11789 \def\Fld@height{\DefaultHeightofSubmit}%
11790 \begingroup

```

```

11791 \expandafter\HyField@SetKeys\expandafter{%
11792 \DefaultOptionsofSubmit,#1%
11793 }%
11794 \HyField@FlagsPushButton
11795 \HyField@FlagsSubmit
11796 \ifFld@hidden\def\Fld@width{1sp}\fi
11797 \leavevmode
11798 \Hy@escapeform\PDFForm@Submit
11799 \pdfstartlink user {%
11800 \PDFForm@Submit
11801 /AP<</N \SubmitObject/D \SubmitPObject>>%
11802 }%
11803 \relax
11804 \MakeButtonField{#2}%
11805 \pdfendlink
11806 \HyField@AddToFields
11807 \endgroup
11808 }
11809 \def\@Reset[#1]#2{%
11810 \Field@toks={ }%
11811 \def\Fld@width{\DefaultWidthofReset}%
11812 \def\Fld@height{\DefaultHeightofReset}%
11813 \begingroup
11814 \expandafter\HyField@SetKeys\expandafter{%
11815 \DefaultOptionsofReset,#1%
11816 }%
11817 \leavevmode
11818 \ifHy@pdfa
11819 \PackageError{hyperref}{%
11820 PDF/A: Reset action is prohibited%
11821 }\@ehc
11822 \MakeButtonField{#2}%
11823 \else
11824 \HyField@FlagsPushButton
11825 \ifFld@hidden\def\Fld@width{1sp}\fi
11826 \Hy@escapeform\PDFForm@Reset
11827 \pdfstartlink user {\PDFForm@Reset}\relax
11828 \MakeButtonField{#2}%
11829 \pdfendlink
11830 \HyField@AddToFields
11831 \fi
11832 \endgroup
11833 }
11834 \def\@CheckBox[#1]#2{% parameters, label
11835 \def\Fld@name{#2}%
11836 \def\Fld@default{0}%
11837 \begingroup
11838 \def\Fld@width{\DefaultWidthofCheckBox}%
11839 \def\Fld@height{\DefaultHeightofCheckBox}%
11840 \Field@toks={ }%
11841 \expandafter\HyField@SetKeys\expandafter{%
11842 \DefaultOptionsofCheckBox,#1%
11843 }%
11844 \PDFForm@Name
11845 \HyField@FlagsCheckBox
11846 \ifFld@hidden\def\Fld@width{1sp}\fi
11847 \LayoutCheckField{#2}{%

```



```

11848 \Hy@escapeform\PDFForm@Check
11849 \pdfstartlink user {\PDFForm@Check}\relax
11850 \MakeCheckField{\Fld@width}{\Fld@height}%
11851 \pdfendlink
11852 \HyField@AddToFields
11853 }%
11854 \endgroup
11855 }
11856 \def\Hy@FormObjects{%
11857 \pdfobj {%
11858 <<%
11859 /Type/Encoding%
11860 /Differences[%
11861 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
11862 /ring/tilde %
11863 39/quotesingle %
11864 96/grave %
11865 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11866 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11867 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11868 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
11869 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11870 164/currency %
11871 166/brokenbar %
11872 168/dieresis/copyright/ordfeminine %
11873 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11874 /twosuperior/threesuperior/acute/mu %
11875 183/periodcentered/cedilla/onesuperior/ordmasculine %
11876 188/onequarter/onehalf/threequarters %
11877 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11878 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11879 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11880 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11881 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11882 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11883 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11884 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11885 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
11886 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
11887]%
11888 >>%
11889 }%
11890 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
11891 \pdfobj{%
11892 <<%
11893 /Type/Font%
11894 /Subtype/Type1%
11895 /Name/ZaDb%
11896 /BaseFont/ZapfDingbats%
11897 >>%
11898 }%
11899 \xdef\OBJ@ZaDb{\the\pdflastobj}%
11900 \pdfobj{%
11901 <<%
11902 /Type/Font%
11903 /Subtype/Type1%
11904 /Name/Helv%

```

```

11905 /BaseFont/Helvetica%
11906 /Encoding \OBJ@pdfdocencoding\space 0 R%
11907 >>%
11908 }%
11909 \xdef\OBJ@Helv{\the\pdfastobj}%
11910 \global\let\Hy@FormObjects\relax
11911 }
11912 \pdfTeX

```

## 47.5 dvipdfm, xetex

D. P. Story adapted the pdf<sub>T</sub>E<sub>X</sub> forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

11913 *dvipdfm | xetex

```

\@Gauge

```

11914 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11915 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
11916 }

```

\@Form

```

11917 \def\@Form[#1]{%
11918 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11919 \setkeys{Form}{#1}%
11920 \Hy@FormObjects
11921 \@pdfm@mark{obj @afields []}%
11922 \@pdfm@mark{obj @corder []}%
11923 \@pdfm@mark{%
11924 obj @aform <<%
11925 /Fields @afields%
11926 /DR<<%
11927 /Font<<%
11928 /ZaDb @OBJZaDb%
11929 /Helv @OBJHelv%
11930 >>%
11931 >>%
11932 /DA(/Helv 10 Tf 0 g)%
11933 /CO @corder%
11934 \ifHy@pdfa
11935 \else
11936 /NeedAppearances true%
11937 \fi
11938 >>%
11939 }%
11940 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11941 }

```

\@endForm

```

11942 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

11943 \def\dvipdfm@setdim{%
11944 height \the\ht\pdfm@box\space
11945 width \the\wd\pdfm@box\space
11946 depth \the\dp\pdfm@box\space
11947 }

```

\HyField@AnnotCount

```
11948 \newcount\HyField@AnnotCount
11949 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
11950 \def\HyField@AdvanceAnnotCount{%
11951 \global\advance\HyField@AnnotCount\@ne
11952 }
```

\HyField@TheAnnotCount

```
11953 \def\HyField@TheAnnotCount{%
11954 \the\HyField@AnnotCount
11955 }
```

\@TextField

```
11956 \def\@TextField[#1]#2{% parameters, label
11957 \def\Fld@name{#2}%
11958 \def\Fld@default{}%
11959 \let\Fld@value\@empty
11960 \def\Fld@width{\DefaultWidthofText}%
11961 \def\Fld@height{%
11962 \ifFld@multiline
11963 \DefaultHeightofTextMultiline
11964 \else
11965 \DefaultHeightofText
11966 \fi
11967 }%
11968 \begingroup
11969 \Field@toks={ }%
11970 \expandafter\HyField@SetKeys\expandafter{%
11971 \DefaultOptionsofText,#1%
11972 }%
11973 \PDFForm@Name
11974 \HyField@FlagsText
11975 \ifFld@hidden\def\Fld@width{1sp}\fi
11976 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11977 \setbox\pdfm@box=\hbox{%
11978 \MakeTextField{\Fld@width}{\Fld@height}%
11979 }%
11980 \HyField@AdvanceAnnotCount
11981 \LayoutTextField{#2}{%
11982 \Hy@escapeform\PDFForm@Text
11983 \@pdfm@mark{%
11984 ann @text\HyField@TheAnnotCount\space
11985 \dvipdfm@setdim << \PDFForm@Text >>%
11986 }%
11987 }%
11988 \unhbox\pdfm@box
11989 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11990 % record in @afields array
11991 \endgroup
11992 }
```

\@ChoiceMenu

```
11993 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11994 \def\Fld@name{#2}%
```

```

11995 \let\Fld@default\relax
11996 \let\Fld@value\relax
11997 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11998 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11999 \begingroup
12000 \Fld@menulength=0 %
12001 \@tempdima\z@
12002 \@for\@curropt:=#3\do{%
12003 \expandafter\Fld@checkequals\@curropt==\%
12004 \Hy@StepCount\Fld@menulength
12005 \settowidth{\@tempdimb}{\@currDisplay}%
12006 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12007 }%
12008 \advance\@tempdima by 15\p@
12009 \Field@toks={ }%
12010 \begingroup
12011 \HyField@SetKeys{#1}%
12012 \edef\x{\endgroup
12013 \noexpand\expandafter
12014 \noexpand\HyField@SetKeys
12015 \noexpand\expandafter{%
12016 \expandafter\noexpand\csname DefaultOptionsof%
12017 \ifFld@radio
12018 Radio%
12019 \else
12020 \ifFld@combo
12021 \ifFld@popdown
12022 PopdownBox%
12023 \else
12024 ComboBox%
12025 \fi
12026 \else
12027 ListBox%
12028 \fi
12029 \fi
12030 \endcsname
12031 }%
12032 }\x
12033 \HyField@SetKeys{#1}%
12034 \PDFForm@Name
12035 \ifFld@hidden\def\Fld@width{1sp}\fi
12036 \ifx\Fld@value\relax
12037 \let\Fld@value\Fld@default
12038 \fi
12039 \LayoutChoiceField{#2}{%
12040 \ifFld@radio
12041 \HyField@FlagsRadioButton
12042 \@@Radio{#3}%
12043 \else
12044 \begingroup
12045 \HyField@FlagsChoice
12046 \ifdim\Fld@width<\@tempdima
12047 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12048 \edef\Fld@width{\the\@tempdima}%
12049 \fi
12050 \ifFld@combo
12051 \else

```

```

12052 \@tempdima=\the\Fld@menulength\Fld@charsize
12053 \advance\@tempdima by \Fld@borderwidth bp %
12054 \advance\@tempdima by \Fld@borderwidth bp %
12055 \edef\Fld@height{\the\@tempdima}%
12056 \fi
12057 \@@ListBox{#3}%
12058 \endgroup
12059 \fi
12060 }%
12061 \endgroup
12062 }

```

\@@Radio

```

12063 \def\@@Radio#1{%
12064 \Fld@listcount=0 %
12065 \setbox\pdfm@box=\hbox{%
12066 \MakeRadioField{\Fld@width}{\Fld@height}%
12067 }%
12068 \@for\@curropt:=#1\do{%
12069 \expandafter\Fld@checkequals\@curropt==\%
12070 \Hy@StepCount\Fld@listcount
12071 \@currDisplay\space
12072 \leavevmode
12073 \Hy@escapeform\PDFForm@Radio
12074 \ifnum\Fld@listcount=1 %
12075 \HyField@AdvanceAnnotCount
12076 \fi
12077 \@pdfm@mark{%
12078 ann %
12079 \ifnum\Fld@listcount=1 %
12080 @radio\HyField@TheAnnotCount%
12081 \space
12082 \fi
12083 \dvi pdfm@setdim
12084 <<%
12085 \PDFForm@Radio
12086 /AP<</N<</\@currValue /null>>>>%
12087 >>%
12088 }%
12089 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12090 \ifnum\Fld@listcount=1 %
12091 \@pdfm@mark{%
12092 put @afields @radio\HyField@TheAnnotCount
12093 }%
12094 \fi
12095 }%
12096 }

```

\Fld@listcount

```

12097 \newcount\Fld@listcount

```

\@@ListBox

```

12098 \def\@@ListBox#1{%
12099 \HyField@PDFChoices{#1}%
12100 \setbox\pdfm@box=\hbox{%
12101 \MakeChoiceField{\Fld@width}{\Fld@height}%
12102 }%

```

```

12103 \leavevmode
12104 \Hy@escapeform\PDFForm@List
12105 \HyField@AdvanceAnnotCount
12106 \@pdfm@mark{%
12107 ann @list\HyField@TheAnnotCount\space
12108 \dvi pdfm@setdim
12109 <<\PDFForm@List>>%
12110 }%
12111 \unhbox\pdfm@box
12112 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12113 }

```

#### \@PushButton

```

12114 \def\@PushButton[#1]#2{% parameters, label
12115 \def\Fld@name{#2}%
12116 \begingroup
12117 \Field@toks={ }%
12118 \expandafter\HyField@SetKeys\expandafter{%
12119 \DefaultOptionsofPushButton,#1%
12120 }%
12121 \PDFForm@Name
12122 \ifHy@pdfa
12123 \PackageError{hyperref}{%
12124 PDF/A: Push button with JavaScript is prohibited%
12125 }\@ehc
12126 \LayoutPushButtonField{%
12127 \leavevmode
12128 \MakeButtonField{#2}%
12129 }%
12130 \else
12131 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12132 \HyField@FlagsPushButton
12133 \ifFld@hidden\def\Fld@width{1sp}\fi
12134 \HyField@AdvanceAnnotCount
12135 \LayoutPushButtonField{%
12136 \leavevmode
12137 \Hy@escapeform\PDFForm@Push
12138 \@pdfm@mark{%
12139 ann @push\HyField@TheAnnotCount\space
12140 \dvi pdfm@setdim
12141 <<\PDFForm@Push>>%
12142 }%
12143 }%
12144 \unhbox\pdfm@box
12145 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12146 \fi
12147 \endgroup
12148 }

```

#### \@Submit

```

12149 \def\@Submit[#1]#2{%
12150 \Field@toks={ }%
12151 \def\Fld@width{\DefaultWidthofSubmit}%
12152 \def\Fld@height{\DefaultHeightofSubmit}%
12153 \begingroup
12154 \expandafter\HyField@SetKeys\expandafter{%
12155 \DefaultOptionsofSubmit,#1%

```

```

12156 }%
12157 \HyField@FlagsPushButton
12158 \HyField@FlagsSubmit
12159 \ifFld@hidden\def\Fld@width{1sp}\fi
12160 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12161 \leavevmode
12162 \Hy@escapeform\PDFForm@Submit
12163 \HyField@AdvanceAnnotCount
12164 \@pdfm@mark{%
12165 ann @submit\HyField@TheAnnotCount\space
12166 \dvipdfm@setdim
12167 <<\PDFForm@Submit>>%
12168 }%
12169 \unhbox\pdfm@box%
12170 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12171 \endgroup
12172 }

```

#### \@Reset

```

12173 \def\@Reset[#1]#2{%
12174 \Field@toks={ }%
12175 \def\Fld@width{\DefaultWidthofReset}%
12176 \def\Fld@height{\DefaultHeightofReset}%
12177 \begingroup
12178 \expandafter\HyField@SetKeys\expandafter{%
12179 \DefaultOptionsofReset,#1%
12180 }%
12181 \leavevmode
12182 \ifHy@pdfa
12183 \PackageError{hyperref}{%
12184 PDF/A: Reset action is prohibited%
12185 }\@ehc
12186 \MakeButtonField{#2}%
12187 \else
12188 \HyField@FlagsPushButton
12189 \ifFld@hidden\def\Fld@width{1sp}\fi
12190 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12191 \Hy@escapeform\PDFForm@Reset
12192 \HyField@AdvanceAnnotCount
12193 \@pdfm@mark{%
12194 ann @reset\HyField@TheAnnotCount\space
12195 \dvipdfm@setdim
12196 <<\PDFForm@Reset>>%
12197 }%
12198 \unhbox\pdfm@box
12199 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12200 \fi
12201 \endgroup
12202 }

```

#### \@CheckBox

```

12203 \def\@CheckBox[#1]#2{% parameters, label
12204 \def\Fld@name{#2}%
12205 \def\Fld@default{0}%
12206 \begingroup
12207 \def\Fld@width{\DefaultWidthofCheckBox}%
12208 \def\Fld@height{\DefaultHeightofCheckBox}%

```

```

12209 \Field@toks={ }%
12210 \expandafter\HyField@SetKeys\expandafter{%
12211 \DefaultOptionsOfCheckBox,#1%
12212 }%
12213 \PDFForm@Name
12214 \HyField@FlagsCheckBox
12215 \ifFld@hidden\def\Fld@width{1sp}\fi
12216 \setbox\pdfm@box=\hbox{%
12217 \MakeCheckField{\Fld@width}{\Fld@height}%
12218 }%
12219 \HyField@AdvanceAnnotCount
12220 \LayoutCheckField{#2}{%
12221 \Hy@escapeform\PDFForm@Check
12222 \@pdfm@mark{%
12223 ann @check\HyField@TheAnnotCount\space
12224 \dvipdfm@setdim
12225 <<\PDFForm@Check>>%
12226 }%
12227 \unhbox\pdfm@box
12228 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12229 }%
12230 \endgroup
12231 }

12232 \def\Hy@FormObjects{%
12233 \@pdfm@mark{obj @OBJpdfdocencoding%
12234 <<%
12235 /Type/Encoding%
12236 /Differences%
12237 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12238 39/quotesingle %
12239 96/grave %
12240 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12241 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12242 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12243 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12244 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12245 164/currency %
12246 166/brokenbar %
12247 168/dieresis/copyright/ordfeminine %
12248 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12249 /twosuperior/threesuperior/acute/mu %
12250 183/periodcentered/cedilla/onesuperior/ordmasculine %
12251 188/onequarter/onehalf/threequarters %
12252 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12253 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12254 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12255 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12256 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12257 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12258 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12259 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12260 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12261 /thorn/ydieresis%
12262]%
12263 >>%
12264 }%
12265 \@pdfm@mark{obj @OBJZaDb%

```



```

12266 <<%
12267 /Type/Font%
12268 /Subtype/Type1%
12269 /Name/ZaDb%
12270 /BaseFont/ZapfDingbats%
12271 >>%
12272 }%
12273 \@pdfm@mark{obj @OBJHelv%
12274 <<%
12275 /Type/Font%
12276 /Subtype/Type1%
12277 /Name/Helv%
12278 /BaseFont/Helvetica%
12279 /Encoding @OBJpdfdocencoding%
12280 >>%
12281 }%
12282 \global\let\Hy@FormObjects\relax
12283 }
12284 </dvipdfm | xetex>

```

## 47.6 Common forms part

```
12285 <*pdfform>
```

\Hy@escapestring

```

12286 \begingroup\expandafter\expandafter\expandafter\endgroup
12287 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12288 \let\Hy@escapestring\@firstofone
12289 \def\Hy@escapeform#1{%
12290 \ifHy@escapeform
12291 \def\Hy@escapestring##1{%
12292 \noexpand\Hy@escapestring{\noexpand##1}%
12293 }%
12294 \edef\Hy@temp{#1}%
12295 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
12296 \def\Hy@escapestring##1{%
12297 \@ifundefined{Hy@esc@\string##1}{%
12298 ##1%
12299 \ThisShouldNotHappen
12300 }{%
12301 \csname Hy@esc@\string##1\endcsname
12302 }%
12303 }%
12304 \else
12305 \let\Hy@escapestring\@firstofone
12306 \fi
12307 }%
12308 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12309 \ifx\#3\%
12310 \else
12311 \expandafter
12312 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12313 \Hy@ReturnAfterFi{%
12314 \Hy@@escapeform#3\@nil
12315 }%
12316 \fi
12317 }%

```

```

12318 \else
12319 \def\Hy@escapeform#1{%
12320 \ifHy@escapeform
12321 \let\Hy@escapestring\pdfescapestring
12322 \else
12323 \let\Hy@escapestring\@firstofone
12324 \fi
12325 }%
12326 \Hy@escapeform{}}%
12327 \fi

```

#### \PDFForm@Name

```

12328 \def\PDFForm@Name{%
12329 \begingroup
12330 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12331 \ifHy@unicode
12332 \Hy@unicodedefalse
12333 \fi
12334 \fi
12335 \HyPsd@XeTeXBigCharstrue
12336 \pdfstringdef\Hy@gtemp\Fld@name
12337 \endgroup
12338 \let\Fld@name\Hy@gtemp
12339 }

```

#### \PDFForm@Check

```

12340 \def\PDFForm@Check{%
12341 /Subtype/Widget%
12342 \Fld@annotflags
12343 /T(\Fld@name)%
12344 /FT/Btn%
12345 \Fld@flags
12346 /Q \Fld@align
12347 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12348 /MK<<%
12349 \ifnum\Fld@rotation=\z@
12350 \else
12351 /R \Fld@rotation
12352 \fi
12353 \ifx\Fld@bordercolor\relax
12354 \else
12355 /BC[\Fld@bordercolor]%
12356 \fi
12357 \ifx\Fld@bcolor\relax
12358 \else
12359 /BG[\Fld@bcolor]%
12360 \fi
12361 /CA(\Hy@escapestring{\Fld@cbsymbol}})%
12362 >>%
12363 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12364 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12365 /H/P%
12366 \ifFld@checked /V/Yes\else /V/Off\fi
12367 }

```

#### \PDFForm@Push

```

12368 \ifHy@pdfa

```

```

12369 \else
12370 \def\PDFForm@Push{%
12371 /Subtype/Widget%
12372 \Fld@annotflags
12373 /T(\Fld@name)%
12374 /FT/Btn%
12375 \Fld@flags
12376 /H/P%
12377 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12378 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12379 \ifx\Fld@bordercolor\relax\else 1\fi
12380 \space
12381 \else
12382 /MK<<%
12383 \ifnum\Fld@rotation=\z@
12384 \else
12385 /R \Fld@rotation
12386 \fi
12387 \ifx\Fld@bordercolor\relax
12388 \else
12389 /BC[\Fld@bordercolor]%
12390 \fi
12391 >>%
12392 \fi
12393 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12394 }%
12395 \fi

```

\Fld@additionalactions

```

12396 \def\Fld@@additionalactions{%
K input (keystroke) format
12397 \ifx\Fld@keystroke@code\@empty
12398 \else
12399 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12400 \fi
F display format
12401 \ifx\Fld@format@code\@empty
12402 \else
12403 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12404 \fi
V validation
12405 \ifx\Fld@validate@code\@empty
12406 \else
12407 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12408 \fi
C calculation
12409 \ifx\Fld@calculate@code\@empty
12410 \else
12411 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12412 \fi
Fo receiving the input focus
12413 \ifx\Fld@onfocus@code\@empty
12414 \else
12415 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12416 \fi

```

Bl loosing the input focus (blurred)

```
12417 \ifx\Fld@onblur@code\@empty
12418 \else
12419 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12420 \fi
```

D pressing the mouse button (down)

```
12421 \ifx\Fld@onmousedown@code\@empty
12422 \else
12423 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12424 \fi
```

U releasing the mouse button (up)

```
12425 \ifx\Fld@onmouseup@code\@empty
12426 \else
12427 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12428 \fi
```

E cursor enters the annotation's active area.

```
12429 \ifx\Fld@onenter@code\@empty
12430 \else
12431 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12432 \fi
```

X cursor exits the annotation's active area.

```
12433 \ifx\Fld@onexit@code\@empty
12434 \else
12435 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12436 \fi
```

```
12437 }
12438 \def\Fld@additionalactions{%
12439 \if\Fld@@additionalactions-%
12440 \else
12441 \ifHy@pdfa
12442 \else
12443 /AA<<\Fld@@additionalactions>>%
12444 \fi
12445 \fi
12446 }
```

\PDFForm@List

```
12447 \def\PDFForm@List{%
12448 /Subtype/Widget%
12449 \Fld@annotflags
12450 /T(\Fld@name)%
12451 /FT/Ch%
12452 \Fld@flags
12453 /Q \Fld@align
12454 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12455 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12456 \ifx\Fld@bordercolor\relax\else 1\fi
12457 \ifx\Fld@bcolor\relax \else 1\fi
12458 \space
12459 \else
12460 /MK<<%
12461 \ifnum\Fld@rotation=\z@
12462 \else
12463 /R \Fld@rotation
12464 \fi
```

```

12465 \ifx\Fld@bordercolor\relax
12466 \else
12467 /BC[\Fld@bordercolor]%
12468 \fi
12469 \ifx\Fld@bcolor\relax
12470 \else
12471 /BG[\Fld@bcolor]%
12472 \fi
12473 >>%
12474 \fi
12475 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12476 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12477 \Fld@choices
12478 \Fld@additionalactions
12479 }

```

#### \PDFForm@Radio

```

12480 \def\PDFForm@Radio{%
12481 /Subtype/Widget%
12482 \Fld@annotflags
12483 /T(\Fld@name)%
12484 /FT/Btn%
12485 \Fld@flags
12486 /H/P%
12487 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12488 /MK<<%
12489 \ifnum\Fld@rotation=\z@
12490 \else
12491 /R \Fld@rotation
12492 \fi
12493 \ifx\Fld@bordercolor\relax
12494 \else
12495 /BC[\Fld@bordercolor]%
12496 \fi
12497 \ifx\Fld@bcolor\relax
12498 \else
12499 /BG[\Fld@bcolor]%
12500 \fi
12501 /CA(\Fld@radiosymbol)%
12502 >>%
12503 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12504 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12505 \ifx\@currValue\Fld@default
12506 /V/\Fld@default
12507 \else
12508 /V/Off%
12509 \fi
12510 \Fld@additionalactions
12511 }

```

#### \PDFForm@Text

```

12512 \def\PDFForm@Text{%
12513 /Subtype/Widget%
12514 \Fld@annotflags
12515 /T(\Fld@name)%
12516 /FT/Tx%
12517 \Fld@flags

```

```

12518 /Q \Fld@align
12519 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12520 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12521 \ifx\Fld@bordercolor\relax\else 1\fi
12522 \ifx\Fld@bcolor\relax \else 1\fi
12523 \space
12524 \else
12525 /MK<<%
12526 \ifnum\Fld@rotation=\z@
12527 \else
12528 /R \Fld@rotation
12529 \fi
12530 \ifx\Fld@bordercolor\relax
12531 \else
12532 /BC[\Fld@bordercolor]%
12533 \fi
12534 \ifx\Fld@bcolor\relax
12535 \else
12536 /BG[\Fld@bcolor]%
12537 \fi
12538 >>%
12539 \fi
12540 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12541 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12542 /DV(\Hy@escapestring{\Fld@default})%
12543 /V(\Hy@escapestring{\Fld@value})%
12544 \Fld@additionalactions
12545 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12546 }

```

\PDFForm@Submit

```

12547 \def\PDFForm@Submit{%
12548 /Subtype/Widget%
12549 \Fld@annotflags
12550 /T(\Fld@name)%
12551 /FT/Btn%
12552 \Fld@flags
12553 /H/P%
12554 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12555 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12556 \ifx\Fld@bordercolor\relax\else 1\fi
12557 \space
12558 \else
12559 /MK<<%
12560 \ifnum\Fld@rotation=\z@
12561 \else
12562 /R \Fld@rotation
12563 \fi
12564 \ifx\Fld@bordercolor\relax
12565 \else
12566 /BC[\Fld@bordercolor]%
12567 \fi
12568 >>%
12569 \fi
12570 /A<<%
12571 /S/SubmitForm%
12572 /F<<%

```

```

12573 /FS/URL%
12574 /F(\Hy@escapestring{\Form@action})%
12575 >>%
12576 \Fld@submitflags
12577 >>%
12578 }

```

\PDFForm@Reset

```

12579 \ifHy@pdfa
12580 \else
12581 \def\PDFForm@Reset{%
12582 /Subtype/Widget%
12583 \Fld@annotflags
12584 /T(\Fld@name)%
12585 /FT/Btn%
12586 \Fld@flags
12587 /H/P%
12588 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12589 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12590 \ifx\Fld@bordercolor\relax\else 1\fi
12591 \space
12592 \else
12593 /MK<<%
12594 \ifnum\Fld@rotation=\z@
12595 \else
12596 /R \Fld@rotation
12597 \fi
12598 \ifx\Fld@bordercolor\relax
12599 \else
12600 /BC[\Fld@bordercolor]%
12601 \fi
12602 % /CA (Clear)
12603 % /AC (Done)
12604 >>%
12605 \fi
12606 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12607 /A<</S/ResetForm>>%
12608 }%
12609 \fi

12610 </pdfform>
12611 <*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`

```

12612 \def\phantomsection{%
12613 \Hy@GlobalStepCount\Hy@linkcounter
12614 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12615 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%

```

```

12616 }
12617 </package>

```

## 48.1 Bookmarks

```

12618 <*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  $\varepsilon$ -TeX, the order of the \BOOKMARK commands written to the \@outlinefile could appear wrong, because of mis-feature of  $\varepsilon$ -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.

```

12619 \def\Hy@writebookmark#1#2#3#4#5{%
12620 % section number, text, label, level, file
12621 \ifx\WriteBookmarks\relax%
12622 \else
12623 \ifnum#4>\Hy@bookmarksdepth\relax
12624 \else
12625 \@writetorep{#1}{#2}{#3}{#4}{#5}%
12626 \fi
12627 \fi
12628 }
12629 \def\Hy@currentbookmarklevel{0}
12630 \def\Hy@numberline#1{#1 }
12631 \def\@writetorep#1#2#3#4#5{%
12632 \begingroup
12633 \edef\Hy@tempa{#5}%
12634 \ifx\Hy@tempa\Hy@bookmarkstype
12635 \edef\Hy@level{#4}%
12636 \ifx\Hy@levelcheck Y%
12637 \@tempcnta\Hy@level\relax
12638 \advance\@tempcnta by -1 %
12639 \ifnum\Hy@currentbookmarklevel<\@tempcnta
12640 \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12641 \advance\@tempcnta by 1 %
12642 \Hy@Warning{%
12643 Difference (\the\@tempcnta) between bookmark levels is %
12644 greater \MessageBreak than one, level fixed%
12645 }%
12646 \@tempcnta\Hy@currentbookmarklevel
12647 \advance\@tempcnta by 1 %
12648 \edef\Hy@level{\the\@tempcnta}%
12649 \fi
12650 \else
12651 \global\let\Hy@levelcheck Y%
12652 \fi
12653 \global\let\Hy@currentbookmarklevel\Hy@level
12654 \@tempcnta\Hy@level\relax

```



```

12655 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12656 \advance\@tempcnta by -1 %
12657 \edef\Hy@tempa{#3}%
12658 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12659 \ifx\Hy@tempa\Hy@tempb
12660 \Hy@Warning{%
12661 The anchor of a bookmark and its parent's must not%
12662 \MessageBreak be the same. Added a new anchor%
12663 }%
12664 \phantomsection
12665 \fi
12666 \ifHy@bookmarksnumbered
12667 \let\numberline\Hy@numberline
12668 \let\partnumberline\Hy@numberline
12669 \let\chapternumberline\Hy@numberline
12670 \else
12671 \let\numberline\@gobble
12672 \let\partnumberline\@gobble
12673 \let\chapternumberline\@gobble
12674 \fi
12675 \HyPsd@XeTeXBigCharstrue
12676 \pdfstringdef\Hy@tempa{#2}%
12677 \if@filesw
12678 \stepcounter{bookmark@seq@number}%
12679 \@ifundefined{@outlinefile}{%
12680 }{%
12681 \protected@write\@outlinefile{}{%
12682 \protect\BOOKMARK
12683 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12684 {\Hy@tempa}{\Hy@tempb}%
12685 \@percentchar\space\thebookmark@seq@number
12686 }%
12687 }%
12688 \fi
12689 \fi
12690 \endgroup
12691 }
12692 \newcounter{bookmark@seq@number}

```

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

```

12693 \newcommand{\currentpdfbookmark}{%
12694 \pdfbookmark[\Hy@currentbookmarklevel]%
12695 }
12696 \newcommand{\subpdfbookmark}{%
12697 \@tempcnta\Hy@currentbookmarklevel
12698 \Hy@StepCount\@tempcnta
12699 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12700 }
12701 \newcommand{\belowpdfbookmark}[2]{%
12702 \@tempcnta\Hy@currentbookmarklevel
12703 \Hy@StepCount\@tempcnta
12704 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12705 \advance\@tempcnta by -1 %
12706 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12707 }

```

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.

```

12708 \renewcommand\pdfbookmark[3][0]{%
12709 \Hy@writebookmark{#{#2}{#3.#1}{#1}{toc}}%
12710 \hyper@anchorstart{#3.#1}\hyper@anchorend
12711 }
12712 \def\BOOKMARK{%
12713 \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}%
12714 }
12715 \def\@BOOKMARK[#1]{%
12716 \@ifnextchar[{\@BOOKMARK[{#1}]}{\@@BOOKMARK[{#1}][-]}%
12717 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo pdf macros.

#### 48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

12718 \RequirePackage{rerunfilecheck}[2009/12/10]
12719 \def\Hy@OutlineRerunCheck{%
12720 \RerunFileCheck{\jobname.out}{%
12721 \immediate\closeout\@outlinefile
12722 }{%
12723 Rerun to get outlines right\MessageBreak
12724 or use package 'bookmark'%
12725 }%
12726 }

```

#### 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.

```

12727 < *vtex >
12728 \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.

```

12729 \begingroup
12730 \catcode'\'=12 %
12731 \ifnum\Hy@VTeXversion<650 %
12732 \catcode'\ "=12 %
12733 \gdef\hv@pdf@char#1#2#3{%
12734 \char
12735 \ifcase'#1#2#3 %
12736 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12737 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12738 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12739 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12740 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12741 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12742 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12743 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12744 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12745 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

```

```

12746 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12747 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12748 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12749 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12750 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12751 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12752 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12753 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12754 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12755 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12756 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12757 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12758 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12759 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12760 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12761 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12762 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12763 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12764 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12765 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12766 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12767 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12768 \fi
12769 }%
12770 \else
12771 \gdef\hv@pdf@char{\char'}%
12772 \fi
12773 \endgroup

```

\@@BOOKMARK

```

12774 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12775 \expandafter\edef\csname @count@#3\endcsname{%
12776 \the\@serial@counter
12777 }%
12778 \edef\@mycount{\the\@serial@counter}%
12779 \Hy@StepCount\@serial@counter
12780 \edef\@parcount{%
12781 \expandafter\ifx\csname @count@#5\endcsname\relax
12782 0%
12783 \else
12784 \csname @count@#5\endcsname
12785 \fi
12786 }%
12787 \immediate\special{%
12788 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12789 s=\ifx#2-c\else o\fi,t=#4%
12790 }%
12791 }%

```

\ReadBookmarks

```

12792 \def\ReadBookmarks{%
12793 \begingroup
12794 \def\0{\hv@pdf@char 0}%
12795 \def\1{\hv@pdf@char 1}%
12796 \def\2{\hv@pdf@char 2}%
12797 \def\3{\hv@pdf@char 3}%
12798 \def\{({}%

```

```

12799 \def\)}%
12800 \def\do##1{%
12801 \ifnum\the\catcode'##1=\active
12802 \makeother##1%
12803 \fi
12804 }%
12805 \dospecials
12806 \InputIfFileExists{\jobname.out}{-}{-}%
12807 \endgroup
12808 \ifx\WriteBookmarks\relax
12809 \else
12810 \if@filesw
12811 \newwrite\@outlinefile
12812 \Hy@OutlineRerunCheck
12813 \immediate\openout\@outlinefile=\jobname.out\relax
12814 \ifHy@typexml
12815 \immediate\write\@outlinefile{<relaxxml>\relax}%
12816 \fi
12817 \fi
12818 \fi
12819 }

12820 </vtex>
12821 <!*vtex>
12822 \def\ReadBookmarks{%
12823 \begingroup
12824 \escapechar='\'%
12825 \let\escapechar\@gobble %
12826 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12827 \calc@bm@number{##5}%
12828 }%
12829 \InputIfFileExists{\jobname.out}{-}{-}%
12830 \ifx\WriteBookmarks\relax
12831 \global\let\WriteBookmarks\relax
12832 \fi
12833 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12834 \def\Hy@temp{##4}%
12835 <*pdftex>
12836 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12837 \Hy@OutlineName{\Hy@pstringName{%
12838 ##2\check@bm@number{##3}}%
12839 }-%
12840 \expandafter\strip@prefix\meaning\Hy@temp
12841 }%
12842 </pdftex>
12843 <*pdfmark>
12844 \pdfmark{%
12845 pdfmark=/OUT,%
12846 Count={##2\check@bm@number{##3}},%
12847 Dest={##3},%
12848 Title=\expandafter\strip@prefix\meaning\Hy@temp
12849 }%
12850 </pdfmark>
12851 <*dvi pdfm | xetex>
12852 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12853 \@pdfm@mark{%
12854 outline \ifHy@DvipdfmxOutlineOpen
12855 [%

```

```

12856 \ifnum##21>\z@
12857 \else
12858 -%
12859 \fi
12860] %
12861 \fi
12862 ##1<<%
12863 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
12864 /A<<%
12865 /S/GoTo%
12866 /D(\Hy@pstringName)%
12867 >>%
12868 >>%
12869 }%
12870 </dvi pdfm | xetex>
12871 }%
12872 {%
12873 \def\WriteBookmarks{0}%
12874 \InputIfFileExists{\jobname.out}{-}{-}%
12875 }%
12876 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
12877 \ifx\WriteBookmarks\relax
12878 \else
12879 \if@filesw
12880 \newwrite\@outlinefile
12881 \Hy@OutlineRerunCheck
12882 \immediate\openout\@outlinefile=\jobname.out\relax
12883 \ifHy@typexml
12884 \immediate\write\@outlinefile{<relaxxml>\relax}%
12885 \fi
12886 \fi
12887 \fi
12888 \endgroup
12889 }
12890 <*pdf tex>
12891 \def\Hy@OutlineName#1#2#3#4{%
12892 \pdfoutline goto name{#2}count#3{#4}%
12893 }
12894 </pdf tex>
12895 \def\check@bm@number#1{%
12896 \expandafter\ifx\csname B_#1\endcsname\relax
12897 0%
12898 \else
12899 \csname B_#1\endcsname
12900 \fi
12901 }
12902 \def\calc@bm@number#1{%
12903 \@tempcnta=\check@bm@number{#1}\relax
12904 \advance\@tempcnta by 1 %
12905 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
12906 }
12907 </!vtex>
12908 \ifHy@implicit
12909 \else
12910 \expandafter\endinput
12911 \fi
12912 </outlines>

```

```

12913 <*outlines | hypertex>
12914 \newlength\Hy@SectionHShift
12915 \def\Hy@SectionAnchorHref#1{%
12916 \ifx\protect\@typeset@protect
12917 \Hy@@SectionAnchor{#1}%
12918 \fi
12919 }
12920 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
12921 \leavevmode
12922 \hbox to 0pt{%
12923 \kern-\Hy@SectionHShift
12924 \Hy@raisedlink{%
12925 \hyper@anchorstart{#1}\hyper@anchorend
12926 }%
12927 \hss
12928 }%
12929 }
12930 \let\H@old@ssect\@ssect
12931 \def\@ssect#1#2#3#4#5{%
12932 \Hy@GlobalStepCount\Hy@linkcounter
12933 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12934 \setlength{\Hy@SectionHShift}{#1}%
12935 \begingroup
12936 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
12937 \toks\tw@\expandafter{%
12938 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
12939 #5%
12940 }%
12941 \edef\x{\endgroup
12942 \the\toks@\the\toks\tw@}%
12943 }\x
12944 }
12945 \let\H@old@schapter\@schapter
12946 \def\@schapter#1{%
12947 \begingroup
12948 \let\@mkboth\@gobbletwo
12949 \Hy@GlobalStepCount\Hy@linkcounter
12950 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12951 \Hy@raisedlink{%
12952 \hyper@anchorstart{\@currentHref}\hyper@anchorend
12953 }%
12954 \endgroup
12955 \H@old@schapter{#1}%
12956 }

```

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:

```

12957 \ifundefined{@chapter}{-}{-}%
12958 \let\Hy@org@chapter\@chapter
12959 \def\@chapter{%
12960 \def\Hy@next{%
12961 \Hy@GlobalStepCount\Hy@linkcounter
12962 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12963 \Hy@raisedlink{%
12964 \hyper@anchorstart{\@currentHref}\hyper@anchorend
12965 }%

```

```

12966 }%
12967 \ifnum\c@secnumdepth>\m@ne
12968 \@ifundefined{if@mainmatter}%
12969 \iftrue{\csname if@mainmatter\endcsname}%
12970 \let\Hy@next\relax
12971 \fi
12972 \fi
12973 \Hy@next
12974 \Hy@org@chapter
12975 }%
12976 }

12977 \let\H@old@part\@part
12978 \begingroup\expandafter\expandafter\expandafter\endgroup
12979 \expandafter\ifx\csname chapter\endcsname\relax
12980 \let\Hy@secnum@part\z@
12981 \else
12982 \let\Hy@secnum@part\m@ne
12983 \fi
12984 \def\@part{%
12985 \ifnum\Hy@secnum@part>\c@secnumdepth
12986 \phantomsection
12987 \fi
12988 \H@old@part
12989 }

12990 \let\H@old@spart\@spart
12991 \def\@spart#1{%
12992 \Hy@GlobalStepCount\Hy@linkcounter
12993 \xdef\@currentHref{part*.\the\Hy@linkcounter}%
12994 \Hy@raisedlink{%
12995 \hyper@anchorstart{\@currentHref}\hyper@anchorend
12996 }%
12997 \H@old@spart{#1}%
12998 }

12999 \let\H@old@sect\@sect
13000 \def\@sect#1#2#3#4#5#6[#7]#8{%
13001 \ifnum #2>\c@secnumdepth
13002 \expandafter\@firstoftwo
13003 \else
13004 \expandafter\@secondoftwo
13005 \fi
13006 {%
13007 \Hy@GlobalStepCount\Hy@linkcounter
13008 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
13009 \setlength{\Hy@SectionHShift}{#3}%
13010 \begingroup
13011 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13012 \toks\tw@\expandafter{%
13013 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13014 #8%
13015 }%
13016 \edef\x{\endgroup
13017 \the\toks@\the\toks\tw@}%
13018 }\x
13019 }{%
13020 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13021 }%
13022 }

```

```

13023 </outlines | hypertex>
13024 <*outlines>

13025 \expandafter\def\csname Parent-4\endcsname{}
13026 \expandafter\def\csname Parent-3\endcsname{}
13027 \expandafter\def\csname Parent-2\endcsname{}
13028 \expandafter\def\csname Parent-1\endcsname{}
13029 \expandafter\def\csname Parent0\endcsname{}
13030 \expandafter\def\csname Parent1\endcsname{}
13031 \expandafter\def\csname Parent2\endcsname{}
13032 \expandafter\def\csname Parent3\endcsname{}
13033 \expandafter\def\csname Parent4\endcsname{}

13034 </outlines>

```

## 49 Compatibility with koma-script classes

```

13035 <*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.

```

13036 \def\Hy@tempa{%
13037 \def\@addchap{##1}##2{%
13038 \typeout{##2}%
13039 \if@twoside
13040 \@mkboth{##1}{}%
13041 \else
13042 \@mkboth{}{##1}%
13043 \fi
13044 \addtocontents{lof}{\protect\addvspace{10\p@}}%
13045 \addtocontents{lot}{\protect\addvspace{10\p@}}%
13046 \Hy@GlobalStepCount\Hy@linkcounter
13047 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13048 \Hy@raisedlink{%
13049 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13050 }%
13051 \if@twocolumn
13052 \@topnewpage[\@makeschapterhead{##2}]%
13053 \else
13054 \@makeschapterhead{##2}%
13055 \@afterheading
13056 \fi
13057 \addcontentsline{toc}{chapter}{##1}%
13058 }%
13059 }
13060 \@ifclassloaded{scrbook}{%
13061 \@ifclasslater{scrbook}{2001/01/01}{%
13062 \let\Hy@tempa\@empty
13063 }{}%
13064 }{%
13065 \@ifclassloaded{scrreprt}{%
13066 \@ifclasslater{scrreprt}{2001/01/01}{%
13067 \let\Hy@tempa\@empty
13068 }{}%
13069 }{}%
13070 \let\Hy@tempa\@empty

```



```

13071 }%
13072 }%
13073 \Hy@tempa
13074 </outlines | hypertext>

```

## 50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

### 50.1 PD1 encoding

```

13075 <*pd1enc>
13076 \DeclareFontEncoding{PD1}{-}{-}

```

#### Accents

```

13077 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13078 \DeclareTextAccent{\'}{PD1}{\textacute}
13079 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
13080 \DeclareTextAccent{\~}{PD1}{\texttilde}
13081 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13082 \DeclareTextAccent{\r}{PD1}{\textring}
13083 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13084 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13085 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13086 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13087 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13088 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13089 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13090 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13091 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
13092 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13093 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13094 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13095 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13096 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13097 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13098 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13099 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13100 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13101 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13102 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13103 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
13104 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13105 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13106 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13107 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13108 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13109 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13110 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13111 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13112 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13113 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
13114 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
13115 \DeclareTextCommand{\newtie}{PD1}[1]{%
13116 \TextSymbolUnavailable{\newtie{#1}}#1%
13117 }

```

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

13118 % U+0009 (CHARACTER TABULATION)  
 13119 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009  
 13120 % U+000A (LINE FEED)  
 13121 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A  
 13122 % U+000D (CARRIAGE RETURN)  
 13123 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D  
 Accent glyph names  
 13124 % U+02D8 BREVE; breve  
 13125 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8  
 13126 % U+02C7 CARON; caron  
 13127 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7  
 13128 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex  
 13129 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6  
 13130 % U+02D9 DOT ABOVE; dotaccent  
 13131 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9  
 13132 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut  
 13133 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD  
 13134 % U+02DB OGONEK; ogonek  
 13135 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB  
 13136 % U+02DA RING ABOVE; ring  
 13137 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA  
 13138 % U+02DC SMALL TILDE; ilde, \*tilde  
 13139 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC  
 \040: U+0020 SPACE; \*space, spacehackarabic  
 \041: U+0021 EXCLAMATION MARK; exclam  
 13140 % U+0022 QUOTATION MARK; quotedbl  
 13141 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022  
 13142 % U+0023 NUMBER SIGN; numbersign  
 13143 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023  
 13144 % U+0024 DOLLAR SIGN; dollar  
 13145 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024  
 13146 % U+0025 PERCENT SIGN; percent  
 13147 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025  
 13148 % U+0026 AMPERSAND; ampersand  
 13149 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026  
 \047: U+0027 APOSTROPHE; quotesingle  
 13150 % U+0028 LEFT PARENTHESIS; parenleft  
 13151 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028  
 13152 % U+0029 RIGHT PARENTHESIS; parenright  
 13153 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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  
 13154 % U+002E FULL STOP; period  
 13155 \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  
 13156 % U+003C LESS-THAN SIGN; less

13157 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C  
 \075: U+003D EQUALS SIGN; equal  
 13158 % U+003E GREATER-THAN SIGN; greater  
 13159 \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  
 13160 % U+005C REVERSE SOLIDUS; backslash  
 13161 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C  
 \135: U+005D RIGHT SQUARE BRACKET; bracketright  
 13162 % U+005E CIRCUMFLEX ACCENT; asciicircum  
 13163 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E  
 13164 % U+005F LOW LINE; underscore  
 13165 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F  
 13166 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F  
 13167 % U+0060 GRAVE ACCENT; grave  
 13168 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060  
 \141: U+0061 LATIN SMALL LETTER A; a  
 ...  
 \150: U+0068 LATIN SMALL LETTER H; h  
 13169 % U+0069 LATIN SMALL LETTER I; i  
 13170 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069  
 \152: U+006A LATIN SMALL LETTER J; j  
 ...  
 \172: U+007A LATIN SMALL LETTER Z; z  
 13171 % U+007B LEFT CURLY BRACKET; braceleft  
 13172 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B  
 13173 % U+007C VERTICAL LINE; \*bar, verticalbar  
 13174 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C  
 13175 % U+007D RIGHT CURLY BRACKET; braceright  
 13176 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D  
 13177 % U+007E TILDE; asciitilde  
 13178 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E  
 Slot \177 (0x7F) is undefined in PDFDocEncoding.  
 13179 % U+2022 BULLET; bullet  
 13180 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022  
 13181 % U+2020 DAGGER; dagger  
 13182 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020  
 13183 % U+2021 DOUBLE DAGGER; daggerdbl  
 13184 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021  
 13185 % U+2026 HORIZONTAL ELLIPSIS; ellipsis  
 13186 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026  
 13187 % U+2014 EM DASH; emdash  
 13188 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014  
 13189 % U+2013 EN DASH; endash  
 13190 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013  
 13191 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin  
 13192 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192  
 13193 % U+2044 FRACTION SLASH; fraction  
 13194 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044  
 13195 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-  
 lingleft

13196 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039  
13197 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-  
ingright  
13198 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A  
13199 % U+2212 MINUS SIGN; minus  
13200 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212  
13201 % U+2030 PER MILLE SIGN; perthousand  
13202 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030  
13203 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase  
13204 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E  
13205 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft  
13206 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C  
13207 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright  
13208 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D  
13209 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft  
13210 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018  
13211 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright  
13212 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019  
13213 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase  
13214 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A  
13215 % U+2122 TRADE MARK SIGN; trademark  
13216 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122  
13217 % U+FB01 LATIN SMALL LIGATURE FI; fi  
13218 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01  
13219 % U+FB02 LATIN SMALL LIGATURE FL; fl  
13220 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02  
13221 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash  
13222 \DeclareTextCommand{\L}{PD1}{\225}% U+0141  
13223 % U+0152 LATIN CAPITAL LIGATURE OE; OE  
13224 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152  
13225 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron  
13226 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160  
13227 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis  
13228 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178  
13229 \DeclareTextCommand{\IJ}{PD1}{\230}  
13230 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron  
13231 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D  
13232 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi  
13233 \DeclareTextCommand{\i}{PD1}{\232}% U+0131  
13234 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash  
13235 \DeclareTextCommand{\l}{PD1}{\233}% U+0142  
13236 % U+0153 LATIN SMALL LIGATURE OE; oe  
13237 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153  
13238 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron  
13239 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161  
13240 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron  
13241 \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.  
13242 % U+20AC EURO SIGN; \*Euro, euro  
13243 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC  
13244 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown  
13245 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1  
13246 % U+00A2 CENT SIGN; cent  
13247 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2  
13248 % U+00A3 POUND SIGN; sterling  
13249 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3

13250 % U+00A4 CURRENCY SIGN; currency  
 13251 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4  
 13252 % U+00A5 YEN SIGN; yen  
 13253 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5  
 13254 % U+00A6 BROKEN BAR; brokenbar  
 13255 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6  
 13256 % U+00A7 SECTION SIGN; section  
 13257 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7  
 13258 % U+00A8 DIAERESIS; dieresis  
 13259 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8  
 13260 % U+00A9 COPYRIGHT SIGN; copyright  
 13261 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9  
 13262 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine  
 13263 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA  
 13264 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-  
 motleft  
 13265 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB  
 13266 % U+00AC NOT SIGN; logicalnot  
 13267 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC  
 13268 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not  
 No glyph \255 in PDFDocEncoding.  
 13269 % U+00AE REGISTERED SIGN; registered  
 13270 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE  
 13271 % U+00AF MACRON; \*macron, overscore  
 13272 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF  
 13273 % U+00B0 DEGREE SIGN; degree  
 13274 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0  
 13275 % U+00B1 PLUS-MINUS SIGN; plusminus  
 13276 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1  
 13277 % U+00B2 SUPERSCRIFT TWO; twosuperior  
 13278 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2  
 13279 % U+00B3 SUPERSCRIFT THREE; threesuperior  
 13280 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3  
 13281 % U+00B4 ACUTE ACCENT; acute  
 13282 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4  
 13283 % U+00B5 MICRO SIGN; mu, mul  
 13284 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5  
 13285 % U+00B6 PILCROW SIGN; paragraph  
 13286 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6  
 13287 % U+00B7 MIDDLE DOT; middot, \*periodcentered  
 13288 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7  
 13289 % U+00B8 CEDILLA; cedilla  
 13290 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8  
 13291 % U+00B9 SUPERSCRIFT ONE; onesuperior  
 13292 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9  
 13293 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine  
 13294 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA  
 13295 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-  
 motright  
 13296 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB  
 13297 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter  
 13298 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC  
 13299 % U+00BD VULGAR FRACTION ONE HALF; onehalf  
 13300 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD  
 13301 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters  
 13302 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE  
 13303 % U+00BF INVERTED QUESTION MARK; questiondown

13304 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF  
13305 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave  
13306 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0  
13307 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute  
13308 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1  
13309 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex  
13310 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2  
13311 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde  
13312 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3  
13313 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis  
13314 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4  
13315 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring  
13316 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5  
13317 % U+00C6 LATIN CAPITAL LETTER AE; AE  
13318 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6  
13319 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla  
13320 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7  
13321 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave  
13322 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8  
13323 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute  
13324 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9  
13325 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex  
13326 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA  
13327 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis  
13328 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB  
13329 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave  
13330 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC  
13331 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute  
13332 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD  
13333 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex  
13334 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE  
13335 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis  
13336 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF  
13337 % U+00D0 LATIN CAPITAL LETTER ETH; Eth  
13338 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0  
13339 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0  
13340 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde  
13341 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1  
13342 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve  
13343 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2  
13344 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute  
13345 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3  
13346 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex  
13347 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4  
13348 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde  
13349 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5  
13350 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis  
13351 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6  
13352 % U+00D7 MULTIPLICATION SIGN; multiply  
13353 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7  
13354 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash  
13355 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8  
13356 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave  
13357 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9  
13358 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute  
13359 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA  
13360 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex

13361 \DeclareTextCompositeCommand{\~}{PD1}{U}{\333}% U+00DB  
13362 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis  
13363 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC  
13364 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute  
13365 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD  
13366 % U+00DE LATIN CAPITAL LETTER THORN; Thorn  
13367 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE  
13368 % U+00DF LATIN SMALL LETTER SHARP S; germandbls  
13369 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF  
13370 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave  
13371 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0  
13372 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute  
13373 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1  
13374 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex  
13375 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2  
13376 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde  
13377 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3  
13378 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis  
13379 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4  
13380 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring  
13381 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5  
13382 % U+00E6 LATIN SMALL LETTER AE; ae  
13383 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6  
13384 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla  
13385 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7  
13386 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave  
13387 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8  
13388 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute  
13389 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9  
13390 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex  
13391 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA  
13392 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis  
13393 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB  
13394 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave  
13395 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC  
13396 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC  
13397 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute  
13398 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED  
13399 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED  
13400 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex  
13401 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE  
13402 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE  
13403 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis  
13404 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF  
13405 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF  
13406 % U+00F0 LATIN SMALL LETTER ETH; eth  
13407 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0  
13408 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde  
13409 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1  
13410 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve  
13411 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2  
13412 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute  
13413 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3  
13414 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex  
13415 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4  
13416 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde  
13417 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5

13418 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis  
 13419 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6  
 13420 % U+00F7 DIVISION SIGN; divide  
 13421 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7  
 13422 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash  
 13423 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8  
 13424 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave  
 13425 \DeclareTextCompositeCommand{'}{PD1}{u}{\371}% U+00F9  
 13426 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute  
 13427 \DeclareTextCompositeCommand{'}{PD1}{u}{\372}% U+00FA  
 13428 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex  
 13429 \DeclareTextCompositeCommand{'}{PD1}{u}{\373}% U+00FB  
 13430 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis  
 13431 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC  
 13432 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute  
 13433 \DeclareTextCompositeCommand{'}{PD1}{y}{\375}% U+00FD  
 13434 % U+00FE LATIN SMALL LETTER THORN; thorn  
 13435 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE  
 13436 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis  
 13437 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF  
 13438 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13439 \DeclareTextCommand{\SS}{PD1}{SS}  
 13440 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13441 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}  
 13442 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}  
 13443 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}  
 13444 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}  
 13445 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}  
 13446 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}  
 13447 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}  
 13448 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13449 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}  
 13450 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}  
 13451 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}  
 13452 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}  
 13453 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}  
 13454 \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).

13455 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek  
 13456 \DeclareTextCompositeCommand{'}{PD1}{c}{c}% cacute  
 13457 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek  
 13458 \DeclareTextCompositeCommand{'}{PD1}{n}{n}% nacute  
 13459 \DeclareTextCompositeCommand{'}{PD1}{s}{s}% sacute  
 13460 \DeclareTextCompositeCommand{'}{PD1}{z}{z}% zacute  
 13461 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot  
 13462 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek  
 13463 \DeclareTextCompositeCommand{'}{PD1}{C}{C}% Cacute  
 13464 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek  
 13465 \DeclareTextCompositeCommand{'}{PD1}{N}{N}% Nacute  
 13466 \DeclareTextCompositeCommand{'}{PD1}{S}{S}% Sacute  
 13467 \DeclareTextCompositeCommand{'}{PD1}{Z}{Z}% Zacute



```

13468 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13469 \end{pd1enc}

```

## 50.2 PU encoding

```

13470 \newcommand{*puenc}
13471 \DeclareFontEncoding{PU}{}{}

```

### 50.2.1 NFSS2 accents

```

13472 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13473 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
13474 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13475 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
13476 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13477 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
13478 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
13479 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
13480 % U+0304 COMBINING MACRON; macroncmb
13481 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
13482 % U+0306 COMBINING BREVE; brevecmb
13483 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
13484 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
13485 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13486 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
13487 % U+0308 COMBINING DIAERESIS; dieresiscmb
13488 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
13489 % U+030A COMBINING RING ABOVE; ringcmb
13490 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13491 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13492 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13493 % U+030C COMBINING CARON; caroncmb
13494 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13495 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13496 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13497 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13498 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13499 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13500 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
13501 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13502 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13503 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13504 % U+0327 COMBINING CEDILLA; cedillacmb
13505 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13506 % U+0328 COMBINING OGONEK; ogonekcmb
13507 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13508 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13509 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13510 % U+20DD COMBINING ENCLOSING CIRCLE
13511 \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.

```

13512 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
13513 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13514 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
13515 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
13516 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13517 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}

```

```

13518 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13519 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13520 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13521 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13522 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13523 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13524 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13525 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13526 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13527 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13528 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13529 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13530 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13531 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13532 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textacute}
13533 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13534 \DeclareTextCompositeCommand{\-}{PU}{\ }{\texttilde}
13535 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13536 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13537 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13538 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13539 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13540 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13541 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13542 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13543 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13544 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13545 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13546 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13547 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13548 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13549 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13550 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13551 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13552 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13553 \DeclareTextCommand{\capitalacute}{PU}[1]{\`{#1}}
13554 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\~{#1}}
13555 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13556 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13557 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13558 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13559 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13560 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13561 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13562 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13563 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13564 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

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

Special white space escape characters.

```

13565 % U+0009 (CHARACTER TABULATION)
13566 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13567 % U+000A (LINE FEED)
13568 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13569 % U+000D (CARRIAGE RETURN)
13570 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

```

\80\040: U+0020 SPACE; space, spacehackarabic  
 \80\041: U+0021 EXCLAMATION MARK; exclam  
 13571 % U+0022 QUOTATION MARK; quotedbl  
 13572 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022  
 13573 % U+0023 NUMBER SIGN; numbersign  
 13574 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023  
 13575 % U+0024 DOLLAR SIGN; dollar  
 13576 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024  
 13577 % U+0025 PERCENT SIGN; percent  
 13578 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025  
 13579 % U+0026 AMPERSAND; ampersand  
 13580 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026  
 13581 % U+0027 APOSTROPHE; quotesingle  
 13582 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027  
 13583 % U+0028 LEFT PARENTHESIS; parenleft  
 13584 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028  
 13585 % U+0029 RIGHT PARENTHESIS; parenright  
 13586 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029  
 13587 % U+002A ASTERISK; asterisk  
 13588 \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  
 13589 % U+003C LESS-THAN SIGN; less  
 13590 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C  
 \80\075: U+003D EQUALS SIGN; equal  
 13591 % U+003E GREATER-THAN SIGN; greater  
 13592 \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  
 13593 % U+005C REVERSE SOLIDUS; backslash  
 13594 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C  
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright  
 13595 % U+005E CIRCUMFLEX ACCENT; asciicircum  
 13596 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E  
 13597 % U+005F LOW LINE; underscore  
 13598 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F  
 13599 % U+0060 GRAVE ACCENT; grave  
 13600 \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

13601 % U+0069 LATIN SMALL LETTER I; i  
13602 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069  
13603 \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  
13604 % U+007B LEFT CURLY BRACKET; braceleft  
13605 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B  
13606 % U+007C VERTICAL LINE; \*bar, verticalbar  
13607 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C  
13608 % U+007D RIGHT CURLY BRACKET; braceright  
13609 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D  
13610 % U+007E TILDE; asciitilde  
13611 \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  
13612 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown  
13613 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1  
13614 % U+00A2 CENT SIGN; cent  
13615 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2  
13616 % U+00A3 POUND SIGN; sterling  
13617 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3  
13618 % U+00A4 CURRENCY SIGN; currency  
13619 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4  
13620 % U+00A5 YEN SIGN; yen  
13621 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5  
13622 % U+00A6 BROKEN BAR; brokenbar  
13623 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6  
13624 % U+00A7 SECTION SIGN; section  
13625 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7  
13626 % U+00A8 DIAERESIS; diaeresis  
13627 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8  
13628 % U+00A9 COPYRIGHT SIGN; copyright  
13629 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9  
13630 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine  
13631 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA  
13632 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft  
13633 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB  
13634 % U+00AC NOT SIGN; logicalnot  
13635 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC  
13636 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC  
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen  
13637 % U+00AE REGISTERED SIGN; registered  
13638 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE  
13639 % U+00AF MACRON; \*macron, overscore  
13640 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF  
13641 % U+00B0 DEGREE SIGN; degree  
13642 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0  
13643 % U+00B1 PLUS-MINUS SIGN; plusminus  
13644 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1  
13645 % U+00B2 SUPERScript TWO; twosuperior  
13646 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2  
13647 % U+00B3 SUPERScript THREE; threesuperior

13648 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3  
13649 % U+00B4 ACUTE ACCENT; acute  
13650 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4  
13651 \DeclareTextCommand{\textasciiaacute}{PU}{\80\264}% U+00B4  
13652 % U+00B5 MICRO SIGN; mu, mu1  
13653 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5  
13654 % U+00B6 PILCROW SIGN; paragraph  
13655 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6  
13656 % U+00B7 MIDDLE DOT; middot, \*periodcentered  
13657 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7  
13658 % U+00B8 CEDILLA; cedilla  
13659 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8  
13660 % U+00B9 SUPERSCRIPT ONE; onesuperior  
13661 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9  
13662 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine  
13663 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA  
13664 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-  
motright  
13665 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB  
13666 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter  
13667 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC  
13668 % U+00BD VULGAR FRACTION ONE HALF; onehalf  
13669 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD  
13670 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters  
13671 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE  
13672 % U+00BF INVERTED QUESTION MARK; questiondown  
13673 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF  
13674 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave  
13675 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0  
13676 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute  
13677 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1  
13678 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex  
13679 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2  
13680 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde  
13681 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3  
13682 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis  
13683 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4  
13684 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring  
13685 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5  
13686 % U+00C6 LATIN CAPITAL LETTER AE; AE  
13687 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6  
13688 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla  
13689 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7  
13690 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave  
13691 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8  
13692 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute  
13693 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9  
13694 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex  
13695 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA  
13696 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis  
13697 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB  
13698 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave  
13699 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC  
13700 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute  
13701 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD  
13702 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex  
13703 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

13704 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis  
13705 \DeclareTextCompositeCommand{"}{PU}{i}{\80\317}% U+00CF  
13706 % U+00D0 LATIN CAPITAL LETTER ETH; Eth  
13707 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0  
13708 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde  
13709 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1  
13710 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve  
13711 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2  
13712 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute  
13713 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3  
13714 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex  
13715 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4  
13716 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde  
13717 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5  
13718 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis  
13719 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6  
13720 % U+00D7 MULTIPLICATION SIGN; multiply  
13721 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7  
13722 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash  
13723 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8  
13724 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave  
13725 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9  
13726 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute  
13727 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA  
13728 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex  
13729 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB  
13730 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis  
13731 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC  
13732 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute  
13733 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD  
13734 % U+00DE LATIN CAPITAL LETTER THORN; Thorn  
13735 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE  
13736 % U+00DF LATIN SMALL LETTER SHARP S; germandbls  
13737 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF  
13738 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave  
13739 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0  
13740 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute  
13741 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1  
13742 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex  
13743 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2  
13744 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde  
13745 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3  
13746 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis  
13747 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4  
13748 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring  
13749 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5  
13750 % U+00E6 LATIN SMALL LETTER AE; ae  
13751 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6  
13752 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla  
13753 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7  
13754 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave  
13755 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8  
13756 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute  
13757 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9  
13758 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex  
13759 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA  
13760 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis

13761 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB  
13762 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave  
13763 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC  
13764 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC  
13765 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute  
13766 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED  
13767 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED  
13768 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex  
13769 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE  
13770 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE  
13771 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis  
13772 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF  
13773 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF  
13774 % U+00F0 LATIN SMALL LETTER ETH; eth  
13775 \DeclareTextCommand{dh}{PU}{\80\360}% U+00F0  
13776 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde  
13777 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1  
13778 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve  
13779 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2  
13780 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute  
13781 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3  
13782 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex  
13783 \DeclareTextCompositeCommand{~}{PU}{o}{\80\364}% U+00F4  
13784 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otild  
13785 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5  
13786 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis  
13787 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6  
13788 % U+00F7 DIVISION SIGN; divide  
13789 \DeclareTextCommand{texdiv}{PU}{\80\367}% U+00F7  
13790 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash  
13791 \DeclareTextCommand{o}{PU}{\80\370}% U+00F8  
13792 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave  
13793 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9  
13794 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute  
13795 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA  
13796 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex  
13797 \DeclareTextCompositeCommand{~}{PU}{u}{\80\373}% U+00FB  
13798 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis  
13799 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC  
13800 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute  
13801 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD  
13802 % U+00FE LATIN SMALL LETTER THORN; thorn  
13803 \DeclareTextCommand{th}{PU}{\80\376}% U+00FE  
13804 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis  
13805 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

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

13806 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron  
13807 \DeclareTextCompositeCommand{=}{PU}{A}{\81\000}% U+0100  
13808 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron  
13809 \DeclareTextCompositeCommand{=}{PU}{a}{\81\001}% U+0101  
13810 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve  
13811 \DeclareTextCompositeCommand{u}{PU}{A}{\81\002}% U+0102  
13812 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve  
13813 \DeclareTextCompositeCommand{u}{PU}{a}{\81\003}% U+0103  
13814 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek

13815 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104  
13816 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek  
13817 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105  
13818 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute  
13819 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106  
13820 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute  
13821 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107  
13822 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex  
13823 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108  
13824 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex  
13825 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109  
13826 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent  
13827 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A  
13828 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent  
13829 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B  
13830 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron  
13831 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C  
13832 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron  
13833 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D  
13834 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron  
13835 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E  
13836 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron  
13837 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F  
13838 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash  
13839 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110  
13840 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron  
13841 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111  
13842 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron  
13843 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112  
13844 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron  
13845 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113  
13846 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve  
13847 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114  
13848 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve  
13849 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115  
13850 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent  
13851 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116  
13852 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent  
13853 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117  
13854 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek  
13855 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118  
13856 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek  
13857 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119  
13858 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron  
13859 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A  
13860 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron  
13861 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B  
13862 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex  
13863 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C  
13864 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex  
13865 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D  
13866 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve  
13867 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E  
13868 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve  
13869 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F  
13870 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent  
13871 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120



13872 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent  
13873 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121  
13874 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent  
13875 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122  
13876 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent  
13877 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123  
13878 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex  
13879 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124  
13880 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex  
13881 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125  
13882 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar  
13883 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126  
13884 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar  
13885 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127  
13886 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde  
13887 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128  
13888 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde  
13889 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129  
13890 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129  
13891 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron  
13892 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A  
13893 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron  
13894 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B  
13895 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B  
13896 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve  
13897 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C  
13898 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve  
13899 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D  
13900 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D  
13901 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek  
13902 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E  
13903 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek  
13904 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F  
13905 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F  
13906 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent  
13907 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130  
13908 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi  
13909 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131  
13910 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ  
13911 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132  
13912 % U+0133 LATIN SMALL LIGATURE IJ; ij  
13913 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133  
13914 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex  
13915 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134  
13916 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex  
13917 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135  
13918 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135  
13919 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent  
13920 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136  
13921 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent  
13922 \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`.

13923 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic

13924 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138  
13925 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute  
13926 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139  
13927 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute  
13928 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A  
13929 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-  
cent  
13930 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B  
13931 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent  
13932 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C  
13933 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron  
13934 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D  
13935 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron  
13936 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E  
There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). There-  
fore the \. accent is reused instead of making a separate accent macro \textmiddledot.  
13937 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent  
13938 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F  
13939 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent  
13940 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140  
13941 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash  
13942 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141  
13943 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash  
13944 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142  
13945 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute  
13946 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143  
13947 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute  
13948 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144  
13949 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-  
cent  
13950 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145  
13951 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent  
13952 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146  
13953 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron  
13954 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147  
13955 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron  
13956 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148  
13957 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-  
trophe, quoterightn  
13958 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149  
13959 % U+014A LATIN CAPITAL LETTER ENG; Eng  
13960 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A  
13961 % U+014B LATIN SMALL LETTER ENG; eng  
13962 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B  
13963 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron  
13964 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C  
13965 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron  
13966 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D  
13967 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve  
13968 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E  
13969 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve  
13970 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F  
13971 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac-  
cute, Ohungarumlaut  
13972 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150  
13973 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohun-  
garumlaut

13974 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151  
13975 % U+0152 LATIN CAPITAL LIGATURE OE; OE  
13976 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152  
13977 % U+0153 LATIN SMALL LIGATURE OE; oe  
13978 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153  
13979 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute  
13980 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154  
13981 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute  
13982 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155  
13983 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent  
13984 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156  
13985 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent  
13986 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157  
13987 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron  
13988 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158  
13989 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron  
13990 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159  
13991 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute  
13992 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A  
13993 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute  
13994 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B  
13995 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex  
13996 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C  
13997 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex  
13998 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D  
13999 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla  
14000 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E  
14001 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla  
14002 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F  
14003 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron  
14004 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160  
14005 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron  
14006 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161  
14007 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent  
14008 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162  
14009 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent  
14010 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163  
14011 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron  
14012 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164  
14013 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron  
14014 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165  
14015 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar  
14016 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166  
14017 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar  
14018 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167  
14019 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde  
14020 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168  
14021 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde  
14022 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169  
14023 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron  
14024 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A  
14025 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron  
14026 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B  
14027 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve  
14028 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C

14029 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve  
 14030 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D  
 14031 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring  
 14032 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E  
 14033 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring  
 14034 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F  
 14035 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut  
 14036 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170  
 14037 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut  
 14038 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171  
 14039 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek  
 14040 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172  
 14041 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek  
 14042 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173  
 14043 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex  
 14044 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174  
 14045 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex  
 14046 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175  
 14047 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex  
 14048 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176  
 14049 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex  
 14050 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177  
 14051 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis  
 14052 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178  
 14053 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute  
 14054 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179  
 14055 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute  
 14056 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A  
 14057 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent  
 14058 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B  
 14059 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent  
 14060 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C  
 14061 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron  
 14062 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D  
 14063 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron  
 14064 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E  
 14065 % U+017F LATIN SMALL LETTER LONG S; longs, slong  
 14066 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

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

14067 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin  
 14068 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192  
 14069 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron  
 14070 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD  
 14071 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron  
 14072 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE  
 14073 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron  
 14074 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF  
 14075 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron  
 14076 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0  
 14077 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0  
 14078 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron  
 14079 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1  
 14080 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron  
 14081 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2

14082 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron  
14083 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3  
14084 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron  
14085 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4  
14086 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke  
14087 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4  
14088 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke  
14089 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5  
14090 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron  
14091 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6  
14092 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron  
14093 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7  
14094 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron  
14095 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8  
14096 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron  
14097 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9  
14098 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek  
14099 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA  
14100 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek  
14101 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB  
14102 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron  
14103 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0  
14104 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0  
14105 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute  
14106 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4  
14107 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute  
14108 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5  
14109 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE  
14110 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8  
14111 % U+01F9 LATIN SMALL LETTER N WITH GRAVE  
14112 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9  
14113 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute  
14114 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC  
14115 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute  
14116 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD  
14117 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; \*Oslasha-  
acute, Ostrokeacute  
14118 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE  
14119 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; \*oslasha-  
acute, ostrokeacute  
14120 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF  
14121 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave  
14122 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200  
14123 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave  
14124 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201  
14125 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave  
14126 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204  
14127 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave  
14128 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205  
14129 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave  
14130 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208  
14131 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave  
14132 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209  
14133 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209  
14134 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave  
14135 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C  
14136 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave

14137 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D  
 14138 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave  
 14139 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210  
 14140 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave  
 14141 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211  
 14142 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave  
 14143 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214  
 14144 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave  
 14145 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215  
 14146 % U+021E LATIN CAPITAL LETTER H WITH CARON  
 14147 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E  
 14148 % U+021F LATIN SMALL LETTER H WITH CARON  
 14149 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F  
 14150 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE  
 14151 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226  
 14152 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE  
 14153 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227  
 14154 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA  
 14155 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228  
 14156 % U+0229 LATIN SMALL LETTER E WITH CEDILLA  
 14157 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229  
 14158 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE  
 14159 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E  
 14160 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE  
 14161 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F  
 14162 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON  
 14163 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232  
 14164 % U+0233 LATIN SMALL LETTER Y WITH MACRON  
 14165 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233  
 14166 % U+0237 LATIN SMALL LETTER DOTLESS J  
 14167 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

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

14168 % U+02C7 CARON; caron  
 14169 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7  
 14170 % U+02D8 BREVE; breve  
 14171 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8  
 14172 % U+02D9 DOT ABOVE; dotaccent  
 14173 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9  
 14174 % U+02DA RING ABOVE; ring  
 14175 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA  
 14176 % U+02DB OGONEK; ogonek  
 14177 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB  
 14178 % U+02DC SMALL TILDE; ilde, \*tilde  
 14179 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC  
 14180 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut  
 14181 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD  
 14182 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD  
 14183 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT  
 14184 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5  
 14185 % U+02F7 MODIFIER LETTER LOW TILDE  
 14186 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

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

14187 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb  
 14188 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F  
 14189 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb

14190 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311  
 14191 % U+0323 COMBINING DOT BELOW; dotbelowcmb, \*dotbelowcmb  
 14192 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323  
 14193 % U+0331 COMBINING MACRON BELOW; macronbelowcmb  
 14194 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331  
 14195 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb  
 14196 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

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

14197 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek  
 14198 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374  
 14199 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek  
 14200 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375  
 14201 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos  
 14202 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386  
 14203 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos  
 14204 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388  
 14205 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos  
 14206 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389  
 14207 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos  
 14208 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A  
 14209 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos  
 14210 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C  
 14211 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos  
 14212 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E  
 14213 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos  
 14214 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F  
 14215 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis  
 14216 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390  
 14217 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha  
 14218 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391  
 14219 % U+0392 GREEK CAPITAL LETTER BETA; Beta  
 14220 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392  
 14221 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma  
 14222 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393  
 14223 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, \*Delta  
 14224 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394  
 14225 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon  
 14226 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395  
 14227 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta  
 14228 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396  
 14229 % U+0397 GREEK CAPITAL LETTER ETA; Eta  
 14230 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397  
 14231 % U+0398 GREEK CAPITAL LETTER THETA; Theta  
 14232 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398  
 14233 % U+0399 GREEK CAPITAL LETTER IOTA; Iota  
 14234 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399  
 14235 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa  
 14236 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A  
 14237 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda  
 14238 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B  
 14239 % U+039C GREEK CAPITAL LETTER MU; Mu  
 14240 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C  
 14241 % U+039D GREEK CAPITAL LETTER NU; Nu  
 14242 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D

14243 % U+039E GREEK CAPITAL LETTER XI; Xi  
 14244 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E  
 14245 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron  
 14246 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F  
 14247 % U+03A0 GREEK CAPITAL LETTER PI; Pi  
 14248 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0  
 14249 % U+03A1 GREEK CAPITAL LETTER RHO; Rho  
 14250 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1  
 14251 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma  
 14252 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3  
 14253 % U+03A4 GREEK CAPITAL LETTER TAU; Tau  
 14254 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4  
 14255 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon  
 14256 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5  
 14257 % U+03A6 GREEK CAPITAL LETTER PHI; Phi  
 14258 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6  
 14259 % U+03A7 GREEK CAPITAL LETTER CHI; Chi  
 14260 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7  
 14261 % U+03A8 GREEK CAPITAL LETTER PSI; Psi  
 14262 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8  
 14263 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, \*Omega  
 14264 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9  
 14265 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis  
 14266 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA  
 14267 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA  
 14268 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-  
 silondieresis  
 14269 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB  
 14270 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos  
 14271 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC  
 14272 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon  
 14273 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD  
 14274 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos  
 14275 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE  
 14276 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos  
 14277 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF  
 14278 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-  
 silondieresis  
 14279 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0  
 14280 % U+03B1 GREEK SMALL LETTER ALPHA; alpha  
 14281 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1  
 14282 % U+03B2 GREEK SMALL LETTER BETA; beta  
 14283 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2  
 14284 % U+03B3 GREEK SMALL LETTER GAMMA; gamma  
 14285 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3  
 14286 % U+03B4 GREEK SMALL LETTER DELTA; delta  
 14287 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4  
 14288 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon  
 14289 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5  
 14290 % U+03B6 GREEK SMALL LETTER ZETA; zeta  
 14291 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6  
 14292 % U+03B7 GREEK SMALL LETTER ETA; eta  
 14293 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7  
 14294 % U+03B8 GREEK SMALL LETTER THETA; theta  
 14295 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8  
 14296 % U+03B9 GREEK SMALL LETTER IOTA; iota  
 14297 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9



14298 % U+03BA GREEK SMALL LETTER KAPPA; kappa  
 14299 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA  
 14300 % U+03BB GREEK SMALL LETTER LAMDA; lambda  
 14301 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB  
 14302 % U+03BC GREEK SMALL LETTER MU; mugreek, \*mu  
 14303 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC  
 14304 % U+03BD GREEK SMALL LETTER NU; nu  
 14305 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD  
 14306 % U+03BE GREEK SMALL LETTER XI; xi  
 14307 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE  
 14308 % U+03BF GREEK SMALL LETTER OMICRON; omicron  
 14309 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF  
 14310 % U+03C0 GREEK SMALL LETTER PI; pi  
 14311 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0  
 14312 % U+03C1 GREEK SMALL LETTER RHO; rho  
 14313 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1  
 14314 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; \*sigma1, sigmafinal  
 14315 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2  
 14316 % U+03C3 GREEK SMALL LETTER SIGMA; sigma  
 14317 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3  
 14318 % U+03C4 GREEK SMALL LETTER TAU; tau  
 14319 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4  
 14320 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon  
 14321 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5  
 14322 % U+03C6 GREEK SMALL LETTER PHI; phi  
 14323 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6  
 14324 % U+03C7 GREEK SMALL LETTER CHI; chi  
 14325 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7  
 14326 % U+03C8 GREEK SMALL LETTER PSI; psi  
 14327 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8  
 14328 % U+03C9 GREEK SMALL LETTER OMEGA; omega  
 14329 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9  
 14330 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis  
 14331 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA  
 14332 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-  
 silondieresis  
 14333 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB  
 14334 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos  
 14335 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC  
 14336 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos  
 14337 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD  
 14338 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD  
 14339 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos  
 14340 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE  
 14341 % U+03DA GREEK LETTER STIGMA; Stigmagreek  
 14342 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA  
 14343 % U+03DB GREEK SMALL LETTER STIGMA  
 14344 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB  
 14345 % U+03DC GREEK LETTER DIGAMMA; Digammagreek  
 14346 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC  
 14347 % U+03DD GREEK SMALL LETTER DIGAMMA  
 14348 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD  
 14349 % U+03DE GREEK LETTER KOPPA; Koppagreek  
 14350 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE  
 14351 % U+03DF GREEK SMALL LETTER KOPPA  
 14352 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF  
 14353 % U+03E0 GREEK LETTER SAMPI; Sampigreek

14354 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0  
 14355 % U+03E1 GREEK SMALL LETTER SAMPI  
 14356 \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.

14357 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE  
 14358 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400  
 14359 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, \*afii10023  
 14360 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401  
 14361 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???  
 14362 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, \*afii10051  
 14363 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402  
 14364 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, \*afii10052  
 14365 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403  
 14366 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, \*afii10053  
 14367 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404  
 14368 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, \*afii10054  
 14369 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405  
 14370 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrilic, \*afii10055  
 14371 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406  
 14372 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, \*afii10056  
 14373 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407  
 14374 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407  
 14375 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, \*afii10057  
 14376 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408  
 14377 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, \*afii10058  
 14378 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409  
 14379 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, \*afii10059  
 14380 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A  
 14381 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, \*afii10060  
 14382 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B  
 14383 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, \*afii10061  
 14384 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C  
 14385 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE  
 14386 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D  
 14387 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, \*afii10062  
 14388 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E  
 14389 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E  
 14390 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, \*afii10145  
 14391 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F  
 14392 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, \*afii10017  
 14393 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410  
 14394 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, \*afii10018  
 14395 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411  
 14396 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, \*afii10019  
 14397 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412  
 14398 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, \*afii10020  
 14399 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413  
 14400 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, \*afii10021  
 14401 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414  
 14402 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, \*afii10022  
 14403 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415  
 14404 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, \*afii10024  
 14405 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416

14406 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, \*afii10025  
14407 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417  
14408 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, \*afii10026  
14409 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418  
14410 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, \*afii10027  
14411 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419  
14412 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419  
14413 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, \*afii10028  
14414 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A  
14415 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, \*afii10029  
14416 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B  
14417 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, \*afii10030  
14418 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C  
14419 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, \*afii10031  
14420 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D  
14421 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, \*afii10032  
14422 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E  
14423 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, \*afii10033  
14424 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F  
14425 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, \*afii10034  
14426 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420  
14427 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, \*afii10035  
14428 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421  
14429 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, \*afii10036  
14430 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422  
14431 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, \*afii10037  
14432 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423  
14433 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, \*afii10038  
14434 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424  
14435 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, \*afii10039  
14436 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425  
14437 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, \*afii10040  
14438 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426  
14439 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, \*afii10041  
14440 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427  
14441 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, \*afii10042  
14442 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428  
14443 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, \*afii10043  
14444 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429  
14445 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, \*afii10044  
14446 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A  
14447 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, \*afii10045  
14448 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B  
14449 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, \*afii10046  
14450 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C  
14451 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, \*afii10047  
14452 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D  
14453 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, \*afii10048  
14454 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E  
14455 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, \*afii10049  
14456 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F  
14457 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, \*afii10065  
14458 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430  
14459 % U+0431 CYRILLIC SMALL LETTER BE; \*afii10066, becyrillic  
14460 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431  
14461 % U+0432 CYRILLIC SMALL LETTER VE; \*afii10067, vecyrillic  
14462 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432

14463 % U+0433 CYRILLIC SMALL LETTER GHE; \*afii10068, gecyrillic  
 14464 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433  
 14465 % U+0434 CYRILLIC SMALL LETTER DE; \*afii10069, decyrillic  
 14466 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434  
 14467 % U+0435 CYRILLIC SMALL LETTER IE; \*afii10070, iecyrillic  
 14468 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435  
 14469 % U+0436 CYRILLIC SMALL LETTER ZHE; \*afii10072, zhecyrillic  
 14470 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436  
 14471 % U+0437 CYRILLIC SMALL LETTER ZE; \*afii10073, zecyrillic  
 14472 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437  
 14473 % U+0438 CYRILLIC SMALL LETTER I; \*afii10074, iicyrillic  
 14474 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438  
 14475 % U+0439 CYRILLIC SMALL LETTER SHORT I; \*afii10075, iishortcyrillic  
 14476 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439  
 14477 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439  
 14478 % U+043A CYRILLIC SMALL LETTER KA; \*afii10076, kacyrillic  
 14479 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A  
 14480 % U+043B CYRILLIC SMALL LETTER EL; \*afii10077, elcyrillic  
 14481 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B  
 14482 % U+043C CYRILLIC SMALL LETTER EM; \*afii10078, emcyrillic  
 14483 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C  
 14484 % U+043D CYRILLIC SMALL LETTER EN; \*afii10079, encyrillic  
 14485 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D  
 14486 % U+043E CYRILLIC SMALL LETTER O; \*afii10080, ocyrillic  
 14487 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E  
 14488 % U+043F CYRILLIC SMALL LETTER PE; \*afii10081, pecyrillic  
 14489 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F  
 14490 % U+0440 CYRILLIC SMALL LETTER ER; \*afii10082, ercyrillic  
 14491 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440  
 14492 % U+0441 CYRILLIC SMALL LETTER ES; \*afii10083, escyrillic  
 14493 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441  
 14494 % U+0442 CYRILLIC SMALL LETTER TE; \*afii10084, tecyrillic  
 14495 \DeclareTextCommand{\cyrte}{PU}{\84\102}% U+0442  
 14496 % U+0443 CYRILLIC SMALL LETTER U; \*afii10085, ucyrillic  
 14497 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443  
 14498 % U+0444 CYRILLIC SMALL LETTER EF; \*afii10086, efcyrillic  
 14499 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444  
 14500 % U+0445 CYRILLIC SMALL LETTER HA; \*afii10087, khacyrillic  
 14501 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445  
 14502 % U+0446 CYRILLIC SMALL LETTER TSE; \*afii10088, tsecyrillic  
 14503 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446  
 14504 % U+0447 CYRILLIC SMALL LETTER CHE; \*afii10089, checyrillic  
 14505 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447  
 14506 % U+0448 CYRILLIC SMALL LETTER SHA; \*afii10090, shacyrillic  
 14507 \DeclareTextCommand{\cyrrsh}{PU}{\84\110}% U+0448  
 14508 % U+0449 CYRILLIC SMALL LETTER SHCHA; \*afii10091, shchacyrillic  
 14509 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449  
 14510 % U+044A CYRILLIC SMALL LETTER HARD SIGN; \*afii10092, hardsigncyrillic  
 14511 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A  
 14512 % U+044B CYRILLIC SMALL LETTER YERU; \*afii10093, yericyrillic  
 14513 \DeclareTextCommand{\cyryery}{PU}{\84\113}% U+044B  
 14514 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; \*afii10094, softsigncyrillic  
 14515 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C  
 14516 % U+044D CYRILLIC SMALL LETTER E; \*afii10095, ereversedcyrillic  
 14517 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D  
 14518 % U+044E CYRILLIC SMALL LETTER YU; \*afii10096, iucyrillic  
 14519 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E

14520 % U+044F CYRILLIC SMALL LETTER YA; \*afii10097, iacyrillic  
 14521 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F  
 14522 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE  
 14523 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450  
 14524 % U+0451 CYRILLIC SMALL LETTER IO; \*afii10071, iocyrillic  
 14525 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451  
 14526 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451  
 14527 % U+0452 CYRILLIC SMALL LETTER DJE; \*afii10099, djecyrillic  
 14528 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452  
 14529 % U+0453 CYRILLIC SMALL LETTER GJE; \*afii10100, gjecyrillic  
 14530 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453  
 14531 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; \*afii10101, ecyrillic  
 14532 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454  
 14533 % U+0455 CYRILLIC SMALL LETTER DZE; \*afii10102, dzecyrillic  
 14534 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455  
 14535 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; \*afii10103, icyrillic  
 14536 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456  
 14537 % U+0457 CYRILLIC SMALL LETTER YI; \*afii10104, yicyrillic  
 14538 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457  
 14539 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457  
 14540 % U+0458 CYRILLIC SMALL LETTER JE; \*afii10105, jecyrillic  
 14541 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458  
 14542 % U+0459 CYRILLIC SMALL LETTER LJE; \*afii10106, ljecyrillic  
 14543 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459  
 14544 % U+045A CYRILLIC SMALL LETTER NJE; \*afii10107, njecyrillic  
 14545 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A  
 14546 % U+045B CYRILLIC SMALL LETTER TSHE; \*afii10108, tshecyrillic  
 14547 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B  
 14548 % U+045C CYRILLIC SMALL LETTER KJE; \*afii10109, kjecyrillic  
 14549 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C  
 14550 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE  
 14551 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D  
 14552 % U+045E CYRILLIC SMALL LETTER SHORT U; \*afii10110, ushortcyrillic  
 14553 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E  
 14554 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E  
 14555 % U+045F CYRILLIC SMALL LETTER DZHE; \*afii10193, dzhecyrillic  
 14556 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F  
 14557 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic  
 14558 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460  
 14559 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic  
 14560 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461  
 14561 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, \*afii10146  
 14562 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462  
 14563 % U+0463 CYRILLIC SMALL LETTER YAT; \*afii10194, yatcyrillic  
 14564 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463  
 14565 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic  
 14566 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464  
 14567 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic  
 14568 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465  
 14569 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic  
 14570 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466  
 14571 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic  
 14572 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467  
 14573 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-  
 14574 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468

14575 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-  
 fiedcyrillic  
 14576 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469  
 14577 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic  
 14578 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A  
 14579 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic  
 14580 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B  
 14581 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-  
 cyrillic  
 14582 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C  
 14583 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-  
 lic  
 14584 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D  
 14585 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic  
 14586 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E  
 14587 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic  
 14588 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F  
 14589 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic  
 14590 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470  
 14591 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic  
 14592 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471  
 14593 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, \*afii10147  
 14594 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472  
 14595 % U+0473 CYRILLIC SMALL LETTER FITA; \*afii10195, fitacyrillic  
 14596 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473  
 14597 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, \*afii10148  
 14598 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474  
 14599 % U+0475 CYRILLIC SMALL LETTER IZHITSA; \*afii10196, izhitsacyrillic  
 14600 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475  
 14601 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-  
 CENT; Izhitsadblgravecyrillic  
 14602 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476  
 14603 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-  
 CENT; izhitsadblgravecyrillic  
 14604 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477  
 14605 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic  
 14606 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478  
 14607 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic  
 14608 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479  
 14609 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-  
 lic  
 14610 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A  
 14611 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic  
 14612 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B  
 14613 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-  
 cyrillic  
 14614 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C  
 14615 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-  
 cyrillic  
 14616 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D  
 14617 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic  
 14618 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E  
 14619 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic  
 14620 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F  
 14621 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic  
 14622 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480  
 14623 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic

14624 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481  
14625 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic  
14626 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482  
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb  
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb  
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb  
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb  
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE  
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN  
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN  
14627 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL  
14628 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A  
14629 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL  
14630 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B  
14631 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN  
14632 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C  
14633 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN  
14634 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D  
14635 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK  
14636 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E  
14637 % U+048F CYRILLIC SMALL LETTER ER WITH TICK  
14638 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F  
14639 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, \*afii10050  
14640 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490  
14641 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; \*afii10098, gheupturncyrillic  
14642 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491  
14643 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic  
14644 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492  
14645 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic  
14646 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493  
14647 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic  
14648 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494  
14649 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic  
14650 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495  
14651 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic  
14652 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496  
14653 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic  
14654 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497  
14655 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic  
14656 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498  
14657 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498  
14658 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic  
14659 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499  
14660 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

14661 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic  
 14662 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A  
 14663 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic  
 14664 \DeclareTextCommand{\cyrkdesc}{PU}{\84\233}% U+049B  
 14665 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic  
 14666 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C  
 14667 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic  
 14668 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D  
 14669 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic  
 14670 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E  
 14671 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic  
 14672 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F  
 14673 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic  
 14674 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0  
 14675 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic  
 14676 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1  
 14677 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic  
 14678 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2  
 14679 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic  
 14680 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3  
 14681 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic  
 14682 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4  
 14683 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic  
 14684 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5  
 14685 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic  
 14686 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6  
 14687 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic  
 14688 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7  
 14689 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic  
 14690 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8  
 14691 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic  
 14692 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9  
 14693 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic  
 14694 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA  
 14695 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA  
 14696 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic  
 14697 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB  
 14698 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB  
 14699 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic  
 14700 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC  
 14701 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic  
 14702 \DeclareTextCommand{\cyrtasc}{PU}{\84\255}% U+04AD  
 14703 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic  
 14704 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE



14705 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic  
14706 \DeclareTextCommand{\cyrj}{PU}{\84\257}% U+04AF  
14707 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraighstrokecyrillic  
14708 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0  
14709 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraighstrokecyrillic  
14710 \DeclareTextCommand{\cyrjhcrs}{PU}{\84\261}% U+04B1  
14711 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic  
14712 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2  
14713 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic  
14714 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3  
14715 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic  
14716 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4  
14717 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic  
14718 \DeclareTextCommand{\cyrttetse}{PU}{\84\265}% U+04B5  
14719 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic  
14720 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6  
14721 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic  
14722 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7  
14723 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chevverticalstrokecyrillic  
14724 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8  
14725 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chevverticalstrokecyrillic  
14726 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9  
14727 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic  
14728 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA  
14729 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic  
14730 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB  
14731 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic  
14732 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC  
14733 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic  
14734 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD  
14735 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic  
14736 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE  
14737 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE  
14738 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic  
14739 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF  
14740 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF  
14741 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic  
14742 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0  
14743 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic  
14744 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1  
14745 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic  
14746 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2  
14747 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic  
14748 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3  
14749 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic

14750 \DeclareTextCommand{\cyrkhhk}{PU}{\84\304}% U+04C4  
 14751 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL  
 14752 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5  
 14753 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL  
 14754 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6  
 14755 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic  
 14756 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7  
 14757 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic  
 14758 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8  
 14759 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic  
 14760 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB  
 14761 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic  
 14762 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC  
 14763 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL  
 14764 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD  
 14765 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL  
 14766 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE  
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA  
 14767 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic  
 14768 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0  
 14769 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic  
 14770 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1  
 14771 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic  
 14772 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2  
 14773 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic  
 14774 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3  
 14775 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic  
 14776 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4  
 14777 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic  
 14778 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5  
 14779 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic  
 14780 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6  
 14781 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic  
 14782 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7  
 14783 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic  
 14784 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8  
 14785 % U+04D9 CYRILLIC SMALL LETTER SCHWA; \*afii10846, schwacyrillic  
 14786 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9  
 14787 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic  
 14788 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA  
 14789 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic  
 14790 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB  
 14791 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic  
 14792 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC  
 14793 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic  
 14794 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD  
 14795 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic  
 14796 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE  
 14797 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

14798 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF  
14799 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic  
14800 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0  
14801 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic  
14802 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1  
14803 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic  
14804 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2  
14805 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic  
14806 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3  
14807 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic  
14808 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4  
14809 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic  
14810 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5  
14811 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic  
14812 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6  
14813 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic  
14814 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7  
14815 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic  
14816 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8  
14817 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic  
14818 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9  
14819 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic  
14820 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA  
14821 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic  
14822 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB  
14823 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS  
14824 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC  
14825 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS  
14826 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED  
14827 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic  
14828 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE  
14829 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic  
14830 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF  
14831 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic  
14832 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0  
14833 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic  
14834 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1  
14835 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic  
14836 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2  
14837 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic  
14838 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3  
14839 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic  
14840 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4  
14841 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic  
14842 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5  
14843 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER  
14844 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6  
14845 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER  
14846 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

14847 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-  
siscyrillic  
14848 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8  
14849 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-  
siscyrillic  
14850 \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  
14851 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK  
14852 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC  
14853 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK  
14854 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD  
\84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE  
\84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

## 50.2.10 Thai: U+0E00 to U+0E7F

14855 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai  
14856 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

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

14857 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent  
14858 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02  
14859 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent  
14860 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03  
14861 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow  
14862 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06  
14863 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow  
14864 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07  
14865 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent  
14866 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A  
14867 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent  
14868 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B  
14869 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow  
14870 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E  
14871 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow  
14872 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F  
14873 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla  
14874 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10  
14875 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla  
14876 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11  
14877 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent  
14878 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E  
14879 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent  
14880 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F  
14881 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron  
14882 \DeclareTextCompositeCommand{=} {PU}{G}{\9036\040}% U+1E20  
14883 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron  
14884 \DeclareTextCompositeCommand{=} {PU}{g}{\9036\041}% U+1E21  
14885 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent  
14886 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22  
14887 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent  
14888 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23  
14889 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis  
14890 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26  
14891 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis

14892 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27  
14893 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla  
14894 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28  
14895 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla  
14896 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29  
14897 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute  
14898 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30  
14899 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute  
14900 \DeclareTextCompositeCommand{'}{PU}{k}{\9036\061}% U+1E31  
14901 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow  
14902 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34  
14903 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow  
14904 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35  
14905 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow  
14906 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A  
14907 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow  
14908 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B  
14909 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute  
14910 \DeclareTextCompositeCommand{'}{PU}{M}{\9036\076}% U+1E3E  
14911 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute  
14912 \DeclareTextCompositeCommand{'}{PU}{m}{\9036\077}% U+1E3F  
14913 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent  
14914 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40  
14915 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent  
14916 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41  
14917 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent  
14918 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44  
14919 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent  
14920 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45  
14921 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow  
14922 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48  
14923 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow  
14924 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49  
14925 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute  
14926 \DeclareTextCompositeCommand{'}{PU}{P}{\9036\124}% U+1E54  
14927 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute  
14928 \DeclareTextCompositeCommand{'}{PU}{p}{\9036\125}% U+1E55  
14929 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent  
14930 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56  
14931 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent  
14932 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57  
14933 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent  
14934 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58  
14935 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent  
14936 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59  
14937 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow  
14938 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E  
14939 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow  
14940 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F  
14941 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent  
14942 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60  
14943 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent  
14944 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61  
14945 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow  
14946 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E  
14947 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow  
14948 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F

14949 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde  
14950 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C  
14951 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde  
14952 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D  
14953 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave  
14954 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80  
14955 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave  
14956 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81  
14957 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute  
14958 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82  
14959 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute  
14960 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83  
14961 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis  
14962 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84  
14963 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis  
14964 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85  
14965 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent  
14966 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86  
14967 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent  
14968 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87  
14969 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent  
14970 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A  
14971 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent  
14972 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B  
14973 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis  
14974 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C  
14975 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis  
14976 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D  
14977 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent  
14978 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E  
14979 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent  
14980 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F  
14981 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex  
14982 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90  
14983 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex  
14984 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91  
14985 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow  
14986 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94  
14987 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow  
14988 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95  
14989 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow  
14990 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96  
14991 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis  
14992 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97  
14993 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring  
14994 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98  
14995 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring  
14996 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99  
14997 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-  
cent  
14998 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B  
14999 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde  
15000 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC  
15001 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde  
15002 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD  
15003 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave  
15004 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2

15005 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave  
 15006 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3  
 15007 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde  
 15008 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8  
 15009 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde  
 15010 \DeclareTextCompositeCommand{\-}{PU}{y}{\9036\371}% U+1EF9

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

15011 % U+200C ZERO WIDTH NON-JOINER; \*afi61664, zerowidthnonjoiner  
 15012 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C  
 15013 % U+2013 EN DASH; endash  
 15014 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013  
 15015 % U+2014 EM DASH; emdash  
 15016 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014  
 15017 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar  
 15018 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016  
 15019 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft  
 15020 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018  
 15021 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright  
 15022 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019  
 15023 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase  
 15024 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A  
 15025 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft  
 15026 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C  
 15027 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright  
 15028 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D  
 15029 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase  
 15030 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E  
 15031 % U+2020 DAGGER; dagger  
 15032 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020  
 15033 % U+2021 DOUBLE DAGGER; daggerdbl  
 15034 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021  
 15035 % U+2022 BULLET; bullet  
 15036 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022  
 15037 % U+2026 HORIZONTAL ELLIPSIS; ellipsis  
 15038 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026  
 15039 % U+2030 PER MILLE SIGN; perthousand  
 15040 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030  
 15041 % U+2031 PER TEN THOUSAND SIGN  
 15042 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031  
 15043 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-  
   inglleft  
 15044 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039  
 15045 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-  
   inglright  
 15046 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A  
 15047 % U+203B REFERENCE MARK; referencemark  
 15048 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B  
 15049 % U+203D INTERROBANG  
 15050 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D  
 15051 % U+2044 FRACTION SLASH; fraction  
 15052 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044  
 15053 % U+2045 LEFT SQUARE BRACKET WITH QUILL  
 15054 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045  
 15055 % U+2046 RIGHT SQUARE BRACKET WITH QUILL  
 15056 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046  
 15057 % U+2052 COMMERCIAL MINUS SIGN

15058 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

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

15059 % U+2070 SUPERSCRIPT ZERO; zerosuperior  
15060 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070  
15061 % U+2074 SUPERSCRIPT FOUR; foursuperior  
15062 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074  
15063 % U+2075 SUPERSCRIPT FIVE; fivesuperior  
15064 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075  
15065 % U+2076 SUPERSCRIPT SIX; sixsuperior  
15066 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076  
15067 % U+2077 SUPERSCRIPT SEVEN; sevensuperior  
15068 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077  
15069 % U+2078 SUPERSCRIPT EIGHT; eightsuperior  
15070 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078  
15071 % U+2079 SUPERSCRIPT NINE; ninesuperior  
15072 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079  
15073 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior  
15074 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A  
15075 % U+207B SUPERSCRIPT MINUS  
15076 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}  
15077 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior  
15078 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}  
15079 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior  
15080 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}  
15081 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior  
15082 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}  
15083 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior  
15084 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}  
15085 % U+2080 SUBSCRIPT ZERO; zeroinferior  
15086 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080  
15087 % U+2081 SUBSCRIPT ONE; oneinferior  
15088 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081  
15089 % U+2082 SUBSCRIPT TWO; twoinferior  
15090 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082  
15091 % U+2083 SUBSCRIPT THREE; threeinferior  
15092 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083  
15093 % U+2084 SUBSCRIPT FOUR; fourinferior  
15094 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084  
15095 % U+2085 SUBSCRIPT FIVE; fiveinferior  
15096 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085  
15097 % U+2086 SUBSCRIPT SIX; sixinferior  
15098 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086  
15099 % U+2087 SUBSCRIPT SEVEN; seveninferior  
15100 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087  
15101 % U+2088 SUBSCRIPT EIGHT; eightinferior  
15102 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088  
15103 % U+2089 SUBSCRIPT NINE; nineinferior  
15104 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089  
15105 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior  
15106 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D  
15107 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior  
15108 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

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

15109 % U+20A1 COLON SIGN; \*colonmonetary, colonsign  
15110 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1



15111 % U+20A4 LIRA SIGN; afii08941, \*lira  
 15112 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4  
 15113 % U+20A6 NAIRA SIGN  
 15114 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6  
 15115 % U+20A7 PESETA SIGN; peseta  
 15116 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7  
 15117 % U+20A9 WON SIGN; won  
 15118 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9  
 15119 % U+20AB DONG SIGN; dong  
 15120 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB  
 15121 % U+20AC EURO SIGN; \*Euro, euro  
 15122 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC  
 15123 % U+20B1 PESO SIGN  
 15124 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1  
 15125 % U+20B2 GUARANI SIGN  
 15126 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

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

15127 % U+2103 DEGREE CELSIUS; centigrade  
 15128 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103  
 15129 % U+2116 NUMERO SIGN; \*afii61352, numero  
 15130 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116  
 15131 % U+2117 SOUND RECORDING COPYRIGHT  
 15132 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117  
 15133 % U+211E PRESCRIPTION TAKE; prescription  
 15134 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E  
 15135 % U+2120 SERVICE MARK  
 15136 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120  
 15137 % U+2122 TRADE MARK SIGN; trademark  
 15138 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122  
 15139 % U+2126 OHM SIGN; Ohm, Omega  
 15140 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126  
 15141 % U+2127 INVERTED OHM SIGN  
 15142 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127  
 15143 % U+212B ANGSTROM SIGN; angstrom  
 15144 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B  
 15145 % U+212E ESTIMATED SYMBOL; estimated  
 15146 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E  
 15147 % U+2135 ALEF SYMBOL; aleph  
 15148 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

### 50.2.16 Arrows: U+2190 to U+21FF

15149 % U+2190 LEFTWARDS ARROW; arrowleft  
 15150 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190  
 15151 % U+2191 UPWARDS ARROW; arrowup  
 15152 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191  
 15153 % U+2192 RIGHTWARDS ARROW; arrowright  
 15154 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192  
 15155 % U+2193 DOWNWARDS ARROW; arrowdown  
 15156 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

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

15157 % U+2212 MINUS SIGN; minus  
 15158 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212  
 15159 % U+221A SQUARE ROOT; radical  
 15160 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

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

15161 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft  
15162 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329  
15163 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright  
15164 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

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

15165 % U+2422 BLANK SYMBOL  
15166 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422  
15167 % U+2423 OPEN BOX; blank  
15168 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

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

15169 % U+2460 CIRCLED DIGIT ONE; onecircle  
15170 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460  
15171 % U+2461 CIRCLED DIGIT TWO; twocircle  
15172 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461  
15173 % U+2462 CIRCLED DIGIT THREE; threecircle  
15174 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462  
15175 % U+2463 CIRCLED DIGIT FOUR; fourcircle  
15176 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463  
15177 % U+2464 CIRCLED DIGIT FIVE; fivecircle  
15178 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464  
15179 % U+2465 CIRCLED DIGIT SIX; sixcircle  
15180 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465  
15181 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle  
15182 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466  
15183 % U+2467 CIRCLED DIGIT EIGHT; eightcircle  
15184 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467  
15185 % U+2468 CIRCLED DIGIT NINE; ninecircle  
15186 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468  
15187 % U+2469 CIRCLED NUMBER TEN; tencircle  
15188 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469  
15189 % U+246A CIRCLED NUMBER ELEVEN; elevencircle  
15190 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A  
15191 % U+246B CIRCLED NUMBER TWELVE; twelvecircle  
15192 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B  
15193 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle  
15194 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C  
15195 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle  
15196 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D  
15197 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle  
15198 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E  
15199 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle  
15200 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F  
15201 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle  
15202 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470  
15203 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle  
15204 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471  
15205 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle  
15206 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472  
15207 % U+2473 CIRCLED NUMBER TWENTY; twentycircle  
15208 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473  
15209 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle  
15210 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6  
15211 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle  
15212 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7

15213 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle  
15214 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8  
15215 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle  
15216 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9  
15217 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle  
15218 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA  
15219 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle  
15220 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB  
15221 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle  
15222 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC  
15223 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle  
15224 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD  
15225 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle  
15226 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE  
15227 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle  
15228 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF  
15229 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle  
15230 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0  
15231 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle  
15232 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1  
15233 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle  
15234 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2  
15235 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle  
15236 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3  
15237 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle  
15238 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4  
15239 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle  
15240 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5  
15241 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle  
15242 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6  
15243 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle  
15244 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7  
15245 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle  
15246 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8  
15247 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle  
15248 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9  
15249 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle  
15250 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA  
15251 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle  
15252 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB  
15253 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle  
15254 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC  
15255 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle  
15256 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD  
15257 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle  
15258 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE  
15259 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle  
15260 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF  
15261 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle  
15262 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0  
15263 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle  
15264 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1  
15265 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle  
15266 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2  
15267 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle  
15268 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3  
15269 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle

15270 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4  
 15271 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle  
 15272 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5  
 15273 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle  
 15274 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6  
 15275 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle  
 15276 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7  
 15277 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle  
 15278 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8  
 15279 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle  
 15280 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9  
 15281 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle  
 15282 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA  
 15283 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle  
 15284 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB  
 15285 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle  
 15286 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC  
 15287 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle  
 15288 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD  
 15289 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle  
 15290 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE  
 15291 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle  
 15292 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF  
 15293 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle  
 15294 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0  
 15295 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle  
 15296 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1  
 15297 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle  
 15298 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2  
 15299 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle  
 15300 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3  
 15301 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle  
 15302 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4  
 15303 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle  
 15304 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5  
 15305 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle  
 15306 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6  
 15307 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle  
 15308 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7  
 15309 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle  
 15310 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8  
 15311 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle  
 15312 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9  
 15313 % U+24EA CIRCLED DIGIT ZERO  
 15314 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

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

15315 % U+25E6 WHITE BULLET; \*openbullet, whitebullet  
 15316 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6  
 15317 % U+25EF LARGE CIRCLE; largecircle  
 15318 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

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

15319 % U+266A EIGHTH NOTE; musicalnote  
 15320 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A  
 15321 % U+26AD MARRIAGE SYMBOL  
 15322 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD

15323 % U+26AE DIVORCE SYMBOL  
 15324 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

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

15325 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET  
 15326 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6  
 15327 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET  
 15328 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

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

15329 % U+FB01 LATIN SMALL LIGATURE FI; fi  
 15330 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01  
 15331 % U+FB02 LATIN SMALL LIGATURE FL; fl  
 15332 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

### 50.2.25 Miscellaneous

15333 \DeclareTextCommand{\SS}{PU}{SS}

### 50.2.26 Aliases

Aliases (german.sty)

15334 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}  
 15335 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}  
 15336 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}  
 15337 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}  
 15338 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}  
 15339 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}  
 15340 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}  
 15341 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15342 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}  
 15343 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}  
 15344 \DeclareTextCommand{\textdiv}{PU}{\textdivide}  
 15345 \DeclareTextCommand{\textpm}{PU}{\textplusminus}  
 15346 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}  
 15347 </puenc>

## 50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

15348 <\*puvnenc>  
 15349 \DeclareTextCommand{\abreve}{PU}{\81\003}  
 15350 \DeclareTextCommand{\acircumflex}{PU}{\80\342}  
 15351 \DeclareTextCommand{\dj}{PU}{\81\021}  
 15352 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}  
 15353 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}  
 15354 \DeclareTextCommand{\ohorn}{PU}{\81\241}  
 15355 \DeclareTextCommand{\uhorn}{PU}{\81\260}  
 15356 \DeclareTextCommand{\ABREVE}{PU}{\81\002}  
 15357 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}  
 15358 \DeclareTextCommand{\DJ}{PU}{\81\020}  
 15359 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}  
 15360 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}  
 15361 \DeclareTextCommand{\OHORN}{PU}{\81\240}  
 15362 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15363 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}  
15364 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}  
15365 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}  
15366 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}  
15367 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}  
15368 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}  
15369 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}  
15370 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}  
15371 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}  
15372 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}  
15373 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}  
15374 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}  
15375 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}  
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15377 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}  
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15385 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}  
15386 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}  
15387 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}  
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15400 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}  
15401 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}  
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15403 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}  
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15415 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}  
15416 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}  
15417 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}  
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15420 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}  
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15422 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}  
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15430 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\260}  
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15446 \DeclareTextCompositeCommand{h}{PU}{\ECIRCUMFLEX}{\9036\302}  
15447 \DeclareTextCompositeCommand{~}{PU}{\ECIRCUMFLEX}{\9036\304}  
15448 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}  
15449 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}  
15450 \DeclareTextCompositeCommand{'}{PU}{I}{\80\314}  
15451 \DeclareTextCompositeCommand{h}{PU}{I}{\9036\310}  
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15465 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\334}  
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15473 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\350}  
15474 \DeclareTextCompositeCommand{d}{PU}{\UHORN}{\9036\360}  
15475 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\352}  
15476 \DeclareTextCompositeCommand{h}{PU}{\UHORN}{\9036\354}

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15477 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
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15479 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15480 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15481 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15482 \DeclareTextCompositeCommand{\-}{PU}{Y}{\9036\370}
15483 </puvnc>

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## 50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

15484 <*puarenc>
15485 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
TER HAMZA
15486 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15487 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15488 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15489 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15490 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15491 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
15492 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
15493 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
15494 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
15495 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
TER THEH
15496 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
TER JEEM
15497 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
15498 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
15499 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
15500 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
15501 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
15502 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
15503 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
15504 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
TER SHEEN
15505 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
15506 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
15507 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
15508 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
15509 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
15510 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
TER GHAIN
15511 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
15512 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
15513 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
15514 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
15515 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
15516 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LET-
TER MEEM
15517 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON

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15518 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
15519 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
15520 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
15521 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15522 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15523 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15524 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15525 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15526 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15527 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15528 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15529 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

Farsi
15530 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15531 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
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15532 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15533 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
15534 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
15535 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afi????;FARSI LET-
TER YEH

15536 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15537 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

15538 \puarenc

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## 51 End of file hyccheck.tex

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15539 *check
15540 \typeout{}
15541 \begin{document}
15542 \end{document}
15543 \check

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| \@Localurifalse    | 9136                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |
| \@Localurltrue     | 9133                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |
| \@M                | 980, 2201, 4133, 6171                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                     |
| \@MM               | 6305                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |
| \@PushButton       | 5055, 9199, 11264, 11370, 11479, 11756, 12114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                     |
| \@Refstar          | 7421, 7428                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                     |
| \@Reset            | 5064, 9202, 11310, 11373, 11495, 11809, 12173                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                     |
| \@Roman            | 483                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                     |
| \@SCTR             | 7168, 7220                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                     |
| \@SetMaxRnhefLabel | 6617                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |
| \@Submit           | 5061, 9205, 11292, 11374, 11492, 11786, 12149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                     |
| \@TextField        | 5046, 9190, 11144, 11361, 11385, 11623, 11956                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                     |
| \@addchap          | 13037                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                     |
| \@addtoreset       | 6943, 6944, 6958, 7165                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                     |
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| \@alph             | 5827, 5828                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                     |
| \@alph@bul         | 5827                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                     |
| \@anchorcolor      | 8335, 8423, 9250, 10589, 10862                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                     |
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|                                                                                                                                                                                                           | \CYRKBEAK . . . . . 14674                                                                      | \CYRPHK . . . . . 14686                                                              |
|                                                                                                                                                                                                           | \cyrkbeak . . . . . 14676                                                                      | \cyrphk . . . . . 14688                                                              |
|                                                                                                                                                                                                           |                                                                                                | \CYRPSI . . . . . 14590                                                              |

|                                                                                                                                 |                                                                      |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| \cyrpsi .....                                                                                                                   | 14592                                                                | \cyryi .....                                                                                                                                                                 | 14538                                                                                                                                              | \DefaultHeightofReset ....                             | 5098,<br>11313, 11812, 12176                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \CYRR .....                                                                                                                     | 14426                                                                | \CYRYO .....                                                                                                                                                                 | 14360                                                                                                                                              | \DefaultHeightofSubmit ...                             | 5096,<br>11295, 11789, 12152                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \cyr 2871, 2873, 2876, 2879, 2880,<br>2886, 2890, 2891, 2893, 2895,<br>2896, 2901, 2902, 2903, 2904,<br>2905, 2906, 2907, 14491 |                                                                      | \cyryo .....                                                                                                                                                                 | 14525                                                                                                                                              | \DefaultHeightofText 5104, 11153,<br>11632, 11965      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRRTICK .....                                                                                                                 | 14636                                                                | \CYRYU .....                                                                                                                                                                 | 14454                                                                                                                                              | \DefaultHeightofTextMultiline ..                       | 5105, 11151, 11630, 11963                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
| \cyr rtick .....                                                                                                                | 14638                                                                | \cyr yu .....                                                                                                                                                                | 14519                                                                                                                                              | \DefaultOptionsofCheckBox 5110,<br>11342, 11842, 12211 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRS .....                                                                                                                     | 14428, 14695                                                         | \CYRZ ....                                                                                                                                                                   | 14407, 14657, 14796                                                                                                                                | \DefaultOptionsofComboBox 5113                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr s 2876, 2879, 2882, 2883, 2886,<br>2901, 2902, 2903, 2904, 2908,<br>14493, 14698                                           |                                                                      | \cyr z ...                                                                                                                                                                   | 2890, 2895, 2896, 14472,<br>14660, 14798                                                                                                           | \DefaultOptionsofListBox . 5112                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRSCHWA ....                                                                                                                  | 14784, 14788                                                         | \CYRZDSC .....                                                                                                                                                               | 14656                                                                                                                                              | \DefaultOptionsofPopdownBox .                          | 5114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |
| \cyr schwa .....                                                                                                                | 14786, 14790                                                         | \cyr zdsc .....                                                                                                                                                              | 14659                                                                                                                                              | \DefaultOptionsofPushButton ..                         | 5109, 11269, 11761, 12119                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
| \CYRSDSC .....                                                                                                                  | 14694, 14695                                                         | \CYRZH ...                                                                                                                                                                   | 14405, 14744, 14792                                                                                                                                | \DefaultOptionsofRadio ...                             | 5115                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |
| \cyr sdsc .....                                                                                                                 | 14697                                                                | \cyr zh ..                                                                                                                                                                   | 2873, 2893, 14470, 14746,<br>14794                                                                                                                 | \DefaultOptionsofReset ...                             | 5108,<br>11316, 11815, 12179                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \CYRSEMISFTSN .....                                                                                                             | 14632                                                                | \CYRZHDSC .....                                                                                                                                                              | 14652                                                                                                                                              | \DefaultOptionsofSubmit ...                            | 5107,<br>11298, 11792, 12155                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \cyr semisftsn .....                                                                                                            | 14634                                                                | \cyr zhdsc .....                                                                                                                                                             | 14654                                                                                                                                              | \DefaultOptionsofText ....                             | 5111,<br>11159, 11638, 11971                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \CYRSFTSN .....                                                                                                                 | 14450                                                                |                                                                                                                                                                              |                                                                                                                                                    | \DefaultWidthofCheckBox . 5101,<br>11338, 11838, 12207 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr sftsn .....                                                                                                                | 14515                                                                |                                                                                                                                                                              |                                                                                                                                                    | \DefaultWidthofChoiceMenu ...                          | 5103, 11176, 11656, 11997                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |
| \CYRSH .....                                                                                                                    | 14442                                                                |                                                                                                                                                                              |                                                                                                                                                    | \DefaultWidthofReset ....                              | 5099,<br>11312, 11811, 12175                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \cyr sh .....                                                                                                                   | 14507                                                                |                                                                                                                                                                              |                                                                                                                                                    | \DefaultWidthofSubmit ...                              | 5097,<br>11294, 11788, 12151                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |
| \CYRSHCH .....                                                                                                                  | 14444                                                                |                                                                                                                                                                              |                                                                                                                                                    | \DefaultWidthofText 5106, 11148,<br>11627, 11960       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr shch .....                                                                                                                 | 14509                                                                |                                                                                                                                                                              |                                                                                                                                                    | \define@key .....                                      | 2286,<br>2288, 2331, 2346, 2349, 2352,<br>2360, 2363, 2373, 2376, 2379,<br>2396, 2408, 2410, 2413, 2416,<br>2433, 2437, 2440, 2443, 2446,<br>2449, 2452, 2487, 2544, 2564,<br>2565, 2579, 2582, 2585, 2588,<br>2591, 2599, 2602, 2605, 2608,<br>2612, 2640, 2656, 2667, 2670,<br>2673, 2676, 2680, 2683, 2690,<br>2719, 2738, 2741, 2967, 2998,<br>3006, 3014, 3021, 3024, 3039,<br>3064, 3067, 3071, 3099, 3104,<br>3108, 3111, 3118, 3130, 3138,<br>3141, 3144, 3146, 3149, 3158,<br>3168, 3175, 3182, 3183, 3255,<br>3264, 3281, 3286, 3291, 3296,<br>3301, 3307, 3313, 3318, 3323,<br>3356, 3363, 3397, 3447, 3448,<br>3468, 3475, 3482, 3483, 3486,<br>3489, 3492, 3495, 3498, 3501,<br>3504, 3527, 3530, 3533, 4385,<br>4473, 4529, 4831, 4836, 4848,<br>4885, 4888, 4891, 4894, 4897, |  |  |
| \CYRSHHA .....                                                                                                                  | 14728                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr shha .....                                                                                                                 | 14730                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRT .....                                                                                                                     | 14430                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr t 2876, 2879, 2885, 2887, 2899,<br>2900, 2901, 2902, 2903, 2904,<br>2905, 2906, 2907, 14495                                |                                                                      | \dad .....                                                                                                                                                                   | 15506                                                                                                                                              |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRTDSC .....                                                                                                                  | 14700                                                                | \dal .....                                                                                                                                                                   | 15499                                                                                                                                              |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr tdsc .....                                                                                                                 | 14702                                                                | \damma .....                                                                                                                                                                 | 15526                                                                                                                                              |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRTETSE .....                                                                                                                 | 14716                                                                | \declare@shorthand 850, 851, 856,<br>857, 862, 872, 873, 874, 879,<br>880, 885, 886, 891, 896, 897,<br>902, 907, 908, 909, 910, 911,<br>912, 917, 918, 923, 924, 929,<br>930 |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr tetse .....                                                                                                                | 14718                                                                | \DeclareFontEncoding ...                                                                                                                                                     | 13076,<br>13471                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr thousands .....                                                                                                            | 14626                                                                | \DeclareFontFamily 754, 762, 2466                                                                                                                                            |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRTSHE .....                                                                                                                  | 14382                                                                | \DeclareFontShape 755, 763, 2467                                                                                                                                             |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr tshe .....                                                                                                                 | 14547                                                                | \DeclareFontSubstitution ...                                                                                                                                                 | 756,<br>764, 2468                                                                                                                                  |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRU 14389, 14432, 14828, 14832,<br>14836                                                                                      |                                                                      | \DeclareLocalOptions ....                                                                                                                                                    | 3590                                                                                                                                               |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr u .....                                                                                                                    | 2883,<br>2885, 2899, 2900, 2903, 2907,<br>14497, 14830, 14834, 14838 | \DeclareRobustCommand .                                                                                                                                                      | 4020,<br>4021, 4137, 4154, 4156, 4158,<br>4167, 5045, 5048, 5051, 5054,<br>5057, 5060, 5063, 5188, 5192,<br>5260, 5264, 7427, 7453, 7472,<br>12920 |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRUK .....                                                                                                                    | 14606                                                                | \DeclareTextAccent 13077, 13078,<br>13079, 13080, 13081, 13082,<br>13083, 13084, 13085, 13086,<br>13087, 13088                                                               |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr uk .....                                                                                                                   | 14608                                                                | \DefaultHeightofCheckBox .                                                                                                                                                   | 5100,<br>11339, 11839, 12208                                                                                                                       |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRUSHRT .....                                                                                                                 | 14388                                                                | \DefaultHeightofChoiceMenu ...                                                                                                                                               | 5102, 11177, 11657, 11998                                                                                                                          |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyrushrt .....                                                                                                                 | 14553                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRV .....                                                                                                                     | 14397                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr v .....                                                                                                                    | 2871, 2873, 14462                                                    |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRY .....                                                                                                                     | 14704                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr y .....                                                                                                                    | 14706                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRYA .....                                                                                                                    | 14456                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr ya .....                                                                                                                   | 14521                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRYAT .....                                                                                                                   | 14562                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr yat .....                                                                                                                  | 14564                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRYHCRS .....                                                                                                                 | 14708                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \cyr yhcrs .....                                                                                                                | 14710                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |
| \CYRYI .....                                                                                                                    | 14373                                                                |                                                                                                                                                                              |                                                                                                                                                    |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |

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| \multiply . . . . . 8034, 9542, 9577                                                                                                                                                                                                                                                                                                                                      | \NG . . . . . 13960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | \numexpr . 2029, 2030, 2031, 2033,<br>2039, 2047, 2048, 2049, 2050,<br>2051, 2052, 2056, 2058, 2062,<br>2064, 2066, 2068, 2072, 2075,<br>2076, 2078, 2087, 2092, 2109,<br>2123, 2131, 2137, 3465                                                                                                                                                                       |
| N                                                                                                                                                                                                                                                                                                                                                                         | \ng . . . . . 13962                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | \nun . . . . . 15517                                                                                                                                                                                                                                                                                                                                                   |
| \n . . . . . 710                                                                                                                                                                                                                                                                                                                                                          | \noboundary . . . . . 15537                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | O                                                                                                                                                                                                                                                                                                                                                                      |
| \name@of@eq . . . . . 5749, 5778                                                                                                                                                                                                                                                                                                                                          | \nobreak . 2216, 2224, 2235, 2243,<br>6237, 6389                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \O . . . . . 13355, 13723, 14118                                                                                                                                                                                                                                                                                                                                       |
| \name@of@slide . . . . . 5750, 5760                                                                                                                                                                                                                                                                                                                                       | \nobreakspace . . 515, 7437, 7466,<br>7469                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | \o . . . . . 13423, 13791, 14120                                                                                                                                                                                                                                                                                                                                       |
| \nameref . . . . . 502                                                                                                                                                                                                                                                                                                                                                    | \noexpand . . . 22, 93, 95, 108, 116,<br>169, 171, 172, 173, 176, 206,<br>688, 792, 1128, 1524, 1541,<br>1664, 2018, 2222, 2223, 2224,<br>2227, 2241, 2242, 2243, 2246,<br>2963, 2965, 2967, 2968, 2984,<br>3158, 3159, 3161, 3441, 4092,<br>4175, 4255, 4338, 4340, 4440,<br>5508, 5509, 5518, 5520, 5523,<br>5642, 5902, 5903, 5905, 5931,<br>5932, 5933, 5934, 5935, 5943,<br>5944, 5945, 6093, 6256, 6264,<br>6265, 6266, 6267, 6268, 6270,<br>6398, 6487, 6562, 6577, 6593,<br>6947, 6949, 7402, 7403, 7516,<br>7517, 7522, 7524, 7529, 7530,<br>7535, 7536, 8037, 8592, 9941,<br>10008, 10485, 10729, 11192,<br>11193, 11194, 11195, 11672,<br>11673, 11674, 11675, 12013,<br>12014, 12015, 12016, 12292 | \obeylines . . . . . 10484                                                                                                                                                                                                                                                                                                                                             |
| \nasb . . . . . 15522                                                                                                                                                                                                                                                                                                                                                     | \nofrenchguillemets . . . . 534, 536                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | \OBJ@acroform . . . 11602, 11603                                                                                                                                                                                                                                                                                                                                       |
| \netscape . . . . . 8414                                                                                                                                                                                                                                                                                                                                                  | \NoHy@OrgPageRef . . 5191, 5193,<br>5263, 5265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | \OBJ@Helv . 11583, 11592, 11909                                                                                                                                                                                                                                                                                                                                        |
| \new@ifnextchar . . . . . 527                                                                                                                                                                                                                                                                                                                                             | \NoHy@OrgRef 5187, 5189, 5259,<br>5261                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | \OBJ@OCG@print . . . 7720, 7723,<br>7731, 7757, 8739, 8741, 8754,<br>8758, 8767, 8796                                                                                                                                                                                                                                                                                  |
| \new@pdf@link . . . 7803, 7853, 7856                                                                                                                                                                                                                                                                                                                                      | \NoHyper . . . . . 5195                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | \OBJ@OCG@view . . . 7705, 7723,<br>7756, 8723, 8725, 8738, 8758,<br>8795                                                                                                                                                                                                                                                                                               |
| \new@refstepcounter . 6003, 6035                                                                                                                                                                                                                                                                                                                                          | \nohyperpage . . 5241, 7098, 7100,<br>7102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | \OBJ@OCGs . . 7726, 7729, 7735,<br>7740, 7745, 8755, 8757, 8761,<br>8765, 8771, 8776, 8781                                                                                                                                                                                                                                                                             |
| \newblock . . . . . 6721                                                                                                                                                                                                                                                                                                                                                  | \nolinkurl . . . . . 4154                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | \OBJ@pdfdocencoding . . . 11581,<br>11890, 11906                                                                                                                                                                                                                                                                                                                       |
| \newcommand 4, 9, 42, 2192, 5246,<br>5712, 5715, 5718, 5719, 5720,<br>5722, 5723, 5724, 5725, 5727,<br>5728, 5729, 5730, 5731, 5732,<br>5741, 5742, 5743, 5744, 5745,<br>5746, 6085, 6955, 7154, 7159,<br>7160, 12693, 12696, 12701                                                                                                                                       | \nolinkurl@ . . . . . 4154, 4155                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | \OBJ@ZaDb 11582, 11591, 11899                                                                                                                                                                                                                                                                                                                                          |
| \newcount . . 332, 333, 4809, 5416,<br>11256, 11746, 11948, 12097,<br>12728                                                                                                                                                                                                                                                                                               | \NomFancyVerbLineautorefname<br>. . . . . 2902                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | \OCIRCUMFLEX . 15360, 15458,<br>15459, 15460, 15461, 15462                                                                                                                                                                                                                                                                                                             |
| \newcounter . . . 5734, 6179, 8721,<br>12692                                                                                                                                                                                                                                                                                                                              | \Nomfootnoteautorefname . 2882                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | \ocircumflex 15353, 15398, 15399,<br>15400, 15401, 15402                                                                                                                                                                                                                                                                                                               |
| \newdimen . . . . . 329, 4810, 4811                                                                                                                                                                                                                                                                                                                                       | \Nomtheoremautorefname . 2906                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \oddsidemargin . . . . . 6800                                                                                                                                                                                                                                                                                                                                          |
| \newif . . . . . 246, 247, 248, 249,<br>250, 251, 252, 253, 254, 255,<br>256, 259, 260, 261, 262, 263,<br>264, 265, 266, 267, 268, 269,<br>270, 271, 272, 273, 274, 275,<br>276, 277, 278, 279, 280, 281,<br>282, 283, 284, 285, 286, 287,<br>288, 289, 290, 668, 847, 2543,<br>3147, 3376, 3849, 4384, 4472,<br>4805, 4806, 4826, 5751, 5752,<br>5775, 6039, 9098, 10004 | \nonumber . . . . . 6064, 6067                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | \OE . . . . . 13224, 13976                                                                                                                                                                                                                                                                                                                                             |
| \newlabel . 2157, 4225, 5283, 5284,<br>5291, 5313, 5890, 5918                                                                                                                                                                                                                                                                                                             | \normalfont . . . . . 444, 6125                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \oe . . . . . 13237, 13978                                                                                                                                                                                                                                                                                                                                             |
| \newlabelxx . . . . . 5285, 5286                                                                                                                                                                                                                                                                                                                                          | \normalsize . . . . 462, 6434, 6505                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | \offinterlineskip . . . . . 5387                                                                                                                                                                                                                                                                                                                                       |
| \newlength . . . . . 12914                                                                                                                                                                                                                                                                                                                                                | \NR@gettitle . . . . . 6424                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \OHORN . . . 15361, 15463, 15464,<br>15465, 15466, 15467                                                                                                                                                                                                                                                                                                               |
| \newline . . . . . 418, 5361                                                                                                                                                                                                                                                                                                                                              | \null . . . . . 6702, 6710, 7391, 7496                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | \ohorn . . 2929, 2936, 15354, 15403,<br>15404, 15405, 15406, 15407                                                                                                                                                                                                                                                                                                     |
| \newname 5781, 6031, 6053, 6077,<br>6090, 6099                                                                                                                                                                                                                                                                                                                            | \number . . . . . 966,<br>970, 973, 981, 984, 986, 1251,<br>1253, 1280, 1281, 1964, 2022,<br>2023, 2024, 2025, 2029, 2030,<br>2031, 2032, 2033, 2037, 2038,<br>2039, 2040, 2041, 2042, 2043,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \oldb . . . . . 742                                                                                                                                                                                                                                                                                                                                                    |
| \newsavebox . . . . . 8651, 10041                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \oldc . . . . . 743                                                                                                                                                                                                                                                                                                                                                    |
| \newtie 13115, 13116, 13499, 13529,<br>13548, 13564                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \oldcontentsline . 5278, 5281, 5290                                                                                                                                                                                                                                                                                                                                    |
| \newtoks . . 90, 4871, 9876, 10074,<br>10075                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | \oldd . . . . . 744                                                                                                                                                                                                                                                                                                                                                    |



|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                                                                                                                                                                                                                                                                                                                     |                            |                                                                                                                                                                                                       |
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| \on@line . . . . .              | 6848, 6849                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | \paperheight . . . . .          | 3564, 8245,<br>8247, 8250, 8252, 8264, 8265,<br>9079, 9080, 9217, 9218, 9220,<br>10406, 10407                                                                                                                                                                                                                                                       | \pdfannotlink . . . . .    | 7794                                                                                                                                                                                                  |
| \openout . . . . .              | 5273, 5308, 12813, 12882                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | \paperwidth . . . . .           | 8241, 8243, 8254,<br>8256, 8261, 8262, 9078, 9080,<br>9221, 10405, 10407                                                                                                                                                                                                                                                                            | \pdfbookmark . . . . .     | 2192, 5245, 5246,<br>12694, 12699, 12704, 12708                                                                                                                                                       |
| \OpMode . . . . .               | 2619, 2622, 2633, 2647,<br>2650, 9594, 9685, 10429                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | \par . . . . .                  | 6123, 6426, 6454, 6496, 6506,<br>6704, 6724                                                                                                                                                                                                                                                                                                         | \pdfcatalog . . . . .      | 5551, 7727, 8059, 8101,<br>11603                                                                                                                                                                      |
| \or . . . . .                   | 1000,<br>1001, 1002, 1003, 1004, 1005,<br>1006, 1007, 1008, 1022, 1023,<br>1024, 1025, 1026, 1027, 1028,<br>1029, 1030, 1045, 1046, 1047,<br>1048, 1049, 1050, 1051, 1052,<br>1053, 1134, 1135, 1136, 1137,<br>1138, 1139, 1140, 1141, 1142,<br>1143, 1144, 1145, 1146, 1147,<br>1148, 1149, 1150, 1151, 1152,<br>1153, 1154, 1155, 1156, 1157,<br>1158, 1159, 1160, 1161, 1162,<br>1163, 1164, 1165, 1183, 1205,<br>1208, 1214, 1215, 1216, 1217,<br>1218, 1219, 1220, 1221, 1222,<br>1223, 1224, 1225, 1226, 1227,<br>1228, 1229, 1230, 1231, 1232,<br>1233, 1234, 1235, 1236, 1237,<br>1238, 1239, 1240, 1241, 1242,<br>1243, 1244, 1245, 1258, 1259,<br>1260, 1261, 1262, 1374, 1375,<br>1376, 4558, 4564, 4569, 4783,<br>6871, 6875, 7314, 7323, 9587,<br>12736, 12737, 12738, 12739,<br>12740, 12741, 12742, 12743,<br>12744, 12745, 12746, 12747,<br>12748, 12749, 12750, 12751,<br>12752, 12753, 12754, 12755,<br>12756, 12757, 12758, 12759,<br>12760, 12761, 12762, 12763,<br>12764, 12765, 12766, 12767 | \paragraphautorefname . . . . . | 2756,<br>2774, 2792, 2810, 2828, 2846,<br>2864, 2897, 2899, 2922, 2940,<br>7587                                                                                                                                                                                                                                                                     | \PDFdefaults . . . . .     | 10085                                                                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \partautorefname . . . . .      | 2750, 2768, 2786,<br>2804, 2822, 2840, 2858, 2888,<br>2916, 2934, 7581                                                                                                                                                                                                                                                                              | \pdfdest . . . . .         | 7812                                                                                                                                                                                                  |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \partnumberline . . . . .       | 12668, 12672                                                                                                                                                                                                                                                                                                                                        | \pdfendlink . . . . .      | 7850, 11647, 11739,<br>11753, 11780, 11805, 11829,<br>11851                                                                                                                                           |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \PassOptionsToPackage . . . . . | 2663,<br>2702, 2706, 2728, 3595, 3838                                                                                                                                                                                                                                                                                                               | \pdfescapestring . . . . . | 12321                                                                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@addtoks . . . . .          | 10077, 10096, 10102,<br>10111, 10118, 10122, 10124,<br>10126, 10128, 10130, 10138,<br>10147, 10151, 10153, 10155,<br>10158, 10167, 10171, 10173,<br>10175, 10177, 10179, 10181,<br>10183, 10185, 10187, 10189,<br>10191, 10193, 10195, 10197,<br>10199, 10201, 10202, 10203,<br>10204, 10205, 10206, 10207,<br>10208, 10209, 10210, 10211,<br>10216 | \PDFForm@Check . . . . .   | 11347, 11349,<br>11848, 11849, 12221, 12225,<br>12340                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@addtoksx . . . . .         | 10071, 10081, 10094                                                                                                                                                                                                                                                                                                                                 | \PDFForm@List . . . . .    | 11259, 11261,<br>11750, 11751, 12104, 12109,<br>12447                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@box . . . . .              | 10041, 10048, 10050,<br>10052, 10053, 10056, 10063                                                                                                                                                                                                                                                                                                  | \PDFForm@Name . . . . .    | 11640, 11693,<br>11763, 11844, 11973, 12034,<br>12121, 12213, 12328                                                                                                                                   |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@defaulttoks . . . . .      | 10008, 10075,<br>10076, 10086                                                                                                                                                                                                                                                                                                                       | \PDFForm@Push . . . . .    | 11284, 11286,<br>11777, 11778, 12137, 12141,<br>12368                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@docset . . . . .           | 9876                                                                                                                                                                                                                                                                                                                                                | \PDFForm@Radio . . . . .   | 11247, 11251,<br>11729, 11731, 12073, 12085,<br>12480                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@endanchor . . . . .        | 7810, 7853, 7860                                                                                                                                                                                                                                                                                                                                    | \PDFForm@Reset . . . . .   | 11327, 11329,<br>11826, 11827, 12191, 12196,<br>12579                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@escapestring . . . . .     | 7647                                                                                                                                                                                                                                                                                                                                                | \PDFForm@Submit . . . . .  | 11303, 11306,<br>11798, 11800, 12162, 12167,<br>12547                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \PDF@FinishDoc . . . . .        | 2573, 2574, 2627,<br>2628, 3558, 3613, 3716, 3717,<br>3816, 3817, 5240, 5397, 5398,<br>8113, 8318, 8541, 8972, 9099,<br>9653, 9877, 10685, 10846                                                                                                                                                                                                    | \PDFForm@Text . . . . .    | 11165, 11167,<br>11645, 11646, 11982, 11985,<br>12512                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@linktype . . . . .         | 10026, 10030, 10091,<br>10092                                                                                                                                                                                                                                                                                                                       | \pdfhorigin . . . . .      | 8237                                                                                                                                                                                                  |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@rect . . . . .             | 10018, 10032, 10045                                                                                                                                                                                                                                                                                                                                 | \pdfinfo . . . . .         | 8116                                                                                                                                                                                                  |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \PDF@SetupDoc . . . . .         | 3557, 3612,<br>5158, 5159, 5239, 8044, 8319,<br>8572, 9012, 9100, 9602, 9928,<br>10573, 10716, 10847                                                                                                                                                                                                                                                | \pdflastform . . . . .     | 7797                                                                                                                                                                                                  |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \PDF@SetupDox . . . . .         | 8044                                                                                                                                                                                                                                                                                                                                                | \pdflastlink . . . . .     | 11563                                                                                                                                                                                                 |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@strcmp . . . . .           | 824                                                                                                                                                                                                                                                                                                                                                 | \pdflastobj . . . . .      | 7705, 7720, 7726, 11602,<br>11890, 11899, 11909                                                                                                                                                       |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@toks . . . . .             | 10008, 10023, 10034,<br>10074, 10078, 10082                                                                                                                                                                                                                                                                                                         | \pdflastxform . . . . .    | 7797, 11525, 11527                                                                                                                                                                                    |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | \pdf@type . . . . .             | 10010, 10014, 10023,<br>10034, 10069, 10089                                                                                                                                                                                                                                                                                                         | \pdflinkmargin . . . . .   | 7792, 7795, 7800                                                                                                                                                                                      |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                                                                                                                                                                                                                                                                                                                     | \pdfliteral . . . . .      | 7776, 7778, 7783                                                                                                                                                                                      |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                                                                                                                                                                                                                                                                                                                     | \pdfm@box . . . . .        | 8651, 11944, 11945,<br>11946, 11977, 11988, 12065,<br>12089, 12100, 12111, 12131,<br>12144, 12160, 12169, 12190,<br>12198, 12216, 12227                                                               |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                                                                                                                                                                                                                                                                                                                     | \pdfmark . . . . .         | 5660,<br>8592, 8601, 8631, 9718, 9738,<br>9768, 9800, 9817, 9829, 9863,<br>9900, 9912, 9941, 9950, 9981,<br>10005, 10224, 10238, 10253,<br>10265, 10272, 10290, 10315,<br>10729, 10738, 10769, 11166, |
| <b>P</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                                                                                                                                                                                                                                                                                                                                                     |                            |                                                                                                                                                                                                       |
| \P . . . . .                    | 414                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |                                                                                                                                                                                                                                                                                                                                                     |                            |                                                                                                                                                                                                       |
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| \UTFviii@three@octets      | 2008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|          |                                                                                            |                                                                                                                                                                                                                                                                                                   |                                                                                                       |
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|          |                                                                                            |                                                                                                                                                                                                                                                                                                   | \ZWJ                                                                                                  |